



ENVIRONMENTAL QUALITY COUNCIL

PO BOX 201704
HELENA, MONTANA 59620-1704
(406) 444-3742

GOVERNOR JUDY MARTZ
DESIGNATED REPRESENTATIVE
Todd O'Hair

HOUSE MEMBERS
Debby Barrett
Paul Clark
Christopher Harris
Don Hedges
Monica J. Lindeen
Doug Mood

SENATE MEMBERS
Mack Cole
Pete Ekegren
Bea McCarthy
Walter L. McNutt
Jon Tester
Ken Toole

PUBLIC MEMBERS
Tom Ebzery
Julia Page
Ellen Porter
Howard F. Strause

LEGISLATIVE
ENVIRONMENTAL
ANALYST
Todd Everts

**ENVIRONMENTAL QUALITY COUNCIL
Coal Bed Methane/Water Policy Subcommittee
December 10, 2001
FINAL MINUTES**

COUNCIL MEMBERS PRESENT

**SEN. MACK COLE, Chair
SEN. JON TESTER, Vice Chair
MR. TOM EBZERY**

**SEN. PETE EKEGREN
MS. JULIA PAGE
SEN. BEA McCARTHY**

STAFF MEMBERS PRESENT

Ms. Mary Vandebosch

Ms. Robyn Lund, Secretary

AGENDA

Attachment 1

VISITORS' LIST

Attachment 2

SUBCOMMITTEE ACTION

- Approve September minutes
- Adopt agenda for February meeting

I SCIENTIFIC PERSPECTIVE ON WATER FROM COAL BED METHANE (CBM) NATURAL GAS WELLS

- ***Water Quality***

Art Compton, DEQ, spoke about CBM water production. There is a settlement limitation of 250 producing wells in the state. There is one MPDES permit that has been issued to those wells, which is the Fidelity permit for discharges on the Tongue River.

There are a number of ways to deal with the water that is produced by CBM mining. The EIS uses the figure of 2.5 gallons per minute, which is a reasonable number over the 20-year period of well production. There are many options for CBM water management. In Wyoming, most water is discharged, stored in small reservoirs and stock ponds. These are infiltration ponds. It is a water disposal method, as well as providing the rancher some use. Discharge to streams is another management strategy. Reinjection and treatment are also options.

Mr. Compton showed a picture of a discharge from Fidelity. Their permit allows for a discharge rate of 1600 gallons per minute as the discharge rate. The two constituents of highest concern for impacts of beneficial uses are salinity and sodium absorption ratio (SAR). Salinity is a plant issue and SAR is a soil issue. Elevated SAR levels prevent infiltration into the soil. Alfalfa problems can be found around the 2000 microsiemens per centimeter of soil. The problem is that saline water is difficult for the plant roots to draw out of the soil. It is common to see salinity over 2000 on the Powder River. The run-off period is the best water and when the majority of the irrigation takes place. Permitting needs to take the approach that when the natural level exceeds a certain level, it should not be increased by CBM discharges. The average conductivity of CBM water is 1500. Administering and providing protection must happen through a flexible permitting approach because of the natural exceedences.

As SAR increases there is a reduction in the ability of water to infiltrate into the soil, therefore less water is available to the plant root zone. The more clay in the soil, the more susceptible the soil is to SAR problems. Because of the clay content in the soils of the Tongue and Powder River Basins, we need to be careful.

Water quality in the Tongue River is better than in the Powder River. Salinity on the Tongue River rarely exceeds 7 to 800 as compared to 2000 on the Powder River. The discharge program on the Tongue would have to be more restrictive than on the Powder.

MR. EBZERY asked about numeric standards for SAR. **Mr. Compton** said that the translation of the narrative standards that the state now has for SAR and salinity is the subject of voluntary public outreach meetings that are beginning this week. The general ranges of numbers will be reflected in the EIS that will be coming out this spring.

MR. EBZERY asked why numeric standards would be used when there is such a wide range. **Mr. Compton** said that the narrative standards that are in place for certain constituents essentially say, "Thou shalt not affect beneficial uses." An EIS needs to provide some perspective on what levels of constituents are protected by that use and the ranges that the literature suggests are protective of beneficial uses, such as irrigation and fisheries. A hearing process will establish what the new numerical standards will be. This is not a new rule, but rather it is translating the narrative standards. Those numbers may be site-specific or a formula-based method. The EIS will suggest the ranges that the literature suggests are protective of beneficial uses. **MR. EBZERY** asked if Wyoming had developed numeric standards. **Mr. Compton** said that Wyoming doesn't use numeric standards. **MR. EBZERY** asked why Montana is thinking about using numeric standards. **Mr. Compton** said that Wyoming doesn't have a MEPA statute or any overriding environmental review.

MS. PAGE asked what SAR levels are coming out of the Fidelity field at this point.

Mr. Compton said that the Fidelity discharges currently run in the range of 25 to 40. **MS. PAGE** asked what levels are in Squirrel Creek and the Tongue River. **Mr. Compton** said that in the

Tongue the SAR level is around 1. **MS. PAGE** asked about the water in the infiltration ponds and where it goes. **Mr. Compton** said that the EIS consultant and DEQ have looked at. The fate and transport of produced water in the ponds is something that not much known about. It is conceivable that in the northern part of Wyoming, they will begin to see more water coming back. Not all drainages are going to act the same. The industry estimates that 10% of that water in the storage ponds will move enough to manifest itself as surface water. The EIS assumes that 24% of that water will come back as surface flow. **MS. PAGE** asked for an explanation of a graph.

Mr. Compton said that with the numeric approach they can model the impact and it provides a general approach in a build-out scenario that will indicate the number of wells that can discharge and pond or water that has to be treated.

SEN. TESTER asked if the Tongue is more pure than the Powder in the natural existence. **Mr. Compton** said that it was. **SEN. TESTER** asked about the salinity and the discharges that go into the river basin and how much concern should there be for the long-term impacts on the irrigators. **Mr. Compton** said that in the Powder River drainage, the key to an effective permit program is going to be not making the water any more saline during the irrigation season. DEQ is concerned about the salinity and can not adversely affect irrigation. The permitting strategy will deliver that responsibility. **SEN. TESTER** asked, in the long term, if the soil becomes polluted, will it be able to get back to healthy soil. **Mr. Compton** said that it would take a fair amount of leaching of the soil with high quality water to return to fully supporting use. **SEN. TESTER** asked if salinity and SAR impact each other. **Mr. Compton** said that elevated salinity would allow for better accommodation of a higher SAR. There is a threshold that will be reached, however, where both will be working against you. **SEN. TESTER** asked if the EIS allowed for low water flows. **Mr. Compton** said that 7Q10, which is the lowest flows that are generally seen on the Tongue, is 39 CFS. The permits are written assuming that there is 39 CFS in the stream, which is the worst case that DEQ has seen. That provides for a margin of comfort in the discharges that are being made. In years where there is less than 7Q10, a permittee is not liable for concentrations that exceed the standards. **SEN. TESTER** asked where that puts the irrigators. Do they have any recourse? **Mr. Compton** said that there isn't enough information from the irrigators to know for sure how they respond.

