BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

BOARD MEETING)
JULY 31, 2015)

TRANSCRIPT OF PROCEEDINGS

Heard at Room 111 of the Metcalf Building
1520 East Sixth Avenue
Helena, Montana
July 31, 2015
9:00 a.m.

BEFORE CHAIRMAN JOAN MILES,
BOARD MEMBERS MARIETTA CANTY,
CHRIS TWEETEN, DR. ROBERT BYRON,
ROY SAYLES O'CONNOR, ROBIN SHROPSHIRE,
and MICHELE REINHART LEVINE

PREPARED BY: LAURIE CRUTCHER, RPR
COURT REPORTER, NOTARY PUBLIC

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

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CHAIRMAN MILES: Good morning, everyone. Welcome to the Board of Environmental Review meeting. We have a lot of new members today and also some other new folks, so I would like to start with a few introductions before we get into business.

First, I'm Joan Miles. I've been on the Board for two years now, and was asked to chair the Board, so this is actually my first meeting as Chair. And I think what we'll do is maybe start with Robin over here. Just introduce yourself, and if you occupy one of the designated seats on the Board. The Board of Environmental Review has four designated seats for a hydrologist, someone with environmental sciences background, a physician or health officer, and a local government representative.

I'm actually in the local government position. I worked with Lewis & Clark County for about 18 years. Robin.

BOARD MEMBER SHROPSHIRE: Good morning. My name is Robin Shropshire. I'm the hydrogeologist on the Board. I've been on the Board I think since 2005. Awhile. And what else did you want me to say?

CHAIRMAN MILES: I think that's it, unless you want to say anything else. I just want to thank Robin again for her two years as Chair. As I said in communication to her a little while ago, I wish I had paid a little bit closer attention to what she did for the two years. She did a wonderful job as chair, I hope I can do the

same. Chris.

BOARD MEMBER TWEETEN: I'm Chris Tweeten. I am the designated attorney member of the Board, I guess, and this is my second year on the Board.

BOARD MEMBER REINHART-LEVINE: I'm Michele Reinhart-Levine. I'm also an attorney from Great Falls, and I have a masters in environmental studies.

MR. REED: I'm Ben Reed. I'm the designated attorney for the Board of Environmental Review.

CHAIRMAN MILES: By the way, I'm an attorney also. I guess we have a number of us on this Board.

BOARD MEMBER DR. BYRON: I'm Dr. Robert Byron, an internist from Hardin, Montana, new member, physician.

BOARD MEMBER CANTY: I'm Marietta Canty, and the role I play on the Board is environmental scientist. I'm a scientist and an engineer as well, and this is also my second year on the Board.

BOARD MEMBER O'CONNOR: I'm Roy O'Connor, and I'm new to the Board.

CHAIRMAN MILES: George, I was going to introduce you next anyway. George Mathieus, who is the new Deputy Director for DEQ and the Board liaison, and I'd like to have you say a few words.

MR. MATHIEUS: Thank you. It feels a little bit different being at the table today for all the years I've sat in the back or at the podium. So I'm excited about that. I just would say, similar to what the Chair said, I watched my boss, Director Livers, sit at this table for 13 years, and I wish I would have listened to what he said as well. Hopefully if I need a bail out today, he'll help me, but it is a pleasure to be here, and looking forward to it. Thank you.

CHAIRMAN MILES: Thanks, George. We look forward to working with you. And I know we'll hear from a lot of people in the audience, but a few other introductions. The Director of the Department of Environmental Quality, Tom Livers, I appreciate your being here; and John North, who is the Chief Legal Counsel for the Department who also will be providing assistance to the Board, and already has provided me with a fair amount of assistance already.

And then two really important people. Joyce Wittenberg, I think all of you Board members met her yesterday, but Joyce is the person who schedules all of our meetings, and gets information together, and makes coffee, which we appreciate. And our Court Reporter, Laurie Crutcher. I appreciate Laurie being here. She's a great reporter. She's also a heck of a tennis player, and when Laurie tells me it is time for a break, we take a break. We'll be doing that at least probably about an hour and a half or thereabouts, depending on where we're at in the

meeting.
So I think with that, we'll open the meeting. We're going to start with review and approval of the minutes, but I am just going to say that the doughnut rule is in effect, and if you don't know what that is, if anybody has a telephone that goes off or causes a disruption, you might have to get doughnuts, or maybe chocolate -- chocolate sounds pretty good -- chocolate if your phone goes off. So please mute your phones.
Assuming the Board members had an opportunity to look at the minutes from May 29th, do we have any questions? Any changes? Is there a motion to approve the minutes?
BOARD MEMBER SHROPSHIRE: I would move that we approve the minutes.
CHAIRMAN MILES: It's been moved by Robin Shropshire. Is there a second?
BOARD MEMBER CANTY: Second.
CHAIRMAN MILES: Thanks, Marietta. Is there any discussion or changes that are noted in the minutes?
(No response)
CHAIRMAN MILES: All in favor of approving the minutes from May 29th, please say aye.
(Response)
CHAIRMAN MILES: Opposed.

(No response)
CHAIRMAN MILES: Hearing none, the motion passes unanimously.
An additional item that we added to this agenda is just a quick update on the October meeting that has been changed from October 9th until October 16th. I know that survey was sent out, and I'm not sure if we officially got notice out that the next meeting will be on October 16th. The December meeting is on December 4th, and at that meeting is when we will schedule our 2016 meeting calendar. Part of the reason for waiting on the 2016 meetings is to get the calendar out, the rulemaking calendar for the State, so we can sort of time our meetings accordingly. So we'll set those meetings. Any questions?
(No response)
CHAIRMAN MILES: We'll get into the briefing items, and for those of you who are new on the Board, this is where we have an opportunity to just get updated on some of the contested cases that we have assigned to a Hearings Examiner, and Ben will give us an update on these items. Thank you, Ben.
MR. REED: Thank you, Madam Chair. For the enforcement cases that have been assigned to me, on matters "A" through "E," those matters are currently going through discovery between and among the parties. I think the exception to that is perhaps "C." I think negotiations for settlement are ongoing between and among the

parties.

But as the Board can see, the next matter up, the next two matters will be Normont and Somont Oil which are taking place in October. So that should be right before the next Board meeting, and I expect to have a more substantive report on those matters at that time. Until then, as I say, these matters are ongoing, and there is not much to report on them.

For nonenforcement cases, those are again ongoing. I've signed an order extending the stay and reporting deadlines by a non-contested motion between the parties for Yellowstone Energy Limited Partnership.

For Phillips 66, the parties have stipulated, and are as far I am aware complying with the terms of the stipulation as Phillips 66 comes into and maintains compliance with Department requirements.

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And then there is a scheduling order out for Columbia Falls Aluminum Company's appeal, and that proceeds at pace.

CHAIRMAN MILES: And Item No. 3?

MR. REED: I think that Mr. North is perhaps better able to speak to that than I am.

MR. NORTH: Madam Chair, members of the Board. John North, Chief Legal Counsel for the Department.

This is a case that was filed in front of the Board, but also there was a contention made that it was more properly in front of a District Court. The Plaintiffs did file in District Court, and that is now proceeding in Helena District Court on motions for summary judgment. Oral argument has been held, and we're waiting for a decision from the Judge.

CHAIRMAN MILES: Thank you, John. Are there any questions from Board members about these?

(No response)

CHAIRMAN MILES: Okay. We had, in a recent conversation I had with the Department, requested that we take a little bit of time for legislative briefing. I don't know if any of that

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was covered at the main meeting. I was not here at the main meeting. I didn't see it in the minutes. So there are a number of pieces of legislation that impact this Board directly, and George is going to give us an update on those, particularly one of them that I think is relevant to the hearing that we're going to be having, or the discussion we're to be having on proposed rulemaking this morning. George.

MR. MATHIEUS: Thank you, Madam Chair. The Chair requested that I print out copies of one of the specific pieces of legislation, so I'll do that now, Senate Bill 325. (Provides document)

So there is four pieces of legislation this morning that I'm going to discuss and describe to you. The first one is Senate Bill 97. Senate Bill 97 was introduced at the request of

the Department of Environmental Quality. It changes the criteria that the Board must use to reclassify State waters that are misclassified in our current classification system.

Under current law, the Board may reclassify a water body only if it determines that that water body was misclassified back in 1967 when the current classification system was

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adopted. In many situations this information is non-existent.

This bill will give the Board authority to use the most current science to appropriately develop new use classes for misclassified streams as necessary. It will benefit surface water discharge permit holders who are currently asked to meet permit limits that may not reflect the receiving water in which they discharge. This bill does not provide a process for lowering water quality levels that will harm beneficial uses.

CHAIRMAN MILES: What was the bill number of this one?

MR. MATHIEUS: Senate Bill 97. So basically this bill gives the Department and the Board another tool in the tool box to deal with water quality issues as we move into the future.

CHAIRMAN MILES: Any questions?

(No response)

MR. MATHIEUS: Moving right along, Senate Bill 102. Senate Bill 102 was introduced at the request of the DEQ. This bill amends the fee provisions of the Clean Air Act of Montana. Air quality fees are set by the Board in rulemaking proceedings, so this bill directly

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affects the Board's rulemaking authority.

Under the air quality rules, certain oil and gas operations do not need an air quality permit. Instead they may simply register the operation with the Department. Senate Bill 102 amends the Clean Air Act to expressly provide that we can continue to collect and use registration fees for the administration of existing and future registration programs.

The Department plans to develop additional registration programs where appropriate in the future as an alternative to the traditional case-by-case permitting program that requires far more time and effort by the agency and the applicants. These registration programs would be brought forward before the Board for approval. Registration programs reduce time and resources that would otherwise be spent on issuance of a case-by-case permit, and in many situations are a much more efficient and effective means of meeting air quality obligations.

This bill also removed the requirement that certain air quality fees be adjusted annually to account for changes to the Consumer Price Index. It is unnecessary to adjust these fees

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annually. This would usually result in an upward adjustment of the fee.

Finally, this bill does not increase air fees, does not allow the Department to collect for fees from those that are currently subject to air fees, and does not expand the air quality regulatory authority of the Department.

CHAIRMAN MILES: Any comments or questions?

(No response)

MR. MATHIEUS: So the next bill is Senate Bill 112. This bill does not affect the Board's rulemaking function, but it does create another type of appeal that may be made to the Board. Senate Bill 112 applies when the Department receives an application for a discharge permit on an impaired water body. It sets an initial deadline of 180 days for the Department to develop a TMDL water quality restoration plan after receipt of the application.

It allows the Department thirty days to assess whether adequate data and information exists to meet that deadline. If the Department determines that there is not adequate data, the bill allows the Department to set an alternative

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deadline for completion. If the applicant disagrees with that time frame, the applicant can appeal to the Board. If inadequate resources are identified by the Department, the Department may request the applicant provide funding for the development of that TMDL.

I saved Senate Bill 325 for last. So Senate Bill 325 has two distinct components that I'd like to point out. First it sets the natural condition of a stream as the water quality standard when the existing standard is more stringent than the natural condition of that stream. This bill limits natural as the non-anthropogenic condition. The bill expressly requires the Department to protect downstream water quality standards.

Secondly, this bill allows the Department to issue a temporary variance to a discharger when the receiving stream exceeds water quality standards due to upstream pollution.

Finally, this bill triggers two rulemaking efforts for the Board: One to define how non-anthropogenic is determined; and second on how the variance is implemented.

CHAIRMAN MILES: So what can we expect

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in terms of when the Board needs to adopt the rules? How that is going to happen procedurally? Will the Department be drafting something for the Board to consider?

MR. MATHIEUS: Madam Chair, members of the Board, the timeline for the Department is sometime this fall that we're expecting to -- we're working towards the draft rule at the moment, and we're looking at a fall time frame.

CHAIRMAN MILES: Board implementation, full implementation of Senate Bill 325?

MR. MATHIEUS: For a proposal to initiate rulemaking.

CHAIRMAN MILES: Does anyone have any questions or comments? That one is a fairly complicated bill, and it will impact, certainly will impact some of the work we do, since we do have standards on streams that are probably more stringent than the natural non-human caused conditions. Robin.

BOARD MEMBER SHROPSHIRE: Madam Chair, George, that was my question, was in terms of the initiation of rulemaking that's on our agenda today. How do we approach incorporating a future rulemaking? I'm confused if that would impact the initiation of rulemaking that we're looking at today.

MR. MATHIEUS: Madam Chair, Ms. Shropshire. The two concepts and the two rulemakings are related, but not necessarily dependent on each other. So the rulemaking before you today is for site specific standards, so specific to a specific water body; and the rulemaking to determine natural is going to be a broader brush across the state of Montana. And the rulemaking before you today will help inform the Department on the second rulemaking because we're talking about natural.

CHAIRMAN MILES: What do you mean the second rulemaking? In Senate Bill 325?

MR. MATHIEUS: Yes.

CHAIRMAN MILES: Michele.

BOARD MEMBER REINHART-LEVINE: Madam Chair, George. I'm a little bit confused. Wouldn't it make sense to have an over-arching definition of what counts as natural, sort of a framework, and then proceed with stream by stream after that? I'm wondering if we're putting the cart before the horse here.

MR. MATHIEUS: Madam Chair, Ms. Reinhart-Levine. That's a good question, and I would recommend that listening to the presentations today, and seeing why we are where we are today, and why we think that it is important to make this decision today, might put that more in context for you.

CHAIRMAN MILES: I think that that's true. Some of these questions might be more relevant to the actual action item that we get into, but I think they're very pertinent questions. But in terms of understanding the overall bill, Senate Bill 325, I think; wanted everyone to see the bill, and see the language, and then we can maybe explore that little bit further during that discussion.

Anything else there? With that, we'll move right into our action items. Thank you, George. I appreciate that, and we'll look forward to hearing more about that, and seeing the initiation of rulemaking for Senate Bill 325.

We have three action items today. We have a new contested case, and then we have two requests for initiation of rulemaking. The new contested case, that was fairly detailed in your

Board packets. I hope you had a chance to go through that. That deals with Water Quality Act violations by Buscher Construction and development in the Billings area. This goes back to -- I think it was 2012 and 2013.

Once an issue goes into the contested case status, we do not take any public testimony on it. The issue for us today is whether we want to hear this case directly, or assign it to a permanent Hearings Examiner who will decide the matter. Ben, should we ask you to take that on, are you prepared to do so?

MR. REED: I am able, and I think it's appropriate, Madam Chair.

CHAIRMAN MILES: Any questions? Any discussion? Is there a motion to either assign a permanent Hearings Examiner, or for the Board to hear the matter?

BOARD MEMBER SHROPSHIRE: I'd move that we assign Ben as the permanent Hearing Examiner.

CHAIRMAN MILES: Thank you, Robin. Is there a second?

BOARD MEMBER O'CONNOR: I will second that.

CHAIRMAN MILES: Any discussion on the issue?

(No response)

CHAIRMAN MILES: All in favor, please say aye.

(Response)

CHAIRMAN MILES: Opposed.

(No response)

CHAIRMAN MILES: Motion passes unanimously. Thank you.

The first initiation of rulemaking is a proposal from the Department to adopt site specific electrical conductivity and sodium adsorption rate criteria for Otter Creek, a tributary of Tongue River. I anticipate that we're going to have quite a bit of testimony on this today. Can I actually see how many people intend to comment on this proposal?

(Response)

CHAIRMAN MILES: We'll start with the Department doing an explanation. Actually I'm going to turn it over to George first to sort of give an introduction, and then Department will give their presentation, and then we'll open it up to public comment. I would just ask that people stay on point, concise, very clear, so the Board can understand this. I understand we will have some visuals, and I appreciate that. I think that will probably help us. And with that, I'll turn it over to George.

And this is not a formal process here, so we can ask questions. After presenters give their comments, you certainly can ask questions at that point and clarification. So have a good discussion so we can proceed accordingly.

MR. MATHIEUS: Thank you, Madam Chair,

members of the Board. Since today is my first day as well, I went ahead and wrote this speech down as well to keep me focused.

Today the Department brings for your consideration a rule package for site specific water quality standards on Otter Creek. We fully recognize and want you to know that this effort has not come without public concern. It is why we have increased the normal public involvement process over the last year to include informal open forums, public meetings, and presentations, to discuss and seek input as we developed this rule package.

I want to give you some context on how we got here. The Department developed a TMDL, which is a water quality plan, as required under

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the Water Quality Act. We were able to draw from forty years worth of water quality data, which clearly showed us the existing water quality standards for EC and SAR rarely, if ever, existed in Otter Creek. We then developed a watershed model to better understand salt in Otter Creek drainage. Finally, we received a permit application for a discharge permit.

The current regulatory framework presents problems for the Department when trying to implement the water quality standard in a permit. This is because the 500 EC standard rarely exists in Otter Creek naturally. Current law does not allow the Department to require treatment purer than a natural condition.

When the Department set out to develop these standards, we had three objectives: No. 1, the numbers must protect uses in Otter Creek; No. 2, the numbers must protect the Tongue River; and No. 3, those numbers must represent and maintain the natural condition of Otter Creek. I believe we have met those objectives today.

It is the Department's position that it is appropriate to review and modify water quality standards to ensure we capitalize on the newest

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and best information to ensure the protection of our State waters.

So today we have a pretty awesome team that's going to present to you today, led by Amy Steinmetz with our Water Quality Standards Program. So I'd like to welcome Amy, and I think she's probably going to introduce her team. So thank you, Amy.

CHAIRMAN MILES: Amy, and anyone else who comes up to the podium, would you make sure you introduce yourself, your full name, and spell it for Laurie so she has the correct information in the record.

MS. STEINMETZ: Good morning, Madam Chair, members of the Board. My name is Amy Steinmetz, S-T-E-I-N-M-E-T-Z. I work in the Water Quality Standards Section, the Water Quality Planning Bureau, at DEQ. I'm here today to request initiation of rulemaking for site specific standards for EC, electrical conductivity, and

sodium adsorption rate, SAR for Otter Creek. And I'd like to invite comments, questions, throughout the presentation. Feel free to interrupt.

Why are we here today? This slide just shows the chronology of how we got here today, and

I'll go into a little bit more detail in the next couple of slides, but first we're here because an assessment of Otter Creek showed that it is water limited for EC and SAR, and if that's the case, a watershed plan to attain water quality standards, or as George described, a TMDL, is necessary for that water.

