BEFORE THE BOARD OF ENVIRONMENTAL REVIEW

OF THE STATE OF MONTANA

BOARD MEETING)

January 21, 2014)

TRANSCRIPT OF PROCEEDINGS

Heard at Room 111 of the Metcalf Building

1520 East Sixth Avenue

Helena, Montana

January 21, 2014

9:00 a.m.

BEFORE CHAIRMAN ROBIN SHROPSHIRE,

BOARD MEMBERS LARRY MIRES, JOAN MILES,

MARIETTA CANTY, JOSEPH RUSSELL,

CHRIS TWEETEN, and HEIDI KAISER

PREPARED BY: LAURIE CRUTCHER, RPR

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WHEREUPON, the following proceedings were had and testimony taken, to-wit:

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(Ms. Miles and Mr. Tweeten not present)

CHAIRMAN SHROPSHIRE: It's 9:00 a.m. and we have a quorum. So why don't we go ahead and get started. I'll call this meeting to order. Maybe I'll do roll call in a minute, but Tom, you had an announcement that you wanted to make.

MR. LIVERS: Yes. First, in addition to the new sound system, we also have a new Administrator for our Permitting and Compliance Division. Judy Hanson retired at the end of October, and her replacement is here today, and I'd like introduce John DeArment.

MR. D'ARMAND: Hi, there. I'm John DeArment, as Tom just said. I'm the new Administrator for Permitting and Compliance. I replace Judy Hanson. I wanted to introduce myself and say hi. And I have been here about -- I guess this is my sixth week.

I came to Department of Environmental Quality from private consulting in Missoula. I'm a hydrologist by training, and it has been a great

first month and a half. I'm looking forward to getting to know all of you folks, and getting to know all of you in working together in the years to come.

CHAIRMAN SHROPSHIRE: All right. Why we don't do roll call. Do you mind doing that, Tom.

MR. LIVERS: Sure. Mr. Mires.

MR. MIRES: Present.

MR. LIVERS: Ms. Canty.

MS. CANTY: Present.

MR. LIVERS: Ms. Kaiser.

MS. KAISER: Present.

MR. LIVERS: Ms. Miles.

(No response)

MR. LIVERS: Mr. Russell.

MR. RUSSELL: Here.

MR. LIVERS: Mr. Tweeten.

(No response)

MR. LIVERS: Chairman Shropshire.

CHAIRMAN SHROPSHIRE: Here.

(Ms. Miles enters)

CHAIRMAN SHROPSHIRE: For the record, Joan is present. The first thing on the agenda is the review and approval of the minutes from the December 6th meeting. Any comments?

(No response)

CHAIRMAN SHROPSHIRE: Is there a motion to approve?

MR. MIRES: I would move to approve.

CHAIRMAN SHROPSHIRE: It's been moved by Larry. Is there a second?

MS. KAISER: I'll second.

CHAIRMAN SHROPSHIRE: It's been seconded by Heidi. Any further discussion?

(No response)

CHAIRMAN SHROPSHIRE: Hearing none, all those in favor, signify by saying aye.

(Response)

CHAIRMAN SHROPSHIRE: Opposed.

(No response)

CHAIRMAN SHROPSHIRE: All right. Motion carries unanimously.

The next thing that we have on the agenda are briefing items. There is some contested case updates. Katherine.

MS. ORR: Good morning, Board members. I wanted to --

UNKNOWN SPEAKER: Now joining Olivia Hunter.

MS. ORR: Madam Chair, members of the

Board, there isn't very much really to add to what is here on the agenda, but let me just go through it systematically.

In Item II(A)(3)(a), which has to do with In the Matter of the Notice of Appeal and Request for Hearing by Western Energy Company, the parties have requested an extension, and the date for prehearing conference won't even be set for April 14th, so I am just going to wait to hear from the parties about when they want to set that. I think that's all to provide briefing on.

The next item involving Signal Peak Energy, the parties asked for a minor extension of about a month to complete discovery.

And then you're all here probably wondering about the contested cases for JE Corette and Colstrip, and let me go into that for the Board a little bit.

The parties have determined that they want to try to settle these cases, and they asked me to issue an order on two of the motions for summary judgment that were filed by PPL and by the Department concerning the applicability of rule 17.81/212(4), which figures largely in this case, and I represented to the parties that I will be

issuing that order by this Friday, and indeed that will happen.

(Mr. Tweeten enters)

MS. ORR: It may be that the parties will want to approach the Board concerning my disposition of that order, and we'll just kind of take that step by step. But here you have a listing of all of the pending motions and the disposition of those motions so far, and I'd be glad to field any questions that you might have.

So let me summarize. What is going to happen is the parties are going to try to settle these cases -- and I forgot to mention this -- they're going to file a status report at the end of February; and depending on that, it may be necessary to put it back in a schedule for hearing or not as the case may be. Any questions?

CHAIRMAN SHROPSHIRE: Any questions for Katherine?

(No response)

MS. ORR: Thank you.

CHAIRMAN SHROPSHIRE: I guess that takes us all the way to the action items, if I'm not mistaken. Tom, we were going to take these out of order.

MR. LIVERS: Yes. Madam Chair, members of the Board, for the record, Tom Livers, Deputy Director, DEQ. I think for a couple reasons, we were hoping to do No. 4, the Temporary Standards for the New World Mining District, early; but I think it looks like the Forest Service isn't here yet, so I think what we will do is probably go into No. 1, and if they show up at that time, maybe we'll move them up whenever they get here between items.

So let's go ahead and stay with the agenda for now with incorporation by reference. And for those of you not familiar with incorporating rules by reference, as part of our federally delegated authority, we typically have to update State rules to make sure they're essentially consistent with federal rules that guide our delegation, in this case the Air Quality Program delegated by EPA under the Clean Air Act.

So often there is not a lot of flexibility in changing rules substantively when you're incorporating by reference. It tends to be a little bit of a housekeeping item, but I think this time we're going to explain in a little more detail than we have in the past some of what has

taken place here, because there are some fairly substantive developments with this incorporation, and I want to make sure the Board is aware what is being done here. So we're going to list some of the highlights as we talk through that.

So with that, I turn it over to Eric Merchant.

MR. MERCHANT: Thank you, Tom. Good morning, Madam Chair, members of the Board. For the record, my name is Eric Merchant, and I'm here representing the Department regarding the proposed initiation of rulemaking for incorporation by reference as Tom suggested.

More specifically, what the Department is doing here is we're asking the Board to initiate rulemaking to adopt the current editions of Federal and State statutes and rules that are incorporated by reference in the Administrative Rules of Montana. This would be the July 1st, 2013 edition of the Code of Federal Regulations; the 2013 of the United States Code Annotated as it existed on December 31st, 2013; and the Administrative Rules of Montana as they existed on June 30th, 2013. An example of that would be other rules of the Department or any other State

agency that are incorporated by reference into the air quality rules.

For your reference, in your packet the Department has highlighted and summarized substantive change to the federal regulations, and included that information for your reference.

Essentially what is happening here, this is the transfer of administrative authority to implement these standards, these federal standards, from the Environmental Protection Agency to the State of Montana. An example of impact, and something that we've heard from our stakeholders recently, as an example, the electric utility mercury and air toxic standard of the MACT rules. This is found at 40 CFR Part 63, and these are national emission standards for hazardous air pollutants.

In part, this standard provides an opportunity for compliance extensions of up to one year by permit action as necessary for the installation of controls. We have heard from our stakeholders in this category of sources that this is something they would really rather deal with the State of Montana on these types of issues than the Federal Environmental Protection Agency.

And again, there is a list of examples of what we are specifically incorporating, any changes that have happened to those codes since the last time we incorporated federal requirements by reference.

You'll also see, if you look in the executive summary, that there are certain exceptions that we've made in the past. That would be in circumstances where we might have a standard that's been promulgated, published in the rule, and then subsequently remanded or vacated by EPA or rescinded by EPA in some form, yet it still exists in the Federal Code. So we have made an exception in our rule in that case.

An example of this is performance standards for commercial industrial solid waste incineration units. This is found in 40 CFR Part 60, New Source Performance Standards. In this case, EPA promulgated these standards, published them in the CFR. Subsequently the standard was vacated by a Court, vacated and remanded by the Court. The State provided an exception in rule, and you'll see that really is just cross-outs in the rule text. And then subsequently EPA issued a new standard, and at this time, we are now

incorporating that updated new standard by reference under this rulemaking, or proposing to incorporate under this rulemaking.

Again, for your reference, the description of these sections are included in the executive summary in the rule text.

As Tom indicated earlier, the purpose of this rulemaking is to ensure that Montana's Air Quality Rules are as least as stringent as Federal Air Quality regulations and standards to maintain primacy and federal delegation of air quality programs. And then obviously one of the big ones here is the transfer of administrative authority from the federal government to the State of Montana.

Does anybody have any questions, specific questions at this time?

MR. RUSSELL: I do have one. Can you describe the mercury rule and how that came about.

MR. MERCHANT: I could go into some -- Mr. Russell, Madam Chair, members of the Board, I can go into some detail, but probably not going to be able to pick out all the details that may be necessary for this discussion.

As I understand it, EPA -- it was a

voluntary vacature of the rule. There were certain problems within the definitions of how the regulated industrial -- or how these sources were subject to the requirements for this rule. There are certainly some other requirements, and I have some people in the audience that may be able to speak to that.

However, essentially what happened was the rule was vacated, remanded back to EPA, so that they could work on applicability issues. They came back with a rule, and subsequently we're now putting that into rule and incorporating that by reference.

Any more?

MR. RUSSELL: Maybe Dave could do a little more.

MR. KLEMP: Madam Chair, members of the Board, for the record, my name is David Klemp. I'm the Bureau Chief of the Air Resources Management Bureau.

Board Member Russell, I think I understand the genesis of your question. The mercury rule, from a federal perspective, has gone through many iterations. It was first published under Section 111 of the Federal Clean Air Act,

almost ten years ago now. That was the inappropriate section of the Clean Air Act. When that was published, Montana adopted its version of the mercury rule, this Board, and that was subsequently vacated, and it has been republished under Section 112, which is the Maximum Achievable Control Technology requirement as opposed to New Source Performance standards, and that's what we're adopting today.

Does that answer your question, Mr. Russell?

MR. RUSSELL: I just wanted to make sure that we thought of how progressive our Board was back then with the mercury rule that was put out by the feds at that time.

MR. KLEMP: If I may, Madam Chair, Board Member Russell, the federal rule looks very similar to Montana's mercury rule, and I don't think it is an accident. So I think the State did an excellent job.

CHAIRMAN SHROPSHIRE: A follow up question. So in terms of the next year, and implementation of that rule at a specific source, what sort of steps would they have to go through to meet the requirements of that?

MR. MERCHANT: Madam Chair, the mercury and air toxic rule has many different pollutants aside from mercury. There's acid gases, and really there is some options that facilities have. The mercury requirement, many of the facilities in Montana are already in compliance with the federal mercury rule by virtue of having the State program.

There is also particulate that can be used as surrogate for some of the metals. There's acid gases. And so ultimately these facilities need to be in compliance by April 2015, and they need to demonstrate compliance unless an extension is granted. As Eric mentioned, they can get an extension for up to one year if they need it, due to the availability of control equipment, or getting contractors to install control and those types of things. So there is various options that facilities have that they're looking into.

CHAIRMAN SHROPSHIRE: So facilities would do stack testing to see what their current emissions are, and then see if they're currently in compliance, and if they are not, they would have to get in compliance? Is that kind of the big picture?

MR. KLEMP: Madam Chair, yes. A lot of facilities, if they use a particulate matter as a surrogate, they're already obligated to do some form of particulate testing, so they know whether they need to improve their control equipment or not, and whether they'll be able to comply or not.

CHAIRMAN SHROPSHIRE: Okay. Thank you.

MR. MERCHANT: Mr. Russell, Madam Chair, had you asked me a question on commercial solid waste industrial incineration units, my answer would have been more on point.

MR. RUSSELL: I would have never been able to ask that question.

CHAIRMAN SHROPSHIRE: And it is not on the agenda.

MR. MERCHANT: Thank you. Any other questions?