- ***Understanding soils in relation to coal bed methane product water***

Dr. Jim Bauder, MSU, said that if you look at carbon-based energy sources it suggests that CBM is a clean resource. The work that he has seen shows that there are opportunities and CBM can be done in a manner that is environmentally and socially acceptable. There are two kinds of surface water systems in the southeast area of Montana: perennial streams and ephemeral streams. Ephemeral streams don't run year round. There is a degree of variability in the water of the streams and of the different CBM developments. As water is applied to soils, the impacts are of a chronic nature. It takes a long time for responses to occur. The soil will equilibrate with the water that is applied.

CBM is a fast-paced process. The general disposal methods are impoundment of discharge. A coal seam contains a significant amount of water. One of the proposed options is spreading the water on the landscape for livestock. Another option is discharge into streams. A third option that has been discussed is to disburse the water on the land. The contrast to that are the changes in the soil and plant species.

Water produced is considered a by-product; there are no significant identified values for the water. It represents an economic burden for the developers. The quality of the water is dictated by the intended use. As the quality of the water is reduced, the need for suitable water management increases. The water can be used for livestock. The water quality changes over time. The potential hazards of irrigation water are the salinity and the sodicity of the water. He showed a graph that represented the irrigation effects of soil salinity and leaching.

It is agreed that salinity is the most typical concern with respect to irrigation sustain ability. Salinity affects crops in varying degrees, but is most pronounced on seedlings and young plants. Tolerance of different crops of salinity levels varies with the crop. Alfalfa is not very tolerant. With good management there will be increase of salinity in the soil. He is interested in having an appreciation for the actual salinity. When CBM is imposed on a system the level increases.

There are two processes when soil is impacted with sodium. It will expand or disperse. The swelling or expansion can be reversed easily, but the dispersion can not. Dispersion requires significant intervention.

The average of coal seam water and discharge water is hugely higher than the water in the Tongue River. In the Powder River that is reversed. With an increase in the ESP there is a drop in the inflow rates. In time a reduction will occur. Not all soils have dispersion problems.

When you start looking at the soils, many places have mortmorilltic in the soil. Irrigation may be used to clean up the soil in some cases and may be beneficial for the land owner. This is not possible in all soils. Sandy soils are easier to clean. The soil responds to what happens on the land surface. Problems occur for landowners more readily when the landowner is downstream from the CBM development. It is a holistic issue.

There is not a great deal of data saying that well water is showing up in other places. A CBM operation was developed according to permitting, within a few days the impoundment overflowed onto a private owner's land. The dam level was subsequently raised, but ten days later that dam overflowed. About 1000 yards downstream from the dam the water disappeared. Ten months later, a landowner three miles away found water in his wheat field. It was determined that water had come from the CBM development. That site has become a sacrifice site.

There is a relationship between electrical conductivity (EC) and SAR. The issue is balancing the two. The higher the SAR, the more EC is needed. Raising both can affect the ability to grow and maintain plants. It is important to remember that it is not a static issue. Precipitation events can cause changes in the SA and EC.

SEN. COLE asked if the biggest issue with salinity is whether or not there is drainage.

Dr. Bauder said that the basic premise of sustainable irrigation is that there must be drainage. Accumulation of water will lead to accumulation of salts in the soil. There needs to be both internal and external drainage. Even with drainage, the soil will equilibrate with the water that is applied. **SEN. COLE** asked if there are natural salts in the soil. **Dr. Bauder** said that was correct. **SEN. COLE** asked if there are certain times of year that can be irrigated in the Powder River Basin. **Dr. Bauder** said that was correct. It is very well defined, but has taken a fair amount of time to decide when that is.

SEN. TESTER said that soils and aquifers are the bottom line. It is an important issue.

II WATER QUALITY MONITORING PROGRAM

Art Compton, DEQ, said that water quality monitoring is an important part of any permitting process. Wyoming has a multitude of wells currently running. The monitoring agreement with Wyoming is representative of where Montana is now on monitoring water quality as it relates to CBM development. There will be a monitoring network similar to that found in Wyoming in Montana and this is the tool used to monitor the border agreement with Wyoming.

About a year ago, concerns were expressed to Wyoming about water quality in the Tongue and Powder Rivers. The result was a response from Wyoming acknowledging that Montana CBM was down the line and what is at the border needs to be protected. The promise was made by Wyoming to maintain baseline water quality at the border. DEQ has the ability to monitor the water quality at the border in real time. This information is available to anyone over the Internet. Daily variations may be caused by changes in the temperature.

The Powder River water quality is good as far as salinity. Conductivities are generally ranging below 1000. The Tongue River is showing conductivity at around 1000 as well.

Montana has been lucky to be able to take the water quality one step at a time, rather than having to play catch-up. DEQ is trying to learn from what has happened in Wyoming and make sure that as development begins in earnest, a real-time monitoring system is up and running.

SEN. McCARTHY asked who is responsible for maintenance of the monitoring stations. **Mr. Compton** said it depends on whose station it is. Some are USGS stations, therefore USGS personnel is responsible for maintaining the monitoring. DEQ also has some stations that they are responsible for.

SEN. TESTER asked about the Powder being dry and if that was the case, what was being monitored. **Mr. Compton** said that they monitor the conductivity of the standing water. Because this is not uncommon on the Powder, the standing water is still a typical low flow conductivity value. **SEN. TESTER** asked what is used as a baseline to determine if water quality is going up and down. **Mr. Compton** said that DEQ worked a protocol out with Wyoming that used a typical low flow month and took the average for that month over the last six years. That set Wyoming's performance standards. They can't cause the in-stream quality of the Powder to be worse than it is during a typical low-flow June before CBM development. Wyoming has met that criteria, which is a running 30-day average.

MS. PAGE asked if a couple days of higher SARs would be a problem, which would not be addressed by a monthly average. **Mr. Compton** said that there could be some adverse effects if there was irrigation during those days. Flows this year were too low to support irrigation during that time period.

MS. PAGE asked if an incident with elevated levels of these various parameters gets on the soils for a day or two would affect the soil. **Dr. Bauder** said that it wouldn't be significant. The soils already have elevated salinity levels. If the blended waters are not bad, there is not likely going to be significant devastation to the soil with a single application.

MS. PAGE asked if the agreement with Wyoming was dependant on seeing a problem and then going back to Wyoming to have them correct the problem. It seems to her that there is a lot of lag time built in to the protection. **Mr. Compton** said that is true. It is a numeric approach. If the thirty-day running figure exceeds the numbers there is a process set in motion to address the problem. DEQ will inform Wyoming that there has been an exceedence. Wyoming goes back and looks at the individual numbers that they have for each drainage. They will then identify from these nodes whether the elevated EC is coming from a tributary with CBM development or whether it is a natural exceedence from a tributary with no CBM development on it. Wyoming is committed to adjusting their permit management to eliminate the exceedence.

SEN. COLE asked if there had been an exceedence in the last 12 months. **Mr. Compton** said that there had been daily exceedences, but there had not been an exceedence of the thirty-day average. **SEN. COLE** asked if there was an exceedence of the thirty-day running average, would Wyoming have to check at every node. **Mr. Compton** said they would be tabulating the data and that data would be used to locate the problem.