A pending permit application elevated the priority of that TMDL, and that TMDL process showed us that the natural condition is significantly different than the water quality standards that are currently on the books. So this is a water quality standards issue, and not a TMDL issue.

Assessment. Water quality beneficial use assessment. Data in 1996 showed high level of salts in Otter Creek. We determined that those levels of salts could negatively impact irrigated agriculture. In 2008, a comparison of real data to the standards that the Board adopted in 2003 showed exceedence of those standards. So with that information Otter Creek is listed as water quality limited, or an impaired stream, on a 303(d) list, a federal list that lists impaired streams that don't meet water quality uses.

Like I said, when that's the case, the next step is to allocate load reduction of a pollutant so we can meet water quality standards, and those load reductions go to point sources -- industry permitted discharges -- and nonpoint sources -- anybody who might add a pollutant to a stream. So that would include agriculture, other uses as well.

Water bodies can stay on that 303(d) list for a long time without having that watershed plan to reduce pollution, and one of the things that can elevate the priority of a TMDL, that watershed plan, is a pending permit application. The Department had information that a permit application was pending for Otter Creek. That, along with the decision of the State TMDL Advisory Group, elevated the priority of the TMDL.

TMDL stands for total maximum daily load. It is not a standard. It doesn't develop standards. It's a watershed plan to attain and maintain water quality standards by identifying significant sources, and then allocating load reduction to those sources, so that if each of those sources reduce their load to their assigned amount, the water quality standard would be met.

So TMDLs protect water quality standards.

Before I go any further with the Otter Creek TMDL, just a little bit of background information that will be helpful as we keep going. Electrical conductivity, EC, is the ability of

water to conduct electricity. It depends on the amount of ions in the water, cations such as sodium, calcium, magnesium; and anions, like sulphate, bicarbonate. The measure that we use for EC is microsiemens per centimeter, so you'll hear that a lot today. And the way that EC can negatively impact agriculture is that it competes with the plants for water. So the higher the EC, the harder it is for plants to uptake water.

Sodium adsorption rate, SAR, is the ratio of sodium to calcium and magnesium. It is a ratio, no units. This high levels of sodium adsorption rate can negatively impact agriculture because sodium is a large molecule. With high SAR, we have lots of sodium. That sodium can push the soil particles apart, accusing loss of soil structure. Then when clean water rinses the sodium out of the soil, the soil collapses, forms a hard crust. And you've probably all seen soil that looks like this.

When a TMDL is completed, we compare water quality to water quality standards. These are the water quality standards that apply to Otter Creek. Electrical conductivity, 500 microsiemens per centimeter; sodium adsorption ratio, three or five. Those are the numbers that are in the Administrative Rules of Montana at 17.30.670.

I have "or natural" behind the numbering. When the Board adopted these standards in 2003. When the notice of adoption was published in the Montana Administrative Register, there were two responses to comments that addressed this situation where the natural condition is much higher than the standards; and the Board said that if that's the case, then the numbers don't apply in permits or assessments, then natural applies.

And one of the responses to comments specifically referred to Montana Code Annotated 75.5.306, which says that wastes don't need to be treated to a purer condition than the natural condition of the receiving water. So the response to comment about permits and standards too low, the lower than natural, was that natural would become the standard, would be implemented in permits.

So these are our rules, statute, but Montana doesn't have rules or guidance on how to do that. That's why we're here today.

CHAIRMAN MILES: On natural? Defining natural?

MS. STEINMETZ: On implementing natural in the standards.

This is the current data that the TMDL writer looked at compared to standards. Thousands of data points for Otter Creek dating back to the 1970s, as you'll see.

SC is the measure of conductivity that standardizes the measure to -- takes out the influence of temperature. So specific

conductance, the ability of water to conduct electricity at 25 degrees Celsius. The data that we have is measured SC. The definition of EC in Montana rules is the same as the definition of SC, so when I use those two terms today, for our purposes, we use them interchangeably.

3,050 daily SC data points. The daily data is information from a continuous gauge, a USGS gauge, that measures conductivity maybe every

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fifteen minutes, and then that data is averaged daily, so that's the daily data points.

The grab samples are just somebody going out, dipping a bottle in the stream, and analyzing for EC, and then ions to calculate SAR.

This in the next three charts, they're set up the same way, either SC or SAR on the "Y" axis; and day of calendar year on the "X" axis. Year is irrelevant. We're just looking at EC and SAR, SC and SAR, during different times of the year. January on the left, through December on the right.

This first chart shows the daily specific conductivity, specific conductance. We can see the standard, the red line on the bottom, 500 microsiemens per centimeter; and the actual data mostly hovers between 2,500 and 3,500 microsiemens per centimeter, significantly higher than the water quality standard.

CHAIRMAN MILES: Amy, excuse me. Where are these samples taken from?

MS. STEINMETZ: Thank you, Madam Chair. These samples are collected from a USGS gauge that's near Ashland, Montana, a couple of stream miles upstream of the confluence with the Tongue

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River; and the grab samples were collected near there. So for our purposes, we're seeing that all these samples were collected in same location.

These are the grab samples. Shows about the same thing, most of the data between 2,500 and 3,500 microsiemens per centimeter. Here we do see that four data points fall below the standard. And something to remember when we're looking at grab samples and the continuous samples, these are instantaneous values. The daily samples, you do see some averaging of highs and lows throughout the day, so we see higher values with grab samples, and we also see lower values with the grab samples.

BOARD MEMBER SHROPSHIRE: Madam Chair, if we have questions, do you want us to work through you?

CHAIRMAN MILES: No. I think it's important to ask it when it's on your mind.

BOARD MEMBER SHROPSHIRE: When is high flow or runoff? Typically when would you see the lowest flow on the "X" axis and the highest flow?

MS. STEINMETZ: You would typically -- just time of year, low flow after August; and then the high flow, mostly probably January through

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June.

BOARD MEMBER SHROPSHIRE: So where you're seeing the 500 level grab samples, those are higher flow?

MS. STEINMETZ: Probably extreme high flow, where there is so much precipitation that it significantly dilutes the actual Otter Creek water. And I do have some slides -- I didn't include them in the presentation, but we can go to them later -- that do show the relationship between conductivity and flow. Until about 35 CFS, cubic feet per second, we don't see a difference in conductivity. We don't see a difference in conductivity until we get to very high flow. Average flow for Otter Creek is about five CFS. So it is all over the board.

So sodium adsorption ratio, this is the continuous data averaged daily. We didn't start taking this data until 2004, and in 2004, those continuous data loggers were only employed between March and the end of October, so just during the growing season on the Tongue River. So here we are missing some data from January through March, November, December.

But we can see that the data that is

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available is almost all above that five standard. That is the non-growing season standard; corresponds to the Tongue River. We'll see in a little bit, there is no growing season for Otter Creek, but the Tongue River does have a growing season. So almost of the data is above the non-growing season standard. All of the data is above the growing season standard of three.

The next slide is the grab samples. These we have year around. Remember this later. I'm going to come back to this. Year around, again, most of it is above the non-growing season standard. All but four points are above the growing season standard.

So when the TMDL writer looked at all of this information, looked for sources, it appeared that the salts were coming from natural sources. George mentioned a model. That's when we decided that we would develop a model that would show us what was coming from natural sources, and what was coming from anthropogenic sources. This is an easy one. The model showed that everything that's there of any significance is coming from natural.

BOARD MEMBER SHROPSHIRE: Why is that?

MS. STEINMETZ: I should have probably

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had Eric make us a modeling report. He's available to answer questions on the model. But he put in any land use that's in the watershed, and then removed any of the anthropogenic, and any salt loads that that would contribute, and it showed us that there are no anthropogenic sources. And the only thing that could contribute to the salts in this watershed would be from agriculture, which is a very small portion of the total land.

And again, you'll see when I talk about the type of agriculture that's being used, it doesn't lend itself to that return of salts to the

stream. It is very natural and passive. But Eric could answer more questions if you have them on the model. He was here in March, but some of you were not, so some of you did not have the privilege of hearing his presentation on the model.

Sometimes, some streams, it is going to be very difficult to tease out what's anthropogenic and what's natural. This watershed is very natural. It was an easy one to determine.

BOARD MEMBER SHROPSHIRE: I'm still not sure I understand. Let's say you had some activity on the land that was historic.

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MS. STEINMETZ: Sure.

BOARD MEMBER SHROPSHIRE: That could be impacting the concentrations in the river.

MS. STEINMETZ: Historic mining?

BOARD MEMBER SHROPSHIRE: Yes.

MS. STEINMETZ: That is one of the uses that was considered in the model.

BOARD MEMBER SHROPSHIRE: So in the model, you took off any potential impact, and you were able to reproduce the numbers that you see; is that correct?

MS. STEINMETZ: That's correct. Yes. When he calibrated the model, the simulated results and the actual data matched up very closely.

BOARD MEMBER CANTY: So would it be maybe correct to say there are some anthropogenic sources, but they're just so insignificant in comparison to background?

MS. STEINMETZ: That's correct.

BOARD MEMBER CANTY: They're sort of negligible.

MS. STEINMETZ: So we can say that all of that data that you saw on those previous four slides, that those are the natural conditions.

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BOARD MEMBER SHROPSHIRE: And the natural sources are what again?

MS. STEINMETZ: The geology of the area, very high saline geology; used to be an inland sea. I'm sure you would know this a lot better than I do as a hydrologist. But yes. So as the water flows through Otter Creek and flows over land, picks up salts from the soil, from the rocks, and that's where the salts are coming from.

At that point, seeing that we didn't have any sources to require or ask load reductions, it became a standards issue rather than a TMDL issue. The existing tributary standards for EC and SAR are significantly lower than the natural condition. At that point, not only can we technically not implement that standard, but Montana Code Annotated 75.5.306 kicks in. So we want to set standards or apply natural, and numeric standards provide more certainty for everyone involved, for anybody who has to implement those standards. The narrative standard is just a statement that says that harm can't occur.

And then the other thing -- and George mentioned this, too. He did a really good job of summarizing everything that I'm going to say today -- but water quality standards have to protect uses. That's the purpose of a water quality standard. It has to protect the use.

The uses on Otter Creek. Recreation is one of the designated uses. These uses are designated in the Administrative Rules of Montana. We're not going to have an issue with salts and recreation.

Aquatic life is one of the uses. Aquatic life exists. The aquatic life that exists there either exists because it's adapted to the natural salts, or because the aquatic life that's there can tolerate one way or another, but it is there naturally. And so if we take a natural approach, maintain the natural condition of Otter Creek, aquatic life will be protected.

And agriculture is the third big use that we need to protect. It's thought to be the most sensitive use with regard to salts. In the Administrative Rules of Montana, Otter Creek is designated as a stream that's marginal for agriculture, so we're going to talk about that next. You won't see any sprinkler irrigation occurring on Otter Creek, and you don't drive up through sprinkler irrigation. If you did, you wouldn't see any plants because the salts in the water would kill the plants.

What you do see -- this is a little bit hard to see, but easier to see in the next slide -- we see berms that are built up around these fields. These berms capture water coming out of the hills, out of clean side channels, and that's how irrigation is occurring. It's capturing clean water, precipitation, snow melt, or combination of the two. Passive irrigation. The main method of irrigation is precipitation.

Here's another picture that shows that. Here's one of those berms. Otter Creek. The other reason to build these berms is that we're keeping water from Otter Creek off the fields. We don't want that water on the fields typically. The only time that the water would enter the field is if there is enough precitation, first of all, to increase the volume, but also diluting the salts.

And then the other thing that's happening is that water, when it does overflow the banks, is mixing with water that's already on the fields or in the soil. So there is so much dilution by the time that this irrigation is occurring, that you're not seeing those levels of salts like you would see in that water that's being applied to plants, and that's why I say that the main method of irrigation is precipitation.

So far, we know we have standards that we can't implement technically or legally. We know that we need to protect the most sensitive

use; provide numeric standards to provide more certainty to users; we need to set these standards based on natural that will protect the uses that exist naturally.

Site specific standards based on natural conditions will protect Otter Creek's designated uses because they maintain the current condition under which those uses exist. We would require status quo. We would require no change to natural.

Site specific standards based on natural are not a new concept by any means. They're not common in Montana. We have a couple of examples. These are recent examples. Some of you who have been on the Board for awhile saw the nutrient package comes through. These are nutrient standards. The rest of these are from other

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states. Using site specific criteria based on natural conditions is a common method of developing water quality standards in other states.

Just because it's common in other states doesn't mean it is easy to understand, easy to agree with. We knew that this was going to be a challenge. We've provided a lot of stakeholder outreach, much more than we usually do with water quality standards. Most water quality standards don't present the same challenges. In the last nine months, since October of last year, we've held twelve stakeholder outreach meetings in different cities across Montana. Still doesn't take away those challenges.

In fact, we were at the Water Pollution Control Advisory Council meeting June 26th. Water Pollution Advisory Council, WPCAC, is a Governor appointed council that provides advice to the Department on water quality issues. It is also a precursor council before we come to you and request initiation of rulemaking.

When we went to them in June, they recommended that we don't initiate rulemaking, that you don't initiate rulemaking. So why are we

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here? Why Otter Creek? Why now?

One, the natural condition is significantly different from the standards, higher than the standards. We can't implement the standards, so really all we have is a narrative statement that says we use natural. Two, we have a statutory obligation to review standards and update as necessary. Triennial review. We have to continue to update, improve our water quality standards. If we have information that says that they need to be different, we have an obligation to do that.

Numeric standards. They provide the highest level of certainty. We have hundreds, thousands actually, of data points that span forty years. There is no lack of data from which to calculate these site specific standards. And finally, initiation of rulemaking will spark some of those more in-depth conversations with a

broader range of stakeholders who would be impacted by these rules. Some of those stakeholders that maybe we haven't reached yet, or who haven't felt comfortable discussing the subject, because they don't want to see these kinds of standards.

We know that we can't use 500, we can't use three and five. We need something. So the proposed new rules, new section, would be a new section in the Administrative Rules --

CHAIRMAN MILES: Amy, just a quick question before you get into that. The advisory council, what was their basis for recommending against that? Did they produce any kind of report or statement that was submitted to the Department?

MS. STEINMETZ: There was no report or statement that was written. It was verbal. I'd like to say it was more of an emotional statement. I'm going to say the preface to the motion was, "I don't believe in science or graphs or math, but I see trends." What they see is that salts in the system fluctuate. They fluctuate naturally. That was the basis for the motion not to initiate rulemaking. I wasn't going to throw them under the bus, but since you asked. I'm just being honest about how that --

CHAIRMAN MILES: -- that council, and what kind of a role they play, and whether they're just advising the Department, or do they provide advice to the Board as well?

MS. STEINMETZ: No, they're an advisory Counsel to the Department. Strictly advice. And when we went to them, understanding that it is challenging subject, we asked them for advice on the standards themselves. How can we make the standards better? That's what we were asking them. And we didn't get much discussion on the actual standards themselves.

BOARD MEMBER CANTY: Does that council have technical people on it?

MS. STEINMETZ: Some. And the decision was split. It ended up being three/two. WPCAC has eleven members. Six of them were present at that meeting, six of them, including the Chairman, so the Chairman would have voted if it would have broken a tie. So it ended up being three/two. The two people that voted for the standards, against the motion, were the technical people. The member who initiated the motion was the developer, big land developer; and then one of the other ones that voted for it is a conservation district member. The other one, which was more of a surprise, is a member that represents disposal of inorganic waste.

But that was a split. It was close. There wasn't the discussion that we were looking for, and that's why this last bullet point is important. We feel like maybe it would be more real if there was a rulemaking, if it was more pressing to get these conversations started. Not

that we can't have those discussions anyway, but are they going to happen? They will happen if the rulemaking is initiated. It is just a level of discomfort. Like I said, the technical people on the council were able to understand and agreed with what the Department is doing.

MR. MATHIEUS: Madam Chair, I would just add that, yes, this board is an advisory board to the Department, and it isn't traditional that there is an actual vote; but as I indicated in my opening, and as you are all aware, is that this is a very important rulemaking from the perspective of -- there is a lot of interest, and there is a lot of concern. So it would make sense that those types of discussions have occurred and would continue to occur.

From our perspective, we have the data and information we need to show what natural is in Otter Creek, and we don't have the appropriate regulatory framework to implement that, and I think that's really the bottom line I don't want

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folks to lose sight of. Thank you.

MS. STEINMETZ: Back to the proposed new section in rule. This would be a place holder in the Administrative Rules of Montana, where when we do get to the point where we're developing other site specific standards based on natural, this section of rule would house those site specific standards if and when they become necessary.

It consists of three sections. The first section simply states that site specific standards based on natural conditions are protective of designated uses. For the reasons that we've already talked about, those uses exist under natural conditions. If we keep the conditions natural, the uses will continue to exist.

The second section, we haven't talked about this yet today, but it's very important: Protection of downstream water standards. George did mention protection of the Tongue River. That was one of the things that was important in this rulemaking. So the second section of this rule addresses that.

These two charts show EC or SC and sodium adsorption ratio in the Tongue River.

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These samples are from the Brandenberg Bridge which is near Ashland, so just downstream of where Otter Creek enters the Tongue River. The second bar of both of these charts is water from Otter Creek. And then the third bar is groundwater from the area. And you can see that Tongue River water is cleaner in EC and SAR than both Otter Creek and groundwater.

So that was a concern, is a concern for irrigators on the Tongue River, that we're going to be putting this water from Otter Creek into the Tongue River, and that it will impact uses. Something to remember, this water is already going into the Tongue River naturally. We want to maintain that natural condition. But just

maintaining the concentration, if we allow larger volumes, that would impact the Tongue River because the load would increase, the load of salts going into the Tongue River would increase.

That is why we've added a statement that protects against loading of parameters that would negatively affect the water quality of downstream waters. And this is a piece that we took -- it also includes the word "load" before this -- but we would require protection of downstream water

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quality standards. We would require that those water quality standards be maintained and attained.

The third section contains the numbers, the standards themselves. Water quality standards consist of three pieces: Magnitude, duration, and frequency. Magnitude is the number; duration is a period of time over which that standard can be exceeded and we not see negative results; and frequency is how often that can happen and the system can still recover.

Magnitude, duration, frequency are a part of every single water quality standard, surface water quality standard. We never expect that a point will never be exceeded, we expect statistically that exceedences will occur, but systems can naturally recover from those exceedences, so we write that into the rule.