(No response)

CHAIRMAN SHROPSHIRE: I will entertain a motion to amend ARM 17.8.102 to incorporate by reference the updated Federal and State regulations and other non-substantive housekeeping revisions to the ARM, and appoint Katherine as the Hearing Examiner.

MS. ORR: That would be fine.

MR. RUSSELL: So moved.

CHAIRMAN SHROPSHIRE: Joe has moved. Is there a second?

MS. CANTY: I'll second that.

CHAIRMAN SHROPSHIRE: All those in favor, signify by saying aye.

(Response)

CHAIRMAN SHROPSHIRE: Any opposed?

(No response)

CHAIRMAN SHROPSHIRE: Motion carries unanimously. Do we want to continue on in the same order, Tom, or do you want -- I'll leave it up to you as to whether we go to the fourth item.

MR. LIVERS: If you could give me just a second. Madam Chair, if we could, why don't we go ahead and do the New World. We were moving it early partly out of courtesy to the Forest Service. We have a couple probably longer rulemakings coming up. Also I think for timing purposes, we're hoping to file this today if we can, and so that's the other reason we had hoped to move early in the agenda. So with that, we'll turn it over to Eric Urban.

MR. URBAN: Madam Chair, members of the Board, for the record, my name is Eric Urban, and

I'm representing the Department's Water Quality Standards Program. I would also like to take a moment to recognize Dave Feldman and Amy Steinmetz for their efforts with this proposed rulemaking.

I'm here requesting the Board initiate rulemaking for the New World Mining District Area. Specifically we are requesting the Board extend the existing temporary water quality standards five years, to expire on June 14th, 2019. Before we see the Forest Service presentation, which I guess I'll take on now, I thought I would provide some background for those of you who are not familiar with the New World Mine Project.

The site is located north of Cooke City, Montana, just outside of Yellowstone National Park. Mining began in the area in the 1860s with extensive mining occurring between the early 1900s and 1950s. In 1989, a large ore body was discovered, and there was renewed interest in a large scale mining operation. Multiple parties had concerns about the existing impacts, and potential environmental impacts that a mine may have.

There was litigation over water quality, and in the end, the US federal government

negotiated with the potential mining companies to purchase the land and forfeit the mineral rights. The United States Forest Service was tasked with the management of the land, and was also charged with managing $22.5 million that was dedicated to reclamation efforts for the historic mining impacts. One of the focus points of the reclamation was to stabilize and improve water quality.

Prior to the Forest Service reclamation efforts, water quality in the project area was heavily impacted. To facilitate the necessary reclamation, temporary water quality standards were approved by the Board for portions of Daisy Creek, Stillwater River, and Fisher Creek. These temporary water quality standards are set to expire on June 4th of this year. The Department is requesting to initiate rulemaking which extends the expiration date of these temporary standards for an additional five years.

The US Forest Service reclamation work is complete. However, as water quality data shows, Mother Nature is continuing to provide incremental improvements with time.

At this point I would have turned it

over to the Forest Service. We'll check on their safety shortly. But the handout is the one the Forest Service intended to provide, and they chose one parameter for most of the graphs, which was copper. There are several graphs we can go through where they're labeled in percent decrease.

Figure 3, the percent decrease in concentrations with just one of their reclamation activities showed on average around a 50 percent decrease in every metal that was present in the stream.

For their Figure 4 is a total recoverable copper concentration, and copper has been one of the more challenging metals to remediate at this location. And you can see, with the trend lines on the right side of the graph, you can see that there is continued improvement with time, and even the most recent data in 2012 shows improvements in the recent years.

We could go through graph by graph, but I think ultimately the take home message is while the reclamation work is done, time continues to improve water quality up there. It is a very short growing season, as it is high elevation. There is only a couple month window where grasses

are growing.

So I guess with that, the Forest Service is here, so I could take questions, or we could turn it over to Mary Beth.

CHAIRMAN SHROPSHIRE: Any questions for Eric before we turn it over to the Forest Service?

(No response)

CHAIRMAN SHROPSHIRE: Are you ready or do you need a few minutes?

MS. MARKS: I'm ready.

CHAIRMAN SHROPSHIRE: We'll wait for Mary Beth's presentation, and then follow up with you if we have more questions.

MS. MARKS: Madam Chairman, members of the Board, for the record, my name is Mary Beth Marks. I'm employed by the USDA Forest Service on the Gallatin National Forest, and I'm the on scene coordinator for the New World Mining District Response and Restoration Project. It is my pleasure to meet with you today to update the Board with the progress we have made on the New World Response and Restoration Project.

For this briefing, we have assembled several figures of the location of the New World Mining District and graphs summarizing

improvements to water quality in the headwater areas of Fisher Creek, Daisy Creek, and the Stillwater River.

Improvements to water quality in these drainages are a direct result of the US Forest Service's reclamation efforts that I will describe in a moment. The information I will refer to was collected as part of our statutory obligation to adhere to temporary water quality standards for portions of Fisher Creek, Daisy Creek, and the headwaters of Stillwater River.

As you know, these streams do not support their designated uses, due in part to the impacts attributable to historic mining. The temporary standards allow the US Forest Service to proceed with cleanup to these historic wastes, and move incrementally towards water quality improvements in support of the designated uses for these streams.

Most of the major reclamation activities at New World took place prior to the third three year review cycle in 2008, with subsequent work to address remaining sources of metals and sediment loaded completed through 2012. This work included the following. In 2003, 190 feet of Glengarry

Adit and the Como Raise were reopened to backfill and install water type plugs in these mine workings. This work was complete in 2004 and 2005, essentially eliminating the contaminated adit discharge into Fisher Creek.

Also in 2003, the McLaren Pit was backfilled and capped, eliminating a major source of contaminated drainage to Daisy Creek. In 2005 and 2006, an impermeable cap and lime amended soil cover was placed on 5.5 acres of mineralized and disturbed soils in the Como Basin at the headwaters of Fisher Creek.

From 2005 through 2007, the remaining adit and drain discharges on district property were evaluated to address source control treatment of any contaminated water. Sites that had undergone waste removal and capping have been reclaimed, and as a result, a total of 22 acres have been revegetated. Construction of the portal closure and infiltration basin to passively treat discharge from the McLaren Adit was completed in 2010. Restoration of road cuts and drainage controls on roads throughout the district was completed in 2011.

Other reclamation activities included

placement of barriers to offroad vehicle use in select areas, placement of runoff controls, and stabilization of stream channels below the Como Basin and the McLaren Pit areas. All major sources of surface and groundwater loading were addressed as of 2008. Surface and groundwater monitoring continued through 2011 as in previous years, and implementation of a long term operations and maintenance plan began in 2012.

With these reclamation activities in mind, I would like to review water quality trends over time in the Fisher Creek, Daisy Creek, and Stillwater River drainages. During this discussion, I will be referring to your hand-outs that contain various maps and graphs. Figure 1 is a general location map of the New World Mining District, and Figure 2 shows the three principal drainages being regulated under temporary water quality standards, and the surface water sampling stations along those drainages.

These temporary water quality standards apply specifically to surface water monitoring stations CFY2 on Fisher Creek, Clarks Fork, Yellowstone; DC5 on Daisy Creek; and then SW7 on the Stillwater River. The remaining Figures 3

through 7 display water quality trends for the three monitored drainages.

Graphs of metals concentrations over time focus on copper, as this metal exceeds water quality standards for aquatic life more frequently than other metals.

During the previous project review for the BER in 2011, an inquiry was made as to whether reclamation activities had any effect on arsenic concentrations in surface water. Surface water samples were submitted for measurement of arsenic concentrations in 1989 through 1997, and again in 2001 and 2003. Arsenic was typically not detected in these samples, and specifically was never detected above analytical reporting limits at either DC2 or SW3 located nearest the major sources of metals loading into Daisy and Fisher Creek. Based on these results, the decision was made to discontinue arsenic monitoring.

With the elimination of the Glengarry Adit and construction of the Como Basin cap in 2004/2006, substantial improvements to water quality occurred in upper Fisher Creek. On the third page of your hand-out is a bar graph, Figure 3, demonstrating the reduction in metals

concentration in Upper Fisher Creek at surface water station SW3, several hundred yards downstream of the Glengarry mine.

As you can see, there has been considerable reduction in metals concentration during both high and low flow conditions. Overall, post adit closure changes in metals concentration have increased an average of 41 percent during low flow, and 60 percent during high flow conditions.

Figure 4 illustrates changes in copper concentration over time at surface water station CFY2 located on Lower Fisher Creek near the confluence with Clark Fork of the Yellowstone River. These data suggest that changes to copper concentrations have been limited at Station CFY2.

In the Daisy Creek drainage, improvements to water quality have been measured downstream of the McLaren Pit was since the cap over the pit was completed in 2003. As the McLaren pit is located at the headwaters of the Stillwater River, it was one of the major contributors to water quality degradation in the upper portion of this drainage. The construction of this eleven acre capping system was designed to

eliminate the infiltration of snow melt and rain through the waste rock, consolidate the waste, and thereby reduce metals concentration and loading that had historically occurred in Daisy Creek.

At the top of the fourth page of the hand-out is bar graph, Figure 5, demonstrating the average reduction in metals concentration in Upper Daisy Creek at surface water station DC2. Post McLaren Cap, which was 2004 to 2013, metals concentration at DC2 have decreased an average of 10 percent during low flow periods, and an average of 62 percent during high flow periods.

Further downstream at station DC5, seasonal copper concentrations have been lowest since the McLaren Cap was completed in 2003, particularly during high flow conditions.

The improvement to Daisy Creek water quality during high flow conditions as a result of the large volume of snow melt that now runs off the capped McLaren Pit as essentially clean water. Prior to capping, this water became contaminated as it infiltrated through the mine waste. This runoff has the additional positive impact of diluting metal contamination and acidity derived from other sources in Upper Daisy Creek.

The results measured during low flow conditions are not as dramatic, but decreases in metal concentrations are realized for all metals monitored except for zinc.

On the fifth page of the hand-out, Figure 7, shows copper concentrations measured at station SW7 on the Stillwater River. The trend in copper concentrations over time at this station is similar to that discussed above for other stations, and shows that water quality has improved as a result of capping the McLaren Pit. Water quality at SW7 now meets aquatic standards during most low flow monitoring events.

During high flow events, a considerable amount of suspended sediments is scoured and transported in surface water, and these suspended sediments likely account for high flow exceedences of the aquatic life standard. No temporary water quality standards were exceeded between 2008 and 2013 at CFY2, DC5, and SW7, where the temporary water quality standards apply.

Water quality improvements occurring since the beginning and completion of reclamation work are summarized in Table 1 on Page 6 of the hand-out. These data show that metals

concentrations at CFY2, DC5, and SW7 were greatest prior to the beginning of reclamation activities in 2001. Mean metal concentrations decreased considerably in the time since reclamation began, 2001 through the present, and continue to decrease after completion of the reclamation work, 2008 through the present.

Studies of natural background surface water conditions and a regional study of background groundwater were completed as a means of determining realistic, technically supportable, and attainable long term water quality goals for the closure of New World Mining District. These studies suggest that water quality in Upper Daisy and Fisher Creeks were influenced by natural mineralization prior to mining, and that B-1 water quality standards are unlikely to be met even if all known mining related sources or metals loading were completely eliminated.

The New World Mining District Response and Restoration Project entered a long term operations and maintenance plan phase in 2012. Water quality monitoring continues during this time, although at a reduced frequency and at fewer locations. Instead of three times per year,

samples are now collected twice a year, once during high flow conditions in the spring, and once during low flow conditions in the fall.

As part of the long term operations and maintenance plan, fisheries and aquatic macroinvertebrate studies were initiated during the summer of 2013. A fish community bioassessment study was developed with the objective to determine the fish species, distribution, abundance, condition, and life stages present through the project area.

The monitoring work outlined in the plan was conducted by a Forest Service fisheries crew and the area Fish, Wildlife and Parks biologist in August of 2013. Project area streams were devoid of fish, with the exception of Lower Fisher Creek and Clarks Fork Yellowstone River. Natural waterfall barriers were documented on both Fisher Creek and the Stillwater River. These barriers would preclude any fish establishment on the stream segments above those barriers. Based on these results, no further fish monitoring is planned at this time.