SEN. COLE asked what might make an exceedence. **Mr. Compton** said that the type of deliberations would be looking at water management actions such as draining reservoirs. There would be the possibility that well water was reaching streams more rapidly than anticipated.

MR. EBZERY asked why numeric standards would be used rather than narrative standards. **Mr. Compton** said that the final analysis, an EIS investigation is different than the administration of a permitting program. The EIS preferred alternative is going to be the development of a water management plan any time that a discharge is proposed. If no discharges are proposed, DEQ is hoping that those operations are candidates for the general permit that they hope to put in place through the EIS process for CBM development. The general permit is a non-discharge permit. **Mr. Compton** explained that there is a difference between MEPA and an EIS when compared to a permitting program. Montana has established numeric limits for virtually all constituents. Every MPDES permit is based on a numeric approach. It is difficult to write a meaningful permit from narrative standards. **MR. EBZERY** asked, Wyoming has issued 9000 well permits with narrative standards, is there information from what they have done.

Mr. Compton said that some of Wyoming permits are non-discharging permits. He is not sure that Wyoming uses narrative standards.

III FRIENDS OF THE MARIAS & MISSOURI RIVER CITIZENS, INC. vs. DNRC AND SUNNYBROOK COLONY, INC.

Jack Stults, DNRC, said the decision dealing with the water rights is based on an application to withdraw water from the Marias River for irrigation filed by the Sunnybrook Colony. They would like to obtain a new appropriation for irrigation at a rate of 7,200 gallons per minute from the Marias River.

Public was given notice and the opportunity to object. Other entities who had rights and interests in the river were also notified. An environmental assessment has been conducted. There were objections from the FWP based on their water reservation based on in-stream flows in the Marias that was granted to maintain fisheries. The reservation is 480 cubic feet per second (CFS). The environmental assessment process included a consultation with FWP. FWP

offered a figure of 560 CFS, which they had identified as the best flow for maintaining fish in the river.

A hearing officer drafted a proposed decision using all of the information. Under the statutes in the Water Use Act, the DNRC must issue a permit if the applicant meets the statutory requirements. DNRC also has the authority to condition a water use permit. The proposal was that the permit be granted for the full amount, with the condition that the applicant couldn't divert water if the flow fell below 560 CFS. He used this figure because of a rule allowing the DNRC to use information through an environmental assessment.

The applicant filed exceptions with that decision under the Montana Administrative Procedures Act and requested an oral argument before the final decision maker. During that oral argument, the applicant said that the condition should be based on the actual reservation. The FWP argued that it was appropriate to use the condition that the hearing officer had proposed. Mr. Stults modified the condition to use the 480 CFS because the DNRC is constrained to work within the context of the Water Use Act. He felt the legally correct decision was to have the condition based on the actual reservation. That decision is now the case of a lawsuit filed in district court.

Laura Ziemer, Trout Unlimited, said that the case is brought because of a difference between an amount of water that is protective of the fisheries in the Marias and a statutory cap which limited the amount of the reservation that FWP could use to protect fisheries' values. Absent the statutory cap, the level would be set at the 560 CFS. The statutory cap is not scientific.

There are two claims in this case. The first one is that by issuing this permit, DNRC didn't follow one of the requirements for permitting in the Water Use Act and that is the requirement of preventing degradation of a senior water rights holder's water. Water quality maintenance requires an anti-degradation review, which requires that all existing beneficial uses be maintained. There are statutory mechanisms that prevented DNRC from carrying out its overriding duty to ensure that water quality is not impaired on senior water rights. The second claim is the issue of whether MEPA can inform DNRC's permitting decisions on a water-use issue. If the MEPA analysis shows significant harm to the environment if water is withdrawn, that should help the department determine if the water requirement has been met. MEPA can't inform the existing constraints of the Water use Act. She asked, if the fish die, have we done the right thing?

Greg Duncan, Legal counsel, Sunnybrook Colony, said that they started the process with the idea that Sunnybrook Colony was going to be able to enhance approximately 1000 acres of property. At the time, it was found that the Colony would be able to water the acreage for approximately 18 out of 20 years. During the EA process, FWP wrote a letter that said that they felt 560 CFS was needed in the river, however, Montana statutory law limits the amount of the FWP reservation to 480 feet. There are other mechanisms for them to get additional water if it is needed.

The Colony viewed the 560 CFS as a phantom water right. The result of this case will affect the Montana water law. If we are going to have a stable economy in Montana, there needs to be a balance between the fisheries and the agriculture. The plaintiffs have ignored the agricultural aspect of this case. The Marias is a dammed river, not a wild river. If the plaintiffs win in the

district court, it will end in a situation where further expansions of agricultural water rights will be threatened.

FWP is not able to justify the benefit of the larger amount of water. He asked if this is a clean and healthful environment for people or for fish.

Tim Hall. DNRC, said that the parties that are appealing didn't object to the water permit during the public comment on the decision. FWP did object, but decided not to appeal. There is an allegation that an EA is not adequate. There is the allegation that the DNRC wouldn't let these people object. No one at the DNRC ever said that these entities couldn't object. There is a motion to dismiss pending. That decision should be issued soon.

There are two actions in this that have been combined. One is a petition for judicial review of a DNRC final order. The other one is an original action which involves the complaint for declaratory relief and that is to declare that the EA was inadequate and that an EIS is needed.

SEN. TESTER asked if there are any other rivers that have the potential to be drawn to half the normal flow. **Mr. Stults** said that FWP has reservations on a number of streams east of the divide. DNRC routinely sends out notices identifying the fact that flows are approaching the level of the reservation. **SEN. TESTER** asked if there is monitoring to determine when the level of the river gets to a critical flow. **Mr. Stults** said that there is. **SEN. TESTER** wants to make sure that there is adequate oversight to ensure that the Marias won't become a dead river. **Mr. Stults** said that he feels that there is adequate oversight. The DNRC is monitoring the gages routinely and will know when the situation is approaching the point where the FWP reservation would become the controlling water right on the river. **SEN. TESTER** asked if it would be up to FWP to determine the water level. **Mr. Stults** said that was correct.

SEN. TESTER asked, if the water right was left 560 CFS in the river, would there be a lawsuit filed. **Ms. Ziemer** said no.

SEN. TESTER asked if any models were run using 560 CFS as the reservation. **Mr. Duncan** said the number of years of water use was significantly reduced.

MS. PAGE asked what the conditions were that the FWP is trying to protect.

Ms. Ziemer said that the scientific method arrived at the 560 CFS. That method looks at the morphology and the channel of the river, and you understand what the habitat elements the fish need to survive are and the amount of water needed to cover the minimum habitat elements. If you fall below that number, there will be a decrease in the ability of the fish to survive and spawn. There will be a long-term decrease in the population.

SEN. TESTER asked if the back flows to the river would lead to further degradation of the river. **Mr. Stults** said that was addressed in the EA. The impacts would be minor. **Ms. Ziemer** said that the EA was based on the higher flow number, 560 CFS, in the river. **Mr. Duncan** said that the 480 CFS number also showed minor impacts.