Magnitude -- and this is taken from those data sets that you saw, the continuous data for the conductivity. Because we only had data from March through October for sodium adsorption ratio, we used the grab samples. Spanned more time. There weren't as many data points, but it spanned a longer period of time, and it was

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available year around. So those are the numbers that we used to calculate the magnitude for these standards: 3,100 microsiemens per centimeter conductivity; 6.5 sodium adsorption ratio. So 80th percentile of the natural data sets.

Salts build up over years. It is a long term effect. There is national precedents for selecting anywhere from the 75th to 85th percentile to protect against long term effects. That's why we choose the 80th percentile.

Here, the magnitude, duration, and frequency, they're all selected because they reflect that natural condition. If we look at the actual data, one year as an averaging period makes sense because it is a long term effect; also more reflects a growing season. It would make sense to have a week, longer period of time for duration. And then frequency, once in a two year period.

The rule specifies that for assessments, we take the 80th percentile of an annual data set and compare that to the criterion, which is based on the long term data set, so we expect some fluctuation around that long term 80th percentile. That's what the one, two year period. That's what we would expect to see naturally. Because we're

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preserving natural, that's the duration of frequency that we chose.

Then the other piece of this third section specifies that the water quality standards are to be met at the point that we took the data from to calculate the standards. There are differing conditions along Otter Creek we're protecting at one point. Any discharge to Otter Creek has to protect that point from a section to the Tongue River. So there are all kind of layers of protection going into these standards. Protect uses. They reflect natural.

CHAIRMAN MILES: So would discharges be new discharges, new development along Otter Creek?

MS. STEINMETZ: That's correct. There is one discharge currently, and that's a publicly owned treatment work type, waste water treatment, and that's right above the Tongue River. So that's the only discharge, surface water discharge that we have in the Otter Creek watershed, so that would apply to new sources.

BOARD MEMBER CANTY: So the flow of Otter Creek is about five CFS on average. What is the flow of the Tongue River? 500,000 or more?

MS. STEINMETZ: I don't remember. Can I

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get a hint from the audience?

MR. MAKUS: Somewhere around 51 average maybe. 500 average maybe. My name is Erik Makus.

MS. STEINMETZ: The objectives, like we've mentioned a couple of times throughout, the objectives are to protect uses, to reflect natural, to maintain the natural condition of the watershed. But a water quality standard is just a number. It doesn't do anything except inform other decisions, decisions implemented by other programs within the Department.

So we felt it was very important to have an implementation plan that the water quality standards people are working with the other people who are implementing the numbers to make sure that they're going to be protective. So we've drafted an implementation guidance that explains specifically how the numbers will be used in assessments, how they'll be used in permits. Also bringing in other pieces. Nondegradation is a very important piece that will help protect the natural condition, and help protect those clean flushes. How to implement the numbers to develop effluent limitations for both concentration and load, so that implementation guidance directs

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other programs how to use these standards to make sure that they're protective, to make sure that they really maintain the natural condition of Otter Creek.

So just coming back to the slide. Why Otter Creek? Why now? Why are we requesting initiation of rulemaking of you today? We're requesting initiation of rulemaking from you today because the natural condition is significantly different from the standards. We know that we can't implement these numbers, and we want to have

a numeric, concrete, certain way to make sure that natural is being protected.
We have years of data. Like I mentioned, there is no lack of data from which to calculate these standards. We want to initiate these discussions, and we have the obligation to review and update our standards as necessary.
And I will take questions now. I'll introduce some of the people from the team who worked on these water quality standards. You already met Erik Makus, hydrologist. He developed the model, and answer questions on model and any of the data. Jon Kenning is Bureau Chief of the Water Protection Bureau that houses the Surface

Water Discharge Permit Program. Eric Urban is Bureau Chief of the Water Quality Protection Bureau, which houses the Standards Section. And there are many others here who can help answer questions that I may not be able to answer.
CHAIRMAN MILES: Thanks, Amy. Any immediate questions of Amy?
BOARD MEMBER TWEETEN: I have some, Madam Chair. Amy, several times in your presentation you referenced the desire to initiate and maintain further discussions regarding this issue in a more formal setting, I gather from your comments. From that, I assume that you would agree that if we were to initiate rulemaking, we're not obligated to actually adopt a rule.
MS. STEINMETZ: Madam Chair, Mr. Tweeten, that is correct.
BOARD MEMBER TWEETEN: So we're certainly not here today to decide to whether your proposed rule is right or wrong, simply whether we want to initiate the process, correct?
MS. STEINMETZ: Correct.
CHAIRMAN MILES: Robin, did you have other questions?
BOARD MEMBER SHROPSHIRE: I had a couple

of questions. One relates to what Chris asked, and that relates to the scope of the rulemaking, and understanding that the scope is broad enough to allow for those discussions to happen. And I guess the question would be: If it were determined that in fact natural, based on different review of the data, was lower than the numbers you have for EC and SAR, would the rulemaking have lower numbers? Does that make sense?
MS. STEINMETZ: Madam Chair, Ms. Shropshire, it does, and that's what we've been asking. That's what we've been asking of stakeholders, we've asked of WPCAC, we ask of you. Do things look right? Do you have other suggestions? Is there something that we're missing? That's what we've been asking, and that's what we would be asking during a public, a formal public process. So yes, it could look different.
BOARD MEMBER SHROPSHIRE: The numbers in the final rulemaking could be lower than what are

in this rulemaking?
MS. STEINMETZ: Yes.
BOARD MEMBER SHROPSHIRE: We aren't prohibited from having a lower number.
MS. STEINMETZ: No.
CHAIRMAN MILES: Or changing some of the provisions of the rules.
BOARD MEMBER SHROPSHIRE: And I guess the second question that I have is I recall when you guys presented last time that the trends of the EC and SAR were trending downward a little bit, and so I don't know if there is -- and it maybe getting too much in the weeds for this. My main goal is that we're not limited by 3,100 and 6.5, if we were to look at the data differently and determine that it needed to be lower. So if we're not limited by that, I'm not sure that we need to get into it, but I didn't know if you --
The data that you had was based on the day of the year?
MS. STEINMETZ: Yes.
BOARD MEMBER SHROPSHIRE: But I don't know if you had any data that you could show us that is historic.
MS. STEINMETZ: I do have some. I'll have to run over to the keyboard. Maybe I can pull it up here. But yes, I can show some of that. I can also show, like I mentioned earlier, the trends by flow. So we've looked at this data as many ways as we could think of, and that others have thought of.
This slide, the yellow line is the proposed criterion, and the yellow diamonds are the 80th percentile of each annual data set. And we can see, and this slide was initially intended to show that we expect about half and half. We expect that some years that 80th percentile of the annual data set is going to be a little higher than that in the long term. Some years it is going to be a little bit lower. And we see that. We see these diamonds fluctuating around that line.
We do see that in the last several years we've had some really high flow years; and there have been fires that have cleared out vegetation, so that there is increased runoff; we've seen some increase in the specific conductance. So this is that trend by year, 1974 or 1975, I believe, through 2014.
CHAIRMAN MILES: Any other questions?
BOARD MEMBER O'CONNOR: Yes. Amy, it seems to me like the critical thing here is protect irrigation water when it's being utilized, and your SAR, either of these numbers that you're proposing, don't seem to protect it because they can't the use the water when it's that high. So the high flow periods are when the water is accessible and usable, but can you set different standards for various flows? It may be impossible to monitor those and enforce them.

MS. STEINMETZ: That's a good question. We have talked about different ways that we can do that. The bottom line is that the clean flushes, the irrigation water, that's protected through the permit process. So when we read the implementation guidance, we're saying how to protect all of that.

And if you think about the way that irrigation is occurring, it is precipitation driven, and standards don't change that. And because we're protecting the Tongue River, we're going to be protecting against concentration and loading. So we're not going to be allowing huge volumes of high conductivity water. We're going to be introducing small amounts of water that's either 3,100 or below, and then when that precipitation is added to the system, any small addition to the system will be diluted.

BOARD MEMBER O'CONNOR: I guess I'd like to hear from the irrigators and see what their perspective is.

CHAIRMAN MILES: I know that before the day is out, I need to understand more about this 80th percentile concept, and how that's fitting in here, but I think I'd like to go through and hear the rest of the statements, and maybe have a better big picture of what we're looking at here, where some of the issues are, if that makes sense with people, that we move on, but I think there may be some questions later on.

MS. STEINMETZ: I agree. There will be. And the other piece of the permitting is nondegradation, so the Tongue River will be protected through the nondegradation review, which allows much less of a pollutant to be added. It protects existing uses. So we can talk more permitting pieces after you've heard from others.

CHAIRMAN MILES: Okay. I think that's an important component as well. It is about ten after ten. Let's take just a ten minute break, no longer than that. And then I know that we have a lot of people that want to testify. I would ask the audience to keep in mind we also have a very

significant hearing after this. We need to get on with that. We had originally scheduled that for 11:00. I don't think that that's probably going to happen. But I don't want to be starting that at 3:00 this afternoon. We want to keep on task here. So a quick ten minutes, and then we'll get back to business here.

(Recess taken)

CHAIRMAN MILES: We're going to get started again. With that, we'll open to public comment. I want to remind people again. Please stay as direct and on point as you can. I don't want this to be like a legislative hearing where comments are really limited. I want to make sure that we hear from everybody, but we ask you to be as concise and direct as you can. And we'll have time and opportunity for questions, and maybe some questions of the Department when we finish as

well. So open to public comment. Please come up to the podium. This is not for proponents or opponents. Do you have a visual?

MS. DUNNING: I do have a power point. Get that loaded up. While we're waiting for that, I'll spell my name for the record, D-A-R-A-N-N-E D-U-N-N-I-N-G.

Again, thank you all for the opportunity to speak today. My name is Daranne Dunning, and today I'm going to be presenting some comments on behalf of the Northern Plains Resource Council. I'm an attorney. I currently work here in Helena, but I am from Otter Creek. My family has ranched on Otter Creek for over 130 years. I'm the fifth generation to have grown up on that same ranch in Otter Creek. We're just a couple of miles from the proposed mine.

My great great grandfather came to Otter Creek in the 1880s, well before Montana was a state. And he came as a horse trainer. Otter Creek was the site of one of the largest horse raising operations in the entire country, and my family raised and trained horses for the Army remount for generations. Really after World War II did my family then transition into the full-time business of raising cattle, and that's what my family does on Otter Creek, and on some of the tributaries that these standards would also impact.

Our earliest water rights for the ranch date to the 1800's, and as a ranch, as individuals, we have over 100 years of

generational knowledge about the irrigation practices on Otter Creek, knowledge of when we can irrigate, what water quality allows this, and really the most important thing is how we can make our ranch into an ongoing operation in what's really a dry and arid region.

As I mentioned, I'm here testifying as a member of Northern Plains. I think you're probably familiar with the Northern Plains Resource Council, but just in case you're not, it is a grass roots organization that was started in 1972. It was started by -- shockingly -- a group of ranchers that were concerned about proposed coal development, and how that was going to impact their water rights, their grazing, and their way of life, and so group of ranchers organized, and since then have been working on much those same issues, although our membership has certainly grown over those years.

I'm a visual person, so these are some photographs of Otter Creek. So you can see what Otter Creek looks like. It a beautiful, beautiful area, and it is one of the last undeveloped jewels of Montana. It is very productive, and this area that you see, although the entire Otter Creek

drainage is over 700 square miles, most of that is productive ranch land, and that productive ranch land is very important to southeastern Montana's

agricultural economy. Otter Creek is also a tributary to the Tongue River, which of course is even larger, and more important part of southeastern Montana's ag economy.

Otter Creek is a beautiful region, but it is also an arid region, and that landscape is made productive by very careful use of water. And water, especially good water, is a very scarce and precious resource in the area.

In Otter Creek, as is common in the surrounding areas, these coal seams actually serve as the aquifers for the region. That's what feeds the alluvial valley, and so we have to rely on really careful management, one, to make sure that we're protecting those surface waters that we use for direct irrigation, but also because of the connectivity between ground and surface water, we need to make sure that we're protecting the groundwater resources because subirrigation is also a really important component of our ranching operation.

Otter Creek is high in salts, and it is

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not usable for irrigation for most of the year. But there are key points during the year when we do irrigate out of Otter Creek and its tributaries, and we rely on that irrigation. Those events occur during early season high flow events, and that is really critical to our operation.

There are couple of things I want to go through here today. I want to explain a little bit about Otter Creek irrigation practices. I find that nowadays when people think about irrigation, they're thinking about sprinkler systems and circle pivots coming out of the Missouri River. Otter Creek really goes back to the more traditional forms of irrigation, the olden days of irrigation, but those are still valid water right, still valid irrigation, and still important uses that have to be protected.

I want to explain a little bit about the importance of irrigation to our operations. I want to talk a little bit about why this rule does not protect Otter Creek users. As the DEQ said in their presentation, they need to protect the most sensitive use, and I want to talk about how this proposed rulemaking fails to do that. I'll talk a

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little bit about why this rule also negatively impacts downstream users in the Tongue River, and there will also be a few other presenters that have personal knowledge of the Tongue River, and can talk a little bit more about the Tongue River piece of this.

Finally I want to emphasize the information that is needed to make changes to the water quality standards that are already in place for Otter Creek. I do disagree that the data that has been collected by DEQ, based off of one gauging station, is sufficient to establish what is natural for the entire drainage. The proposed rulemaking doesn't just impact one point of Otter

Creek, it impacts the entire drainage, and I'm going to talk a little bit more about that well.

Let's talk about irrigation. This is a map kind of designed to show one particular schematic. This is from the D. Dunning Ranch. On this there is a direct diversion. So there is a direct diversion right here. There's actually a headgate on Otter Creek. That headgate can be controlled, and it can be opened during those times when you do want to irrigate, and can allow these fields up here to be irrigated.

The field down here is overflow flood irrigation, but what's important about this particular system is that during those high flow events when traditionally we know we've been able to safely irrigate, the rest of the year that headgate can be closed off to keep water off of those fields.

I guess this is what's important to know. We've been ranching on Otter Creek for a long time, and what we're doing is we're relying on those generations of knowledge of when it is safe to irrigate. Ranchers don't have gauges at headgates. They don't have ability to test EC levels and SAR levels on particular fields and at particular points in the stream. So what we really have to do is rely on that narrative, and that generation knowledge that we have.

What's concerning about this proposed rule is that during those times when we can irrigate -- those are going to be those early season melt-offs, high precipitation events -- that's also going to be when the Otter Creek Mine is going be discharging the most as well. So at the times that are going to be most critical to our irrigation operation is also going to be the time that the mine is going to impact the quality as well, and that we're not really going to be able to safely rely on that traditional knowledge of, "Okay. We have a high flow. It's safe to irrigate. We know this from our past practice."

CHAIRMAN MILES: So you're saying at that point in time when the EC and SAR is the lowest concentration, there would be able to be more discharge put into the screek?

MS. DUNNING: Yes. That's the concern that we have. Thank you for that clarification. And I'll get into this hopefully a little bit more later to clarify that.

BOARD MEMBER SHROPSHIRE: Before you -- can you go back? Just to confirm where Otter Creek is.

MS. DUNNING: So this is Otter Creek.

BOARD MEMBER SHROPSHIRE: Do you know the gauge station where the DEQ data is collected? Is it upstream or downstream?

MS. DUNNING: Downstream. Significantly downstream. So this ranch is on the tributaries of Otter Creek. If you're looking at a map, it's going to be on Oak Creek or Fifteen Mile, so it is going to be approximately fifteen miles from the

gauge station roughly.
BOARD MEMBER SHROPSHIRE: Thank you.
MS. DUNNING: This is just an example of a different irrigation system from a different ranch on Otter Creek. This one is slightly different, but you can see here. This is another common scheme. So here is an irrigation diversion dam. There is no headgate on this, but during high flow events, it does allow diversion for irrigation in spreader dikes and then can control that flow over the fields.
What's important about this is unlike the previous system with no headgate, during a high flow event, there is going to be no way to prevent that water from running into the fields.
So this is Otter Creek at its base flow -- I was home just last week -- a very representative picture of what this looks like about this time of year in July. What's important is that at the time this picture was taken, this time of the year, ranchers would never irrigate out of Otter Creek, so the levels, the EC and SAR levels as they exist now, we would never irrigate at.
There are really only going to be one,

maybe a couple -- if you're lucky -- event in an entire year when you would be able to safely irrigate out of Otter Creek. So it is different than irrigation practices maybe in western Montana, where you're able to irrigate for an entire season. So that's different in Otter Creek.
BOARD MEMBER CANTY: I have a question. Going back to that last picture. So you said that's representative of right now?
MS. DUNNING: It looks very similar to when I was home just last week, although it is really going to depend on where you're at in the Otter Creek drainage and how far upstream you are. Of course, the further upstream you are, Otter Creek gets significantly smaller. But this looks very similar to what the water would look like on our ranch right now.
BOARD MEMBER CANTY: But just as far as like the shrubbery that is along the side that don't have any leaves, was this taken in the spring? Have they been impaired because of the salt in the water?
MS. DUNNING: I think that this is -- I think this picture is taken perhaps in the fall.

I'm not certain about when this picture -- I didn't take it. I recognize Otter Creek there. But no, the plants, the riparian areas that you see, there are cottonwood trees and various shrubberies along it, and those are -- Because Otter Creek as it exists right now, the plants are used to that, and this is the natural use of Otter Creek. So those aren't dead plants that are shown. It is just a season when they don't have foliage on them.

And I guess to address, what we're concerned about are future impacts to Otter Creek, not Otter Creek as it currently exists, if that makes sense.

These are some photos taken in 2014 of Otter Creek, just kind of showing -- these are early season events. The bottom one is a thawing event, the top one is a spring flood event, and these are the events that we wait for and that you look for, and there isn't a particular time of year that this happens. You could have a thawing event in February that could have good water that you might be able to put onto the field. It could be more of the traditional spring runoff that could occur later in the year. But they are early season.

Right now, even if we got a flash flood, a huge swell of water that comes down from the tributaries into Otter Creek, we wouldn't irrigate out of that in the summer, even if there is a higher flow in the summer months, just because we know that -- although we don't have the narrative numbers, we just know from practice that that water isn't going to produce good crops and is going to harm our crops.