Sampling for periphyton and aquatic macroinvertebrates was conducted in September of

2013. When available, analytic laboratory data for these samples will be used to document the existing macroinvertebrate population. This work will continue through 2015, when an assessment will be made to determine if and in what form monitoring should continue.

In conclusion, the rule adopting temporary standards in portions of Fisher Creek, Daisy Creek, and the Stillwater River has allowed the New World Response and Restoration Project to proceed with cleanup activities on an established schedule that has resulted in significant water quality improvements in the New World Mining District. We continue to believe that the reclamation activities completed may result in a additional incremental improvements to water quality as equilibrium conditions are re-established in these drainages.

The USDA Forest Service is recommending that the temporary standards be extended for a five-year period. This completes my update to you this morning. Thank you for your attention, and I'd be glad to answer any questions you may have.

MS. CANTY: I have a question for you. For the McLaren Adit, I think you said you're

using a passive treatment system for water discharging from that adit; is that correct?

MS. MARKS: Yes. Basically it is a rock drain infiltration field, so nothing is added into a passive system. It is just the infiltration into the natural ground.

CHAIRMAN SHROPSHIRE: I have a few questions. I'm looking at Table 1, and it has the temporary standard. Do you have any charts that show the actual standard?

MS. MARKS: Madam Chair, and members of the Board, if you would look at the various figures for, for instance, six and seven, the temporary standard is shown in red, and then the acute and chronic standard for aquatics is shown.

CHAIRMAN SHROPSHIRE: It is a black and white, and it's a logarithmic scale, so it is kind of hard to see.

MS. MARKS: Yes. Basically the temporary standard is considerably higher than the aquatic standards. And so if your top line is the temporary standard, and then the two bottom lines are the aquatic standards, chronic and acute. And yes, it is an exponential scale or logarithmic.

MS. MILES: So you're well in compliance

with the temporary standard, but you're just saying you couldn't get to the other standard.

MS. MARKS: Correct, for most constituents. Now, if you look at -- Again, the idea, if you for instance look at Figure 7 -- and I don't know, if you don't have color copies, if you can see the points. Again, the top line is our temporary standard; the bottom two lines are the aquatic standards. And you can see that during low flow at SW7, the copper is below the aquatics. So in some cases we have improved water quality at certain times of year to meet aquatic standards.

MS. CANTY: So is the temporary standard based on acute or chronic, or it is just a temporary standard?

MS. MARKS: The temporary standard was based on existing water quality, and there were calculations made on averages and certain standard deviations. So the temporary standard was set based on the existing water quality at the site prior to the start of reclamation. The idea was so that we could be in compliance with a standard, that those temporary standards were set, and that we would continue to clean up and stay within

those standards.

CHAIRMAN SHROPSHIRE: What's the most recent arsenic data you have?

MS. MARKS: 2003. Again, we had a lot of arsenic data prior to that with non-detects, and so arsenic really is not a problem at this site.

CHAIRMAN SHROPSHIRE: I'm going to need some help in terms of what our options are in terms of -- Is there an option to ratchet down the temporary standard, or revisit it in another year? Do we rip off the bandaid slowly, or do it all at once? What options can we look at here?

MR. URBAN: Madam Chair, we did. We certainly considered the options of recalculating temporary standards, and ripping off the bandaid slowly, ratcheting it down as we go.

It is our interpretation of the temporary water quality standard that if a new source were to arrive, it in no way can degrade the gains that have been made. So from that perspective, there is little risk to leaving the temporary standard where it is today. The temporary standard is considerably higher than where we are today.

However, if we set the number today where we are with the existing water quality, we would be right back at the Board requesting a new number, and a new number again, until we finally meet this equilibrium point. So there is definitely a cost benefit analysis for the effort involved in setting a new standard that we would likely be proposing a new one again. And like I had mentioned, the intent of the temporary water quality standard is to never go backwards from gains we have made. And when we look at it, we believe that is provided.

Also, perhaps more importantly, leaving this standard where it is today provides some flexibility for continued reclamation if so needed. Like I had mentioned, reclamation is relatively young. There may be maintenance needed. And if we were to set a new standard that's at the bottom, we may inhibit the Forest Service's ability to go in and maintain the project.

CHAIRMAN SHROPSHIRE: This is where I just need some refreshing, and it would probably be helpful for newer Board members, too. But when was the last reclamation work done?

MS. MARKS: In 2011, the road restoration work was done.

CHAIRMAN SHROPSHIRE: So aside from the road restoration?

MS. MARKS: Madam Chair, members of the Board, the major reclamation work was completed in 2008 with the McLaren Pit and Glengarry Adit. Those were the two primary polluting sources. Other work has been completed through 2011, and that consisted of road restoration, sediment control, that type of work. So it was minor work after 2008.

MR. RUSSELL: I guess to keep it simple for a guy like me. It really doesn't matter. Let's face it. You're done. The only thing that could happen is a catastrophic nature event that would pull these standards, or pull our numbers closer to the temporary standards, because it is going to continue to go down. There is nothing else going on on the site except for natural cleanup now. Everything that's in place is in place. So the expectation is those heavy metals are going to go down over time? Is there something else I'm missing?

MR. URBAN: Madam Chair, Mr. Russell.

You're correct. The natural processes will continue to occur. Does it matter I guess becomes a different question. But it is our intent to set the number in the right spot, and we see that coming quickly. We would like to have a better game plan of what that number would look like, and we see that occurring prior to the proposed five year extension.

MR. RUSSELL: Only because we've gone through this in other mine sites. Because it is all done, until -- I don't even know if you have any more reclamation money up there -- but until there is another problem, you're not going to do anything. So if you set those temporary standards too low, and you violate them, then guess what? We've got a crowd of people out here that will be chomping at the bit. We don't want to set them too low. We know nothing else is changing up there, and we have stopped temporary standards when we've had recalcitrant remediators. So we don't have that here, at least that's my --

CHAIRMAN SHROPSHIRE: That's where I guess I'm not convinced yet. I want to understand that better, because if you look at the -- tell me -- This is the way I look at it. At the high

flow, you're more likely to have sediment incorporated in the samples; and low flow, it is maybe more indicative of groundwater contribution into the water.

And so when we're seeing the higher concentrations at high flow, it tells me that there is still sediment sources contributing to the contamination, which means that there may be opportunity for more reclamation which could improve water quality. Is that true?

MS. MARKS: Madam Chair, members of the Board. It depends on where you're at on the site. Again, below the McLaren Pit, at high flow we have very clean water because we've eliminated that water infiltrating through the waste and becoming contaminated. So during high flow in that drainage, we have clean water; and low flow it is not as good because we don't have that.

Now, on the other drainage, Fisher Creek and the Stillwater, or the Clarks Fork, it is actually the opposite effect, where at high flow we have higher numbers than at low flow. So it just depends on where you're at and what's happening.

So when we talk about that scouring,

because we do measure total, we can see that we believe that some of our high numbers are due to sediment; but again, that's sediment in the stream and in the natural system. That last reclamation work that we did, the purpose of that work was to stabilize the roads and many other areas to eliminate sediment discharge into the streams. So that was our last reclamation contract out there, was to address sediments into the streams, and not just from mining sources, you know, from the roads, and landings, and any areas that needed to be reclaimed. So that was our last project.

And then I think the other important thing is that we did go through all of the mining features out there. There was a final look and analysis of every one of those sites to say, "Is there anything else we can do?," in partnership with the State, the EPA, and the public. We looked at every mine disturbance in the district, and determined if there was any additional work that we can do. And the consensus and the decision has been made that we've done everything that we can do. If I could speak for the State, we've also demonstrated to them as well.

CHAIRMAN SHROPSHIRE: Are you able to

differentiate surface runoff sediment contribution from the stream bed?

MS. MARKS: No. The surface runoff coming from outside the stream?

CHAIRMAN SHROPSHIRE: You said it was scouring, so it sounds like you think it is from the stream bed as opposed to it being surface.

MS. MARKS: That's what we think. We haven't done any studies to that effect. We did look at one time in Fisher Creek, because you do have the iron deposits on the rocks, a substrate in the stream, and we looked at the possibility of doing work to remove those sediments; and the conclusion was that we would create more problems than we would solve because of the nature of the precipitates on the rocks. So we had looked at that as well.

MS. CANTY: I have a question, and maybe just as a perspective. When the New World Mining District started their reclamation, and you established these temporary standards -- I don't know the history of that, how that happened -- but it is correct to say that the thousands of other abandoned mines in Montana don't have a temporary standard, right? My perspective is that I did

some work in this years ago, and there are thousands of abandoned mines in Montana that regularly discharge way above the standards, and there is no money to remediate these sites. Plus they're remote, there's no electricity, can't access them during the winter.

So I guess I wanted to put in that perspective, that those temporary standards don't apply to all the other mines. You just established them to do this remediation at New World.

MS. MARKS: Correct.

MR. URBAN: Yes, that is correct. Madam Chair, Ms. Canty. Temporary water quality standards in Montana have been used relatively infrequently, and perhaps the difference has been they've been used in certain circumstances where an individual, accompanied by the Forest Service, has come to the Department and provided an implementation plan that said, "We will do X, Y, and Z in order to improve water quality. Will you provide us the basis to avoid water quality violations in the interim?"

And so is there opportunity for temporary water quality standards at other sites?

Perhaps, but they would be looked at on an individual basis, and the Board would have the opportunity to make that decision.

MS. MILES: Am I reading this correctly, that if we extend it for five more years, that's the maximum amount of time --

MR. URBAN: Madam Chair, Ms. Miles, that is correct. The temporary water quality standard, it has been our interpretation that it's to last no longer than twenty years. We are at fifteen years come June of this year, and so we would end. There would be no further temporary water quality standards.

MS. KAISER: So what happens in 2019 if you don't meet water quality standards?

MR. URBAN: Madam Chair, we are working closely with the Forest Service on collecting additional information as Ms. Mary Beth has provided. We are collecting the biological communities, some additional chemistry; and at that point, the Department will propose the proper water quality standards, which will include classification, criteria for specific parameters, in order to provide a final resting place for New World Mine in our regulations.

It is quite a unique site. We know that there are parameters that likely have never been or will ever be below the existing DEQ7 due to natural conditions up there. So during this interim period, we'll be collecting that data and making that game plan for the final.

CHAIRMAN SHROPSHIRE: Just a comment. I've seen other mining sites where they start to get copper under control, and redox conditions, and changes, then you start to mobilize arsenic. So I'd be curious to know if arsenic is changing. I don't know what the driver is to require you to look at that.

MR. URBAN: Madam Chair, I believe you are the driver, and we will take the direction.

MS. MARKS: We can add it in. It is not a big deal.

CHAIRMAN SHROPSHIRE: I don't want to be arbitrary. Like I said, there is never I guess a free lunch. Any other --

MR. LIVERS: Madam Chair, I get a sense the Board may be struggling to get its arms around the concept of temporary standards, and why here, and why differently. I think it is important to note, as Eric said, that they're used sparingly.

There are thousands of abandoned mines around the state. We do what we can through abandoned mine plan money from the Office of Surface Mining.

And typically temporary standards are given as an incentive when a responsible party steps up to try to clean up the site. I think you can think of them somewhat analogous to preemptions on permitting conditions for Superfund sites that you've got a bad situation, you've got discharges that aren't able to meet standards, and by giving temporary standard there is an operating window that's granted so the reclamation work can be done, without continual violations during that time.

And I think several members of this Board were here when the Board chose to rescind the temporary standard at the Upper Blackfoot Mining Complex, Mikehorse site. That was a case that, as Mr. Russell had indicated, where we felt there was lack of progress, that the site was really not moving quickly, wasn't moving at a pace that was acceptable; and part of the reason deemed by the Board was that there was a continual extension of the temporary standard.

So there was a major shift in philosophy

at that point. A water treatment plant was put in at the headwaters of the Blackfoot, just at the lower end of that site, and reclamation began in earnest. But I think there are different conditions.

So the basic idea is when you have a responsible party that's stepping up, like the Forest Service did with the concentration of mines in the New World District, you give them some operating room, and then you make as much progress as is realistically possible. I think that's what happened here.

CHAIRMAN SHROPSHIRE: Questions?

