DRAFT MEETING MINUTES
Nutrient Workgroup COMMITTEE
Wednesday, September 14th 2016
10:00am to 1:00pm
Metcalf Building
1520 E. Sixth Ave, Helena, MT 59620

PRESENT

Committee Members Present:
Tammy Johnson
Brian Sugden
Taylor Oldroyd
Craig Woolard
Scott Murphy
Shari Johnson
Ryan Swinney
Dave Aune
Michael J. Perrodin
Chris Brick
Elena Evans
Jeff Wivholm
Jim Jensen
Dave Galt
Tim Burton
Peggy Trenk
Doug Parker
Bill Mercer
Craig Pozega
Alan Stine
Jay Bodner

Non-Voting Members Present:
Mike Suplee
Paul LaVigne
Todd Teegarden
George Mathieus
Jeff Blend
Myla Kelly

Montana Department of Environmental Quality Staff Members Present:
Myla Kelly
Kurt Moser

Dr. Mike Suplee called the meeting to order at 10:10 am. He started by showing a list of 12 permits involving nutrients that have a variance issued in them since the 2014 adoption. The list includes both private and public:

- Imersys Talc America Inc. Beaverhead
- Town of Twin Bridges WWTF
- Town of Joliet
- City of Whitefish WWTF
- City of Kalispell
- Bonner Property Development
- City of Harlem WWTF
- Town of Phillipsburg
- Stillwater Mining Company - East Boulder
- Peace Valley Hot Springs
- Stillwater Mining Company
- Laurel Travel Center

Dr. Suplee pointed out the town of Joliet, which is a lagoon, and there is also a mechanical facility. Dr.. Suplee said that DEQ has been applying the variance procedures to a full gamut of groups that the original statutes set up. He reminded the workgroup knew that when this was set up, they would be issued as permits sunsetted, causing the permit writers to look at them and decide if there needs to be a variance put in place. Dr. Suplee said there were other permits looked at but didn't have reasonable potential to exceed the water quality standard for nutrients, in which case they don't need a variance.

Q1: *Can you explain what the current performance basis means?*
Dr. Suplee explained they probably had a water quality effluent that was superior to the group minimum requirement. For example, if you were in the <1 mgd group and the minimum requirement if you can't meet the standard, is 15 milligrams per liter TN, 2 milligrams per liter TP. However, if they were already doing better than that in their permit, that would become the basis of their variance. Dr. Suplee said that is essentially the anti-backsliding aspect of this whole process, if the group minimum requirement is set at a certain level, if a member of that group is doing better, that essentially becomes the basis of their variance. Mr. Suplee said there are quite a lot like that.

Q2: (*Where does different discharger's effluent-quality sit relative to the group minimum requirements?*
Dr. Suplee said it is probably all over the place, especially when you're dealing with private facilities vs. public wastewater facilities. They often have very different effluent. Dr. Suplee said in his observation, a lot of the private facilities will often have some kind of nitrogen component and no phosphorus whatsoever, which is a common pattern. You have to go into the details of each permit to figure out where they landed. Some of them might be very close to standards themselves, or maybe not. They might be closer to the upper limit of the variance allowance, and everywhere in between.

Dr. Suplee continued, saying he just wanted to get everyone up to date so that they could see the process since it was put in rule a couple of years ago, adopted in August 2014. Permitting essentially handles all of it, standards has not been involved in any of these. It's all rolled under the general variance as per design.

Q3: *Is it true that the city of Whitefish is the only >1 MGD facility to have a categorical permit variance discharge levels based on the performance of their facility?*

Mr. Suplee said that is correct, that the group will see that in finer detail when looking at the groups later in the meeting.