SEN. TESTER said that the Colony had talked about purchasing water from the Bureau of Reclamation. **Mr. Duncan** said that the Colony has a commitment from the Black Foot Tribe to provide water at a future date. **SEN. TESTER** asked if the objection period was reopened. **Mr. Duncan** said that it had been. The Friends of the Marias didn't object at that time.

SEN. COLE asked if the Colony was above or below the dam. **Mr. Duncan** said it was below. **SEN. COLE** asked where the water was being taken. **Mr. Duncan** said it was for the entire stretch below the dam. **Mr. Stults** said that the regulation of the water right would be keyed off at the gage at Chester. **SEN. COLE** asked if FWP appealed the decision to use the lower number. **Mr. Stults** said that they did not file a formal appeal of the decision. **SEN. COLE** asked for the reason that FWP didn't appeal. **Kathleen Williams, FWP**, said that FWP was satisfied with the use of the 488.5 CSF for trigger flow. The original draft EA used 500 CFS as the need that had been quantified by FWP, but that was for a different segment of the Marias. FWP argued that the policy elements of the Water Use Act allowed DNRC some discretion to respond to the community, but they never requested the water right of 560 CFS. **SEN. COLE** asked if FWP requested 560. **Ms. Williams** said that they had. They had argued that there was some discretion for DNRC to use that number. FWP was objecting to defend their water right. **SEN. COLE** asked where the 560 CFS came from. **Mr. Stults** said that came from a letter that was provided as a comment on the draft EA. **Ms. Williams** said that between the draft and the final EA, the EA became the vehicle by which all the pieces of the permitting analysis were addressed. The difference between the water availability didn't change.

Dave Schmidt said that he prepared the initial application for the Sunnybrook Colony. Both sides of the issue were in favor of using an EA. He would disagree that the impacts wouldn't change. The project has not been started and a permit has not been received yet. The water is available and should be available for agricultural use.

SEN. TESTER asked if there would be more water available for draws from the lake. **Mr. Schmidt** said that there could be, but the Bureau of Reclamation would make the call.

IV COAL BED METHANE ENVIRONMENTAL IMPACT STATEMENT

David Breisch, BLM, said that about a year ago, the BLM and Montana agreed to do a joint EIS to address the exploration and production of CBM. The areas of emphasis are in the southeastern and south central parts of the state. Each of those areas has a resource management plan, which is a document that BLM prepares that enables them to make land-use decisions. Their resource management plans needed to be amended to address the analysis for potential impacts of CBM development.

The scoping meetings began in January 2001. This EIS will be an agency document. It must meet the standards of the agency and the state. The schedule calls for the draft EIS to be released at the end of December 2001, however, that schedule has slipped. The agencies are conducting an internal review of the preliminary draft document. BLM will start reviewing comments within the week. Those recommendations will then be passed on to the contractor.

Air quality studies are still ongoing. BLM in Wyoming has also been working on a similar study. The hope is that BLM in Montana will be able to make use of that information. They are discussing whether or not to wait until that air quality information has been received and inserted into the EIS before publication.

Art Compton, DEQ, said that the EIS is satisfying federal permitting requirements for wells on federal lands. It will support water discharge permitting by the DEQ. The EIS is also an element of a lawsuit settlement. Those are the three reasons the EIS is being done.

The EIS considered many alternatives. Alternative A is the no action alternative. That contemplated no production wells being allowed to discharge water and untreated water from exploration wells will be stored in tanks or reservoirs. Alternative B was emphasizing resource values, with no discharge of untreated water. Alternative C is the maximum development scenario. This is a full discharge scenario. Alternative D is the treatment alternative. It calls for discharged water to be treated prior to discharge. Alternative E is the preferred alternative and the agency recommended alternative. It calls for no degradation of surface water. The permit application would require a water management plan for every permit to drill that the BLM got. This would attempt to put the water to beneficial use. The discharge would be based on a demonstration through a site-specific water management plan that water quality standards would be met and beneficial uses would be protected. This recognizes the potential to discharge untreated water. It puts the burden on the applicant to demonstrate, through the water management plan, that any discharges would not violate water quality standards.

Tom Richmond, BOGC, said that they had thought that the no action alternative is what is authorized under the settlement agreement. Directional drilling is seen as reducing the footprint, but is not a practical alternative. Alternative B would require a one-mile buffer area around active coal mines. The preferred alternative doesn't require a buffer. A project plan would be developed in consultation with the surface owner. This alternative said that there would be one well developed per coal seam. The operator would need to demonstrate how it would minimize impacts to surface uses and wildlife.

There are suggested alternatives, for example, a two-mile buffer around reservations. There are ways to deal with the impacts other than a buffer zone. Things such as monitoring, reinjection and a unitization agreement could be used. The key is a project management plan, which would include a water management plan.

SEN. TESTER asked if the groundwater models are completed and have they been incorporated. **Mr. Breisch** said that the 2D modeling has been completed, but the 3D model has not been completed. The models will be included in the final EIS, and possibly the draft. **SEN. TESTER** asked if those models would be used to limit the number of the mines. **Mr. Breisch** said the intent of the modeling is to try to give a picture of the draw-down effect on groundwater. A model can only give a certain idea; they are not totally accurate. **SEN. TESTER** asked what the purpose of the model is. **Mr. Breisch** said that it would be to give people a picture of what the draw down from CBM would look like. **SEN. TESTER** asked if there are agency thresholds. **Mr. Breisch** was not aware of any. **SEN. TESTER** asked about naturally occurring springs, and if there had been an inventory done. **Mr. Breisch** said that any information like that which is available will be included in the draft EIS.

MS. PAGE asked if reinjection is being explored in the EIS. **Mr. Compton** said that reinjection would come within the area of no degradation of surface water, which is part of the intent of the preferred alternative. It is the DEQ's intent that no impact would result. **Mr. Breisch** said that reinjection in different formations is being analyzed as part of the EIS. **MS. PAGE** asked if they are looking at reinjecting the water into the area that it came from. **Mr. Breisch** said that they are not looking at that within the area of production because that would be counter to the principles used in producing CBM.

MS. PAGE asked if there were other studies that were being used as input into the EIS. She asked about the Hansen report. **Mr. Richmond** said that it was an existing report. **MS. PAGE**

asked if there would be other reports that the Subcommittee is not seeing. **Mr. Richmond** said that the soils technical report, the water technical report, the modeling, an ethnographic study, and others are all underway. **Mr. Breisch** said that in the future we will have contracts for certain wildlife studies as well as habitat studies.

Mr. Compton said that he would provide a sheet with the studies and the projected availability dates. **MS. PAGE** asked if the EPA has weighed in on this issue yet.

Mr. Compton said that EPA has to provide guidance on effluent limitations.

SEN. TESTER asked when the final EIS will be done. **Mr. Breisch** said that the date was unknown at this time. **SEN. TESTER** asked when the public comment would be held and how many meetings there would be. **Mr. Breisch** said that public comment would take place during five meetings at the time of the release of the draft.