One thing that is also I think good to know is that when we do have these high flow discharge events, you don't irrigate right away. You allow a day or two for that water to go through and flush the salts out of the stream, to kind of flush the stream out before you would open your headgate and start to irrigate. So it allows kind of that process to allow the stream to clean itself, if you will, a bit before you start putting that water on your fields.

And sometimes the best irrigation events -- actually I shouldn't say sometimes. Usually the best irrigation events for us are going to be when this ground is frozen or partially frozen, because it does help to keep some of the accumulation from salts from picking up into the water.

And that's one of the things that we'll talk a little bit about when we start looking at the numbers of the proposed rule, is that these numbers are going to be more skewed, the numbers on which DEQ has proposed for the standards are going to be more skewed to those summer events that aren't going to be when we are irrigating.

BOARD MEMBER TWEETEN: Excuse me, Counsel. You probably can't put a specific date on this, but generally when does the irrigation season end?

MS. DUNNING: I would say that for Otter Creek -- and this is going to be very different for the Tongue River, mind you. For Otter Creek, we would end irrigation by -- my ranch would end it by May, end of May, because we're usually starting to hay about June 10th. So anything later than that, we're going to start impacting the hay that's on the ground. And a good year

with rain events, we might be able to get a second cutting on Otter Creek, of alfalfa on Otter Creek, but often you can only rely on the one cutting event.

So we as a ranch only -- as I mentioned -- really only get one or two chances to irrigate, and those really are vitally important for the ranching operation. I'm sure it will come as no shock to anyone in this room, but ranches in Montana, especially those in a really arid region like Otter Creek, are operating on razor thin margins. And so if you have a year in which you have to buy all of your hay or a significant portion of your hay to be able to feed your cattle through the winter, that's a year that you are going to be operating at a loss.

And that's why these irrigation events are really important to our operation. This particular picture is not taken on Otter Creek. This is taken on Hanging Woman Creek, which is the next creek over from Otter Creek; very, very nearby. But similar to Otter Creek, the ranchers here are also relying on the generations of knowledge about how to irrigate and how to make their ranch into a viable operation.

I wanted to show these slides to really show the difference of what I'm talking about when I say that that one irrigation event is vitally important to a ranching operation. These pictures are taken at a family friend's ranch, the Bones Brothers Ranch. The picture on the left has one single irrigation event. Cattle were actually on, in this picture, the one on the left, until March. This picture on the right, the cattle were taken off the previous November, and there is no irrigation here. That's what we're talking about in the difference between grass and crop production that we can have to feed our cattle through the winter.

Now I want to turn a little bit to talking about the numbers on which the proposed standards to change the currently existing standards are in place. This is a graph. This shows the EC or the SC from April through November of 2013. This is taken at the gauging station in Ashland. And as you can see, this is a really highly variable system. Now --

CHAIRMAN MILES: This is the gauging station the Department is getting their data from?

MS. DUNNING: Correct. And so an EC level of 3,100, as you can see up here, certainly could be a high average, but there are periods of really large reduction. And these periods right here. Those periods of the large reduction in EC, that's going to be when ranchers on Otter Creek are going to irrigate. Also keep in mind when you're looking at the dates that this gauge station is the very terminus of Otter Creek, so ranches that are further up the drainage that are getting that runoff much earlier are going to be

irrigating a lot earlier than those May and early June dates that are shown on this particular map. And it is going to vary from year to year.

Now, these high flow events, these numbers that you see down here, that doesn't necessarily mean that they're flood events. I mean the water still could be entirely within the banks of Otter Creek during those times, but we know that that is when the increase in flow allows the EC levels to drop enough so that it is safe to irrigate.

And the other thing that I do want to point out here is that the specific numbers that you see here -- DEQ talked about -- we'll get into some maps of the drainage here in a bit -- but talked about how, as the water travels through the drainage, it is going to pick up additional salts and other minerals. Remember that this is taken at the terminus. This is after everything has

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traveled through the entire drainage. So the numbers that you see here, the EC levels aren't going to be reflective of what the actually EC levels are going to be, say, on my family's ranch where we're irrigating; or on Bear Creek, a tributary to Otter Creek; or any of the other drainages that are affected by the proposed rulemaking.

This graph is just the inverse of the previous one. This is showing flow or discharge. And really what I want to show here is that those big drops in EC level correspond to the flow. And what we're concerned about is that we can no longer rely on high flows in the winter and spring being predictive of the decreased salt amounts in the water.

So I've showed the slides for EC. This is for the SAR levels. SAR levels, as I'm told -- I'm not a soils scientist, but as I'm told and as I understand -- that it's actually the SAR levels that impact crops and the land, the composition of the land, even more than EC; and I'm also told -- again a I'm not a soils scientist -- but that there is an important interrelationship between these two levels, and that is something that I

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think that DEQ's current proposal of allowing caps of both SAR and EC fails to take into context that relationship between the two levels.

What I really want to point out here with these SAR levels is that when you do have these grab samples that are showing the low SAR levels, that they are occurring the early months of the year. That's when those are happening. That's when we are going to be irrigating.

So getting to the point of setting a standard, I guess the first point that I want to make is that this Board and DEQ has already set standards for Otter Creek. They've set standards for the EC and the SAR levels. They've been reviewed; they've been modified. The important thing is that they were designed and implemented, one, to protect crop health in this area of

Montana; and second, they were designed to make sure that the Tongue River users were also protected. These standards have been approved by the EPA, and have been upheld by the Montana Supreme Court.

And I want to put up some of this because it is easy, when we get to talking about some of this tech language of TMDLs, and EC

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levels, and SAR levels, and what this means. I just want to take a minute and step back, and remember that what the Clean Water Act, what DEQ, what the State of Montana -- it is not just to maintain, and it is not just to design a level that allows a polluter to pollute up to and nudge right up against the point that it is going to start impacting the existing users in Montana.

The State has a duty to not only maintain, but to restore and improve the existing conditions, and to make sure that those users in Montana are protected. Now, with current legislation that's been passed with Senate Bill 325, with existing 75.5.306, the standards in Montana can't be more stringent than what is natural, and that's why we're here, to define what is natural, or to decide if natural needs to be defined in a rulemaking that is specific to Otter Creek.

The issue that I have, that Northern Plains has, with the proposed rule is that it defines natural based on an 80th percentile of a data set. Essentially it's based on a high year around average. It is not basing natural on the condition that ranchers are putting the water to

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beneficial use for irrigation.

And this is another map that -- what I want to show with this one. You can see here that a lot -- this is showing the EC levels plotted out with flow, and you can see that a lot of these grab samples -- Here is the proposed natural standard of EC. They do. They're up there along with the 3,100 for most of the year. But those aren't the ones that are important to ranchers. Those aren't the ones that are put to beneficial use through irrigation.

What I'm concerned about, what ranchers are concerned about, are these points down here. It is what I'm going term "a safe irrigation window." And so the beneficial use can only take place with these data points down here, and these data points are not ones that are protected, but these are the ones that do need to be protected for irrigators on Otter Creek.

And the other point that I want to make is that when we're talking about natural, these data points down here are just as natural. They occur naturally. They are just as natural as these data points up here. We feel it's arbitrary to set the level up here that's not protective of

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an equally natural state down here.

With this map, I want to show why the

proposed rule does not protect use. The proposed rule sets a definition of natural which is the 80th percentile of a data set. So if you have ten data points -- whatever they might be -- the 80th percentile here and here is going to be what the standard for EC is set at.

The issue that we have is under this -- and these are completely hypothetical data sets, just for purposes of making a point. This data point down here is safe to irrigate, maybe we have a precipitation or we've got a thaw event. On this one, there is no safe irrigation window. There wouldn't be a use that's protected for agriculture. But because this use down here, the 2,400, doesn't exceed 3,100, there is no way that DEQ can enforce and to make sure that they're actually protecting the existing uses because it's not going to violate that 31 EC level, and there are also variances written into the rule.

The other thing -- and again, just to reemphasize that point. Our concern is that the times we're irrigating is also going to be when the mine is discharging the most.

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BOARD MEMBER TWEETEN: So do I understand then that your concern is that the use of the 80th percentile value will allow for concentrations that will satisfy the standard, while at the same time still being damaging to irrigating agriculture?

MS. DUNNING: Absolutely. Another point, too, with the 80th percentile. I'd alluded to this earlier, and I forgot. Maybe I should go back to look at some of those graphs.

But as DEQ explained in their presentation, the data points that are used are skewed towards the summer months, are going to be skewed towards right now when it is easier to get that data, but we also know at this time of year that those EC levels are going to be the highest. And so if you are missing, or don't have as many data points from the early season or those winter months when we're actually irrigating, that 80th percentile is going to be skewed. It is not actually going to be reflective if you wanted to do a true average.

There are all different ways of designing -- my point being that there are multitudes of ways that you can define what

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natural means. An arbitrary designation of the 80th percentile at 3,100 does not protect the uses that we use water at down here.

BOARD MEMBER CANTY: Excuse me. I have a question. Why is it that the coal mine would be discharging the most during the thaw?

MS. DUNNING: Good question. So as I understand it, the way that Arch Coal -- and I'm obviously not affiliated with Arch Coal -- but they have a series of holding ponds that are going to be designed. And so one, the process just of mining. As I mentioned, the coal seam serves as an aquifer in the area, and so the process of

mining -- and you see this at other mines in the nearby region -- that produces a lot of water that has to be held.

And so there is a series of holding ponds that would hold this water. So during high water events when you're seeing a lot of precipitation, there is going to be more water in the mine itself. There is also going to be a lot more water that's going to be coming down watersheds, a lot more rain, a lot more of that clean water that normally would reach Otter Creek that would go into various tributaries and feed

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into Otter Creek. All of that then is now going to be going into the mine, and into those holding ponds, and getting stuck there as well, and that clean water isn't reaching. But just if you're having a lot of rain that's reaching Otter Creek, you're also going to be having a lot of rain that's reaching the mine as well.

BOARD MEMBER CANTY: Would you expect that water to also be diluted as well? Would it have the normal concentration the rest of the year in comparison? Would it also be diluted at that time?

MS. DUNNING: When you ask water, which water? The runoff water?

BOARD MEMBER CANTY: If you're having the runoff water coming into the coal mine and exceeding their holding ponds, let's say, and they have to discharge, it would also be diluted then by the precipitation, so their discharge might be lower at that time in their concentrations?

MS. DUNNING: I don't have the slide, but if you can remember from DEQ's previous presentation, they had a slide up that was showing -- it was a bar graph that was showing the EC and SAR levels of the Knoblock Formation of Otter

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Creek and of the Tongue River.

The SAR levels that are in the Knoblock Formation particularly are sky high, and I don't recall the specific numbers. You might even be able to ask DEQ to pull that slide back up. That's the concern is that if you're taking that really, really, really high SAR -- I don't have a number to put with it -- but if you're taking that water out of the coal seam, and that's what has to be trapped within the holding pond. Even if you dilute that with a normal amount of runoff, you're not going to get to the same level of water quality that even exists in Otter Creek right now in July at 3,100.

I don't know the exact numbers, but because the water, both the EC and SAR levels within the formation itself are so much higher than exists in Otter Creek or in the Tongue River, that is the concern; that even if it is diluted, it's still going to be really high.

BOARD MEMBER CANTY: Thank you.

BOARD MEMBER TWEETEN: Can I ask another one? Off the presentation that you've made, the concern seems reasonable to me. Did you have a

chance to explore that particular concern with the Department before today?

MS. DUNNING: Absolutely.

BOARD MEMBER TWEETEN: What was their response? And I'll give them a chance to answer the question, too, but I'm just curious as to how you understood their reaction to this point that you're making regarding this use of the 80th percentile.

MS. DUNNING: I don't fully understand the reasoning for pushing forward. We've been very clear. There have been multiple meetings. WPCAC has actually had two votes on this, and --

BOARD MEMBER TWEETEN: The Department expressed some frustration with that process because of the perceived lack of thoroughness, the fact that a portion of the advisory committee wasn't there; that there didn't seem to them to be substantive discussion, is what the Department's representative had to say. So they are not apparently very impressed with the level of discussion that's happened so far.

MS. DUNNING: I for the record disagree with DEQ's characterization of the WPCAC proceedings, so we'll put that out there. I disagree with that characterization that was made earlier today. We do not feel that -- Although we appreciate the extended opportunity that we've been allowed to comment, and I think that's very important, I feel our concerns haven't been taken into account in changing any of these standards.

My perspective on that is that DEQ has a permit that they -- I don't know if it is -- I'm not exactly sure where in the process that is, and they feel like they're getting a lot of pressure that they need to respond to that permit.

BOARD MEMBER TWEETEN: Well, if we go to rulemaking, they're going to have to respond as part of the rulemaking process. They're obligated by law to explain on the record why they either agree or disagree with your concerns. And we as the Board get to review that and decide what to do with it in facing the question whether we adopt a rule, and if so, what kind. And that's all subject to judicial review down the road. So that seems to me to be an argument for rulemaking rather than against it.

MS. DUNNING: I'm not necessarily opposed to rulemaking in general. I don't want to make that point. What is confusing to me about this process is this push to have a site specific rulemaking done that impacts the entire Otter Creek drainage. It doesn't just impact the area that the mine -- let's get to this. We can go back. But this gets to sort of what my next point is.

This is the whole area that this rule would impact. It includes all of these drainages that flow into Otter Creek. We've got the Otter Creek Mine, one little area right here; the

gauging station right there. So this is a site specific rulemaking that's been proposed, but yet it is going to impact all of these drainages that are up here, that are going to flow into Otter Creek, over 700 miles, and it is not --

This rulemaking also impacts other industries besides the coal mine. This isn't going to be specific just to the permit that Arch Coal is going to apply for. This would apply to coal bed methane, it would apply to a gravel permit, a gravel mine permit, any number of things that could happen in the area.

That's one of my concerns, is that the proposed rulemaking is over broad in scope to address the issues that it feels it needs to address in the mine permit application. And if

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we're going to start establishing standards that are going to impact an entire drainage, I don't quite frankly understand why that needs to be done in this particular rulemaking, and perhaps it would be better to wait and see what other future rulemaking that is proposed, how that could be implemented first, before we look at making region wide rulemaking.

Let's be real here. It is done for the purposes of this mine, but the way it is drafted, it affects a lot more than just this mine.

BOARD MEMBER TWEETEN: How does it negatively affect the areas upstream from the mine on Otter Creek?

MS. DUNNING: Good question. So for instance -- Happy to talk about that, too.

BOARD MEMBER CANTY: Let me interrupt for one minute. Otter Creek flows to the north right here?

MS. DUNNING: Correct, and this right here is the Tongue River. Otter Creek flows into the Tongue.

There are a number of tributaries that, for instance Taylor Creek, Elk Creek, Bear Creek, Lion Creek, Fifteen Mile, all of these tributaries

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that flow into Otter Creek. Now, irrigators irrigate out of these tributaries as well, and in fact that's a big source of irrigation.

So for instance, our ranch. I grew up in a house on some in-holdings within the Custer National Forest that are right at the head of Taylor Creek. The main ranch is right here on Otter Creek, and the house I grew up in is right here on top of the Divide. So in our back yard essentially Taylor Creek forms, and we irrigate out of Taylor Creek during those spring flood events.

Now, that's all snow melt, and you don't have the same aquifer charging issues with the saltier water that Otter Creek has. This is just snow melt runoff that's coming out of these streams that we use to irrigate with. There is no way that those EC levels are going to be at 3,100. But this rule says that that's the maximum level. So next week, when Fidelity wants to start

drilling some coal bed methane wells, and operate on some leases that our neighbors have had, and all of a sudden they want to start discharging into these waters, that level is going to be set at 3,100 for these areas.

That's not natural for what this drainage is, but the way that the rule is proposed, it encompasses all industries, it encompasses all of these drainages, and the standard that is set at natural is all determined by way down at the end of the creek at that gauging station after all of the water has traveled all the way through all of the drainages and picked up additional salts. So that's the concern. It is over broad. It doesn't reflect natural, and --

CHAIRMAN MILES: So you're saying it's in the areas upstream -- if I could follow up what Chris said -- the concentrations would be much lower, and that would allow for perhaps development increasing that load in those areas, that's impacting the irrigators at that point if there is future development.

MS. DUNNING: And the other piece of this puzzle -- and I'm talking more about the Otter Creek piece of the puzzle because that's what I know, and there are going to be other people more qualified to talk about the Tongue River piece that they know. But the Tongue River is in trouble. We all know that. It can't handle

any more assimilation of salts. It has already been out of compliance the first five months of this year.

But right now, Otter Creek, what flows out of this gauging station is pretty much what's flowed out -- because there aren't major anthropogenic influences on Otter Creek. So the Tongue River is used to that. That's sort of taken into consideration.

But if you are changing, say up here on this little piece of land that we own up here at the very top of the Divide, if all of a sudden you're allowing an increase of 3,100 level up here, the concern is then that you're going to increase both the total volume and the total salt load that's going to be flowing into the Tongue.

And that's the other piece of this to keep in mind. We don't just have to remember, and we don't have be protective of the uses on Otter Creek. We've got to be concerned about changes in any total volume or total salt amount that's coming out that's going to negatively impact the Tongue River.

CHAIRMAN MILES: I know we're interrupting with a lot of questions. If you can

keep moving. I think we're taking a lot of time here, but it is very important for us to hear this.