Q4: *Do you know if there are other applications of other permittees who have asked for variances and not been granted them?* Dr. Suplee said he didn't know. *Someone from the group said that Kalispell has*. The person who asked the question said he would like to explore the current performance vs. the categorical standard variances, at some point in this meeting or shortly thereafter. Dr. Suplee asked what exactly he would like to dig into. The person responded saying he was confused on the variance that he believes was the variance. Then Kalispell asked for a variance and was granted a permit on current performance. He wants to understand why and where the regulatory language is for that. Dr. Suplee said it was in Circular DEQ-12B (pulled up a document) and in a couple of places. He referred to the circular, which is essentially rule for the variances. Dr. Suplee also pointed to one paragraph:

Cases will arise in which a permittee is or will be discharging effluent with nitrogen and/or phosphorus concentrations lower than (i.e., better than) the minimum requirements of a general variance, but the resulting concentrations outside of the mixing zone still exceed the base numeric nutrient standards. Such permitted discharges are still within the scope of the general variance, because the statute contemplates that a general variance is allowable if the permittee treats the discharge to, **at a minimum**, the concentrations indicated by §75-5-313(5)(b)(i)and (ii), MCA. Thus, permitted discharges better than those at §75-5-313(5)(b)(i)and (ii), MCA, are not precluded from falling under a general variance.

The person who asked the question said that it doesn't really say, that it defaults, and is more of an interpretation. Dr. Suplee said that the DEQ legal department also said it's not as clear as they would have liked it, so it's probably going to be modified. *A person added that it's a fairly significant issue and that his general concern is what that says and how the program has been implemented is not consistent.* Dr. Suplee said he didn't think that is the case. The person said that this tells him to claim the general variance, and when a couple of communities have done that, their permit has been written on current performance. Dr. Suplee said that was because their current performance is not adequate to meet the nutrient standards but is still superior to or better quality effluent than the minimum requirement of the variance. He said they fall in between, in that interim zone.

DEQ Deputy Director Mr. George Mathieus said the workgroup had significant discussion on this early on and it really falls back to anti-backsliding and the whole point was its still considered a variance against the standard. Mr. Mathieus said they aren't going to allow the discharge in the variance process to go from 7 to 10. It's holding the line and recognizing it's still a variance on the standard. Dr. Suplee admitted that it's not written as crystal clear as the lawyers would have liked it but it was clear to permitting. DEQ had a couple of meetings immediately after all the rule adoption and it was clear that this, coupled with anti-backsliding, means that's the approach they would take. And that's the approach they've been taking. Dr. Suplee said this was discussed during the earlier meetings, too.

Dr. Suplee moved onto DEQ-12a which is the actual standards. He said that during the triennial review process there is the potential for 2 kinds of rulemaking. The nutrients standards themselves, and the actual concentrations that are divvied up by regions (in the table, with seasonal applications), are board rules. So it would be the Board of Environmental Review (BER) who, if any changes were made, would review them and decide to adopt or modify whatever the Department and the nutrient workgroup recommend. In contrast, the DEQ-12B variance rules are Department rules. They are controlled by the Department, but they still have public comment period, which is typically a minimum of 45 days, after

which point DEQ incorporates public comment, making modifications. Dr. Suplee said they then go to DEQ's director for signature. That's the legal process for the rules that are governing the standards and the variances at this point. At this stage, DEQ may or may not make any changes to 12a this go round. There is nothing in the main group of criteria they are looking to change. DEQ are keeping the ecological region criteria as is. The main thing DEQ has been working on since the last nutrient workgroup meeting is adopting standards for Flathead Lake. Those aren't that far along yet, so Dr. Suplee sees it highly unlikely they'll be rolled into this triennial review. In contrast, Dr. Suplee said DEQ has completed the field aspect collecting data for large rivers on pretty much all of the Missouri River that DEQ believes should have water quality standards. This includes the headwaters all the way down to Fort Peck dam. Dr. Suplee said the Yellowstone model is also fairly far along and that right now there has been some new aspects added to the model that were not in the earlier model. Those are out in peer review and should be back in October. At that point, assuming the peer review goes well which DEQ anticipates, Dr. Suplee said they can begin to run those model simulations, like they did with the Lower Yellowstone River. There is a good chance they might be ready to be rolled into the later table under large rivers, which would be the Yellowstone River from the park boundary down to the Big Horn confluence. Dr. Suplee said there might be 2 segments, or a split near Billings and they'll have to see what the data show, that it depends on how quickly the triennial review process goes.