SEN. TESTER asked how complete the spring inventory is and what impact will that have in the EIS. **John Wheaton, Montana Board of Mines and Geology**, said that there are several pages of spring inventory data. They are doing spring inventory work on their own and they are developing some monitoring sites. Inventory, as far as looking at the whole basin, may be about a year away. It most likely won't be included in the EIS. **SEN. TESTER** asked how the potential for drying up of those springs is going to impact CBM if it is not addressed in the EIS. **Mr. Wheaton** said that the springs are at the extreme edges in the aquifers. As the reduced pressure reaches the outcrops, those springs will be affected. There are also wells around outcrops. Those coal seams being used as aquifers will be impacted before the springs. **SEN. TESTER** asked if the springs dry up, will that be accounted for in the EIS. **Mr. Wheaton** said that springs are discussed in the EIS. **Mr. Breisch** said that within the EIS, it will not be site specific areas that are addressed. That will happen at the permitting stage. **Mr. Richmond** said that the water management plan would include the potentially affected wells and springs. **Mr. Wheaton** said that they are modeling the groundwater draw-down to help define that.

MR. EBZERY asked for the status of the 3D model. **Mr. Wheaton** said that it is scheduled to be done by the end of December 2001. **MR. EBZERY** asked if it could be included in the draft EIS. **Mr. Wheaton** said that he thought that it would be included in the final EIS, but probably not the draft. **Mr. Breisch** said that you can't just include a study in an EIS because there needs to be a review of the effects of the analysis in the EIS and changes to the EIS may need to be made. **MR. EBZERY** asked if the air model was included in the draft EIS, would it allow for the 3D study to be included. **Mr. Breisch** said it would.

SEN. EKEGREN asked if it is cost effective for the industry to look at reinjecting. Is the availability of area for reinjection always there? **Mr. Richmond** said that reinjection is a viable alternative when there is something to reinject the water into. That is very site specific. Dry oil wells are sometimes available in the Powder River Basin. If you have to drill an injection well for every CBM well, then it is not economical. Coal is not a good place for reinjection because coal formations will fracture if there is too much pressure, which would then allow that water to go somewhere else.

SEN. COLE asked about the feeling of the tribes. **Rick Stefanic, Bureau of Indian Affairs**, said that at this point in time, Crow tribes would be receptive, but Northern Cheyenne tribes are against methane development on or adjacent to their resources.

Mr. Richmond said that the state can't force tribal land to participate.

V PERSPECTIVES ON MANAGEMENT OF WATER PRODUCED FROM COAL BED NATURAL GAS WELLS

• *Environmental*

Steve Gilbert, NPRC, said that if CBM is developed irresponsibly, NPRC members stand to lose their wells, springs, irrigated fields and their ability to use river water for irrigation. CBM development could dramatically affect Montana south of the Yellowstone River. The toxic grime that is produced by the CBM process is typically discharged into rivers, ponds or directly onto the soil. There are high concentrations of sodium in the water that render it inadequate for irrigation and toxic to soil and plants. Higher SAR means greater threat to soil and plants. Irrigators are particularly concerned with SARs, especially in areas where soils have a high clay content. The SAR average for the Tongue River is 0.79, the SAR of produced water is over 58.0. Vegetation health begins to decrease at a level of 3.0 SAR. High SAR water kills the soil so that no plants can grow.

The Schwartz ranch below the discharges into the Tongue River lost crops and may have destroyed the soil forever due to water from a CBM development upstream. Because of low flow this year, there were times when high SAR discharge water made up half of the flow in the Tongue River. The state has an obligation to the irrigators for the water quality. Will the state tell them that it is too bad that they no longer have good water? Will the state apologize for putting the ranchers and farmers out of business by compromising the water quality?

High SAR also kills the algae that fish and other aquatic life need to survive. All of these things are connected to high water quality. Will the state apologize to the fishermen for diminished opportunities for the fish because aquatic ecosystems have been destroyed?

SEN. EKEGREN asked why the water was not able to come down to the rancher.

Mr. Gilbert said that the rancher was using a seasonal stream that now runs year round with poor quality water. When the water freezes it spreads out on the hay meadows and percolates into the soil. **SEN. EKEGREN** asked if the water that would normally run in the stream is being polluted by the CBM water. **Mr. Gilbert** said that areas that would normally produce runoffs are now blocked by dams. The water that does make it to the rancher is of compromised quality.

SEN. EKEGREN asked about the dams. **Mr. Gilbert** said that the dams were built by the industry to hold discharge water so that they wouldn't be discharging directly into the creek. They are blocking normal drainage that would have made it to the ranch.

Jeff Barber, MEIC, referred to **Attachment 3**. BLM has predicted that there will be approximately 14,000 to 39,000 CBM wells. There are 220 producing wells at the CX development that are discharging 1,400 gallons per minute into the Tongue River and 200 gallons per minute into stock ponds. There would need to be more than 14,000 animals to consume the water in the stock ponds. The water can be used for livestock in areas where there has not been water available before. The number of methane wells projected for Big Horn county is between 3,000 and 10,000. The county would need between 5 and 15 million cows to consume the water produced by those wells.

If you are pumping the water, you are going to deplete the aquifer. That is the bottom line. Water levels in existing wells will drop. If a rancher loses his water, it could cause him to lose his business. At this time it is unknown how much time it will take to recharge the groundwater. In his opinion, if you don't know how long it will take to move the aquifer, it is like playing with fire.

Historically, there have been two categories of water in the state: that put to beneficial use and that which is wasted unlawfully. This was changed in the last session with HB 573, allowing CBM to dispose of water without liability. If the industry is allowed to develop as it sees fit, there may be thousands of wells pumping an average of 11 gallons of water per minute, drying up existing aquifers. Existing groundwater rights holders will have no recourse. The surface water rights will also be impacted by both the quantity and quality of their water. Discharge will make the water unable to be used for irrigation without risk to the crops and soil.

The preferred alternative is to say no degradation of surface water, but over what period of time? The soil will eventually equate itself to the water that is being used on it. Once you kill the soil, it is dead. What happens after 20 years?

The MCA, 82-2-105, says that the EQC will meet as often as necessary and will set the water policy for the state. The EQC needs to look at the amendment to HB 573. It gives one entire industry special treatment. This is something that the EQC needs to look at changing.

Mr. Gilbert said that there are several ways that CBM companies dispose of toxic waste water. Some water is discharged into coolies or into ponds constructed with dams. These impoundments hold huge amounts of toxic water. This water may eventually end up in springs or surface water, which it will poison. These ponds also lose water to evaporation, however, dissolved solids don't evaporate. They are left as hundreds of tons of toxic solids that can become airborne or wash away into streams during floods. The ponds are not for livestock or wildlife. Fidelity claims the pond created habitat, he feels that it destroyed habitat. Adding water does nothing to mitigate the damage to the landscape.

• **Industry**

Dave Searle, Montana Coal Bed Natural Gas Alliance, said that CBM is methane that was laid down by geologic actions. Methane is the natural gas that is used for heating homes and water heaters, etc. The Powder River Basin spans both Montana and Wyoming. That is why it is important to understand what Wyoming is doing and how it relates to Montana.