MS. DUNNING: Basically I think we've covered this point, that the Otter Creek Mine is

only one percent of the entire watershed, and impacts a lot of other users.
So this actually goes right along with what I was talking about, is making sure that we need to protect the Tongue River as part of this. This is a slide that shows the EC levels at the Tongue River. The Tongue River is currently set at 1,000 EC level. This is only March through May, but it was out of compliance for the first five months of the year.
CHAIRMAN MILES: This is at Miles City?
MS. DUNNING: Yes, this is a gauging station at Miles City. And I think, like I said, I'll allow Mark, Bunny, others, that know the Tongue River a little bit better to talk about how this proposed rule would impact their operations. But the point, the take away point for me is that what's natural at that gauge isn't what's natural for the entire drainage, and natural is arbitrarily defined as the 80th percentile of that
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data set, not what natural is for the uses that we actually need.
BOARD MEMBER SHROPSHIRE: When you say define, you mean DEQ's definition, not Senate Bill 325's definition?
MS. DUNNING: Correct. Senate Bill 325 didn't define what natural means for the stream, so that's why we're here.
CHAIRMAN MILES: I'm presuming that would be part of our rulemaking.
MS. DUNNING: Let me go back. I just want to, on this slide, just want to show. As I mentioned before, this right here is the Tongue River; this is Otter Creek that's flowing into the Tongue River; and I just want to note the proximity of the Otter Creek Mine. And we're talking about the Tongue River, all of the impacts that it is already facing, the water quality issues that it has from coal bed methane, from other coal mines. And just note the proximity to the Tongue River of the proposed Otter Creek Mine.
BOARD MEMBER REINHART-LEVINE: On that point, Madam Chair, Ms. Dunning. Would the point source pollution be very close to the Ashland gauge then for the mine?
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MS. DUNNING: I am not certain of where exactly -- I'm not certain if Arch Coal has -- if they have applied -- I don't know where their specific point source discharge would be. If it is in the general area of where I know the mine land to be, we're a couple of miles upstream from that gauging station. And that's as the crow flies, not as you're measuring a meandering stream.
BOARD MEMBER CANTY: I have another question. Back to that slide where you showed the EC of the Tongue River. Why is it that it seems to be opposite of Otter Creek, where the EC goes down in Otter Creek during high flow, why is the Tongue River going up during high flow months and then down during the low flow months?

MS. DUNNING: I might have you hold that question for somebody on the Tongue River that might be able to answer that little bit better perhaps. Perhaps Mark, or Bunny, or somebody on the Tongue River could answer that little bit better for you.

BOARD MEMBER CANTY: Sure. No problem. Thanks.

MS. DUNNING: So here are the concerns,

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just to summarize the deficiencies of this proposed rule. It is not protecting those sensitive uses that we need on Otter Creek; it is also not protecting the downstream users on the Tongue River; there is no enforcement mechanism that's written into the rule that would protect those landowners.

As has been addressed here, I'm confused about how SB 325, any rulemaking that may be involved with that, how it might affect this proceeding, but yet there have been no rules that this Board has approved for SB 325, whether that process has even been initiated.

And finally, and I think this is really important, that one of the big pieces of the puzzle here is the Tongue River and the quality of the water in the Tongue River. DEQ and EPA have not yet finalized the TMDL for the Tongue River, and I think that could have a tremendous impact on the site specific EC and SAR standards, if the Board decides that rulemaking needs to be initiated, that any rulemaking may change the existing EC and SAR standards.

What we do ask in protecting use of any water quality standards in Montana is that they

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protect those narrow irrigation windows that we have and we utilize; that they involve the flow and an understanding of the quantity of water or the flow; that they're protecting the downstream users from discharge point onward; and also recognizing that connection between the surface and the groundwater, so that we're not having negative impacts on the subirrigation.

I've been talking a lot more here about our traditional water rights that we have, and those diversions onto the field, those surface irrigation events; but the subirrigation is also a really critical part of our operation.

I think just to kind of tie this all together, we've been on Otter Creek for a long time, and have a great connection to Otter Creek and what that means, but it is not just -- this isn't just something that's impacting us, it is also impacting a lot of other people in the area. We want to make sure that not only are those direct discharges that we have of the surface water off the fields, that those are protected, that we're protecting the groundwater, that we're protecting all of the other different users that we have that would have an impact on the alluvial

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waters of Otter Creek.

If anyone else has any questions, I'd be more than happy to answer them to the best that I'm able.

CHAIRMAN MILES: Thank you. You may hear from us before this is all over, unless there is any questions right now. Michele.

BOARD MEMBER REINHART-LEVINE: Madam Chair, Ms. Dunning. What is your characterization of the WPCAC proceedings?

MS. DUNNING: There was a motion from Dude Tyler. I do not agree with the characterization that the WPCAC didn't believe in math or graphs. Dude Tyler had said that he wasn't an expert in this area.

What the concern, as I understood WPCAC's concern to be, the reason that they made a motion that the rulemaking should not be initiated really came from a concern towards the cumulative impact that this was going to have on the Tongue, all of the other industry that does impact the Tongue, and said that he felt that it was a trend that was moving in the wrong direction to allow that.

I do not agree with the characterization

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that it was an emotional decision. I think that the members that were there made decisions on the basis of the presentation of testimony, made the decisions that was the basis on the information that was made available to them. And I don't think that -- I'm not, nor do I claim to be a hydrogeologist or a soils scientist, but I can certainly understand some of the big picture things and how that operates.

And I thought that it was not a kind characterization of people that are doing their best to represent the citizens of Montana and the state, the state's interest.

BOARD MEMBER TWEETEN: Just one more. So just to cut to the chase here. Is it NPRC's position that there should never be a site specific rulemaking here, or if you allow for the possibility that there could be at some point site specific rulemaking, what does the Department have to do before we get to the point where a site specific rule would be ripe for consideration?

MS. DUNNING: Good question. I think our standpoint is there is already rulemaking, not that we don't want rulemaking, that there has already been rulemaking approved and that has been

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approved for Otter Creek, and it was designed for very specific purposes of protecting the Tongue River. We're concerned about how any changes, increases to that, are going to impact the Tongue. The fact that a TMDL hasn't been set for the Tongue, so that would be one thing that would need to be done before I think we start tinkering with what Otter Creek levels would be.

I think that if there is a -- we have a site specific permit that's driving this entire process. We have data from downstream. We don't have data at the site where the proposed discharge

would be. We don't have data from any other of the places on Otter Creek or those tributaries that would also be impacted.

I am not comfortable making a characterization of what the EC and SAR levels of the entire drainage, based on what's coming out of the terminus. I don't have that data, nor do I really think that citizens, impacted ranchers, should be the ones responsible for having to come up and provide that. So we would ask that --

I think that there needs to be more data that's collected about what natural means for the entire drainage, and what natural means for the

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area where the mine is proposed. And when I say that, having data at that gauging station, that's important, and it is important for knowing what's dumped into the Tongue River. So it is important, and I'm not saying, just that that's not sufficient in and of itself to create and propose site specific definitions of natural to impact a 700 square mile region that don't have any other industries right now, and don't have -- Some of the land has been leased for coal bed methane development, but nothing is knocking on the door today, and they don't have any mines proposed that would impact them.

So I think it is not saying that rulemaking is never appropriate by any means. In fact, there is rulemaking, there is something in place, and it was done for a purpose. DEQ has upheld that, has put out rationale supporting that, and I don't think it's adequately addressed the issue of how making a change for the benefit of one mine is really going to protect those existing users, as well as the Tongue River users. That's my perspective.

CHAIRMAN MILES: Thank you. Thanks for the very thorough explanation. Continued public

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comment. It is a little bit after eleven. We'd really like to try to be finished by noon if possible on this topic.

MR. HAYES: Good morning, Madam Chair and members of the committee. My name is Art Hayes, Jr. I'm the President of the Tongue River Water Users, and a rancher on Tongue River and the another tributary of the Tongue, Hanging Woman Creek.

This is our main crop here on Tongue River, and this is one of my fields. You can see it is a laser eight level, very efficient irrigation field that's alfalfa hay, and our main source of income is these things here who are waiting in the snowstorm for that bale of hay.

Other crops that we can raise on Tongue River. We have John Hamilton here who is raising melons, squash, watermelon. We can grow anything here that they can raise in southern California. We have the heat units and the long growing season. We also have a winery on Tongue River. We have two producers that are taking their alfalfa hay up to the next level, and making

alfalfa tubes and cake out of them, and selling them in several states.

One thing I'd like to mention at this time is we've had -- since these rules were initiated in 2003, agriculture has changed tremendously. We used to have flood irrigation, like the field I show you. Right now, it is going very rapidly to conserve water with sprinklers. With sprinklers, you do not have the leaching fractions that we did with flood irrigation.

A brief history of the Tongue River. This dam is the original dam built in 1938, a public works project, but it did store water for irrigators on Tongue River for the year. In 1979, we had a flood that changed this dam. It almost took this dam out. We had 12 inches of rain in a week above this dam. In the Big Horn Mountains, we had flows up to 14,000 cubic feet. That spillway almost failed.

From 1978 to 1999, we operated this dam as a high hazard dam. We did not fill it, we just tried to get enough water in it to irrigate through the summer. In 1993, I believe it was, the State and federal government settled the Northern Cheyenne water rights, and under that compact, we raised that dam four feet. It got about 20,000 acre feet of additional storage, and

this is what the new dam looks like today. It can pass about 100,000 cubic feet of water.

But the problem is in 1972, we had Decker Coal go in. This is one of Decker's discharges. This, I want to emphasize, runs 2,900 gallons a minute, 24/7, 365 days a year. The water in this coal is SAR 30. The water in the coal in Otter Creek is going to be anywhere from 50 to 70.

SAR is a very important component of these discharge permits. EC, we can get an instant reading on. That's what we have to ride on. You can have 3,000 EC, but SAR 70 water.

So this was one of the Fidelity's discharge permits. Fidelity discharge is gone. Now above Tongue River, I think they have two wells running. They were permitted to dump a lot of water. In the years Fidelity operated, they dumped -- that is the amount of solids and total dissolved solids that was going into that river every year from one discharge permit. We had a huge amount of salts, and those salts were accumulating.

In Wyoming and Montana both, not so much -- This is a shot of the Tongue River above Wyoming. They turned it into the land of 10,000 lakes. They stored this water in those ponds. Some of them leaked. I took this last Sunday. I had a friend that lives right on the border. He had a ranch. No mineral, so he didn't have any control.

There was a CBM pond above this bank, and you can see where that water had leached

through that bank, and killed the Cedar tree here; and for about 50 yards downstream, it turned that bank sterile. That ground is now sterile, and the bottom of the creek is nothing but a salt laden weed bed. When a rain event comes along, these salts are going to be picked up and carried into Tongue River.

This was another method of disposal until Montana said you had to put it to beneficial use. They had these ponds, they had big pumps, they sprayed that water in the air trying to evaporate it. As you can see here, it wasn't staying in the pond, it was flying out over the land, and a lot of those salts accumulated on the land.

In Wyoming they used a lot of it, what they call -- under the guise of managed

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irrigation. They had these ponds, they stored water in the winter time, then they would pump these out on these pivots. They are all gone now, but the salts remain there on the surface for us to be picked up during a rainfall.

This spring. This is the banks of the Tongue River Reservoir. You can see we've got an accumulation of salt forming on the banks. In all in my years of living on Tongue River, I have never seen this before.

This is something this year has just occurred to us. This spring we were running at very low flows in Tongue River because we had made a call on Wyoming for water, and under that lawsuit we had to shut that river down as to 75 CFS while we stored water in that reservoir. T&Y opened their ditch and two days later the banks of the Tongue River at Miles City turned white.

Just recently, I took this picture last Sunday. This is at Tongue River. You can see the reservoir in the background. We had the reservoir pump full. We were using some of our stored water. The bottom of that reservoir is starting to turn white again. And the black puff you see right there is Decker Coal blasting their coal at

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Decker.

Historical water quality. You look at this. The EC of Tongue River '59 to '99 is 800, mean SAR is 1.5. This spring we had 1,296 means at Miles City for awhile. The SAR data was not available because the USGS does not take that anymore.

But we've had significant increases of EC and SAR. We are starting to see the cumulative effects of coal bed methane in mining upstream of the dam. That salt is accumulating in that system.

One of our major concerns, as you can see here -- it doesn't show up real well -- but when you apply this high SAR water onto your soils, or a higher SAR water, you can change the composition of the chemicals in your soil. You can actually -- the sodium will replace the calcium and magnesium in the soil, and that is

what is very harmful. We feel we're starting to see that in Tongue River. We've been irrigating with higher sodium water the last fifteen, twenty years, and I think we're starting to see that.

This spring, my Board member John Hamilton, who ranches at Brandenberg, he had a

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choice. He either had to irrigate -- his crop was needing water -- and he looked at the EC, and he said, "Well, I'll chance it." EC at Brandenberg was over the limit at 1,000. It was running about 1,100 to 1,200. This is where his end gun hit. It wiped out his crop. Over here is out of range of the end gun. And I'll have to admit. These were very salt sensitive soils, but when that water hit, it just turned it dead.

So we can't run a business saying we cannot use our water rights, we cannot use the water that we've bought from the State of Montana.

CHAIRMAN MILES: I appreciate all this background. Can you really tie this to the proposal in front of us and how that impacts --

MR. HAYES: I will. Otter Creek is a tributary of the Tongue. Right now the Tongue is overloaded with salts, and the cumulative effects of that is killing us. And if you add another source of it, we're not going to be able to ranch anymore.

I mentioned that Montana had sued Wyoming, and that case was heard by the US Supreme Court, Special Master Burton Thompson heard that case in Billings here. Montana this spring, we

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did not have the snow pack we normally had. We made a call on Wyoming. We told Wyoming that they could not use any of their post 50 water rights. They had to shut those down. People were irrigating. And also they could store the post 50 water, but if Tongue River Reservoir did not fill, they would have to release that water.

Part of that, in that trial, the base flow, or the minimum flow historically was 75 CFS for Montana. I lowered that reservoir down -- or river flow to 75 CFS to match Wyoming. And it doesn't show up real well, but right up here, Pat Sherrill (phonetic), the State Engineer, complained that there was a raise of 23 cubic feet going over the T&Y Ditch on a certain date, and that was caused by a rain event. But he was saying we were wasting water.

This is going to be going into settlement talks, and what I'm trying to really say I can explain pretty closely with this next slide. You can see here. We're going along. We're trying to store as much water as we possibly can. We dropped the river down to 75 CFS.

In May we started getting calls here for water. We're well into the irrigation season. We

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get calls for water here from T&Y Ditch and other irrigators. We take the water up here. And then these two little calls up here is we are almost full. So I anticipated rather than have that

spill and a big flush go down the river, and flood out some pumps of people. To bring the river that low, they had to reset their pumps and had them right on the bank. I had raised that water to let them know that that water was coming. Then we get a six inch rain event in the Big Horn Mountains. That shot this flow to 4,000 CFS.

And when you figure things on average -- you can't. We don't run on averages anymore. If you average the 4,000 with the 75, you come out with a great number. We don't operate that dam or operate that river on averages and means. We have to have regulations that protect us at the lowest possible flow. That's what 4,000 CFS looks like coming over the Tongue River Dam.

This is my place on Hanging Woman Creek. This is January 24th of this year. And you can see, as Daranne pointed out in the slides before, this is a dike irrigation that catches when that rain event or that snow event. There is no control on this. It is right at the mouth of a

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small creek, called Hackley Creek. Hanging Woman is right there. This dike fills with water.

We may irrigate once every year or maybe twice a year, or if we don't have snow, it may be four or five years before we don't irrigate anymore. It is just on a high rain event or a snow event.

This is a view of Otter Creek. And to tie this all in, we're very similar. But if you look at these hills here. Do you see those white spots? The reason those white spots are is because that is very high sodium soil. Nothing grows there. Nothing. And we have that in the whole Tongue River drainage. We have lots of natural high sodium soils. It was an inland sea at one time, and when you do get a rain event, it does pick up salts off of these things.

I have several hand-outs I'd like to pass out. Some are back from when we were in rulemaking. The first one is a letter from Larry Munn. He's a professor of soil science, a doctor in soil science at University of Wyoming, and he wrote this letter to Gary Beach, Abe Horpestad, and I'd like to point out in the emails, he expressed concern about water quality criteria to

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assess impacts of CBM development on water quality and irrigation. "My concern is from the common use, simple mathematical means and averages are representative of different water right parameters." These are not going to work according to him. You have to have actual, really day-to-day basis. We cannot estimate this.

This is from an economic study that was done on Tongue River by Tim Fitzgerald. I think I have enough copies.

CHAIRMAN MILES: So are these back from the original --

MR. HAYES: These are back from the original rulemaking.

CHAIRMAN MILES: I want to make sure we

keep focused on the one in front of us today, that's more pertinent here. We need to --

MR. HAYES: I will try to. Why I went back and showed you Tongue River -- because that's what I am familiar with -- but agriculture produces $25 million to $30 million in every year, and you capitalize that, it comes out to $250 million.

This is recent data this week from Miles City. And the reason I'm showing you this is this

is why we have to have high quality water in both Hanging Woman -- or all these creeks, and Tongue River at the same time. And just looking, I guess, Madam Chair, we have to look at the whole system. We cannot isolate one little spot for EC and SAR changes in Otter Creek. There are lots of tributaries of Tongue River. Some of them don't run water, some of them do. Hanging Woman runs about one CFS, very similar to Otter Creek.

But I'll emphasize that these are -- and I may not have enough copies of this to go around. But you can see what happens. If you look at that flow at Miles City, it takes a jump. A couple days ago they had some big rain events, up to an inch and a half. And a lot of that country is just like this. This is what I'm trying to point out. These are high sodium outcrops that they're going to be mining, in that area down here. That soil has washed off these hills and accumulated here. The soils in that mine area are going to be very, very high in sodium.

And this handout is of Pumpkin Creek. This is where it came from, and that has a lot of these high sodium soils.

So when we get in these rain events,

sometimes they bring a lot of salt in. It just depends on where they fall. And if you have mine spoils with these high sodium spoils, and that water spills over into the river, as it does at Decker -- Right on the banks of the river, we have three mines at Decker. Two of them are done. They're still mining at Decker east, and Decker north is done, and Decker west is done.

What we saw is -- we use that water for dust control. Water evaporates. The salts remain on the surface. When you get a rain event, it picks up those concentrated salts, and takes them to their discharge permit where it is put into the river. So you have to remember that.

The last handout I have is the US geological investigative report done back in 1985 of the dissolved solids at Otter Creek. And what I would really like to point -- you can read this, study it -- but it will tell you that Otter Creek, mining of Otter Creek will pollute that creek for hundreds of years. The water coming back through those spoils will pretty much be there for hundreds and hundreds of years.

Just like we're seeing from the CBM development. We're going to be haunted by CBM

development for hundreds of years, because those salts are brought to the surface. And Larry Munn once told me when you bring these highly saline waters up from these deep geological formations, and you put them on the surface, it is going to have a dramatic effect on irrigated agriculture. Is there any questions?

BOARD MEMBER TWEETEN: I'm going to ask you the same question that I asked the representative of the NPRC. So would you say that there should never be a rulemaking that's specific to the Otter Creek Mine proposal, or are there things that you would like to see DEQ do, or things you would like to see happen before you think it would be ripe to go ahead and make a rule like the one that's been proposed?