(No response)

CHAIRMAN SHROPSHIRE: All right. I guess if there is no discussion, I will entertain a motion to extend the expiration date for the temporary water quality standards adopted for the New World Mining District at ARM 17.30.630 for five more years. Should I specify the date, or is that clear enough?

MR. LIVERS: I think extending them five years would be the right terminology.

CHAIRMAN SHROPSHIRE: Okay.

MR. TWEETEN: So moved.

CHAIRMAN SHROPSHIRE: It's been moved by Chris.

MS. MILES: Second.

CHAIRMAN SHROPSHIRE: Seconded by Joan.

MR. LIVERS: Madam Chair, before you vote, if you would ask for public comment.

CHAIRMAN SHROPSHIRE: Thank you. Any public comment?

(No response)

CHAIRMAN SHROPSHIRE: Any further discussion?

(No response)

CHAIRMAN SHROPSHIRE: All those in favor, signify by saying aye.

(Response)

CHAIRMAN SHROPSHIRE: Opposed.

(No response)

CHAIRMAN SHROPSHIRE: All right. Motion carries unanimously. Is it just an extension, or there was actually a hearing? Is there a hearing? Do we need to appoint Katherine?

MR. URBAN: Madam Chair, yes, we're requesting rulemaking, so there will be a hearing.

CHAIRMAN SHROPSHIRE: Friendly amendment to --

MS. MILES: -- initiate rulemaking and appoint a Hearing Examiner.

CHAIRMAN SHROPSHIRE: Are you available?

MS. ORR: I am.

CHAIRMAN SHROPSHIRE: Do we vote again? All those in favor, signify by saying aye.

(Response)

CHAIRMAN SHROPSHIRE: Opposed.

(No response)

CHAIRMAN SHROPSHIRE: Motion carries unanimously. Well take a ten minute break.

(Recess taken)

CHAIRMAN SHROPSHIRE: We're going to go ahead and get started. The next item on the agenda is to initiate rulemaking to adopt new nutrient standards for surface waters throughout Montana, and I believe we're going to have a briefing on that. I'm not going to read the whole agenda item. Are we ready to go on to that item?

MR. LIVERS: I think we are. Madam Chair, on the nutrient rulemaking there will be a couple presenters today. We'll start off with George Mathieus, head of the Planning Division here, and then he'll be followed by Dr. Mike Suplee.

MR. MATHIEUS: Madam Chair, members of the Board, for the record, my name is George Mathieus. I'm the Administrator of the Planning Division. Good morning. As Tom indicated, I'm just going to provide a brief overview, sort of a little bit of process and a little bit of background on the nutrient rule package, and then I'm going to turn over to Dr. Mike Suplee, who is going to talk about the science.

So the numeric nutrient standard package is basically divided into two rulemaking components based on the authority granted under statute. The first component addresses the numeric criteria themselves, and how the criteria are going to be incorporated into the State's surface water quality standard. This is to be considered by this body today.

The second rulemaking component contains implementation elements such as variances from the standards that may be granted. Those rules will be carried out by the Department following its formal rulemaking procedure.

If the Board decides to initiate rulemaking today, the Department will arrange its rulemaking so that both public hearings for both

rules align on the same day. This makes sense because the stakeholders that we've been working with have interest in both rulemakings.

The Department's rulemaking is therefore predicated on the Board's decision to initiate rulemaking today. Some of you have heard my spiel before, and this has been a long process, and it is kind of hard to believe. It's almost surreal that I'm actually standing here today to propose initiation of rulemaking for these standards.

It started really back in around 2000 when the Department started collecting and analyzing data, and trying to figure out what made sense for numeric nutrient criteria in total nitrogen and total phosphorus, for the State of Montana. When we recognized that those numbers were low, and were going to be difficult to achieve, we developed a stakeholder committee to help us figure how we were going to implement those standards. That started about in 2007.

I guess the thinking of that is that stringent water quality standards don't do a bit good to water quality if they can't be implemented. We've presented to this body and the Water Pollution Control Advisory Committee on

several occasions. The Department has talked -- I can't even think of how many times myself or Dr. Suplee have presented to various boards, organizations, conferences across the state and nationally.

Two pieces of legislation, both of them which authorized the Department the ability to have variances against the standard, passed in 2009 and 2011. We've partnered with EPA in this process since 2007.

Following the 2009 legislation, a formal work advisory group was formed, the Nutrient Work Group, which was just basically an expansion of the advisory group the Department was working with at that time. That group is made up of a pretty diverse set of stakeholders across the state, including industry and municipalities, including wastewater engineers, financing agencies, environmental communities. It is a pretty broad diverse group. That group has met 24 times since its inception. The thing about those meetings is there was typically 30 to 40 people engaged in those meetings over the course of several years.

The message I really want to send today is that this has been a huge collaborative effort.

It is a pretty neat thing frankly. And it is an example of where we coupled good science with rational public policy. And again, I know this might be somewhat confusing, but there are two rulemakings here before the Board today, and what Dr. Suplee is going to talk about is the numbers themselves, which is this body's purview to act on, and then the implementation side in the variance.

And it is important to talk about them both, give you that overview from my perspective, because we can't have one without the other. So it is pretty important to put it in that context. Hopefully that helps. I'll be available for any other questions. And Madam Chair, if you'll allow me, I'd like to turn it over to Dr. Suplee to talk about the science. Thank you.

DR. SUPLEE: Good morning. Madam Chair, members of the Board. For the record, my name is Michael Suplee. I'm with the Water Quality Standards Section of the Department. And continuing on the theme that George began with, I wanted to talk more in detail about the rule package before you and the details therein.

Before I get into the details of that,

I'd like to give you a little bit of a national perspective so you can understand where this state is in adopting numeric nutrient standards relative to other states. Right now nationally, there are four states that have adopted statewide nutrient criteria for one, at least one large group of water bodies. In other words, they've adopted criteria for all their streams or all their lakes. That would be Hawaii, Wisconsin, Florida, and New Jersey. In addition, there are ten states with site specific criteria, so that's for phosphorus.

On the nitrogen side, there are three states that have statewide criteria, that's Hawaii, Florida, and Vermont; and six with site specific criteria, and included in those site specific criteria states is Montana for the Clark Fork River, which has had a standard since 2002.

I think probably one of the more interesting things is that as the years have passed and more states have developed nutrient standards, despite the huge variety of ecological and temperature regimes, climate that you see around the country, the criteria often end up fairly similar. What we see in Florida to protect estuaries are not that different. They're

essentially the same order of magnitude as the concentrations that we're seeing to protect rivers and streams in Montana, as seen in for example places internationally, like in New Zealand where rivers and streams, and they also have criteria similar to ours.

So the only down side of that unfortunately is that these concentrations are usually very low relative to common wastewater treatment technologies that are used today, and that gets at the other part of the rulemaking that we will not talk about in any detail today.

I would add that EPA is continuing to expect states to pursue nutrient criteria -- they haven't changed their views on this -- as well as other nutrient abatement policies and regulations. So we are working in that direction with this rulemaking today.

At this point, I'd like to draw your attention in your rule packet to circular DEQ12-A, if you don't mind. And in there, on Page 2, there is a table that we'll talk about a little bit in detail, Table 12-A-1. I want to point out, first of all, that all the criteria you see in the table have been --

CHAIRMAN SHROPSHIRE: One minute just to locate it.

MS. MILES: So it is Table 12-A.

DR. SUPLEE: Yes, Table 12-A-1 on Page 2 of Circular DEQ12, which should be following Page 16 of your rule packet.

MS. MILES: It's on 49 of the PDF.

CHAIRMAN SHROPSHIRE: Okay. Great. Thank you.

DR. SUPLEE: I want to point out -- and maybe I said this already -- but all these criteria, once they were developed, have gone through external peer review by anonymous academic peer reviewers, and have been looked at in that manner, so they've gone through rigorous examination.

The first thing I want to point out to you about the criteria, as you look at the beginning of Table 12-A-1, is that they vary by geographic region, and that's because it was necessary to do that in order to reflect local stream ecology and sensitivity to nutrient pollution. In some cases we've broken out smaller scale, Level 4 ecoregions. You'll see that, for example, below the Middle Rockies, there is one

called Absaroka Gallatin Volcanic Mountains. These are smaller areas within the larger ecoregions, and this was done in cases where the concentrations were considerably different from the larger ecoregion in which they resided.

The criteria were developed basically using a three pronged approach. The primary driver of them were dose response studies. These would be studies that have been carried out, some by the Department, many others by researchers, between levels of nutrients and some kind of a measurable response in a stream, change in macroinvertebrate populations, change in DO, change in algal growth, etc.

We compiled those, and those were key drivers for developing the criteria. We also considered the nutrient concentration ranges of regional reference sites within the ecoregions that are listed there. And also we considered resource ratio theory, which is often also known as a Redfield ratio. Those three pieces are what comprise or were used to derive the criteria.

Key drivers for actually establishing what the levels should be were protection of dissolved oxygen levels, which protect fish;

thresholds for nuisance algae, which were derived from a public perception survey. These were big drivers for helping derive the criteria, but were not unique. Other factors were involved as well, like I said, in some cases studies that looked at the relationship between nutrients and macroinvertebrates.

Another factor I'd like to point out about the criteria is that they apply seasonally, basically summer and early fall. This is to protect streams from the time of the year when algae and plant growth peaks, and the ensuing water quality impacts are maximal. They can be applied year around in certain cases on a case by case basis if they are likely to affect the water quality of a down stream lake. That's determined via another process. It's determined by permitting or TMDL.

Continuing on on the continuation of Table 12-A-1, you'll see we have a list, beginning list of individual streams. These are streams whose water quality is different than the typical characteristics of a stream in the region in which they reside, so we've developed site specific criteria for them.

An example is Flint Creek at the top of the list. This is influenced by the water quality coming out of Georgetown Lake, and that has had an effect on the stream water quality, and that's reflected in the criteria.

I'd like to point out that the Department has developed guidance for stakeholders and also for ourselves on how to develop site specific criteria going forward; and if there were any criteria developed using that process, then ultimately those numbers would be brought before you in the future. So we consider that a live process that may continue to develop site specific criteria as more and more is learned about individual streams.

Moving to the large river criteria, if you look at the bottom of 12-A-1, the second part on Page 3 of Circular DEQ12-A, at the bottom you'll see two large river segments listed: The Big Horn River from -- the Yellowstone River from the Big Horn confluence to the Powder, and from the Powder to state line.

Most of our large river criteria are still under development, but we have completed those. And the thing I want to point out to you

about these is that we took a completely different approach to developing criteria for large rivers than we did for wadeable streams, because large rivers are deep, faster flowing, they have much more limited light availability for plant growth. We knew that techniques that had generally been useful for wadeable streams would not carry over to them, and instead, we used a process based computer simulation model.

In this case, the model's governing equations represent physical relationships between nutrient availability, algal nutrient uptakes, and other dependencies such as light, and flow, and temperature. All these things are developed in the model, and calibrated, and then we derived the criteria from there.

We did this by altering the model conditions, once the Yellowstone River model was built and calibrated, by essentially implementing those nutrients in the model until an ensuing water quality impact began to manifest itself. We were able to look at quite a few water quality, important water quality parameters simultaneously, such as pH, dissolved oxygen, total organic carbon, total gas and benthic algae density, and

the one that was most sensitive would establish the criteria for what we've done.

The thing I find most interesting about this is that was a very different tactic for developing a criterion, and yet the numbers that we came up with in the end looked very similar to what we've seen for wadeable streams. They're higher, and we would expect that for large rivers, but they're in the same order of magnitude, and that tends to lend support to the overall approach. And again, it is consistent with what we're seeing nationally and internationally in terms of the kind of numbers you typically see for developing nutrient standards.

Lake criteria are largely under development. We've collected a lot of data, but the stream work has basically used up much of our available resources and time, and so we haven't come back to the lake work very much.

There is one lake proposed in the packet. That's on the next page in Table 12-A-2. We have proposed or are presenting criteria for Flathead Lake. In this case, they're year around criteria. This one has had a lot more work already gone into it that the Department has been

a part of, but has not been a sole driver.