To make generalizations of water quality or quantity is not accurate. CBM is formed in the coal, gas surrounds the coal particles and is held in contact by water. As you reduce the water pressure holding the gas molecules, the methane is free to flow. There can be multiple coal seams in the same area. As a general rule in the Powder River Basin, the coal gets deeper as you get higher into Montana. The CBM wells are shallow wells. He shared pictures of the wells and well heads. Water management shows that wells come on at 15 gallons of water per minute and the amount of water produced decreases as time goes on. The water released in the Powder River Basin is suitable for livestock and domestic uses. The discharge meets Montana and Federal Safe Drinking Water Act quality standards. The water produced is in the range of the bottled water that can be bought retail.

Water management tools are surface discharge through discharging into a river, into reservoirs, many of which were constructed before the CBM development. Zero discharge ponds rely on evaporation and infiltration to get the water back to the ground. Irrigation can work in some situations. There is experimentation with adding Gypsum and other minerals to the soil, this allows for irrigation with higher SAR. Stock tanks are common in the Powder River Basin. Many landowners have had minimal production on land because of lack of water. Through stock tanks these landowners have been able to increase production. Atomization tries to increase evaporation. Injection of water has been tried, but results have been discouraging. The injection well operates on gravity feed. Coal is a poor aquifer to inject water into. The option of injecting into oil wells has been explored, but was unsuccessful, possibly losing beneficial uses of the water. The water can be used for dust control.

Treatment offers a couple of options. One treatment is oxidization. Another treatment option that has been tried was a man-made wetland. This was a moderate success, but there is some uncertainty that it will make a difference in the sodium level. The deciding factors are the landowner needs and requirements, regulatory limits, water quality, soil type, land use, downstream land use, and others.

Montana has approximately 250 wells operated by Fidelity. There are some test holes being discussed.

SEN. COLE asked how the company deals with increases and how that affects people downstream. **Mr. Searle** said that they have to look at downstream users and what the historical uses are. An analysis of that is required. **SEN. COLE** asked how long the company had been using wells in Wyoming. **Mr. Searle** said that the CBM in Wyoming started in the mid 1980s, but the boom was in the last three years.

MS. PAGE asked what happened on Wild Cat Creek to the Schwartz ranch that was referred to earlier. **Mr. Searle** said that he couldn't speculate on that.

SEN. EKEGREN asked if there were dams on the September tour. **Mr. Barber** didn't remember. **SEN. EKEGREN** asked if the dams being used for the discharge ponds were there years ago, does the industry make dams to collect water on the drainage.

Mr. Searle said that about 60% of what Pennaco uses are structures that were in place for other uses. There have been upgrades made to those. The other 40% is constructed by the company. **SEN. EKEGREN** asked what was in place to deal with runoff that may overflow the dam. **Mr. Searle** said that the reservoirs have a trickle tube to prevent overflow. **SEN. EKEGREN** asked if they were aware of the landowner down below. **Mr. Searle** said that they are concerned with the landowners downstream. The permits take into account water rights issues for the people downstream. **Mr. Gilbert** said that the CX Ranch had 1 of 30 dams that could be called historical.

SEN. EKEGREN asked if the average water output was less than 11. **Mr. Barber** said that it depends. The discharge water production at the front end is much greater than that at the back end. There are no wells in Montana that are at the back end yet.

VI COAL BED NATURAL GAS – PERMITTING AND LEASING

Supplemental information can be found in **Attachment 3**.

• *Department of Environmental Quality*

Art Compton, DEQ, referred to **Attachment 4**. The cornerstone of the EIS approach is the identification of the general permit process that will be applicable in many cases for CBM wells. An applicant will qualify for this if they are essentially non-discharging. Because of some of the problems with on-channel storage and water rights, general permits won't be issued for discharge ponds constructed in dry channels. The water quality standards needs to be met.

There is some guidance as to what can be expected for those applying for an individual permit, that is submitting site-specific information such as water management plans. The department will then do a site-specific environmental assessment, develop a draft individual permit, notice it for 30 days and then the department can issue a permit that is good for up to five years. The process takes about six months.

The general permits are usually issued within 30 days, without the additional public comment. This permit is for off-channel storage, no discharge to perennial streams and have no risk of violating the water quality standards.

• *Board of Oil and Gas Conservation*

Tom Richmond, BOGC, said that they have jurisdiction over both private and state-owned lands. The board has no jurisdiction over tribal lands and limited jurisdiction over federal lands. BOGC has jurisdiction over all class 2 operations outside the exterior of the reservations, including federal.

Methane from coal seams is defined in statute as natural gas, making it an oil and gas resource. The permitting process is covered by their rules and regulations. The applicant must provide the proper forms and attachments. If there are no objections to the issuance of the permit, it is then issued administratively. There are drilling permits, as well as permits that cover any changes or treatment to the wells. There is a separate permit for the plugging of a well.

BOGC does not have any responsibility for issuing permits for water discharge, installations of pipelines, any off-lease disposal of liquid or solid waste, and the construction of roads to the compressor sites.

• *Bureau of Land Management*

David Breisch, BLM, said that the BLM has responsibility for oil and gas leases and for permitting and managing oil and gas leases on federal lands and tribal lands. The BLM would issue oil and gas leases on federal lands where the surface is managed by other federal agencies such as Forest Service. Along with issuing those leases the BLM completes environmental analyses, usually in an EIS related to their resource management plan. Oil and gas leasing activities are anticipated and included in an EIS.

The tribes have options to negotiate separate agreements with consultation with BLM and BIA.

There are a lot of situations where the surface is owned by someone and the mineral rights owned by someone else. There are a lot of situations where the federal government has retained the oil and gas rights, but the surface is owned by someone else, often a private individual.

The operator is required to submit an application for permit to drill (APD) to BLM. The drilling plan included in the APD addresses the proposed drilling operations and the subsurface activities. A surface-use plan is also included. Part of the MEPA compliance with the APD is to inspect the proposed action through site inspections. BLM is mandated to wait 30 days before approval of an APD on federal leases. Before an APD can be approved, environmental studies must be done. There is not a mandated time frame for application approval, but the BLM attempts to do that within 30 days or less. The federal regulations require that an operator have BLM approval.

The Wyoming BLM requires a plan of development. The BLM in Montana is planning to do that as well. The idea is to take a broader view of CBM development, rather than site by site. A water management plan will be part of that plan of development. He referred to **Attachment 5**.

- ***Environmental Protection Agency***

Gwen Jacobs, EPA, said that the waste water discharge permits for the state outside of tribal lands fall to DEQ. EPA handles the permits on tribal lands. To issue these permits the EPA is looking at water quality standards derived by the tribes. Right now there are only water quality standards for Confederated Salish and Kootenai, and the Fort Peck tribes. Other tribes are working on development of similar water quality standards. EPA also looks at technology-based lines in comparison to water-quality-based lines. They will go with which ever way is most protective.