Q4: (Brian Sugden on the phone): *With the litigation surrounding the nutrient variance process, does it make sense to create additional nutrient standards given the uncertainty we're in now?*
A: Dr. Suplee said he didn't know. His personal view is this has been in the works for a long time. DEQ has been working on large river standards continuously since 2006, it's an ongoing process. Dr. Suplee asked for a legal opinion. Kurt Moser from DEQ legal said it should have no effects whatsoever. Mr. Sugden said that given how important the variance process is in making all the nutrient standards work, it doesn't make sense to him to add additional water bodies to the circular at this point.

Q5: *Could you briefly walk me through the triennial review process?*
A: Dr. Suplee explained that every 3 years DEQ is required to take a look at our water quality standards to make sure our technical and scientific basis is still appropriate. Or if we're working on standards, it's an opportunity to roll them in, like mentioned in the Yellowstone. It's also a requirement, and this is particular to the nutrients standards, that we take a look at the variance groups and the treatment levels that were originally established in statute. Evaluate whether those continue to be appropriate or not based on the aggregate economic effect that those variance levels are having on that group. Dr. Suplee said we are just on the tip of the iceberg on that process.

Q6: *Is it the economic effect*? *In his memory, it was written in the law of the rule as the technological advances.* Dr. Suplee said it's technology and cost. The person asked if DEQ feels they have to revisit the economic analysis every 3 years in the review. Dr. Suplee said that in some degree, but it doesn't have to necessarily look like it did in 2012, where DEQ did a full-scale analysis of what they thought this overall effect would be on the state. This will be much more refined to probably just those that need a variance within the group. DEQ is still trying to figure out what it's going to look like. There are still requirements for that to occur. Dr. Suplee pulled up page 2 of 12-B, the general variance treatment requirements for the different categories: >1 mgd and <1 mgd for lagoons. Dr.Suplee pointed out the language requiring DEQ to review this.

The Department (and the Nutrient Work Group) will consider whether or not more cost-effective and efficient treatment technologies are available when determining whether the general variance treatment requirements must be updated in accordance with §75-5-313(7)(a) and (b), MCA. The review

will occur triennially and will be carried out at a state-wide scale, i.e., the Department will consider the aggregate economic impact to dischargers within a category (the > 1 MGD category, for example).

Q7: *"State wide scale". I'm sure Jeff will explain to me that that means.* Dr. Jeff Blend said that they did their economic analysis a few years ago for the whole state. He said they determined that most towns would need reverse osmosis to get to the actual standards, and that would have significant and widespread detriment to most cities and towns. Dr. Blend said he thinks what we'll be doing here is looking to see if anything's changed in terms of the technology and therefore, the economics. Dr. Blend said he highly doubts you could get to the standards right now. He doesn't think anything has happened that has created a sea change, but they'll look at what's happened incrementally. The person in the group said he understands that the technology or the cost of the technology has changed and that triggers DEQ needing to do something. Buy if that hasn't changed significantly, than your process basically stands as it is and all you have to do is say we don't see a change there. Unless the tax bases change or the demographics change, but he said that the inputs to your model is driven primarily by those costs, as he understood it. Mr. Mathieus said that the initial analysis looked at what it takes to get to the standard, not what it takes to get to the variance limits. So I think that we always anticipated that initial widespread economic analysis for meeting the standards. It was just like Jeff said, it was taking a look at what's it going to take to get to the standards. Mr. Matheius said to remember in the end the workgroup worked on what's this going to look like after each of our triennial reviews? How will we get closer over the 20 year period? He continued, saying DEQ took a stab at this, but at the same time agreed we would have to analyze that on a site-specific basis. Let's say we're going to move the variance from 10 to 8 or 6 or whatever. Mr. Matheius asked what's the cost associated with that and what makes it appropriate to do that within the confines of the rules around the variance, when it's technology and economics? What's that really look like now, in 3 years or in 6 years.

Dr. Suplee continued, saying that basically what DEQ did in 2012 was a big state-wide analysis which showed on a statewide basis meeting the standards was economically very difficult or nearly impossible, and that pretty much has been established. Going forward, what DEQ is going to be focusing on is in each of those groups and where they are in those series of reduction steps that will be coming at some point in this triennial review or the next triennial review and saying 'how do these groups individually look relative to making the requirements more stringent'? Not necessarily meeting the standards, per se, but meeting a stiffer requirement within the variance. Mr. Suplee said that is the main difference between what was done in 2012 and what will be done at each of these triennial reviews.