MR. HAYES: Madam Chair, Chris. I think before we do anything on Otter Creek, we have to look at the whole drainage. The rules adopted by the BER back in 2003 are not working. We are seeing constant over 1,000 EC on the lower end; we're seeing damage. It may be better to reevaluate the current rules.

And living on Hanging Woman Creek, I irrigate very much, and it is pretty much the

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common rule of thumb for people. When the trash goes by the headgate and the water is running clear, you pretty much flush the creek out, and it is a simple easy rule to remember.

But yes. I don't think -- The rules that we have now are not working. We're seeing damage, and our agricultural change switching to sprinkler irrigation to be more conservative is going to have a big effect, and more so is this court case with Wyoming. It is going to change the way that we completely operate that dam and that whole drainage. We are going to have to be very, very conservative with our water.

In those court hearings Wyoming says, "Why don't you just shut the gate in the winter and let it fill?" We can't do that for safety reasons. But we have to conserve that water, and we try to fill as high as we can possibly go without damage to the dam in the winter, but then we have all these discharges above the dam from the coal mines and all of the residue from CBM. So we end up in the spring, if we have to store water, we have to shut the flow down. We have very high EC.

And like this spring, there was a lot of

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irrigators that chose not to irrigate. John made a mistake. He said, "I've got to get water on my crop." Does that help if you have a water right and you can't use the water? No, it does not. And these people pay a lot of money. We pay $147,000 to the State. We committed $5 million to building that dam, the water users did, and we got not one acre foot of storage. So we have got a big financial commitment, and we expect the highest quality water from this state that we can get.

CHAIRMAN MILES: Thank you. Any further questions? May I ask how many more people intend to comment?

(Response)

CHAIRMAN MILES: We'll take a short break for five minutes, please, and then we'll get through the rest of the comments.

(Recess taken)

CHAIRMAN MILES: We'd like to get started, please. Next public commenter, please. Good morning.

MR. FIX: Good morning, Madam Chair, and members of the Board of Environmental Review. I'm Mark Fix, I'm a rancher and irrigator on the

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Tongue about 20 miles southwest of Miles City. And I will be affected by any changes in water quality that occur in the Otter Creek drainage.

Art Hayes gave you a graph here a little bit ago, and I guess I ended up running the same ones, and I'll pass them out. They were the Tongue River at Miles City and Pumpkin Creek. So I'm pass those around. I have twenty copies so I should have enough for everyone.

I'm irrigating with the water from the Tongue as we speak. The electrical conductivity is around 500 microsiemens per centimeter. I know that this clean water from the Big Horn Mountains will make my crops grow and protect my soils. It is not right to add 3,100 microsiemens per centimeter water from Otter Creek into this great water.

I think that the first thing that needs to be looked at is the mission of the Department of Environmental Quality. Their first priority is to protect the water. It is not to issue discharge permits that allow degradation to the water. The original standards set for the tributaries do reflect the natural condition of Otter Creek, just not the worst water that

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naturally occurs.

In fact, the State of Montana in defending the current standards in District Court wrote that, and I quote, "Federal law requires that standards be set to protect designated uses irrespective of ambient water quality." That's in the Pinnacle versus DEQ suit.

There is no assimilative capacity to add point source discharges into Otter Creek. In DEQ's final rational for EC and SAR standards, the agency defended the 500 microsiemens per centimeter standard because an increase from 500 to even 600 microsiemens per centimeter has a precipitous impact on production of, for example, alfalfa. In the rationale document, such an increase was reported to lead to root zone salinities that corresponded to decreases in yields of alfalfa ranging from 4.8 percent to 9.3 percent. The 500 microsiemens per centimeter was selected to be protective of target crop production.

Pumpkin Creek is another tributary to

the Tongue River. The EC in Pumpkin Creek varies, as does the EC in Otter Creek. The EC can get as high as 2,000 microsiemens per centimeter.

There was some recent rain events that cause Pumpkin Creek to have an increased flow. I checked the USGS gauging station at Miles City downstream from Pumpkin Creek, and when the flow increased in Pumpkin Creek, it raised the EC at Miles City from 600 to about 1,600 electrical conductivity. That is with the smaller flow in the Tongue River. I think it was around 200 CFS.

The same sort of flow increase will happen when the ponds that Arch is planning for Otter Creek overflow and breach from a big rain event. The difference is that Pumpkin Creek is natural. The water stored in the ponds by Arch is not natural. The sodium adsorption ratio of the coal water is much higher than natural conditions found in Otter Creek. Arch reported at the last WPCAC meeting that the mine water is 1,500 EC. Why are DEQ and Arch asking for 3,100?

The standards that are in existence were years in the making. I want to personally thank the BER for spending six years of your life setting these standards. EPA is still reviewing those standards and will hopefully approve them in the near future. By changing the standards on Otter Creek, the State of Montana is putting

justification for the standards into question.

We worry that EPA may never approve the tributary standards if the State of Montana raises concerns over them. DEQ should not jeopardize a justification that has been used to defend the standards. DEQ must defend the standards and the state of Montana and its water users.

Agricultural use is not protected with a discharge set at 3,100 microsiemens per centimeter. I did an analysis of the data from the USGS gauging station at Miles City after coal bed methane started discharging into the Tongue River. In May, the electric conductivity increased by 13.2 percent from water quality prior to 1999 when coal bed methane started discharging. In May, the sodium adsorption ratio increased by 53.6 percent. I did this analysis in 2008. This is a dramatic increase, and we do not want to see it again.

Coal bed methane is on the downturn, and I thought the water quality this spring would be better. It was not. I found out recently that many of the ponds in Wyoming have been taken out, and the salts have permeated the soils in Wyoming and are flushing down the tributaries and coming

into the Tongue River, and will affect the water quality of the Tongue for many years until the remnants of the salt finally wash out.

Otter Creek is currently listed as impaired for salinity, and a TMDL is required. If the standard is changed to the level that DEQ is recommending, there will not be a TMDL required.

There will not be a record of the salt load in Otter Creek without the TMDL. You will not be able to see what the salt load is before and after discharges from the Otter Creek Mine.

The standard must not be changed to stop the TMDL. The TMDL is needed for when the TMDL is done on the Tongue River. Tributaries like Otter Creek take a large salt load into the Tongue, and must be considered. The cumulative impacts of all the discharges into the Tongue must be looked at. Looking only at Otter Creek without looking at the Tongue will degrade the Tongue.

We are struggling to make our soils produce food and fiber. We ask you to keep the standards as they are, and you not change them to a level that is an authorization to degrade. Do not go forward with rulemaking. Keep the standards as they are. Thank you.

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CHAIRMAN MILES: Thank you very much. Is there any comments or questions for Mr. Fix?

(No response)

CHAIRMAN MILES: You raised some interesting comments about TMDL, and we might have some questions for the Department about that. Thank you very much.

Next commenter.

MS. FRENCH: Hello. My name is Kate French. I'm here from Bozeman, Montana. I'm friends with many of the ranchers and farmers who are here, and have attended many other BER and WPCAC meetings regarding this proposed rulemaking.

What concerns me and what I want to speak about is the degree of public input that DEQ implied that they'd be taking into consideration during the rulemaking process. There seems to be a contradiction here because DEQ has done a great job of reaching out and seeking public input, or providing the forum for public input, but it seems that they have not taken any of the comments or information provided into sincere consideration.

This rulemaking was initiated in October 2014. Many water users and irrigators from the area came to that initial meeting. February 2015,

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WPCAC had a meeting which many water users attended. From that meeting, WPCAC advised that rulemaking does not proceed, that it does not go forward. Again, that was during the legislative session when many of these rules hearings on Senate Bill 325 was being considered.

In May 2015, DEQ created an implementation document which they circulated around. They had meetings in Ashland, in Miles City. Again, many members from the public attended these meetings and provided their information, their testimony, and their comments. Again, in 2015, as we heard earlier, WPCAC also had a meeting, and decided to advise the BER not to continue with rulemaking.

So the characterization that was brought earlier that the public is somehow holding back or is scared because this is a controversial issue I

would say is erroneous. There have been many, many people from this watershed who have come a long ways, six hour drive or an eight hour drive, to come, and testify and speak at these meetings, and meet with the members of the BER, with WPCAC members, during formal hearings. They are here during very busy times of the year to share what

they know, and these same farmers and ranchers are warning you that these new standards would render the water unusable, and probably further from the natural condition that DEQ is proposing.

It is worth taking their input into consideration. Rulemaking is fine if it is done with complete, honest, and robust data sets. This rulemaking process does not seem to be done with, or would not be done with full and complete data. And I don't think that they would all of a sudden start -- DEQ would all of a sudden start taking the public's input into consideration, because these standards have not changed during this entire process. The standards have never been changed from the initial meeting in 2014.

So it seems naive of us to say, "Oh, well, once the rulemaking is initiated, then we're going to incorporate the public's concern." When it comes to salty water and irrigated land, there is no do over. There is no room to say, "Sorry we didn't take the time to measure and understand the natural conditions and historic uses of this waterway correctly."

BOARD MEMBER TWEETEN: Excuse me, Ms. French. I'll ask you the same question I asked

Ms. Dunning. In the context of rulemaking, DEQ doesn't have any choice. They have to take the comments into consideration. They have to specifically respond to them. And all of those, both the comments and the responses, are going to be compared to each other by a reviewing Court, and the Court is going to make a determination as to whether the rule ought to be upheld or not. So isn't this a little different than the informal process that's gone on heretofore?

MS. FRENCH: It just seems that if they were sincere about taking the public's input into consideration, that they would have done so already to some degree at least, and they have not.

BOARD MEMBER TWEETEN: That argues for rulemaking again rather than against it, because then once you get into rulemaking, they have to take into it into consideration, and they have to formally respond to it. They can't just blow you off like you allege they've done so far.

MS. FRENCH: But for many people, the rules as they are are better than the proposed rules that would be --

BOARD MEMBER TWEETEN: That's a

different argument than the one we're talking about. If the rules are okay now, that's one point; but the question we're facing today is

whether we ought to do rulemaking or not, and it seems to me that since they have to formally respond to your comments in writing, and all of that is subject to review, not only by this Board, by also by a Court on judicial review, your concern, it seems to me, argues in favor of rulemaking rather than against it.
MS. FRENCH: I would argue the opposite point. I would say that if DEQ was going to sincerely take into account the public's input, there is a way to respond to that in a way that satisfies legal standards, and there is a way to incorporate that information and those comments sincerely. What I'm saying is that thus far they have not taken that information provided from those on the ground sincerely into consideration.
BOARD MEMBER TWEETEN: I understand your point.
MS. FRENCH: Thank you.
CHAIRMAN MILES: Is that all you had to say?
MS. FRENCH: I had more.

BOARD MEMBER TWEETEN: I didn't mean to cut you off.
MS. FRENCH: My point is that the idea that they are going to start taking this into sincere consideration is just a platitude, and that we need to be looking for a more robust data set that incorporates all of the uses, the historic uses and the current uses of agricultural users in the area, and that I don't think that rulemaking should be initiated under the conditions right now. Thank you.
CHAIRMAN MILES: Thank you. I appreciate that. Any other questions? Next commenter, please.
MR. JENSEN: Good morning, members of the Board. My name is Jim Jensen. I'm Executive Director of the Montana Environmental Information Center. And MEIC is here to simply endorse certainly the testimony that's preceded me, but to highlight -- and for Mr. Tweeten in particular -- in response to your question, Mr. Hayes I think pointed out the fundamental problem on the river is that the existing rules, though better than what is proposed here, are not sufficient to protect this river system, and the exceedences

month after month after month, year after year, that are occurring at Miles City, at the mouth of the Tongue River, proves that that is the case. It simply isn't working.
And the Department, rather than proposing a rule, which its purpose is to allow additional salts and pollutants into the river, ought to be looking at how it can change the standards and rules to prevent the increase in contamination in the river system. And I think that you all have -- though not everyone agrees with this -- a constitutional obligation to take that course, because the Supreme Court did rule in the right to a clean and healthful environment

case that it is a right that is anticipatory and preventative. It is meant to anticipate and prevent pollution, not enact rules which will increase pollution.

It is not that complicated a proposition to understand. Our job, your job, all of us in this together, is to have cleaner water. Thank you.

CHAIRMAN MILES: Thank you. Any questions for Mr. Jensen?

(No response)

CHAIRMAN MILES: More commenters, please.

MS. LINDLIEF-HALL: Madam Chair and members of the committee, my name is Brenda Lindlief-Hall. I'm the attorney for the Tongue River Water Users Association. I've represented them for about fifteen and a half years now.

Mr. Hayes handed out the front page and then Page 11 of an economic study that was done in 2012. I just want to point out that there are about 25,000 irrigated acres in the Tongue River valley that depend on that high quality water. The Tongue River valley, year after year for a very long time, has contributed to the economy of Montana, a very vital economy. According to that study, when capitalized, the agricultural production in the Tongue River valley provides about $250 million to the state of Montana. That's every year, and that's growing.

And so we believe that, again, adding just one more insult to the Tongue River could be the nail in the coffin to what provides a lot of economic stimulus to the state of Montana. Thank you.

CHAIRMAN MILES: Thank you. Any questions?

(No response)

CHAIRMAN MILES: Is there anyone else who would like to comment at this time?

MS. MARQUIS. Good afternoon, Madam Chair and members of the Board of Environmental Review. My name is Vicki Marquis. Thank you for your time here today, and thanks for your consideration, and thanks for the opportunity to comment.

I'm an attorney with Crowley Fleck in Billings, and I'm here today representing Otter Creek Coal, LLC. As you know and as has been talked about today, Otter Creek Coal has submitted both a mine permit and an MPDES water discharge permit application to DEQ for their consideration. I'm not really here so much to talk about those permits or applications, because this rulemaking proposal really isn't about the mine, and it shouldn't be.

This rulemaking should be about coming up with water quality standards that make sense for Otter Creek. Right now you have a standard that is not enforceable, and DEQ has said that they can't use it to come up with an effluent

limit in a permit. So we urge you to use the facts and the science to come up with a relevant and enforceable standard for Otter Creek.

And again, this really isn't about the mine. But to the extent that you have questions about any of the current permitted discharges, or about our permit applications, about the pond system, or anticipated discharges, or how the water will be managed, the DEQ has our permit applications, they have analyzed them, and they can provide you with neutral information and the facts.

Of course, we're also happy to answer any questions that you might have about the mine and the water discharge permit applications. We're not a coal bed methane operation. We don't have to take the groundwater out and discharge anywhere it in order to get the coal. But again, this process that's in front of you today to initiate rulemaking is more about a water quality standard for Otter Creek.

DEQ has put a lot of effort into the rule package, and we appreciate that. They've gathered and studied a lot of data; they've modeled conditions at Otter Creek; and they've

drafted a proposed rule and implementation guidance that sets a standard not only at the compliance point that's referenced by the longitude and latitude that's provided in the rule, but also at the point of discharge, and that's reflected in Section 3(a) of the proposed rule.

DEQ has also held twelve outreach meetings with interested stakeholders, and they've gathered input. We've provided comments, specific, line by line, to their draft rule and their implementation guidance. We appreciate all of that work, and we think it is time to move the process forward to a more formal, broader public process by initiating rulemaking.

One question we have is about the rationale behind the statement on assimilative capacity that's in the second paragraph of the reason statement. We just had a question about the basis for that. We understand that assimilative capacity means that a water body is capable of accepting discharges and still staying within the standard. So our only comment would be more of a question or concern about that statement in the reason, and maybe that could be explained

better or revised in some way.

I'm happy to answer whatever questions you might have of me. We also have Dave Simpson. He'll speak after me. He's a contractor who has worked extensively on the mine permit application, and he can handle any technical questions that you might have of us. But again, we'd like this to be a focus on what is appropriate, what facts and science are appropriate to base the standard off of for Otter Creek.

CHAIRMAN MILES: Thank you, Ms. Marquis. Are there any comments or questions?

BOARD MEMBER CANTY: I do. What sort of discharge are you proposing in your permit, both volume and EC?

MS. MARQUIS: Can I direct that question to Dave Simpson? He's handled the permit application, and he can really provide better information. Any other questions that I might be able to answer?

BOARD MEMBER REINHART-LEVINE: Madam Chair, Ms. Marquis. Can you elaborate on why the current standards are not usable or enforceable? Is that primarily because of Senate Bill 125?

MS. MARQUIS: No. My understanding is

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that the current standard is set at 500 for electrical conductivity, and it is hard because the stream is already beyond that. So by law, you have to -- when that happens, you have to do a TMDL, and the purpose of a TMDL is to come up with a management plan that will bring the stream into compliance with the standard. And I don't know how that's possible on Otter Creek because it is naturally occurring.

So without a TMDL, without the ability to do a TMDL, I don't know where you go. And that's more of a question for DEQ. I'm sure they could give a better answer.

BOARD MEMBER REINHART-LEVINE: Madam Chair, Ms. Marquis. Are the point sources for Arch Coal primarily the ponds that would spill over in rain events?

MS. MARQUIS: We do have a series of ponds. There are internal ponds, and there are exterior ponds. And Dave can really speak more to this. But it's my understanding that any groundwater that would be intercepted would be managed internally. And there are not really exterior ponds, because they're still within the permit area, but they're outside of the active

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mining area. And those are to capture storm water runoff, and they're designed to capture more than they would need to. So those would be the points of discharge, yes.

BOARD MEMBER REINHART-LEVINE: Madam Chair, Ms. Marquis. The location of the ponds, can you describe where that location is in reference to the USGS gauge at Ashland, or would that be deferred to --

MS. MARQUIS: Dave can answer that better. We are upstream, and again our entire permit application is available on DEQ's website, and there are maps that show the exact locations of those ponds. And I believe there are maps that show the discharge points. So all of that is available on DEQ's website.

BOARD MEMBER REINHART-LEVINE: Thank you.

CHAIRMAN MILES: Thank you. Next commenter, please.

MR. SIMPSON: Good afternoon, Madam

Chair, members of the Board. My name is Dave Simpson. I am here as part of the permitting team working on the application for the Otter Creek Mine.

A little bit of background. First of all, I reside in Clancy, Montana. I've been working on coal mine permitting in Montana now for forty years. I spent 34 years in Hardin, Montana, working with Westmoreland Coal, and since I retired, I've been doing consulting part time. My role in this project is as technical coordinator. I'm working with Hydrometrics, Inc., which is the primary contractor, in preparing the permit applications.