Nationally the EPA is looking at an effluent limit guideline. They are asking what is the best technology that is available and economically achievable. They are looking at five different options. Two of them are non-discharging options, which include things like injection or ponding. The other three options are a combination of different treatments, such as oxidation and erosion control. When it is finally adopted, the best professional judgement study (BPJ) will be the goal standard. The draft for that is expected in the first quarter of 2002. More information can be found on the EPA web site.

- ***Department of Natural Resources and Conservation***

Monte Mason, DNRC, said that his role is that of the landowner. The DNRC manages the school trust lands. That land is managed by the Land Management Board, who the DNRC reports to. They own both surface and mineral rights of that land and therefore needs to protect and manage both areas of the land to the best of their ability. The 6 million acres is small for oil and gas development. They are typically in the role of wanting to make sure that the school trust land participates in a fair and equitable basis and that their interests are looked out for. DNRC conducts leasing for CBM pursuant to their statutes and rules. That takes place through four auctions per year, wherein tracks are nominated by interested individuals or companies, that then triggers a DNRC review. The results of that review are then presented to the board for approval.

A key point is that a state lease doesn't convey the right to use the surface. The mineral lessee has to provide a plan, which usually works in with the regulatory processes that are in place. In the review process it is important to work with the surface owner or lessee. They also require comment and coordination with the surface occupant to ensure that the impacts to the surface are minimal. DNRC is subject to all the regulatory aspects.

Jack Stults, DNRC, said that he was first made aware of CBM in 1998. At that point they were looking at something that would implicate the Water Use Act in terms of permitting of new water rights. The purpose of the Water Use Act is to provide an intermediary, which is the DNRC, in the process of creating a constitutionally protected private property right, that private property right is the water right. After some research they determined that the water involved in CBM was not attached to the methane, but rather a by-product. It was determined that it didn't require a water right permit application under the Water Use Act.

There is another set of statutes that deal with the groundwater and these statutes were implicated by CBM activity. In 1999, the process for adopting a controlled groundwater area was started. They went through the process and in December of 1999 a controlled groundwater area was formally adopted. The provisions in this require a mitigation agreement be offered to all existing water right holders within a defined distance of any production well, that there be monitoring done to characterize the groundwater resources in the area, and to monitor the actual impacts of production.

What DNRC did was fairly early in the process of CBM entering Montana. Once created, the controlled groundwater area falls under the jurisdiction of the BOGC. They are the primary permitting entity and they are responsible for seeing that the elements of the controlled groundwater area are implemented through their permitting process. The controlled groundwater area also created a technical advisory committee to develop monitoring plans for the projects as they are developed and provide those plans to BOGC. It is expected to be adopted as part of the EIS. A water right is not a regulatory instrument, it is a constitutional private property right. He submitted supplemental information, see **Attachments 6, 7, 8, 9, and 10**.

• ***Montana Coal Bed Natural Gas Alliance***

Bruce Williams, Montana Coal Bed Natural Gas Alliance, said that industry is governed by all of the other agencies. Fidelity was the first company attempting to do CBM development in Montana, as such they introduced to the agencies a whole set of uncertainties and unknowns. During the time when all of that took place, there wasn't a comprehensive environmental impact analysis document available for the agencies to rely on. Upon completion of the EIS that is now underway, the BLM and BOGC will be impacted the most. The permit requests will essentially be for initial test groups of wells.

Current state regulations only allow one well for 640 acres. That is not enough to get the data needed to assess the potential for CBM development. Industry must request temporary or permanent spacing through the BOGC and that can only be granted after a hearing by the full board. There will be a significant amount of activity for the MBOG in that area. The spacing requirements apply to federal lands as well as to the private and state lands.

The Controlled Groundwater Act was incorporated in the BOGC business. They said that when the operator comes in to ask for spacing, the Board needs to be prepared to address the issues about groundwater impacts and offering water well agreements and things of that nature. All of that works into the plan of development that was discussed previously. They applaud the Miles City office for looking at using a plan of development as a means of permitting CBM development. It is an effective tool for the regulatory agencies and the industry to lay out what the plans are and what the various aspects are.

It would be industries' position to allow the activity to be conducted administratively. It is likely that CBM development will result in more activity for the DEQ in processing construction and storm water discharge permits. There is a significant backlog of permits now. There needs to be additional help in the DEQ to deal with requests associated with discharging water and water management plans. Industries' preferred alternative is to use the water for beneficial uses in any way possible. We all want the same objective. Close communications will be the best way to proceed with the development of this natural resource.

• ***Environmental Quality Council Staff***

Mary Vandenbosch, EQC staff, said that permits and approvals that have been described are not necessarily all that will be needed in the state of Montana. Wyoming doesn't have a state environmental policy act similar to MEPA. Therefore, that level of environmental review is not required. Wyoming does have a general permit option where one permit covers all operators. Most operators don't use a general permit because the permit is more stringent than an individual permit. In Wyoming, for a general permit, they require that a letter from the surface landowner is submitted as part of permit process. Requiring that as a basis for any permit would raise some constitutional issues, but it is just for the general permit. A paid advertisement must be published before the notice of intent is submitted. Documentation showing that the water produced will be for a beneficial use is also required. This is to meet EPA requirements. Wyoming doesn't allow discharge of CBM water into the Tongue River unless the water quality is similar to the natural water in the river, but discharge to total containment ponds is allowed if there is no hydro logic connection.

Underground injection control is another area. The Wyoming Oil and Gas Conservation Commission has authority to issue class 2 permits, similar to Montana's BOGC who also has that authority. The Wyoming DEQ has delegated authority for permitting for class 5 injection wells, which is a catch-all category. There is a general permit option for CBM injection facilities, but again a general permit needs to cover all operators. In Montana, EPA has the authority to issue class 5 permits. WOGC regulates drilling and well spacing and requires an approved application for a permit to drill for all wells in the state.

They do issue permits for wells on federal land, but they do not enforce them. They do not require water well mitigation agreements, but the industry has been voluntarily offering them. A water use permit is required from the state engineer's office for any CBM water produced from groundwater. They do this by giving the operator a temporary water right with the recognition that it will not be adjudicated. Wyoming also issues air quality permits for compressors and generators.

Mr. Compton said that in Wyoming there are 26,000 applications received and have issued 1000 MPDES permits. They use the Wyoming Department of Agriculture Handbook 60 to set

the permit targets for SAR. The range of SAR levels can be met if the discharge is within that range and no measurable changes are predicted, then they can discharge directly. Montana's lawsuit to permit ratio is running at about three to one. Wyoming doesn't have a numeric standard and they are not issuing permits on the Tongue. It is reported that Wyoming management has begun discussions to reach a numeric standards, in order to address South Dakota's concerns as well as Montana's concerns.

Mr. Williams added that the industry has some concern that trying to establish standards on specific reaches of rivers is a TMDL thing. A permit writer has access to the same science that is being used in proposing the water standards for SAR and EC. They don't feel that a numeric standard is needed.

MR. EBZERY asked for status with the Northern Cheyenne. **Ms. Jacobs** said that water quality standards are in draft. In terms of permit writing you can't use them until the standards are formally tribally adopted. **MR. EBZERY** asked how those compared with the state of Montana. **Ms. Jacobs** said that they would probably consistent.