These criteria were developed in the 1990s, and they're essentially the same as what is being proposed today. There was a multi-year multi-stakeholder group similar to the Nutrient Work Group that developed these criteria throughout the 1990s. They proposed total phosphorus and total nitrogen, as you can see, and also we have included secchi depth and chlorophyll.

Now, the lakes, those of you who have familiarity with other lake criteria may be aware that a lot of times people only propose phosphorus for lake standards. In this case, we have phosphorus and nitrogen. That's because a number of studies have shown that the lake is nitrogen and phosphorus co-limited, and those studies were carried out after opossum shrimp, which has changed some of the fundamental quality of that lake, had already been introduced into the lake. So there has been good solid evidence that we should be regulating both of those nutrients in that lake.

The Department believes that the public input on the level at which the lake should be

protected has been well vetted through that process in the 1990s. There were many different stakeholders involved, public, private, all kinds of folks involved in that; and it went over quite a few years back in the 1990s, which ultimately led up to the criteria.

The criteria as proposed would maintain the lake, Flathead Lake, at its current high quality status, and we believe that that's consistent with the Department's classification of that lake as an A-1 water body; and it's consistent with the public's expression of their points of view during the 1990s when this was all being put together; and it is also consistent with the Flathead Basin Commission's mission to "protect the existing high quality of the Flathead Lake aquatic environment."

So that's just a quick overview, basic overview of the criteria. I want then to move on to other major elements of the rule package.

There is a new low flow design flow for nutrient discharges. Up to now, whenever the Department has written permits and they needed to decide what the low flow condition that they would write the permit to would be, they used the 7Q10,

which is seven day ten year low flow.

In this case we're proposing a new water low flow of 14Q5, so that's 14 continuous days occurs on average once every five years. It would be specific to nutrient dischargers. It is based on algal growth patterns in streams and rivers, that basically takes the biological response of the stream or river to go from little or no algae, to nuisance algae. It generally takes about 15 to 20 days once the nutrients are elevated, so by keeping it to about 14 days, this maintains the river water quality below the nuisance level.

And the five year is consistent with the long term recommendations of the EPA, which they suggest that a water quality standard should not be exceeded more than about once every three years, so that's in line with that. So that has been developed specifically for nutrients, and that's in the package.

Then also we will have -- Circular DEQ12 is incorporated throughout the surface water classes, as you probably noticed, alongside DEQ7. We've also modified the nondegradation rules to allow that base numeric nutrient standards are harmful parameters at these concentrations. So in

those cases where we have human health criteria and nondegradation for human health levels of nitrate, for example, those will remain in DEQ7, but these lower concentrations that are designed for nutrification control are considered harmful levels, and the nondegradation regulations have been modified to reflect that.

In closing, I'd just like to state that the Department has been developing and refining the base numeric nutrient criteria over the past 12 years. This work has included extensive reviews of the scientific literature, several on-the-ground studies carried out by the Department, identification of impact thresholds, and external academic peer review of the criteria and the methods used to develop the criteria.

The criterion in DEQ12-A reflect the Department's best scientific and technical analysis to date, and extensive public outreach as George mentioned over the past six years have ensured the Department has a practical and workable means of implementing the standards over time. And with that, I'd be happy to answer any questions you may have on the rules.

MR. RUSSELL: I have a quick question.

On Table 12-A-2 where you haven't set standards for phosphorus or total nitrogen, how will those -- if a permit came up, would you still use a narrative approach?

DR. SUPLEE: That's correct. Right now, the narrative standards, since we're not modifying the narrative standards that are used for nutrients, it continues to apply in those places. In cases where we do have not have a criterion, a numeric criterion, the narrative would apply.

CHAIRMAN SHROPSHIRE: Questions?

MR. RUSSELL: I have a few more. So it states in here that the narrative approach was fairly onerous just as a process.

Since the Flathead River is in my jurisdiction, and certainly the upper part of Flathead Lake, when you set these numeric standards, from a permitting standpoint, you probably looked at the consequences. We have three, four POTW's. Certainly our biggest wastewater generators are the best POTW when it comes to phosphorus and nitrogen.

I just wonder north of Kalispell what's going to happen to some of those other POTW's. Since Bigfork just rebuilt, and it's probably a

little closer to helping keep this -- and I look at this as a TMDL now. If you set those standards in the lake, it is literally a TMDL for everything above there. That's how I would look at it. What's going to happen to Whitefish and Columbia Falls in this whole realm, or does it just become a variance process for them not to comply?

DR. SUPLEE: Well, the variance process -- if the Department rules run alongside the rules that we would ask you to initiate today -- would be available to them to meet the standards in a more staged manner, so they would not have to necessarily meet these criteria or assure that Flathead Lake meets these criteria, or at least their contribution to it immediately. It would be staged out over time.

MR. RUSSELL: So is it actually staging, or do they just have ten years? When the Department looks at the permitting and a potential variance, will you look at some incremental positive changes over that ten years, or do they literally just have ten years that they don't have to meet the numeric standards?

DR. SUPLEE: In early discussions, and recent actually agreements with the Nutrient Work

Group, there has been an understanding that the expectations within the general variances particularly will ratchet down over about five year increments, and some of those initial steps have already been identified, given today's levels of treatment technology

In other words, it would be not just allowing for a variance now and then moving forward with no change, but expecting that there is going to be steps in reduction as the permits sunset every five years.

MR. RUSSELL: I guess the last maybe comment, statement, that I'd make, is when you're using a technology that you clearly can't add onto to meet the standard, there has to be some goal to literally change the wastewater treatment technology over that time. Will the Department's rule consider that?

DR. SUPLEE: Yes. In addition -- we're really moving into the discussion of really the Department rules -- but alongside those predefined reduction steps that I just mentioned, the Department has the obligation to look at the treatment levels for the variances every three years independently. So for example, if a

significant technological improvement were to come along and it's readily implementable in Montana, then we may change those to reflect that, those better treatment availabilities.

MR. RUSSELL: So there is a potential you'd literally be able to force a POTW to change their waste over that ten years period?

DR. SUPLEE: That is the way the other rules that we're looking at are structured, yes.

MR. RUSSELL: Because a pareto comes to mind, and that you're already meeting close to the standard, and you only have that incremental to get in towards that standard, and you're totally outside of that, you're going to get -- an 80/20 rule sits out there. It is going to cost a lot more to get into that standard on some treatment technologies.

And I know I'm beating a dead horse, but I live in that dead horse area, and so I just want to make sure that that's going to be the outcome of this process that is going to allow a variance.

DR. SUPLEE: The way it is structured is that we have the obligation as a Department to every three years examine those treatment levels that are part of the general variance -- which is

again not part of this rule package. This is a part of the Department rule package -- and decide if those steps are still in alignment with the technologies of the day. If the technologies of the day have changed substantially, and greatly improved and put in place, then we would be obligated to put those in place.

MR. LIVERS: Madam Chair, Mr. Russell. I know this line of questioning is to get a sense of how the rules are structured to deal with these situations across Montana. We do have a little bit of additional information on your particular example. John Arrigo of our Enforcement Division has a piece of information on points north of Kalispell.

MR. ARRIGO: Madam Chair, members of the Board. For the record, my name is John Arrigo. I'm the Administrator of the Enforcement Division.

And specific to Mr. Russell's question, the Department and the City of Whitefish have signed an Administrative Order on Consent to resolve past permit violations, and they are aware of the need to improve their treatment to remove nutrients. What the Order on Consent says is that when the permit is renewed, and there are nutrient

levels in there, they will then launch into a plan and schedule to treat to meet those permit limits. If the variance comes into play, that will be a future decision, but they're committed to meet those limits.

CHAIRMAN SHROPSHIRE: Tom, there is two separate initiations of rulemaking here. As I understand, we're the going to lump them into one; is that correct?

MR. LIVERS: Madam Chair, there is one for the Board, and that's all you have to initiate. There are two rulemakings that are going to go contemporaneously, and one is the Department rulemaking on the variance process. But the Board rulemaking, which we're asking you to initiate today, is for setting the numeric standards.

CHAIRMAN SHROPSHIRE: Thank you for that clarification. Is this just for context? Is there somebody that can talk about the variance process at all?

MR. LIVERS: Madam Chair, sure. I think probably Mr. Mathieus could speak to the variance process. We didn't want to go too far into it since it is not in the Board's purview. I wanted

to keep it clear. But we're happy to give an overview and answer questions.

MR. RUSSELL: If you don't mind, this nondeg kind of conjures up in this whole thing. So when you're describing that, can you tell me what nondeg is going to do?

CHAIRMAN SHROPSHIRE: And the reason is just that as we initiate rulemaking and the scope our rulemaking, to make sure that this is all in context.

MS. MILES: Is it pretty common to have it bifurcated like this, where we may adopt the rules, but we don't have any say in terms of what you would have to do to obtain a variance? Is this just the Department's purview, or is that something that's unusual that the Legislature did in this case?

MR. LIVERS: Madam Chair, Ms. Miles, probably more the latter. It is not unprecedented, but it is not particularly common.

MS. MILES: I'm just struggling with how to reconcile that, that we really have no say over what criteria you need to meet to get a variance, so there's nothing you can do about that.

CHAIRMAN SHROPSHIRE: We can initiate

rulemaking that works with the variance process. If we didn't initiate rulemaking, there wouldn't be a variance for the rulemaking.

MR. MATHIEUS: Madam Chair, members of the Board. I'll maybe touch on I think all three questions.

The last one, as you know, the Legislature grants authority for both the Board of Environmental Review and the Department. In this particular case, the Department makes the decision to approve whether or not an individual variance may be granted to a specific POTW or a private industry discharger, and then that variance itself needs to be adopted into rule.

So maybe it makes sense from the perspective that since it is the Department's decision to grant that variance, it also makes sense to have that rulemaking authority. And originally when this concept came about in the 2009 Legislature, it was only an individual variance that was going to be granted, so we were looking at -- just to keep it at the high level, keep it simple -- that potentially 300, however many dischargers there are in the state potentially have to come in for an individual

variance at one time, and how would that be managed.

So I don't know if that helps, Ms. Miles, answer your question, but I think procedurally it makes sense.

MS. MILES: If you adopt every variance into rule, you have to initiate rulemaking every time there is a variance?

MR. MATHIEUS: Madam Chair, Ms. Miles. No. I probably misled you. And I had planned on clarifying that when I walked through the variance process as Madam Chair requested.

So just very simply, it seems odd that I would characterize the variance process as simple, but mechanically it really is, even though we've spent -- as you've heard in previous testimony -- countless public venues by which the process has been vetted.

So at its simplest form, what happened between the 2009 and the 2011 Legislature is, as I indicated we had an individual variance process, and that group, the Nutrient Work Group, became formalized in 2009. Between the 2009 and 2011 Legislature, we discussed the complexities associated with implementing that individual

variance. One of them was that 350 individual rulemakings. So that legislative effort in 2011 provided other opportunities to grant a variance.

The easiest one to describe, we call it a general variance, and it has three categories, and it is based on flow. So for example, a discharger that discharges greater than one million gallons per day has a permit limit in statute; less than one million gallons per day has another permit limit in statute; and then finally lagoons.

Those permit limits sunset in 2016. So the Department, in the rulemaking that we've alluded to previously, are planning on adopting those permit limits in rule today, so there is no overlap or loss of regulation, if you will.

So very simply, that general variance, those numbers have been worked out; they've been worked out with the stakeholder group that I described previously; and they took into account treatment technologies, and more importantly affordability, which is what's authorized under the Federal Clean Water Act for us to have the ability to grant the variance. It's an affordability issue.

The reality is that the numbers that we picked as our starting point that are in statute today frankly are going to result in immediate water quality improvements, pretty significant ones compared to where we're treating today as a state. So they're going to afford immediate water quality improvements.

So that general variance is available for twenty years for any constituent to come forward and apply for, and those numbers are already known. So as far as planning, infrastructure planning, things like that, they're going to be known.

The individual variance is the other option, which is where we started in 2009, and it has now become second choice, if you will. That's available for cases where there might be a discharger who, just for whatever reason -- small town that doesn't quite fit that mold of the general variance, so they would have to approach the Department, ask for an individual variance, and we would base that decision and the numbers that they would get in their permit on that town from a site specific standpoint.