Q8: *Is all this within the rule process?* You can change those numbers as a Department rule? Dr. Suplee said yes. He said the statute was set up so that when these became the Department's property, so to speak, DEQ owns them and are required to review them, and then to upgrade over time, going forward. (same person in Q8) *So I misspoke earlier because the model you did didn't look at those as >1mgd and <1 mgd categories, specifically. You looked at it in a more generic fashion.* Dr. Blend said yes, they did. *So now you're going to have to somehow convert into some economic criteria for those different groups- somehow generalize that rather than generalize it statewide, right?* Dr. Blend said yes, he believes so, but they're still working on how to do that. He said that this was kind of a placeholder a few years ago, to justify a general variance. One hypothetical example would be that some technology came out that you could add onto an existing plan and you could get all the TN systems down to a 5 (mg/L). Dr. Blend said that doesn't exist, but just hypothetically. Then maybe there would be a change at some point and somehow that would be phased in. Or if you found the holy grail that could get everyone down to really strict standards. But he said that (the question 8 speaker) is correct, that they'll have to be more specific this time around and the next cycles.

Mr. Mathieus said that DEQ recognized all along and that one of the soapbox speeches he gave was that this process was relying on the technology's advance and that they become more affordable. DEQ looks at those in the long term and to determine how can we best get to where we need to be? Mr. Mathieus thanked everyone who was in the room and that they have a lot of time invested. And that's why they were here today and encouraged to continue building what they built in the past, which he believes is a great collaborative process with 3 pieces of legislation and several rulemakings. He said it's pretty unprecedented and that they could have made the decision in 2000 to do nothing, which maybe that's what the rest of the country chose to do but they didn't. Mr. Mathieus said that he thinks that the group knew when they left this in 2014/15, that there were still going to be hard things to figure out moving forward.

A participant wanted to be sure that he understood that in 2012 it was a statewide basis for the economic analysis. He asked if this time through you're going to break the economic analysis into the 2 different flow rate categories. Dr. Suplee said there are 3, but yes. And that in 2012 what they really looked at was- what would be the cost for the public and the private sector to meet the standards. And that finding is pretty well set in stone at that time and found that it was going to be expensive. Now they're saying, ok, folks are operating at the variances but we also know that the variances are also going to incrementally become more stringent with time and there will be reasons why we'll change those. Our job is to look at the data and figure out what's going on relative to those variance levels. If they can already meet a standard because they don't have the potential to violate the water quality standard, they are already in the group but they don't have to deal with the variance. There are still a number of people in each category who need a variance and are operating somewhere in that range. The question is if it's time to make the variance more stringent because everyone is already meeting it? Mr. Suplee calls this the first cut or an inventory. It's not the economic inventory, but just folks in different situations.

Q9: *Part of that economic analysis in 2012 was based on water quality standards. In 2016 it sounds like it's something between the variance levels passed in this rulemaking package and the water quality standards.* Dr. Suplee said it's more case by case, probably only targeting the folks in the group who need a variance. If you don't need a variance it's a non-issue. Dr. Suplee said that the process is not totally figured out yet, but that the group is meeting now to see what is figured out and a launch point to figure out the next step.

Q10: *Mr. Doug Parker asked, more to EPA, if other states have the variance process or any change to this economic analysis process in the last 4 or 5 years.* Ms. Tina Laidlaw said that Wisconsin has done some work on variances, but not compared to Montana. There have been no revisions to the 1995 economic analysis, but EPA does have water quality standards out that give more guidance on variances. She said that it's still kind of the 1995 guidance that the group relied on in the work they did. The other nuance the group is talking about is if there is any economic guidance on how you set variances, and again there is additional language under rules that pertains to variances.