MS. PAGE asked what leverage a surface owner has to affect what is done on the surface. **Mr. Breisch** said that the surface owner has the ability to affect in some degree where surface disturbing activities can occur. The oil and gas lessee has the right to use as much of the surface as is necessary to explore and produce the mineral resources. A compromise may have to be made. The surface owner is invited to provide input on inspections. **MS. PAGE** asked if the surface owner had any recourse. **Mr. Breisch** said that the mineral estate takes precedence over the surface estate in case law. BLM requires an agreement between the surface and mineral owners. They want to see that a discussion has taken place and some agreement has been reached. Some things can be made conditions of the permit. **MS. PAGE** asked what would happen if there isn't an agreement. Is there a resolution mechanism? **Mr. Briesch** said that a court would have to decide and the surface owner is entitled to payment for surface disturbing activities.

SEN. TESTER asked why is it that we don't know where the water is going from the containment ponds. **Mr. Stults** said that the general assumption is that it goes to the immediate subsurface strata, but where it goes beyond that would need to be monitored to find out or possibly look at the geology of the area. **SEN. TESTER** asked if it was important to know where the water goes in order to have a reasonable CBM development. **Mr. Stults** said that it is important. It is a matter of the degree of certainty that can be obtained. **SEN. TESTER** asked if at this point in time, where it goes is unknown.

Mr. Stults said that in some instances we know and in others we don't. To a certain extent, the characterization that is available for the Tongue and Powder River valleys is not bad when compared to other parts of the state because of years of experience with coal development. **SEN. TESTER** asked if the beneficial use is for stock water, but it does end up as irrigation, is there any liability if downstream irrigators are negatively impacted by the water. **Mr. Stults** said that the person who is harmed can bring an action against the person who is doing the harm. **SEN. TESTER** asked if that would be hard to prove. **Mr. Stults** said that with the proper monitoring it could be proven.

MR. EBZERY asked if once the EIS is completed, are the agencies ready to handle requests for permits. **Mr. Compton** said that the DEQ anticipates that the workload will increase substantially and they are not currently prepared to handle that. **Mr. Breisch** said that they also believe that they are not adequately staffed to handle the anticipated applications, to do compliance inspections, or the reservoir management program. They will make a request for more money in their next budget. **Mr. Richmond** said that he does all the permits himself and can't do all the anticipated permit applications.

Mr. Breisch said that both the state and the BLM require bonds to be posted by the operator before they approve operations on leases. The BLM has three types of bonds and minimum amounts for those bonds. That bond is held in place until the successful completion of reclamation. He also wanted to say that after the draft EIS is published, there will be 5 or 6 formal public hearing held halfway through the public comment process. The locations have not been determined yet.

SEN. COLE asked if the hearings would be in similar areas as the preliminary hearings. **Mr. Briesch** said that they would be in southeastern Montana, Billings and Helena.

SEN. COLE asked if there were leases on state lands now. **Mr. Mason** said that they do have leases, but no production wells at this point.

SEN. COLE asked if there are any changes as far as the air quality portions of the EIS. **Mr. Briesch** said that the director is going to have conversations with the Governor's office to make that determination.

VII COAL BED NATURAL GAS AND WATER POLICY UPDATES

MS. VANDENBOSCH referred to **Attachments 11 and 12**. There are current CBM activities, in addition to the EIS. The DEQ is developing water quality standards for SAR, EC and bicarbonate ion concentration. Those standards would apply to the Tongue River, Powder River, Little Powder River, Rose Bud Creek and tributaries to these water bodies outside of Indian reservations. The Board of Environmental Review has the authority to adopt water quality standards, but the department is doing the leg work. Public meetings will be held in December in Broadus, Ashland and Miles City, see **Attachment 13**.

The other study that is ongoing now is the EPA's BPJ and BAT, which is the study that Ms. Jacobs talked about. It is the basis for studying technology-based standards for effluent limitations. This is being conducted by region 8 of EPA.

SEN. COLE asked if it would only be on tribal land. **MS. VANDENBOSCH** said that they were for wherever EPA has permitting authority. The EPA has delegated authority to the state to issue MPDES permits. The state develops its own standards and limitations and if they are reasonable they will be upheld.

SEN. COLE said that there was a meeting in Broadus in October about CBM and where we are to-date. He was wondering if **SEN. McCARTHY** could give an update as far as water rights.

SEN. McCARTHY said that the commission had a full meeting and they are just getting updated on where the teams are going to go. The team that is negotiating with the Flathead has had

three meetings, but haven't made much progress. It has been very slow progress. The commission was told by the Department of the Interior that because of September 11, all federal budgets have been cut by 5% and they need to be prepared for that when making negotiations. The Rocky Boy settlement has gone through Congress and has been signed.

MR. EBZERY said that the Northern Cheyenne tribe noticed intent to adopt SAR standards for the Northern Cheyenne reservation. There will be a 30-day comment period.

VIII BUSINESS AND NEXT STEPS

MOTION/VOTE: SEN. McCARTHY moved to approve minutes. Motion passed unanimously.

MS. VANDENBOSCH shared the proposed agenda for the February meeting. It is estimated at a five hour meeting.

MR. EBZERY asked why it would take 60 minutes to make a decision on circulating draft reports or proposals. **MS. VANDENBOSCH** needs to know if the Subcommittee is thinking about circulating draft reports or proposals, so that when we go into the May meeting she is ready to talk about what the Subcommittee wants to circulate. If someone does want to circulate a proposal, it may take some time.

SEN. TESTER said that he would like to see MS. VANDENBOSCH contact Mr. Wheaton and Dr. Bauder to come in the night before the next meeting for questions. He would like to get more information from these people to get a better understanding of the impacts on the aquifers and the water rights downstream.

SEN. COLE said that Mr. Wheaton does a good job, but there are other people. It needs to be kept pretty broad.

SEN. McCARTHY said that if it was done as suggested, the rest of the EQC could participate in that discussion.

SEN. COLE said that maybe we should take an hour at the next meeting to present to the full committee. **SEN. McCARTHY** said that the schedule is tight.

SEN. TESTER said that part of the reason he was late was that he was trying to get information that he was not able to get because of time constraints. There is a lot of new information that might help other people as well as the Subcommittee.

SEN. McCARTHY said that she would talk with staff about getting time in the agenda.

SEN. COLE said that it should be a broad enough segment that other people can have a general idea about CBM, rather than just addressing two or three issues.

SEN. McCARTHY said that the two individuals named are objective, neutral parties.

MR. EBZERY asked if there were other items in the agenda for the next meeting that could be pushed off again, possibly TMDLs. **MS. VANDENBOSCH** said that the presentation on TMDLs

was something that the Subcommittee all wanted to have, partly because there is a court order involved. She does feel that TMDLs are a critical issue for CBM development.

MR. EBZERY said that his frustration is the focus on time and the lack of time for questions.

ACTION: The proposed agenda was adopted.

SEN. TESTER said that there was need to encourage the presenters to make their presentations concise and allow for more questions.

SEN. COLE said that the members need to be present at the start of the meeting.

IX **ADJOURN**

There being no further business, the meeting was adjourned.

CI0425 2022mvxa.