So let's just say there is 15 towns in

Category B, the less than one million gallons per day, but one of those towns just doesn't fit the mold financially, for whatever reason. Then it would be appropriate they would apply for an individual variance, and that would be a specific rulemaking for that town. Does that help?

CHAIRMAN SHROPSHIRE: It does. Thank you.

MR. MATHIEUS: I haven't answered the last question yet. I apologize.

Mr. Russell asked about nondeg. Nondeg is a big issue. So how does it play into this whole realm of things? So right now these variances, the statute gives the Department the authority to grant variances to all dischargers. That's how Title 75-5-313 reads, to grant variances to all dischargers. And what was recognized there is -- There is a term. It is called substantial and widespread. It is an EPA term dealing with economics and affordability, and the discharger's ability to pay.

The 2011 Legislature said that in order to meet the criteria that Dr. Suplee talked about today, that would result in substantial and widespread impacts across the state. So once that

was established in statute, from our interpretation, we have the ability to grant variances to all dischargers. How that plays out as we move forward is yet to be seen.

MR. RUSSELL: Does this not conflict with the anti-degradation EPA requirements?

MR. MATHIEUS: Madam Chair, Mr. Russell. An example of where nondeg would come into this would be in the case of a new discharger. What we've mainly been talking about today is existing dischargers. No different than any permit rule that comes up, we're allowing permits to existing dischargers. I can't speak specifically on whether or not it conflicts with anti-deg. I may ask for a lifeline, and ask the Chief Legal Counsel to bail me out on that one, but --

MR. RUSSELL: The only point is I thought nondeg was new or expanding, that it applied to any new or expanding source. When the anti-degradation laws in 1993 first came out, I thought it was to apply to that.

MR. MATHIEUS: It does apply to new and increased sources.

MR. RUSSELL: I have probably said enough. I'll be quiet now.

CHAIRMAN SHROPSHIRE: Thanks for those explanations. Are there other questions related to the rulemaking?

MS. CANTY: I have a question, and maybe I need clarification for myself, and I think it's Flathead Lake that's kind of throwing me off because it's standards for the entire lake. How does that work? I guess maybe it is the secchi depths and those sort of things that are throwing me off. So maybe you have a POTW or a private industry that's discharging to Flathead Lake, but then how do you account for the septic tanks and the fertilizer on the lawns and the fields, and all of that that's contributing to the lake? Where does that fit in?

DR. SUPLEE: Madam Chair, Ms. Canty. It works in the following way. The standards that we're talking about establish a water quality expectation that the lake is to be maintained at. The particular location where these levels of nitrogen, and phosphorus, and chlorophyll are to be measured is a specific location in the center of the lake that has been well studied for decades, so you might view it as sort of a benchmark location. What they're watching for is

changes at that location that can be documented over time, if it would get better or worse. So that's the standards.

Coming back to the other question. The TMDL is the mechanism by which the loads of nutrients that are getting to the lake, be they from point or nonpoint sources, are considered and evaluated; and my understanding is -- There are folks here from EPA that could perhaps address this better than I.

But they do or have been working on a detailed watershed model for quite some years, which I believe is getting near its completion, or it is nearly completed, which can essentially allocate where all these different loads are coming from, from the point sources, from forestry activities, from natural background, etc. That is the tool you would use if, for example, the lake is --

The lake right now is really very, very close to the standards. It typically usually meets the chlorophyll criteria; usually meets the secchi depth criteria; it most of the time meets the phosphorus; and it doesn't always meet the nitrogen. So the nitrogen and phosphorus, it

depends on the year; and if you look at the long term record, it is right there.

But the model can be used to then decide where can cutbacks be achieved to try to reduce the load to get us back to the criteria that we're interested in. So the standard establishes the water quality level that the lake should be protected at. The TMDL, and in this case, the watershed model establishes the mechanisms by which those things get to the lake, and by what means you can reduce them.

MS. CANTY: So then you're kind of assuming that those other loads are going to remain fairly constant, so then you go back to the discharger from the point source to establish what they can discharge; is that right?

DR. SUPLEE: That comes to the details of how a TMDL is actually implemented. If it gets to be the point where the point sources are basically doing all they can do technologically, for example, then I don't believe -- again, we'd have to talk to folks that are developing the model -- I don't believe that they would necessarily assume that all these other point sources are just as they are, and nothing can be

done about them. Various BMPs or voluntary actions of that type are often used to try to accomplish the reduction goals that have been allocated to the nonpoint sources.

But just for clarity, in terms of actual Department authority, we have direct authority over folks that have MPDES permits. Everything else, even if a detailed watershed model says much of the load belongs to the nonpoint source side, for example, how that would be fixed, addressed, etc., generally goes through voluntary best management practices approaches.

MS. CANTY: So the nonpoint sources aren't through the variance process then?

DR. SUPLEE: No, because they don't have to meet a permit limit. So again, that's different. But that doesn't mean that they will not be potentially rolled into the entire process ultimately indirectly, or in a voluntary manner.

MS. CANTY: Okay. Thank you.

MR. RUSSELL: I have one more question. So in Flathead County, our wastewater treatment is onsite -- and this is homework I hope. So we require uniform pressure distribution, which we know from -- in all of our septic systems, they

have to pressure dose. And we know that reduces the BOD.

But are there any studies out there that that type of uniform pressure distribution, the wetting and drying, actually is good for phosphorus? I know it wouldn't be good for nitrogen, but is that a good treatment modality for reducing some of the phosphorus that may be contributing to some of our surface water?

And then secondly, we use a lot of Level 2 treatment up in Flathead County, which we know reduces the nitrogen. Wouldn't it be appropriate if we could actually quantify that, that we would give that to the appropriate TMDL -- that there would be some reduction from onsite systems granted because of the Level 2's that are used up in Flathead County?

DR. SUPLEE: Madam Chair, Mr. Russell. Regarding your first question, I don't have the answer to that. I don't know if pressure dosing is an improvement, although I think there is folks in our technical staff here that know the answer to that. Do you want address that?

MR. LIVERS: Madam Chair, I might see if I can line somebody up to get that.

DR. SUPLEE: And regarding the second one, that's again the same. I don't have the direct answer for that.

CHAIRMAN SHROPSHIRE: We can follow up on that in maybe few minutes.

MR. RUSSELL: That could be offline. It probably doesn't have anything to do with this. It has everything to do with us rewriting our septic system regs.

MS. KAISER: One question is just -- I don't know whether George would be the best one to answer this or not. Basically the anticipated burden on the Department for processing variances if this rulemaking is completed.

MR. MATHIEUS: I think the burden on the Department was reduced significantly when the 2011 legislation was passed. Of course that depends on how you define burden. As I indicated, 24 meetings working through some pretty difficult issues. But I think the fact that we collectively made a decision to categorize parts of this, some of that was for certainty for the groups -- for our partners, stakeholders -- and some of it was recognizing the burden on resources to the Department. So I think that single provision

significantly reduced the burden on the Department.

Madam Chair, if I may, I might be able to somewhat answer Mr. Russell's question, if I heard it correctly. I think what you were asking is whether or not we're able to take into account other improvements to nonpoint source type uses.

I will say that I probably failed to mention earlier when I described the Nutrient Work Group that we also incorporated nonpoint source folks in this discussion, and the thinking behind that is while in many cases they're not regulated as a point source per se, they do have a stake in the game.

And other things that the Department has pursued over the last several years, I'd like to call it part of a nutrient reduction strategy, we've had other pieces of legislation -- our reuse bill -- but it gives municipalities the ability to come up with other minimal treatment requirements, other uses of their discharge, whether it's seasonally, things like dust abatement, spray irrigation, fire suppression, things like that. Really we've just been trying to build that tool box.

So one of the other ones, if you remember, and this Board was involved with last year, was our trading program. So I know that right now, the Department is looking at ways and working with some of the larger communities in Montana to do trades per se, and it really becomes an offset, where maybe picking up old failing systems, or things of that nature, allows for offsetting the total load to that particular watershed.

So sort of in a round about way, Mr. Russell, we're trying to create as many of those types of opportunities as we can, because we're taking a step back and looking at the whole picture from a watershed scale, and not just pinpointed on point sources.

CHAIRMAN SHROPSHIRE: Related to that, the one that jumps out at me is Flint Creek, and its higher total nitrogen limit. I don't know if you could speak to that, or Dr. Suplee.

MR. MATHIEUS: No, Madam Chair. I'm just a bureaucrat. I'll have the scientist answer that question.

CHAIRMAN SHROPSHIRE: But in terms of nonpoint versus a point impact, why does Flint

Creek -- you touched on it briefly. Could you elaborate on that one.

DR. SUPLEE: Sure. Madam Chair, members of the Board. Flint Creek is located in the Middle Rockies ecoregion. So normally the way this has been structured, the criteria for total phosphorus would be 30 micrograms per liter, and for total nitrogen 300. As you've pointed out, they're considerably higher than that.

The Department determined -- I know there has been a lot of controversy up in that watershed about homeowner development, and folks -- there is a stuff going on between them and the folks down further stream. But regardless of that, the Department did determine in 2000 that Georgetown Lake was fully supporting its beneficial uses. Some of its water quality issues were related to management actions -- where they keep the water levels in the lake during the winter when it ices over, which they've resolved -- and apparently --

It is a reservoir, I should point that out, and once it was created, it seemed like it was fairly eutrophic right from the beginning. And so for that reason, it was delisted as being

impaired by nutrients in 2000. As a result, the water quality coming out of the lake is considered to be natural condition, because we have other laws that say that water quality that results from the reasonable operation of dams is natural.

So in this case, we have a dam that's being optimally operated, to the best of our understanding. The water quality resulting in the headwaters of Flint Creek therefore is natural. And what we did was we characterized that water quality -- us, and also folks from Philipsburg and others who were involved in collecting the data -- over quite a number of years order to understand exactly what does that water quality look like.

And those numbers that you see there reflect that water quality. It has higher phosphorus; it has higher nitrogen. If you get into the details of the technical document, we even say that the level of algae growth at that upper reach can be little bit higher than what we would normally expect, because that is what you might expect to see with these higher nutrient levels. But the effect ultimately kind of peters out some distance downstream, and then the numbers revert back to normal Middle Rockies values.

So essentially these numbers reflect the reasonable operation of a dam. I think that would be a simple way to state it.

CHAIRMAN SHROPSHIRE: One of the process questions I have -- and Tom, I don't know who would be the best person to respond to this -- but in terms of the scope of the rulemaking. And I know there is clearly a lot of science behind these numbers -- but in defining the scope, for example, the ability in the rulemaking process to change the numerical numbers in here. Can somebody talk about that, broadly in terms of -- For example, could we increase the numbers, decrease the numbers? Are those numbers set -- just talk about the rulemaking process.

MR. LIVERS: Sure, Madam Chair. Let me take a first stab at that, and maybe others can elaborate.

I think any changing of numbers would certainly need to be made on the record in terms of -- we're pretty comfortable with the solid scientific basis for the numbers that we're recommending, and they'd need to have similarly robust arguments to suggest different numbers.

With respect -- I think I understand

your question on the scope, and I may defer to Mr. North here -- but it seems to me that we might have some limitations if they're noticed at these levels, if there were a change, to make them more stringent. I'm thinking arguably that might be outside of the scope of the rulemaking.

MR. NORTH: Yes.

MR. LIVERS: So if it is noticed, initiated and noticed at these levels that we've recommended, and there is a compelling argument to make them more stringent, that that added stringency would be outside of the scope of the rulemaking.

MS. MILES: So we would not initiate rulemaking and request --

MR. LIVERS: Madam Chair, Ms. Miles. If the Board wanted to go with more stringent numbers, they would have to then I assume renotice or reinitiate.

CHAIRMAN SHROPSHIRE: I just wanted to make that clear for everybody on the Board that process. Thank you, Tom.

There has been some reference to EPA making comments. I don't know if there is others in the audience that wanted to comment on this.

Would that be now?

MR. LIVERS: Madam Chair, I think given the subject matter, it is probably better to get comment earlier, so that the Board has an opportunity to consider those if it wants to have that impact the motion at all.

CHAIRMAN SHROPSHIRE: Is there somebody from EPA that wants to comment?

(No response)

CHAIRMAN SHROPSHIRE: No. Okay. Any other members in the audience that wanted to comment on that?