The initial application was filed with DEQ in I believe October of 2012, and since that time we've been involved in a rigorous process of review and response to assure that the application ultimately will meet a very rigorous set of standards, the core of which is protection of the hydrological balance, both water quality and water quantity, and protection of agricultural uses on the Otter Creek flood plain, Otter Creek valley floor.

Again, I would just like to reiterate that this proposed rulemaking is not about the Otter Creek Mine, it is about management of water quality in the state of Montana. But it is being represented as being about the Otter Creek Mine because -- I don't think there is any question that one of the triggers for this process has been the application for a mining permit and also a discharge permit for the mine. I'd like to talk for a minute about the water management system at the mine. Again, this is a work in progress. We are involved in preparing responses to the last set of deficiency questions from the Department.

But the mine area is located on the east side of Otter Creek between Ten Mile Creek and Three Mile Creek. There are also facilities on the west side of Otter Creek -- the railroad, etc. -- is on the west side of Otter Creek. The entire area that would be occupied by the mine is approximately one percent of the Otter Creek drainage area, perhaps 2 percent. I don't have an exact acreage, but I'd be confident in saying that less than 2 percent of the drainage area would be controlled by the ponds at the mine.

The mine will handle two types of water. The first is runoff water. Under the mining rules and standard operating practice, surface water is to be controlled primarily for control of sediment, because when you disturb soil materials and you get rainfall or snow melt, certainly you get sediment produced. And so the standard of management practices is the use of sediment ponds.

There is a set of sediment ponds around the rim of the mine operation that would control surface runoff from all of the affected areas. I don't remember the exact number of ponds. I think

it is seventeen or eighteen ponds. These ponds would handle runoff water. Runoff water, the same runoff water that was discussed earlier -- rainfall, snow melt -- and we expect that water to be of relatively high quality.

It will entrain sediment, so there will be some minerals picked up. As far as what the quality of that water would be going into the ponds, it will be dependent on the amount of water and also the sediment that's picked up.

But we don't expect that water to be problematic from the standpoint of either salinity or SAR, the reason being that with the exception of an area within that watershed that would hold those spoil storage area, this is mainly natural soils that it's going to be contributing.

The second category of water is the in-flow to the pits from the Knoblock, primarily from the Knoblock coal, as was mentioned earlier.

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That water is fairly low in specific conductivity, about 1,500, based on the wells in the area, but it is very high in SAR, SAR being -- as was pointed out -- a ratio, so what it has to do with is the ratio of sodium to the other cations in the water.

The mine is designed with an internal drainage system to confine that water to the mine area, that is that water is being kept separate from the runoff water from the outlying parts of the mine. Those ponds are -- let me back up a little bit. The external ponds are designed under the rules to contain the runoff from a ten year 24 hour precipitation event, so that means that statistically we would expect a discharge from those ponds about once every ten years.

The internal ponds are designed for a 100 year event, so our objective is to confine the water to the mine and use that water for dust control within the mine area proper. We do expect that there will be significant groundwater encountered during the early years of the mine. The peak would probably be about, according to the modeling we have now -- and again, this is a preliminary number -- in the 600 gallons per

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minute range. That is over the whole mine. I think the average, according to the model, over time will be about 300, 350 gallons per minute.

To put that in perspective, that's less than one cubic foot per second, and the flow of Otter Creek, as was pointed out earlier, average flow is about five to seven cubic feet per second. So even if all of the water from the Otter Creek mine would be channeled into the creek, even at low flow, or normal flow conditions of five to seven CFS, you're still looking at a relatively small increase. That's not the case. There will be no constant discharge from this mine, there will be no processed water.

When we think of MPDES discharge, what we think of typically is process water, where you have water that's used in some industrial process

and then discharged after treatment. The only water we'll be dealing with here is runoff and the pit in-flow, as I said, with the pit inflow contained. We would expect to discharge to the creek very infrequently, that is unplanned discharge.

It is possible that there would be discharges from the outer ponds to Otter Creek, if

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the water meets whatever standard is established by the MPDES permit, and that application also is in review right now. So until we know what the permit requirements are, there is no way we can predict to what extent there might be discharges to Otter Creek, and what the quality will end up being.

The most important thing to remember, though, is that, as I said, there is no process water involved, and the discharges are very infrequent, on the order of once every ten years or less. If we do have a major rainfall or major event, it will almost be certainly associated with snow melt, mainly because soil surfaces are frozen, and everything runs off. During a rainfall event, there is at least some infiltration, and so you wouldn't --

There are exceptions. There are such things as big rain storms. So we can't guarantee absolutely that there will never be a discharge from this mine. What we can do is engineer it so that those discharges are very infrequent, so that we can manage the water internally.

BOARD MEMBER CANTY: I have a question, Madam Chair. So if I heard that right then, the

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external ponds that are collecting mostly the precipitation events that you expect to be clean, those ponds would discharge maybe once every ten years, but the internal ponds, that's a one in 100 year, like a 100 year event?

MR. SIMPSON: They're being designed to contain a 100 year event, plus the water that we expect, based on the hydrologic models, to in-flow from the coal seam.

BOARD MEMBER CANTY: Thank you.

BOARD MEMBER SHROPSHIRE: Madam Chair. So when you're mining and you encounter groundwater, so you have to do dewatering during mining, where does that water go?

MR. SIMPSON: Initially we're going to put in a central containment pond within the footprint of the mine area, because we initially, with the initial pit, there is really no place for the water to go. So we're going to have to contain it internally temporarily using that water for, as I said, for dust control and haul roads.

But once the mine begins -- once the box cut is established, what the box cut will do is it will cut off the surface drainage from the upper reaches toward the Custer forest. It will cut off

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that surface water runoff, and intercept it by the pit, so the actual amount of water that's runoff

water that's going to be going into the ponds in the box cut is going to be pretty minimal once that pit is established.

But the internal ponds will be established within the footprint of the box cut, which is the initial cut. So there will be a time period of about a year when that water will have to be managed internally entirely by going to a central pond or internal sumps in order to prevent the need to discharge.

BOARD MEMBER SHROPSHIRE: So if I understand what you're saying is you have to construct a big pond to discharge your mine dewatering water.

MR. SIMPSON: That's correct.

BOARD MEMBER SHROPSHIRE: And that over the course of -- starts off at around 600 gallons a minute in the initial dewatering?

CHAIRMAN MILES: That's the preliminary estimate, yes.

BOARD MEMBER SHROPSHIRE: And then steady state around 300 gallons a minute into that pond?

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MR. SIMPSON: Steady state would be in the 300 gallon per minute range, keeping in mind that we're talking about a pit that's over three miles long. So you have a huge amount of surface area and a lot of evaporation, so we don't expect that we'll handle anywhere near that volume of water once the mine becomes established.

BOARD MEMBER SHROPSHIRE: But that would be a permanent pond that you would discharge into?

MR. SIMPSON: A permanent pond?

BOARD MEMBER SHROPSHIRE: You're always going to have dewatering during mining.

MR. SIMPSON: We're going to have dewatering during mining. We expect the amount of dewatering to decrease as the pit advances. We do anticipate that in the initial years those internal ponds will handle primarily pit dewatering; and as the mine advances, and the area is reclaimed to its post-mining topography, of course the drainage will be restored, and then the preponderance of that water will be surface runoff. And once the mine is closed up, then there will be no more pit water. It will all be surface runoff.

BOARD MEMBER SHROPSHIRE: What's the

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projected life of the mine?

MR. SIMPSON: This particular, the Tract 2 portion, about I think it's an 18 year production life. We're projecting right now at 20 million tons a year. It could be more or less, depending on actual production levels.

BOARD MEMBER TWEETEN: Mr. Simpson, there is probably a simple answer to this that I just am not smart enough to see. But I understood you to say that discharges of water from the mine to Otter Creek were going to be a rare, if ever, event because of the development of these ponds inside the mine boundary; is that correct?

MR. SIMPSON: That's correct.
BOARD MEMBER TWEETEN: Then why does it matter to the mine what the standards are in Otter Creek? If you're not going to be discharging water to Otter Creek, why does it make any difference to the mine whether we go forward with this rulemaking or not?
MR. SIMPSON: Ultimately there will need to be an MPDES permit, because there may -- As I said earlier, we can't guarantee that there will never be a discharge, because it does rain, and it does snow, and we do have runoff events.

And we have designed this mine to be as close to zero discharge as is reasonably possible, and the reason for that is that early on, in doing the initial design work, we recognized, with the sensitivity of Otter Creek, and the Tongue River, and salt loading with respect to agriculture, that it's incumbent on the mine operation to be able to contain and manage its water and not, let's say, minimize the possibility of an unplanned discharge, and to be sure any discharges that do occur meet the requirements of the permit.
And since we don't know what those requirements are going to be, it's hard to say what the specific management plan will be in that instance, but the status of the management plan right now is as I've described it, but it is evolving in response to DEQ review.
BOARD MEMBER SHROPSHIRE: One last question. Have you modeled the impact of infiltration to groundwater from your evaporation pond, or your pond where your dewatering water is going?
MR. SIMPSON: Where the dewatering water is going is inside the mining footprint. There will be infiltration. We don't expect a lot

because of the nature of the soils. They're pretty high in clay.
One of the issues that would be addressed in the groundwater modeling process is what will happen when the mining is complete, and the spoils are resaturated by groundwater. It was alluded to by one of the earlier commenters, and we're aware of the study that he referred to.
We don't necessarily agree with the conclusions. We think there are some assumptions that are incorrect. But with the modeling capability that we have -- and I think we can project with pretty high confidence what the ultimate results are going to be, both short term and long term. In the short term, there are going to be some impacts because we're going to be taking water out of the system and moving it into the pit.
So what the extent of those impacts will be will depend on the specific management plans. Again, everything is -- The best way to describe it is that there are a lot of moving parts, and we're working with the Department right now, working through the process of modeling,

characterizing the water, characterizing both the
flows, the subsurface and surface flows, and the quantities to project what's going to happen after mining, during and after mining.

I guess the one thing I would emphasize is that's an entirely permitting process. That will be an issue for a Department decision further down the road, and there will be opportunity to comment and review on the decision at that time.

BOARD MEMBER REINHART-LEVINE: Madam Chair, Mr. Simpson. I did not see any proposal for treating the water in the internal or external ponds. Are there any proposals, as far as you know, for treating the water?

MR. SIMPSON: We have no plans right now to treat the water other than for sediment, and the treatment for sediment is to impound the water and allow the sediment to settle out. If the water, after the sediment settles out, meets requirement of the MPDES permit, it would be discharged into the creek; if not, it will be channeled back, pumped back to one of these internal ponds, because we need to maintain capacity in those external ponds to accommodate rainfall events.

BOARD MEMBER O'CONNOR: Madam Chair, one quick question. In the settlement ponds, generally you get evaporation as well as settlement. Would that increase the EC and the SAR values in those ponds?

MR. SIMPSON: Evaporation would increase the SEC, yes.

CHAIRMAN MILES: Thank you.

BOARD MEMBER CANTY: I have one last question, Madam Chair. So when you treat the water, is that an occurrence you don't expect to do very often, right? Going back to what you said about the discharge once every ten years, once every 100 years. So in order to discharge through evaporation, that's not planned to be a regular occurrence, or it is? Did that make sense? Any water you discharge through your MPDES permit, that's still part of what you said before, is that it wouldn't be very often, this occurrence?

MR. SIMPSON: It would be very infrequent, and in response to rainfall or snow melt runoff events. There will be no constant discharge. And as I said, that application is under review. The review is in its early stages. And I'm just speculating, but I would expect considerations for water quality and quantity as well, based on the concern that's been expressed about load of salt in the creek.

BOARD MEMBER CANTY: Thank you.

BOARD MEMBER REINHART-LEVINE: Madam Chair, Mr. Simpson. Are the ponds lined?

MR. SIMPSON: We're not planning to line them. There is an option to line them. It depends on ultimately the way the water management plan is designed.

The ponds that contain only runoff, we expect that water to be sediment laden, but fairly good quality with respect to salts. So infiltration, in my opinion, is the appropriate way to introduce that water back into the system. If there is a problem with the quality of the ponded water, the option exists to line the ponds. And Otter Creek Coal has made it clear that they're willing to do that.

CHAIRMAN MILES: Thank you. I don't want to get too deep into the actual mine operation. I want to stick to the topic at hand today. So I appreciate your focus on talking about the discharge.

MR. SIMPSON: Thank you very much, Madam Chair.

CHAIRMAN MILES: Is there anyone else that wishes to comment?

MS. KAEDING: Thank you, Madam Chair and members of the Board of Environmental Review. My name is Beth Kaeding, and I live in Bozeman. I'm a long term Northern Plains member, and a past chair. I really appreciate the opportunity to speak today. I'm not going to say too much.

I spent many, many times before the BER back when rulemaking was done on the Tongue River and the tribs, and I know it is a long and lengthy process for rulemaking. I know there was a lot of science that was brought to bear on the original rulemaking. I don't think that science has changed.

I think what has changed is the fact -- and it has been said specifically and alluded to -- that there is now a permit for a mine on Otter Creek that needs to get an MPDES permit. And I understand all that, and I realize it puts us all in a position of needing to deal with this.

Mr. Simpson just said that they're not anticipating any discharges from this mine, so why are we even considering rulemaking on changing the standards in Otter Creek? Why can't a permit be written that takes into account infrequent exceedences of the current standards?

As Ms. Dunning so eloquently showed you, this mine is down toward the mouth of Otter Creek where it enters the Tongue River. There is a huge watershed, and changing these standards affects everyone in that watershed. And we've been living -- and Northern Plains has spent a great deal of time fighting coal bed methane, trying to get those companies to do it right and not discharge all of this horribly salty water into the system. And by changing the standards on Otter Creek with this rulemaking package, you are potentially opening up people up higher in the watershed to problems with their way of life.

Now, I have been to many of these meetings, these twelve meetings that keep being talked about with the public that DEQ has done with us. I drove to Miles City from Bozeman to be in one of the first meetings. I've been here in

Helena for a number of meetings. We really appreciate DEQ trying to convince us -- which is the way I look at what they've done -- that what they are doing is going to work. But as Ms. French said, they haven't really been listening to

what you have heard today from Ms. Dunning. A lot of the problems -- Mr. Hayes, Mr. Fix. They have good concerns that need to be considered by DEQ, and we haven't been having our concerns heard.

You're right, Mr. Tweeten. If we start rulemaking, then they have to officially answer these things, but we think rulemaking is not prime, not ripe at this point. For one, I don't know if it was clear to all of you when you looked at many of the graphs that were on DEQ's presentation, as well as Ms. Dunning's presentation on behalf of Northern Plains. Those USGS gauging station numbers, they only run from April to November. The gauges are turned off then because of freezing and all kinds of other problems.

So the prime time for getting those good numbers, that Ms. Dunning told you were so important to her operation, her family's operation, we don't really have anything more than grab samples when DEQ had a person in the area, or sent somebody out, but they might not have been there on a day that was a good day. So we don't have complete data, so I don't think we're ready for rulemaking.

The other thing I'd like to say is that yes, we do need to see how DEQ thinks these rules, if they do go through rulemaking and are sustained and passed, would be implemented. That's a big hole in my mind as to how this is going to work.

So in answer to Mr. Tweeten's question to everyone, I don't think Northern Plains is necessarily opposed to rulemaking, but we spent a great deal of time, effort, and money, and many, many days out of many of our lives up here during the original rulemaking, and those standards were set to protect the people who use these waters.

Before we launch into a new rulemaking, we need to -- as Mr. Fix and Mr. Hayes have pointed out -- start going forward to protecting the Tongue River. There are not TMDL's on the Tongue River yet. Maybe you'll never be able to put a TMDL on Otter Creek, but we sure as heck can on the Tongue River.

So for many reasons, we just think this is not timely. It is pre-rulemaking. We think there is a lot more data and a lot more thinking that has to go into this before it happens. So thank you very much.

CHAIRMAN MILES: Thank you for your

comments. Is there anyone else who wishes to comment?

(No response)

CHAIRMAN MILES: Thank you. Before we sort of start a discussion among the Board members

and maybe ask the Department or others some questions, I do just want to thank everyone who is here today. And Ms. French definitely reminded me of the people who have come from a long distance. Believe me, I know how far Otter Creek and Tongue River are, and we really appreciate your coming here in person today, and taking the time. I want to apologize to the folks who are here for the MEIC/Signal Peak hearing. We will be getting to that, but I appreciate your patience.

One of the things I will ask George to do at the very end -- and it did remind me when we talked about the distance people have traveled. If you wrap up with a few comments at the end, George, I would appreciate your addressing the issue of -- I know that there is requirements for State agencies and this Board to at times conduct a hearing in the geographic location that's impacted, and whether that would become part of a rulemaking procedure for us. So if you'd address

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that at the end.

And with that, who wants to start? Who has questions for the Department? Are there things that you heard in comments that you would like the Department to respond to? George, do you want to make a few comments, or shall we start with Board comments?

BOARD MEMBER O'CONNOR: I have a question, Madam Chair. George, we saw a slide up there that showed that Tongue River having very low EC and very low SAR, and it wasn't over a time period or anything like that, but it seemed, in comparison to Otter Creek, that it was very clean water. And then we also saw a slide later on that showed the first five months of the year it exceeded, the Tongue River did exceed the limits, which I believe -- are they 1,000? Whatever it is on the Tongue -- that they exceed it for the first five months. So those two don't seem to match very well together. Can you explain for me, please.

MR. MATHIEUS: Madam Chair, Roy, I'm not the technical or subject matter expert on that specifically, and I would ask that I could defer to staff, please.

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CHAIRMAN MILES: Who would you like to?

MR. MATHIEUS: Eric Urban.

MR. URBAN: Madam Chair, members of the Board, for the record, my name is Eric Urban, and I'm the Bureau Chief of the Water Quality Planning Bureau, and I have the privilege of overseeing the TMDL and the Water Quality Standards Program.

Mr. O'Connor, your question is very astute. The water quality standards for the Tongue were driven by a use review, so that being what does agriculture need to have full success.