Q11: *Is the Wisconsin activity driven by litigation?* Ms. Laidlaw said not to her knowledge. She admitted she's not as familiar with it, but that they are regulating point source and nonpoint source in regards to phosphorus. Mr. Jim Jensen asked if she knows the status of litigation there. Ms. Laidlaw said she did not. Mr. Parker said that Wisconsin had variances for other parameters earlier, which is a model that Montana used. They have been around for 20 years or so. Ms. Amanda McInnis said at one of the meetings we talked about incremental variance levels with a glide path of predictability and spending

millions of dollars and the short term predictability is really problematic. This comment led to Dr. Suplee bringing up the guidance document that accompanies the rules published in 2014 where everything is laid out, pointing to the basic layout of what would be expected in the absence of anything else. Dr. Suplee explained for the large facilities, when they first got their variance they should have been working towards 10 and 1. At the next permit cycle we will be looking at 8 and .8. There is a bit of a disconnect because permits are written on 5 year cycles and triennial reviews are every 3 years. That is how the water quality act is written, the point being that they happen in 3 to 5 year increments.

Next step in the guidance is 8 and .5 for TP.

The last one is far out on the variance process timeline under development because Dr. Suplee understood that to go to microfiltration is pretty expensive to get those low TP numbers, so the group wanted to leave that open for more opportunities that may occur and that's still the case. The small mechanicals have a similar glide path based on a higher initial starting point. Dr. Suplee moved on to lagoons, they're required to hold the line. This is what's in guidance for their reduction steps.

Q12: Ms. McInnis asked *if DEQ will reissue the guidance along with the new standards*. Dr. Suplee said if there are changes they will update the document, which could come out of the nutrient workgroup, but it doesn't have to because it's not controlled by rule.

Dr. Suplee moved onto another important point in DEQ-12B, that it sunsets on July 1st 2017. So if nothing were to happen at all and this document was not reviewed and updated and just expired, the nutrient standards would also expire. We would then be back to working under the narrative standard that is still in place. Dr. Suplee thinks this is something the workgroup doesn't want to happen so the review is really important. He encouraged modifications that will then go through public review process, get EPA approval and get it in place in a little over a year from now.

Q13: Guy Alsentzer *said in the clean water act vs. the water quality act, the state adopted the standards enunciated in 12A with 12B part of that package. The statutory expiration or sunset date is incompatible with the water quality standards because they wouldn't disappear by state law, and as a matter of federal law they will remain on the books because it's your approval thereof. He sees an inconsistency between the water quality act and what's been adopted as part of the MCA's vs. what the federal CFR's say what is binding.* Ms. Laidlaw from EPA said it's the States interpretation of their State's laws. Mr. Alsentzer wanted to raise this issue as a red flag for the group that there should be an official inquiry into what that status is and what the interpretations are. It's a huge impact if we're operating under the status of state law it's going to happen but not under federal law. Dr. Suplee said the bigger issue is to get the variance reviewed and in place by that date, then it's a non-issue. Even if they were to go away under state law, we still have our narrative standards and interpretations of these standards are still required by permit writers. How they would do that at this point isn't crystal clear but they were doing it before these rules were adopted and will do it afterwards. Dr. Suplee said these series of meetings need to result in an update of the variance process.

Dr. Suplee moved from the target completion, saying that EPA needs 60 days for review. This could include DEQ-12A, DEQ-12B, or both. Dr. Suplee would like the groups work done some time in the spring to allow for the 60 days in advance of July 1st, 2017. There will be a series of meetings between now and March to craft what it is to be submitted, both to the department and possibly the board. But the board could trip up timelines and delay it another 6 months. Of these 2, Dr. Suplee believes the most important to get in place is the variance rules.

Mr. Parker said he didn't think they had to be concerned about the 60 day review period because the state's responsibility is to get them done by July 1st. Dr. Suplee thought so too but not sure what the answer is, and asked if everything is only complete once EPA signs off on it. Mr. Moser (DEQ legal) said that the goal should be to have it completed before then, to not take any risk with the EPA approval. Mr. Parker said that if EPA doesn't approve it the timeline is shot anyway, but fine with setting this as a goal. Everyone agreed to the goal of sometime in the spring for completion. Dr. Suplee said the department will be working on the technical economic analysis a lot in the coming months.

Q14: It was asked of Dr. Suplee *what did he see as the general process for the meetings?* Dr. Suplee thought that DEQ will need a little time after this meeting for running the economic analysis and what that might look like. Some of this may have to be farmed out to consultants. There will be a little hiatus in the late fall, early winter. Then the meetings will be more routine, maybe monthly, starting the beginning of the year through spring. Dr. Suplee assured the picture (of what needs to be done) will get clearer as things move along.