(No response)

CHAIRMAN SHROPSHIRE: Other questions, discussion?

MR. LIVERS: Madam Chair, if I could just follow up on the question on the uniform pressure, pressure dosing. I really wasn't able to find anything conclusive. I considered asking Barb Kingery to come down. You may remember her from the DEQ4 discussions. But I think probably that's a more productive conversation to have offline.

CHAIRMAN SHROPSHIRE: I have one last question, I think, and that's just -- The table is

not complete. The tables aren't complete. There are some areas that are missing. And I just wanted to understand the process for adding other lakes to this. What's the timeline for finalizing this?

DR. SUPLEE: Madam Chair, members of the Board. I think you're referring to Table 12-A-2 where we have left place holders; is that correct?

CHAIRMAN SHROPSHIRE: Yes.

DR. SUPLEE: Yes. What's going on there is we are working on, and presume that we will be developing lake and reservoir standards just like we had for rivers and streams. We've already collected all the data. It is really a question of time, staff resources, to get and get through the analysis and generate the numbers.

The presumption is they also will be based on larger ecoregion levels, predominantly in western Montana, which is where we think the most important locations to develop lake criteria are. So you can see we've listed the major western Montana ecoregions there with place holders.

The timeline, it is really hard to say. I would say it is going to be several years before we get that all done, just because of the amount

of work that's already kind of lined up, and so I wouldn't expect to see those right away. But the process by which we can develop them has definitely moved, the data collection has been completed, and we put those there as a way to show you that that was the Department's long term intent.

MS. CANTY: With Table 12-A-1, other wadeable streams and rivers could be added at another point as well, right?

DR. SUPLEE: Madam Chair, Ms. Canty. That's correct. We consider, particularly the second half of Table 12-A-1, to be a live document, that as individual streams are identified as needing site specific criteria, they can be added here, the table can continue to grow. We have also the large rivers there you can see at the bottom of the table. We have the remaining sections of the Yellowstone River are well on their way to having criteria developed for them, so presumably within a year or two hopefully we'll be able to include those here. So this table here will continue to develop as more and more site specific criteria for nutrients are identified on a case-by-case basis.

CHAIRMAN SHROPSHIRE: My concern with that is that because -- Let's just use Georgetown Lake, for example. It is not listed here, or there's other rivers not listed here. The broad rulemaking, setting nutrient standards could impact lots of other areas, but people haven't had the opportunity to comment on it or think about it because their particular lake or river of interest isn't in this standard. So could you just comment on making sure that the process has been inclusive. That does that question make sense?

DR. SUPLEE: Yes, it does, Madam Chair. If you read up earlier in the document, we kind of outlined how this table is to be used for. So for example, if you're working on a TMDL or writing a permit, and you need to figure out what the criteria are, the steps are to first review the individual streams to see if the stream you're working on is listed there. If it is not, then you would go back to the earlier part of the table, which talks about the ecoregions, and see if it is broken down at the Level 4 or small scale region. If it is not listed there, then you just look at the ecoregion that it is located.

So the level of specificity moves

backwards from the amount of information that's available in the table. So if your stream isn't listed, but it's in the Middle Rockies, then the Middle Rockies criteria are what would apply.

Just to elaborate a little bit more on that -- because we have a fairly well developed site specific nutrient criteria process developed, one based on water quality modeling, and one based on using existing data -- we feel that there is already a very well laid out process that stakeholders can independently come to you with criteria, or probably more likely would route through the Department on a case-by-case basis going forward.

MR. RUSSELL: I have one more. If you put a table together between 7Q10 and 14Q5, what's the difference?

DR. SUPLEE: The difference is that the 14Q5 flow is always more water consistently from any river or stream across the state that you would look at. In fact, the USGS routinely reports the seasonal 14Q5 flow, which is also part of the reason we selected it. It meshed nicely with standard flow reporting that permitting folks can use when they're writing the permit. You'll

find it is always a larger volume of water.

MR. RUSSELL: So it's beneficial to the POTW's?

DR. SUPLEE: That would be correct.

MS. KAISER: I have one more question. Back to Table 12-A-1, where the Yellowstone River is listed and has assigned standards. If there is a tributary to the Yellowstone, are they subject -- or those segments of the Yellowstone, will they be subject to those standards, or would they revert to the regional standard?

DR. SUPLEE: Madam Chair, Ms. Kaiser. The tributaries that you're mentioning would revert to the regional criteria, which in that case would be the Northwestern Great Plains, 150 milligrams TP, and 1,300 micrograms total nitrogen.

CHAIRMAN SHROPSHIRE: In terms of public comment, I indirectly asked for that, but do we do that?

MR. LIVERS: Madam Chair, as long as it happens before the vote. I think you have asked for it, but if you wanted to be a little more formal and just ask one last time, I think that would be in order.

CHAIRMAN SHROPSHIRE: Is there anyone from the public that wants to comment on this?

MR. LAMBRECHT: Madam Chair, members of the Board. My name is Mark Lambrecht. I'm Executive Director of the Treasure State Resource Industry Association. I've been a member of the Nutrient Work Group for a couple of years. I just wanted to stand up here, and remind all of you that the numbers that you have before you today are based on science, and they were developed through several years of difficult negotiations amongst the Department and stakeholders, including industry, and municipalities, and conservation groups. I would caution you. Think very carefully before you make significant changes to those.

CHAIRMAN SHROPSHIRE: Thank you. Just for clarification, I wasn't suggesting earlier that we change them. I just wanted to make the process clear for everybody, new Board members. But thanks for that comment.

I think also we have an option to appoint Katherine as the Hearing Examiner or hear this ourselves; and because this is a bigger rulemaking, I wanted to get any thoughts on that

before we make a motion.

MR. RUSSELL: Robin, this has been well vetted. If you look at the numbers. Clearly I think Mark's point -- although it was a little abrupt -- was appropriate. These are well vetted. They have been through WPCAC, they've been through everything else. I probably would believe that this rule would go pretty fast after we get it started.

CHAIRMAN SHROPSHIRE: Katherine, are you available?

MS. ORR: I am.

CHAIRMAN SHROPSHIRE: Any other questions?

(No response)

CHAIRMAN SHROPSHIRE: I would entertain a motion to initiate rulemaking, and appoint Katherine as the permanent Hearing Examiner to adopt new nutrient standards for surface waters throughout Montana, the proposed nutrient standards -- I think I can just stop there.

MS. MILES: So moved.

CHAIRMAN SHROPSHIRE: It's been moved by Joan.

MR. RUSSELL: Second.

CHAIRMAN SHROPSHIRE: It's been seconded by Joe. Any further discussion?

MS. KAISER: I just have one comment. I think I understand what the driving force behind the Department to go forward with this rulemaking is. I truly appreciate all the efforts, and there is a lot of effort that's been put forward. But I really struggle with creating these standards that are going to be difficult, if not impossible to meet in the near term. In fact, they create a whole set of rulemaking variances. How to deal with them, that's my struggle.

MR. RUSSELL: I guess my only comment would be that I think that because there is a balance out here between what the Department's looking at for rulemaking and what the Legislature throughout this process has tried to infuse their public sentiment into this, that I think there is a pretty good trade-off there. If you leave it in the narrative realm, there'll be a lot of POTW's out there that will continue to see the uncertainty around the process; whereas I've always been an advocate of numeric standards and flows.

It gives you a pretty good target out

there of what you're going to have to have, and I think that's what driven -- although I'm not a full believer in it -- that that's what's driven the variance process. So there is a chance, a ten year chance for people to meet the standard.

MS. KAISER: I think what Mr. Arrigo mentioned about the Administrative Order, and the fact that the dischargers said once those limits were in their permit, they would put the effort forward to up the technology. So I understand that unless there is a hammer at the end, it is not going to happen.

MR. TWEETEN: Madam Chair, we can also hope to hear from stakeholders during the rulemaking process with respect to how they want to strike that balance, whether the adoption of numeric standards is going to be better or worse for them in terms of their workload, and how the variance process is going to fit in with that. So in the end, that may be a strong consideration in terms of what we do as far as adopting the rules, but I don't think it necessarily counsels against initiating rulemaking at this point, in my mind.

CHAIRMAN SHROPSHIRE: That's why I wanted to make sure that scope was appropriate for

those discussions. And so good discussion.

MS. MILES: I have just a quick question. Are we going to have a public hearing, or is that going to be conducted by Katherine?

CHAIRMAN SHROPSHIRE: Katherine.

We have a motion and a second. Any further discussion?

(No response)

CHAIRMAN SHROPSHIRE: All those in favor, signify by saying aye.

(Response)

CHAIRMAN SHROPSHIRE: Opposed.

(No response)

CHAIRMAN SHROPSHIRE: All right. Motion carries unanimously. Thanks, everybody. Let's take a ten minute break.

(Recess taken)

CHAIRMAN SHROPSHIRE: We're ready to get started again. So the next item on the agenda is initiation of rulemaking to amend Title 17, Chapter 38, Subchapter 1, Public Water and Sewer Plans, Cross Connections, and Drilling Water Wells by updating Department Circular DEQ1 and DEQ3 related to public drinking water design standards, clarification of the requirements for the

submission of plans and specifications, updating the expedited checklist, and adding new Department Circular DEQ10 describing the use of springs as a public source, and adding new Department Circular DEQ16, describing the use of cisterns for non-community public water systems.

MR. LIVERS: Madam Chair. It is really a pretty straight forward ruling, just a lot of moving parts to it, so we'll try to keep a road map so folks can get a sense of how they're fit together. We'll turn it over to Eugene Pizzini.

MR. PIZZINI: Madam Chair, members of the Board. For the record, my name is Eugene Pizzini, and I'm the Rule Manager for the Public Sewer and Subdivisions Bureau.

The Department is proposing a joint rulemaking of Department and Board rules to amend the Administrative Rules of Montana at 17.38.101, and 17.36.345. The proposed amendments would update by the adoption by reference of Department Circular DEQ1 and DEQ3 dealing with minimum design standards for public water systems. They would adopt by reference new Department Circular DEQ10 detailing the design standard for the use of springs for public water systems, and new

Department Circular DEQ16 detailing design standards for the use of cisterns to serve non-community public water supply systems.

The Secretary of State states that, quote, "Administrative Rules are agency regulations, standards, or statements of applicability that implement, interpret, or set law or policy." A rule may be specific enough in and of itself, or it may adopt by reference other documents that may further clarify the requirements. The circulars described above are design standards proposed to be adopted by reference under the applicable ARMs.

This gives the circulars the force of rule without requiring all of the information described in those circulars to be published in the rules themselves. In addition, because the rules allow for deviations to the standards, applicants may propose alternatives to the circulars if they are able to show that what they propose is as protective as what's required in the standards.

A brief summary of the major changes proposed for DEQ1 and DEQ3 was included in your Board Packet. Rachel Clark, our Engineering

Section supervisor, is available should you have technical questions related to those circulars.

The proposed amendments to the certified checklist incorporate the proposed changes to DEQ1 and DEQ3 into those checklists. The checklists reduce the costs associated with the plan review to the applicant, and reduce the Department's review time.

We are also requesting the Board to consider additional amendments to DEQ1 and DEQ3 to incorporate a new federal requirement that became effective January 4th, 2014 related to the definition of lead-free. In DEQ1 at Sections 8.1.1 and 8.11.1, and in DEQ3 at Section 8.6.2, the reference to "pipe and pipefittings not exceeding more than 8 percent lead" should be amended to read "not exceeding more than 0.25 percent lead."

I can give you the page numbers of those sections if you want to look at them. This is a new change in the federal language. It didn't get transcribed into the document that's before you, but we need it in there for primacy.

The remaining proposed amendments are clarifications of existing rules. The proposed

amendments include clarifications for the use of an engineer when submitting under Department Circular DEQ3; an approval may not create a violation or significant deficiency at an existing public water wastewater system; for resubmission of plans and specifications for systems that fail complete construction within the three years; for certification the construction was in accordance with the approved plans and specifications; for existing systems that have never received Department approval for plans and specifications; and for the requirement that a certified engineer must submit certain documents to the Department.

Madam Chair, members of the Board, the Department recommends initiation of rulemaking and appointment of a Hearings Officer for a public hearing. I'm available if you have questions.