What you see on the Tongue is empirical data, data collected from the Tongue River. That was not included directly in the development of those standards. I believe in other testimony, there was a question of the effectiveness and the

appropriateness of the standards on the Tongue, and that the Department should take a look at that. We're in the middle of that, and that is being done through the TMDL process.
That simply is a review of the watershed in its entirety. We look at all sources, point, nonpoint source, and we ask that question: "How do we reduce all those sources to meet that standard on the Tongue?" There is potential that

that's not possible. We haven't got to that point yet. But we will be doing that review, and then handing back out appropriate load reductions to meet that number, or to verify the accuracy of that number.
CHAIRMAN MILES: Thank you. Any further questions, Board members?
BOARD MEMBER SHROPSHIRE: Have you come up with a number for EC and SAR on the Tongue that you would call natural? Are the standards higher than natural, do you think, for the Tongue?
MR. URBAN: Madam Chair, Ms. Shropshire. We have not looked at that question. That is the process for the TMDL. And in order to do that, we quite simply need to model it back to find all the sources in the watershed, and then mathematically remove them from the watershed to see what we would be left with to identify the natural condition. It's a much larger watershed, much more complicated than Otter Creek. We are in the middle of that. We anticipate model completion early 2016.
BOARD MEMBER SHROPSHIRE: Thank you.
BOARD MEMBER O'CONNOR: Wouldn't it seem logical for us to consider the rulemaking process

after the whole drainage is looked at, the Tongue River drainage? Just a thought.
CHAIRMAN MILES: Did you want to respond to that?
MR. URBAN: Madam Chair, Mr. O'Connor. Certainly at first blush, that seems like appropriate. What the Department has presented before you in this rulemaking by and large can be considered a TMDL. We have characterized the natural condition. We have taken what I regard greater leaps than we ever have in any other rulemaking to protect downstream. We have a point on the watershed for cumulative impacts, a compliance point. We have in the rule downstream protection language that incorporates both concentration and load. Quite frankly, a TMDL cannot provide any more than we have in this rule package.
BOARD MEMBER SHROPSHIRE: Is there anything in this rule that would prevent an EC of 3,000 or an SAR of 6.5 during irrigation season?
MR. URBAN: Madam Chair, Ms. Shropshire. This rule package is a water quality standard, and I'll warn you I use this phrase as kind of an attention getter, but I'll soften it a little bit.

Water quality standards don't do anything, that

meaning they are not self-implementing. So what you have is a water quality standards question.

Protection comes through permitting. So protecting clean water first and foremost, when we get a new application, we do a nondegradation review process. That's a layer above and beyond a water quality standard. Protection comes through nondeg of water quality. Uses come through water quality standards.

So to answer your question, yes, there are scenarios that exist where a proposed discharge would change water quality, and lower than 3,100 concentrations would be required.

CHAIRMAN MILES: Board members, before we get too much into real detail -- and George looks like he wants to say something, but I'll get to you in a minute. I think that we just want to ponder for a second. We have a couple of options today. And you'll notice on Page 64 of your Board packet -- if anyone remembers the Board packet -- some of those options were laid out.

We can decide to initiate rulemaking and issue the draft notice that was in our Board packet; we could modify the notice and initiate

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the rulemaking -- I'm not sure that any of us are in a position to actually recommend a specific modification, but that's an option we have. We could determine that the adoption of the rule is not appropriate at this time and deny the Department's request.

I would posit that we have another option. If we feel that we have a lot of questions -- we've had a lot of new information given to us today, and a lot of information that probably most of us were not aware of. I have a lot of questions for the Department. I'm very confused still how this fits together with Senate Bill 325. I'm wondering if we proceed with this proposal, have we set a precedent for how we would define natural in future instances which would relate to this 80th percentile, and we don't even know if that's where we want to be. Lots of questions. That's just the ones that are on top of my mind.

We could just postpone action today, and perhaps ask the Department to provide more detail, and more response, and some more background information to us at our next meeting before we take this up. That just would be another

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alternative for this Board to consider.

George, did you have something you wanted to add?

MR. MATHIEUS: Madam Chair, yes, I can add a couple things, to just provide some clarifications that might help as you ponder your questions surrounding this subject.

The first thing I'll say echoes a little bit what Eric just articulated, and that is this is a unique rule, and why I say that is because in concert with the development of the rule itself, the 3,100 we're talking about, we have developed

an implementation strategy which is really the meat of how a water quality standard is going to look on the ground. We've also been engaged in a lot of discussion on protection of downstream uses at the national level with the Environmental Protection Agency.

So I really want folks to understand that that implementation plan or strategy specifically describes how this standard would in turn be implemented on the ground through like, let's say, a permit. And as Eric said, it is important to understand that 3,100 -- which is the number we're proposing -- would not necessarily

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equate to a discharge permit, because the point is the compliance point is at the end of the drainage. And so what does that number have to be as we back up the drainage, wherever a discharge is in the drainage, to ensure 3,100 is met at that compliance point at the end of the drainage.

CHAIRMAN MILES: So you're saying you have an implementation plan. Is that anything this Board has seen?

MR. MATHIEUS: Madam Chair, we have a plan. I'm not sure how that's been distributed or not. I could ask. I know it's been distributed to some of our informal -- as was mentioned in previous testimony today -- that we've distributed informally to the public.

CHAIRMAN MILES: I don't know that I've seen anything like that. I don't know if anyone else on the Board has.

MR. URBAN: Madam Chair, members of the Board. The Department, after one of our WPCAC meetings, felt very strongly that before proceeding, we needed to have that implementation plan, we need comments on it. May 18th, we emailed that plan to in excess of 80 participants requesting their feedback on it. I'd have to

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double check if the plan made into your agenda packet, but I --

CHAIRMAN MILES: I don't have that.

MR. URBAN: I apologize.

CHAIRMAN MILES: That is all right. We had really, I think, about four or five pages of information in our Board packet relevant to this. There has been a lot of new information today. And that might be something that we'd like to review at some point. Robin.

BOARD MEMBER SHROPSHIRE: Madam Chair, if we chose to delay, would we just take no action?

CHAIRMAN MILES: Yes, and I think we would just say we want to postpone action and we would request -- I think the more specific we can be of the Department in terms of what information we would like to see, or discussion we wanted to have, would be helpful. So this is when I get to say: What's the Board's pleasure? I think Michele had her hand up.

BOARD MEMBER REINHART-LEVINE: Madam Chair, George. You had mentioned that there would

be additional rulemaking proposed to implement Senate Bill 325 this fall. Is that something that would be ready for our next meeting in October?

MR. MATHIEUS: Madam Chair, Ms. Reinhart. I don't anticipate it will be ready by the next meeting.

BOARD MEMBER TWEETEN: George, this is not a proposal for an emergency rulemaking. Is there a time exigency as far as the Department is concerned?

MR. MATHIEUS: Madam Chair, Mr. Tweeten. There is no sense in urgency, other than we're simply here today to describe a situation that we're in, which is we have a standard on the books today that does not line up with a natural condition, and then with the current regulatory framework, that puts us in the conundrum of trying to implement that standard on the ground, because 75.5.306 states that the Department cannot require treatment purer than natural. So just from that premise, how do we implement a standard that doesn't exist on the ground?

And so I think it is important to understand that there has been a lot of discussion today on the rulemaking ten, eleven, twelve years ago. At the time the discussion was surrounded around 500, the number, the current number, and natural; but a definition of natural itself was not determined, and so that's the juncture we're at today, is determining natural.

And so the Department has, in our analysis, provided a suggestion of what we think that natural condition is, and we're asking the Board to use their prerogative to determine if that's an appropriate number or not.

BOARD MEMBER TWEETEN: So the answer is no, there's no time exigency, as far as you know?

MR. MATHIEUS: Madam Chair, Mr. Tweeten, yes. The answer is no.

BOARD MEMBER TWEETEN: I think the Chair's suggestion regarding carrying this over and giving it further consideration makes a lot of sense, given all of the information that we've received today. So that's the way I'm leaning right now. I think some of the other Board members may have different views, but that's kind of what I see.

CHAIRMAN MILES: If we decide to go that route, could we provide some specific sort of issues and questions to the Department that we'd like to explore or hear feedback on at the next meeting?

MR. MATHIEUS: Madam Chair, I think that would be helpful.

CHAIRMAN MILES: So we can target. I'm sure everybody -- I know I have some specific questions I could write down and get to them. Is that a motion, or would you just like to --

BOARD MEMBER TWEETEN: As Robin said, I don't think we need a motion if we're not going to

take any action at all. So you could ask for a motion to grant the Department's request, and if it doesn't get an affirmative vote, then we move on, I think.

MR. MATHIEUS: Madam Chair, just so that I don't forget, you did specifically ask me about a hearing, and the simple answer is yes, and we have done that in the past where we've conducted hearings geographically.

CHAIRMAN MILES: So when we go to the point of actually hearing, not just initiation of rulemaking, but actually conducting a hearing on a proposed rule, I think we could anticipate that we would probably be holding that in eastern Montana.

MR. MATHIEUS: Yes.

CHAIRMAN MILES: I don't know that we need to have a motion that is defeated. I think

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we can -- if the Board is in consensus that we're not ready to take action on this item today, and please put together some questions or thoughts that we would specifically like the Department to address based on -- and I have a lot of notes and questions here that I'd like to explore a little bit further. If we could get those to George after the meeting. Robin, do you have a question?

BOARD MEMBER SHROPSHIRE: Just in that context. I wanted to comment that this is a legislative process. It is not a contested case. And so it has been my practice that in terms of -- I don't know if "lobbying" is the right word -- but in terms of educating ourselves, it is my opinion that it is appropriate to talk to outside parties on this matter to educate ourselves. And there had been some communication prior to this, and the way it was phrased in an email was we aren't obligated to. And I understand that we're not obligated to, but it is perfectly acceptable for us to talk to outside parties to help educate us on this matter.

CHAIRMAN MILES: I think that's correct in this situation. I would encourage, if we do get any information from other parties, that to

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the extent that that can be brought to the whole Board would be equally as important.

BOARD MEMBER SHROPSHIRE: Thank you. I just wanted to clarify that.

CHAIRMAN MILES: Is there any further discussion on this matter before we go to the next rulemaking?

(No response)

CHAIRMAN MILES: I think we're set. I think we would prefer to get a little more information, a little more education, and think through some of these issues before we actually entertain a motion to initiate rulemaking. I think there is a lot of questions about the content of that rule, if there might be some other options for addressing the concerns about, you know, does this remove the potential for irrigators to use those waters at that time.

I think there are a lot of important

issues that were brought up today, and I think to the extent that we can jot those down so the Department can come prepared to address some of these, and I'm sure we will take other public comment at that time next month, too, because it's an open discussion. Thank you very much.

Next is the topic of initiating rulemaking to meet the requirements of Section 128 of the Federal Clean Air Act. I think that will very quick, and then we'll get into our afternoon hearing. I think the next rulemaking will be very quick, so let's take a half an hour for a lunch break.

(Lunch recess taken)

CHAIRMAN MILES: We're going to reconvene. Thank you all very much. The first order of business is to entertain a proposal for the Board to initiate rulemaking to meet the requirements of Section 128 of the Federal Clean Air Act regarding state boards and conflict of interest. So this is particularly relevant to this Board to understand what this new rule would do. I'll turn it over to John.

MR. MATHIEUS: Madam Chair, if I may. Thank you. Yes, John North is going to discuss today the next agenda item. I would just like to take a minute to thank John. As everyone knows, we had some down time between Tom being appointed Director and my hiring, and John graciously stepped up and participated and acted in the role as liaison. So I'd like to thank John for that.

CHAIRMAN MILES: I took full advantage of that.

MR. NORTH: Madam Chair, members of the Board, John North, Chief Legal Counsel with the Department.

The Department has primacy to administer the Federal Clean Air Act in Montana through approval of a State Implementation Plan. We've been notified by EPA that our State Implementation Plan needs to be amended to incorporate the provisions of Section 128 of the Air Quality Act, Federal Air Quality Act, and that applies to boards that approve air quality permits or enforcement orders under the air quality statutes, and this Board does both through the contested case provisions. You hear appeals for permit issuances, and you also hear appeals of enforcement orders.

Therefore, we do need to be in compliance with Section 128 in order to maintain our primacy to administer the Clean Air Act. We took a look at what would be necessary if the current -- we looked at if the current code of ethics is sufficient to maintain that compliance, and we determined that there are a couple of areas where it isn't. So what you have is rulemaking here, proposed rulemaking, that would implement Section 128 as it's written in the Clean Air Act, and that's Rule No. 2, I believe it is.

The two areas that the Code of Ethics, State Code of Ethics, is not astringent as the federal code. And by the way, the State Code of Ethics is overall much more stringent than this provision. Nevertheless, we have to comply with these provisions, too.

One is that under the State Code of Ethics, you would only have a conflict if you had an interest in one of the parties that was before the Board or could be before the Board in Montana. On the other hand, under the federal provision 128, we have to look to any place in the country. So a person who did no air quality work, say, consulting work for people, companies in Montana, would not have a conflict under the Montana Code of Ethics, but under the federal, if a person does that type of work anywhere in the country, that counts in terms of determining whether there is a conflict.

The second thing is that while the State Code of Ethics says if you've got a conflict of

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interest, you shouldn't act, it also has an exception which says that however, if it's necessary for you to act in order for the agency to take, for the Board to take action, then you can disclosure your conflict to the Secretary of State and take the action. This Section 128 says if the Board has a majority of members who are conflicted out, it can not act under the Clean Air Act.

So this rulemaking is designed to fill those gaps. As I said, New Rule II simply incorporates the substantive provisions of Section 128, and then the definitions and the other provisions are closely tailored after the EPA guidance that was written for states to comply with Section 128, and achieve approval of the SIP. And we have been in contact with the EPA down in Denver, we've been working with them, and they have committed that adoption of these rules would suffice under the Federal Clean Air Act.

We're recommending, because this is simply a federal requirement, the Board has an option of either having a hearing or just putting it out for written public comment, and our feeling is that this really shouldn't be that big of a

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deal, very controversial or anything. So we're proposing that it be put out for public comment without a hearing contemplated.

Under the APA, if a sufficient number of people -- which would be 25 in this case -- or one group who has at least 25 members asks for a hearing, then we would need to schedule one, so it is not as if the public would never have a right to a hearing if the public wanted it.

With that, Madam Chair, we would recommend that the Board initiate this rulemaking without a public hearing contemplated.

CHAIRMAN MILES: That's what the draft MAR notice contains?

MR. NORTH: Yes.

CHAIRMAN MILES: Is there any question for John?

BOARD MEMBER TWEETEN: If someone works for a consultant who is hired by a regulated entity as it's defined in the rule and federal statute, receives a salary from a consultant for whom he works, does that person derive a significant portion of income from a regulated person for the purposes of Rule II?

MR. NORTH: Does work for that company?

BOARD MEMBER TWEETEN: Well, the person works for a consultant. The consultant has a contract with the company. Is there a mathematical calculation you do in terms of, "This is 4 percent of the consulting company's gross income, and the Board member's salary from the consulting company is, what, 10 percent of their personnel costs," and work all those numbers out and try to figure out whether that's a significant portion of a person's income? How do you figure that out, John?

MR. NORTH: Quite frankly I'm not sure, Chris, because this is, again, the federal requirement, and we haven't taken a look at that. They've indicated this is a minimum that would be necessary in order to achieve compliance. So that's something we would probably just have to work out.

BOARD MEMBER TWEETEN: So if my consulting company employer has a contract with Black Smoke Industries of Idaho, for example, which is a regulated entity, am I allowed to vote as a Board member or not?

MR. NORTH: This rule does not prohibit you from voting. It only says that if there are four people who are conflicted out, then the Board can't act. And so --

BOARD MEMBER TWEETEN: So am I conflicted out then, I guess is my question.

MR. NORTH: Exactly. And my initial reaction to that would be you would look at the income of that individual and see how much of it is attributable.

CHAIRMAN MILES: That is addressed in the definitions. It's kind of a convoluted definition. And if you're over 60 years of age, your income can differ, but you attempt to get that in there.

BOARD MEMBER SHROPSHIRE: If you are a consultant that works for a company that manages, say, Company ABC that has an air permit, but company ABC is not a party -- so when you're doing general rulemaking, they could impact any regulated entity. I'm just not sure how broad it is.

MR. NORTH: Madam Chair, Ms. Shropshire. First of all, this does not apply to the rulemaking function. This particular rule only applies if you're deciding a contested case.

BOARD MEMBER SHROPSHIRE: Sorry. I

missed that. Thanks. That's what I needed to understand.

CHAIRMAN MILES: If we need more conversation about potential conflict of interest, we can ask for that maybe at a future meeting, but this rule is for when we can take action on contested cases.

BOARD MEMBER SHROPSHIRE: Thank you.

CHAIRMAN MILES: Any other questions?

(No response)

CHAIRMAN MILES: For the record, anyone in the audience want to comment on this?

(No response)

CHAIRMAN MILES: Pleasure of the Board.

BOARD MEMBER TWEETEN: I move we initiate rulemaking as requested by the Department.

CHAIRMAN MILES: It's moved by Chris Tweeten. Is there a second?

BOARD MEMBER DR. BYRON: Second.

CHAIRMAN MILES: Second by Dr. Byron. Any discussion?

(No response)

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

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(Response)

CHAIRMAN MILES: Opposed?

(No response)

CHAIRMAN MILES: Hearing none, motion passes unanimously. Thank you very much. We are finally going to open the hearing.

MR. MATHIEUS: Madam Chair, you still need to call for general public comment on the last item.

CHAIRMAN MILES: Does anyone want to comment on anything not covered this morning before we get into the contested case hearing? Any other topics that you want to bring to the Board?

(No response)

CHAIRMAN MILES: Seeing none, thank you for the reminder.

MR. MATHIEUS: Madam Chair, just one thing I wanted to make the Board aware of. In the Department's continued effort to catch up with modern technology, we're looking at video live-streaming the Board meetings in the future. And we weren't quite prepared to do that at this point. I thought it would be more appropriate to let you know that we're headed into the correct

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century to try to provide opportunity for those who can't always make it to the Board here that travel long distances. So look forward to that hopefully at the next Board meeting.

CHAIRMAN MILES: That will be helpful. With that, we'll basically adjourn our regular business meeting, and open the contested case hearing, and I am going to turn it over to Ben.

(The proceedings were concluded at 1:40 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 - 175 - 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 , 2015.

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