Dr. Suplee moved onto his presentation Triennial Review of Circular DEQ12-B that he refers to as an inventory of where they stand today with the discharger groups. He views this as the starting point for any kind of economic analysis they might do.

Ms. McInnis said that *a lot of these municipalities if they're at half of 35 they don't always take their facilities out of service. They are able to operate at the 15 because they're using full volumes of their facility and are designed for the 30, then fully loaded. That's the Bozeman situation; they were designed for 7 and can only get to 4 using all of their facilities.* She believes that you lose that affect when the analysis is done this way. Mr. Craig Woolard said to also think about the fact that the design flow is designed for some future date so the basis has to stay true to the future limits. Dr. Suplee said this is a leapfrog situation, where the next time you design this facility, it won't be to just meeting capacity. You will build bigger and be back at 50% design flow. He said there has to be some kind of accounting or his analysis would make it look like everyone is not meeting 15. He thinks many are.

Mr. Woolard said that where we are now vs. design flow has to be part of the analysis. Going back to his question about current performance, it's not a linear process. It's easier to operate at a lower flow and it makes it more difficult to meet the limit. His concern is when going through the permitting process using the current performance on a plant designed for a 20-year timeframe and continually increasing the flow, they are going to get a mismatch between the permit and the plant by taking some design capacity off the table. Mr. Woolard thinks there is a solution but it might have to be more nuanced than a simple actual/design ratio multiplier. Dr. Suplee said he understands and that this is something to explore in future meetings, that at this stage everything he is showing is a rough inventory.

Ms. McInnis added there has been a lot of work on treatment performance statistics and how if you push facilities down, how reliably they can continue to keep those numbers. Dr. Suplee said to keep this as a place holder for a future meeting. For now, Dr. Suplee said this is a simplistic approach he took to account for design flow vs. actual flow.
The next slide shows what those 21 facilities in the ≥ 1 MGD group look like:
Dr. Suplee talked about 10 facilities that need a variance, believing they will be the majority of the economic analysis because they meet the standard.

Q15: *How many of the 5 facilities are only delayed (i.e., they will eventually get numeric nutrient standards)?* Dr. Suplee thought 2.

Dr. Suplee went back to the >1 MGD group that need a variance. Everyone in that group is meeting the 10 mg TN/L (or lower) variance right now based on their effluent data, except Whitefish. This is based on the adjustments Dr. Suplee made for design vs. actual flow. On the phosphorus side, half are meeting half aren't.

Dr. Suplee continued with how the timelines work. With Whitefish, for example, their permit was renewed in 2015 and valid until 2020. There is a triennial review today and in 2019, so Whitefish will not be affected by any changes until 2020.

Dr. Suplee next covered the <1 MGD Group, which his 37 public and private facilities

- 32% or 12 don't have standards
- 27% or 10 don't have reasonable potential/can meet their numbers at the end of their mixing zone.
- 38% or 14 need a variance for N or P

Q16: Are the facilities with no RP driven by the size of the stream that they discharge to? Making it a dilution issue more than a treatment issue. Dr. Suplee said yes, and a lot of this is on the Yellowstone River.

Dr. Suplee continued with the small mechanical facilities and the optimization the department is working on, which he believes will help inform some of the variance limit decisions for this group. Optimization results to 2016

Dr. Suplee said the optimizations had a pretty big effect on these facilities with minimal capital investment. Mr. Paul LaVigne agreed, saying it's small capital cost and then you get the operational savings in terms of less energy used and less sludge produced. Dr. Suplee added that technology change can also include just running a plant better. He pointed out many improvements in the chart that were done all through optimization, saying it's really encouraging and something the workgroup should use to help inform decisions about the <1 MGD group and the technological aspect of the review.

Q17:A question was directed to Mr. Lavigne asking *if this was driven off the optimization by how the equipment is being used, or additional training for operators to run their system?* Mr. LaVigne said the latter. Ms. McInnis asked how long they have maintained these limits. Mr. LaVigne said it varies, that they have been doing it 5 years now and used the example of Chinook who was one of the first and keeps getting lower for total Nitrogen.