MR. LIVERS: Madam Chair, I would just add one piece on this. We've been working on clarity, readability of a lot of our documents, and I think it became obvious to us when the previous Board dealt with DEQ4 that we needed some work on our circulars as well, and the time to do that is when we're revamping them. I think in a perfect world we would have completed that prior

to bringing a draft before you; but short of that, now is the time to do it.

So I guess what I would also ask, and it might make sense to even incorporate it in the motion if the Board agrees with this, if the Department could have permission to edit the document for clarity, readability, non-substantive changes as well, and then you'd have a chance to see those before the final adoption.

CHAIRMAN SHROPSHIRE: Thanks, Tom. Questions?

MR. MIRES: Madam Chair, I do have some questions. Was there something that came about for the reason why we're setting standards for springs?

MR. PIZZINI: Madam Chair, Mr. Mires. Currently in our design standards, we have DEQ10 that deals with the use of springs in non-public systems, and we have DEQ17 which deals in the use of cisterns for non-public systems. Both of those are currently done in Public Water Supply. We just don't have design standards for them. We're currently using the design standard for non-public for public use. All we're doing here is putting those standards into their own document that says

"This is what you have to do for public systems" in both of those cases.

So it is not increasing the regulatory world, it is not decreasing, it's just making it clear to everybody, "Here is your standard."

MR. MIRES: And then on the cisterns part in DEQ16, "Standards for non-community public water cisterns," can you explain that. What is non-community? Doesn't that mean when I have a cistern?

MR. PIZZINI: Madam Chair, members of the Board. Public water supplies are defined as, in general, 15 service connections or that they serve 25 or more people for at least 60 days a year. That's broken down in the regulatory world into those systems that are considered community -- meaning that 25 or more of the same people use that system year around -- and those that don't meet that. Those are called non-community systems.

So in this case, we're talking about use of cisterns at like Golden Sunlight Mine, or bars and restaurants, non-community systems. You wouldn't necessarily be able to use a cistern for a community system.

MR. MIRES: Thank you.

MR. TWEETEN: I have a question for Tom actually. On the proposal to edit with respect to matters of form, how exactly do you propose to do that? Who is going to do the editing and so forth?

MR. LIVERS: Madam Chair, Mr. Tweeten. We'd have our paralegal, rule professional, working with our legal staff to do that. She's done that with most of our rules recently, and it has worked well, and she has a very good sense of not only clarity, but when you're getting into something that might have a substantive impact.

MR. TWEETEN: I think that's kind of my point, that I've seen situations where people have tried to rewrite things to make them clear, and come to find out that the reason they're not clear is because they're complicated; and in order to really express what you want, there is no real clear way to say it. You can't reduce it to words of one syllable. You have to use a little bit jargon, and it has to be a little bit technical. And if someone who is not familiar with the subject matter just goes through and rewrites stuff to make it clearer, frequently substantive

changes.

So I just raise that point because it may be that we ask Katherine or we ourselves undertake the task of rereading this after it is done to make sure that we're satisfied that the changes are just matters of form, not matters of substance.

CHAIRMAN SHROPSHIRE: Can you comment on how you can assure that the process is pure.

MR. LIVERS: Madam Chair, Mr. Tweeten. That's a good caution. I've seen that with editors, too, and I've been in that position myself where it's a little bit of either a slippery slope, or maybe just not a clear bright line when you're getting into something that could have a substantive impact. So the paralegal won't be doing this in a vacuum. We'll have both legal and technical review of those changes as well to make sure that we haven't inadvertently changed the substance. So we will be policing that to make sure that doesn't happen. And we've got quite a bit of experience with that very point with the work we've done on the rules, so good caution, and we'll be watching that.

MR. TWEETEN: Okay. Thanks.

CHAIRMAN SHROPSHIRE: I think it's a really good point. Can you maybe elaborate on the types of cleanups that you might do. I just want to make sure that I understand what the process is.

MR. LIVERS: Sure. We can.

MR. PIZZINI: Madam Chair, the types of things that we're looking at, when we redid -- or I should say when Rachel and her group redid DEQ1, there was a lot of cutting and pasting, and going through and looking at the document.

The Secretary of State has a different process and procedure for English than other documents you may look at. It is different than what the Legislature does. And so for instance, where you have a line or a list of items, and it should be comma, comma, comma, and, sometimes the "and" is there, sometimes the commas aren't there.

The types of things that Elois is looking at are those: Spelling errors; formatting where when we were doing the cutting and pasting, I or Rachel or whoever was doing the documents didn't follow the process correctly. It is those types of things. Everything Elois is doing is being done through strike through and underline.

It goes to Rachel, and Rachel says yes or no from a technical standpoint to make sure that anything she's proposing to do isn't changing the language.

We also get to go to Mr. North and his staff to ensure that we're not violating a requirement anywhere. It is not our intent to do so.

MR. TWEETEN: Certainly not, but sometimes inadvertently things get done that cause unintended consequences.

CHAIRMAN SHROPSHIRE: Any other questions or comments?

(No response)

CHAIRMAN SHROPSHIRE: I have a question. Do you anticipate being able to get all this done within the time frame allotted? Is this going to be a big undertaking, or is most of the work done?

MR. PIZZINI: Madam Chair, members of the Board. If I remember correctly, there were 1700 or thereabouts changes made to DEQ1. I think we're going to make it, though.

One of the biggest problems that we ran into was we did not know the George Mathieus group was working on DEQ12 at the same time we were working on DEQ1 and DEQ3, which puts a significant

workload on Legal and the paralegal to do those reviews. That's just the way it worked out. It's the first time I've had that.

MR. NORTH: Madam Chair, to address your question, and maybe give some assurance to Mr. Tweeten, too. Elois Johnson our paralegal started this process, and as of Friday I think she was something like 80 percent of the way through DEQ1. DEQ1 and DEQ3 are the big ones. The other ones I anticipate pretty minimal changes in any of those, but DEQ1 and DEQ3 are the ones that have been on the books, and have historically had some of the unclarity problems.

What she does is, as he said, she identifies each change with strike-out or interline, and then it goes to the program to make sure that she's not changing anything; and then after that process has occurred, then it comes to me, and I review it to make sure there is nothing that is substantive being changed. And the kind of things either have to be grammatical, punctuation, or they have to be a situation where you look at it, and you really don't know what the requirement is.

A lot of times engineers think they've

written it clearly, and then lawyers can read it either way, and it is kind of a situation where we're trying to make it clear both from a legal and an engineering aspect. And we don't anticipate filing this notice until February 3rd, so that gives our paralegal another couple weeks, so we do anticipate that we can make the February 3rd filing deadline.

MR. RUSSELL: For some engineers English is a second language.

MS. CANTY: I'd like to say that it's usually the opposite way. Lawyers think it's clear, and engineers have to step in and straighten you out.

MR. RUSSELL: They also call them briefs and they're like 800 pages long. Get it right.

MR. PIZZINI: Is that why they call it practicing law?

CHAIRMAN SHROPSHIRE: I have a question, just so I include this in the motion. It is to incorporate by reference the federal rule on the definition of non-lead, or can you --

MR. PIZZINI: Lead free, correct.

CHAIRMAN SHROPSHIRE: Can you --

MR. PIZZINI: Madam Chair, do you need

the sections again, or do you just want that we wish to make that change?

CHAIRMAN SHROPSHIRE: I just want to make it clear in the motion whatever the language should be. I just want to incorporate that properly. Can you tell me what to say.

MR. PIZZINI: Madam Chair, it would be to incorporate by reference the new federal standard for lead free into DEQ1 and DEQ3.

MR. LIVERS: Madam Chair, is it an incorporation by reference or is it just a change? I think that's --

MR. PIZZINI: Correct. It is not an incorporation by reference. It is an incorporation of a federal standard into our rules.

MS. MILES: You've already included that in here.

CHAIRMAN SHROPSHIRE: I wasn't clear if that was an addition or not.

MR. PIZZINI: Madam Chair, members of the Board. No, that is an addition. It was intended to be there, and I don't know why it didn't show up, but in reviewing the document, it is still 8 percent.

MR. TWEETEN: It was an unintentional omission you're trying to fix.

MR. PIZZINI: Point well taken.

CHAIRMAN SHROPSHIRE: So the new federal standard for the definition of lead free; is that clear enough? John, are you good with that?

MR. NORTH: Yes.

CHAIRMAN SHROPSHIRE: Any other comments? Members of the public?

(No response)

CHAIRMAN SHROPSHIRE: Okay. Thank you. Because of the complexity of this rulemaking, or initiation rulemaking, I'm going to read through the list because I think it incorporates so many different references. I just want it to be clear. So bear with me while I read this.

I will entertain a motion to initiate rulemaking -- Katherine, are you available?

MS. ORR: I am.

CHAIRMAN SHROPSHIRE: -- to initiate rulemaking, appoint Katherine as the permanent Hearing Examiner and hold a public hearing, to amend the public water supply rules -- to amend existing public water supply engineering rules to adopt updated Department Circular DEQ1, 2014

edition -- to amend existing public water supply rules to adopt updated Department Circular DEQ1, 2014 edition, which sets forth the requirements for the design and preparation of plans and specifications for public water systems; to amend the existing public water supply engineering rules to adopt updated Department Circular DEQ3, 2014 edition, which sets forth minimum design standards for small water systems; to adopt new Department Circular DEQ10, 2014 edition, which sets forth the standards for the development of springs to serve public water supply systems; to adopt new Department Circular DEQ16, 2014 edition, which sets forth the standards for cisterns to serve non-community public water supply systems; to amend the existing checklist to incorporate proposed changes in DEQ1 and DEQ3, and previous changes to Department Circular DEQ4, 2013 edition; clarification of existing rules related to whether a professional engineer is required to submit plans and specifications; to amend for clarification existing rules related to submission of required documents by a professional engineer; to amend existing rules for clarification related to submission of plans and specifications for

systems that have never submitted plans and specifications for those systems that fail to complete construction within a three year window; to amend subdivision rules that adopt DEQ1 and DEQ3 to reference the 2014 editions; to reorganize for clarity without changing the substance portions of these rules mentioned before; and to incorporate the new federal standard for definition for lead-free.

MR. MIRES: So moved.

MS. KAISER: I'll second.

CHAIRMAN SHROPSHIRE: It's been moved by Larry and seconded by Heidi. Any further discussion?

(No response)

CHAIRMAN SHROPSHIRE: All those in favor, signify by saying aye.

(Response)

MR. TWEETEN: Public comment?

MR. LIVERS: We did ask for that earlier before we sent the motion, so I think we're okay.

CHAIRMAN SHROPSHIRE: Thank you. All those in favor, signify by saying aye.

(Response)

CHAIRMAN SHROPSHIRE: Opposed.

(No response)

CHAIRMAN SHROPSHIRE: All right. Motion carries unanimously.

I think that bring us to the last item on the agenda which is reserved for general public comment. Is there anybody here or on the phone that wishes to address the Board?

(No response)

CHAIRMAN SHROPSHIRE: Next meeting.

MR. LIVERS: Madam Chair, I don't have it in front of me. March 21st, I believe, which will be on a Friday again.

CHAIRMAN SHROPSHIRE: That's it. I'll entertain a motion to adjourn.

MR. TWEETEN: So moved.

MS. MILES: Second.

CHAIRMAN SHROPSHIRE: All those in favor, signify by saying aye.

(Response)

CHAIRMAN SHROPSHIRE: Opposed.

(No response)

CHAIRMAN SHROPSHIRE: We're adjourned.

(The proceedings were concluded at 12:01 p.m.)

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C E R T I F I C A T E

STATE OF MONTANA)
: SS.
COUNTY OF LEWIS & CLARK)

I, LAURIE CRUTCHER, RPR, Court Reporter, Notary Public in and for the County of Lewis & Clark, State of Montana, do hereby certify:

That the proceedings were taken before me at the time and place herein named; that the proceedings were reported by me in shorthand and transcribed using computer-aided transcription, and that the foregoing - 115 - pages contain a true record of the proceedings to the best of my ability.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal
this day of , 2014.

LAURIE CRUTCHER, RPR
Court Reporter - Notary Public
My commission expires
March 12, 2016.