Dr. Suplee next covered Lagoons. There are 65 individual permits and 26 general. DEQ started a pilot study on the Joliet lagoon
Dr. Suplee said that the state is paying for the project. They invested in the instrumentation and paying for the pilot studies.
Q18: It was asked *what other technologies is DEQ looking at.* Mr. LaVigne referred back to the Lagoon study and said that they are not as optimistic about it because there is not much that can be done to control lagoons. But there are 2 additional: the floating islands and the biodomes. Mr. Dave Aune commented that they struggle with lagoons because some things are known about them, but not a good analysis that can be performed and guarantee a permit. They can be optimized to get better

performance, but there is a difference between better performance and actually meeting a real number in a permit. He said that anything they can learn about how the systems can perform in the real world is helpful, so he encourages this project. If we know what we might be able to do with these technologies to allow small communities to have an option, maybe we can bring that performance in line with permits and variances.

Mr. LaVigne added affordability as a part, too and that it's a huge burden for smaller towns. So if it ends up being an open source rather than a purchase for the improvement, Mr. LaVigne said he'd be up for that. He said they have also been working with MSU wetlands project with Bridger Bowl.

Mr. Aune commented on ammonia and the subsequent nitrate standard that goes along with it is the gorilla in the room, causing lagoons to find themselves in trouble. But we can get past that with the nutrient variance and the TP nutrient standards, but mixed up with the ammonia and nitrate standard is driving more improvements than anything else. Mr. LaVigne agreed and said that ammonia is really their focus and possibly denitrification coupled with it. Mr. Aune is also interested in where DEQ is in the ammonia standards and would like an update.

Mr. Jim Jensen asked if in Dr. Suplee's analysis he was also examining source reduction alternatives. Dr. Suplee said not specifically, that there is the phosphate dam that went in place and the update to it a few years back. Mr. Jensen said he's looking at things that are on the market. Mr. LaVigne told Mr. Jensen that he would meet with him to listen to his findings. He is interested in what these small communities can do to help themselves.

Dr. Suplee continued with the lagoons, saying that besides being required to maintain current performance, he thinks that this will be a tool for more information about what lagoons can do, but it will still be a few years.

Dr. Suplee moved onto wrapping up the discussion, saying it's been 2 years since they have adopted the rules, 5 years since the statute was adopted and about 8 years since communities began learning of pending nutrient standards. Mr. LaVigne added in regard to optimization he didn't really think size matters. There just hasn't been much interest from the larger communities, but he doesn't see large or small making a difference.

It was stated that it would be useful for future meetings to bring some examples and explain to us how they're getting 3 mg TN/L and how it's relative to other facilities to help us understand. Mr. LaVigne said sure.

Mr.Woolard said that it's not really a non-interest in optimization from larger facilities, that there is ongoing optimization in those facilities, but that it's a different situation than a smaller community with a limited staff. He said we're making adjustments continually and most of the plants are that there is not room for improvement but wouldn't characterize it as a lack of interest. Mr. LaVigne said he sees both, that there is some complacency. Some facilities were upgraded quite a while ago and have dialed into a certain effluent quality that they're happy with.

Mr. Woolard asked if it is also fair to say that 2 days of training goes further at a facility where the level of operation isn't very sophisticated to start with, so you see some bigger benefits. Mr. LaVigne agreed.

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Dr. Suplee reiterated that the workgroups focus will be on the group who need a variance and if the 1 and 10 is still suitable. The Department has an idea of what that might look like but encourages any input from the workgroup. Dr. Suplee said they can talk to him or send him an email.

Dr. Suplee next turned the meeting over to the workgroup for feedback on how implementation of nutrient standards and variances has been going.

- Someone thought the way that some of the variances have been processed with meeting the current performance was not the understanding that a lot of permittees left the rulemaking and lawmaking process with. Whether that was a miscommunication, that has been an issue with several permittees. Dr. Suplee said that was a miscommunication, that they definitely didn't change their interpretation.
- Someone stated that he is still concerned that there might be a disconnect in the variance and the permitting process. We talked about the multiplier and how it gets put in to account for the fact that these are 20, 30, 40 year investments. How do we account for the evolution in their lifecycle and permitting process and making it consistent with the variance process? Dr. Suplee clarified that the adjustment he made for this analysis for design vs. actual flow is strictly for deciding who is and isn't meeting 10 and 1, it has nothing to do with the permitting process. Someone said that in the permitting process there is a very real potential to take capacity out of the system. He said this can work contrary to water quality improvement. You run the risk of penalizing systems that optimize operation on a day to day basis and reward systems that invest in the technology and optimization. That's a problem. You don't want to send a message to treatment facilities "if you do a great job we're going to ratchet down your permit." Someone stated that they are hopeful that in this process everyone is getting the right message.
  Dr. Suplee requested the group to send or forward him an email that outlines the technical considerations they were referring to. He said at one of the meetings he can roll it into the agenda and maybe there's a place in the rules or DEQ-12B where it can be addressed.

- It was asked *if there have been any issues with the lagoon variance and implementing the permits specifically?* Dr. Suplee said no, that the lagoons he showed earlier either had some nutrients in their monitoring data so they were required to continue monitoring and maintain current performance. He said he didn't know of any cases where they didn't have nutrient data, but if they didn't it would have been added to their permit. Then during the next permit renewal they could see what their performance was. Dr. Suplee also referred to the example of Joliet given earlier in the meeting. Mr. LaVigne added that if a lagoon does a project to reduce ammonia, that it's important to not (penalize) them for working on a non-lagoon design to remove nutrients. He said that's not their intent, so he wonders if they need to write something about it. Dr. Suplee didn't think they needed to for ammonia because it's considered a toxic compound and excluded in a way and regulated by other things. (NOTE: this may not have been an accurate statement; statute excludes nitrate + nitrite human health standards, but does not mention ammonia.) But if they start to optimize to try to bring down nitrate or TN, the workgroup is in a gray zone. Dr. Suplee thinks there may be need of some definitions to avoid this. It may need to be worked on in a rule definition.

Dr. Suplee asked for any other observations. There were none.

Dr. Suplee next moved onto Mr. Sugden (who was on the phone) who had a question about the nutrient assessment method. Dr. Suplee said that independent of all this work, there is a monitoring assessment

branch of DEQ that assesses the ambient surface waters to see if they're in compliance with standards, which now includes nutrient standards. It's an elaborate process that also involves looking at macro invertebrate populations and density of aquatic vegetation, and it's all reviewed in a package and housed in a nutrient assessment method. The main changes made this spring to that method:

- Shortened the time period between when water quality samples can be collected and be considered independent, from a month apart to 2 weeks. This helped the field crews go out, collect the data they need in 3 to 6 months period
- Changed how long a minimum reach can be

Dr. Suplee said these changes were small enough to not have to go public with, because it didn't affect the outcome.

Mr. Sugden asked if DEQ is more open to a larger scale review of the method to trigger a public review. Dr. Suplee referred to a project he's working on in eastern Montana, looking at the major pieces that inform the assessment methodology for those streams. They are in their 4th year and will have a lot of information that will probably change parts of the nutrient assessment method for eastern Montana prairie streams. But this is still a couple of years out.

Mr. Sugden said that there was a lot of work done in western Montana through 2014 and a lot of lessons learned in that process to inform a reexamination of the method. Dr. Suplee agreed, saying that the method has been applied in enough places in western Montana to do a working analysis for weak and strong points.

Mr. Sugden asked that before DEQ comes back to western Montana for monitoring and assessment, to complete this review prior to that effort.

Dr. Suplee asked for any comments from the public. There were none.

Dr. Suplee then listed the workgroups next steps:

- Work on the economic analysis for those that need a variance and those that are meeting or not meeting the current statutory limits.
- Look at the next stepdown numbers
- At the next meeting DEQ can lay out what they found and talk about how it informs the group for the next steps of the variance limits
- Any input on how that should go, send to Dr. Suplee.

Dr. Suplee did not set a new meeting date, but thought maybe late this year or early next year. Dr. Suplee also said this information and presentations would all be posted on the Nutrient Workgroup website, along with the meeting minutes. Dr. Suplee adjourned the meeting.

DRAFT