

MEETING MINUTES
WATER POLLUTION CONTROL ADVISORY COUNCIL
Friday, May 2, 2014
10:00 AM – 1:00 PM
Metcalf Building
1520 E. Sixth Ave, Helena, MT 59620

PRESENT

Council Members Present:

Barbara Chillcott
Mitchell Leu
Stevie Neuman
Earl Salley
Karen Bucklin Sanchez
Trevor Selch
Keith Smith
Dude Tyler
Michael Wendland
Kathleen Williams (by phone)

Council Members Absent:

Mack Cole

Montana Department of Environmental Quality Staff Members:

John Arrigo
Kirsten Bowers
Jenny Chambers
John DeArment
Bob Habeck
Jon Kenning
Darrin Kron
George Mathieus
Warren McCullough
Kurt Moser
Sarah Norman
Tom Reid
Paul Skubinna
Kari Smith
Amy Steinmetz
Jim Stimson
Tracy Stone-Manning

Public Present:

Jim Jensen

CALL TO ORDER

Mr. Dude Tyler called the meeting to order at 10:03 a.m.

APPROVAL OF AGENDA

Following introductions, Mr. Michael Wendland moved to approve the agenda as written. There was no opposition; the motion carried.

APPROVAL OF MINUTES

Mr. Tyler moved to approve the February 21, 2014 meeting minutes as written; Mr. Keith Smith seconded the motion. There was no opposition; the motion carried.

BRIEFING ITEMS

DEQ Organization/Leadership Introductions –

Ms. Amy Steinmetz presented the Department of Environmental Quality's (DEQ) organization charts and introduced several key department staff members. Ms. Steinmetz first introduced DEQ Director Tracy Stone-Manning, commenting on Ms. Stone-Manning's efforts to increase departmental communication. Ms. Stone-Manning thanked the Water Pollution Control Advisory Council (WPCAC) members for serving on the council. She commented on Ms. Steinmetz's mention of her work on boosting departmental communication. She said that this is an intentional effort with the goal of better serving Montanans and the environment.

Ms. Steinmetz then gave an introduction to the role of Tom Livers, DEQ's deputy director, as related to the Board of Environmental Review (BER). She said that BER has numerous responsibilities, including water quality. WPCAC members look at water quality rules that come through the department and advise DEQ on water quality issues. WPCAC recommendations typically get tied into the rule package. In instances where WPCAC suggestions cannot be implemented, those recommendations are still presented to BER.

Next, Ms. Steinmetz introduced Mr. George Mathieus, DEQ's division administrator for Planning, Prevention and Assistance (PPA). Mr. Mathieus explained that PPA is comprised of three bureaus and a fiscal unit. He said that they administer the state energy program. The division also manages the state revolving loan program, which provides technical and financial assistance for drinking water and wastewater infrastructure. This program also partners with the Department of Natural Resources Conservation (DNRC) to provide low interest rate loans for infrastructure upgrades. The division also administers the wetland program and partners with other state entities. Additionally, PPA administers other Clean Water Act (CWA) and Montana Water Quality Act programs including a water quality standards program, a statewide water quality monitoring program, and a total maximum daily load (TMDL) program. Mr. Mathieus noted that PPA has a strong quality assurance, quality control, and data control system, which can be useful to the rest of the department.

Mr. Mathieus gave an update on the Nutrient Rule Package. He said that this package contains both numeric water quality standards, which are under BER authority, and variance processes, which are under departmental authority. Although these authorities are separate, the rulemaking is occurring simultaneously. The rule-making process was initiated in February 2014, and then two concurrent public hearings were held on March 24, 2014. Mr. Mathieus said that the public hearings brought up a varied mix of opinions. Opposition was primarily aimed at specific provisions of the rule package. One change that Mr. Mathieus noted was the Department's recommendation to the board to withdraw the criteria for Flathead Lake. The reason behind this is that DEQ received significant comment from Flathead community stakeholders, so DEQ staff members are striving to make the process more transparent and develop an implementation plan.

Mr. Mathieus said that there will be a BER meeting on May 30, 2014, and DEQ is planning on providing a briefing to the board at that time to explain where they are with the nutrient rule package, and how public comments have been coming in. The goal is for both rule packages to be adopted in July 2014.

Mr. Wendland asked about the follow up on TMDLs around the state. Mr. Mathieus said that five to ten years ago, DEQ was not doing a great job of implementing a five-year review. At that time, all resources were focused on the lawsuit. Since then, an implementation program has been developed. They split the TMDL group, and created an implementation program specifically for the 319 program. Now there are staff members dedicated to the five-year TMDL review process. Mr. Mathieus mentioned some areas that have undergone the review process, including Big Creek. He said that the Big Creek review resulted in the stream being taken off the 303(d) list.

Ms. Steinmetz then introduced Mr. John DeArment, division administrator for Permitting and Compliance. He said that the division has six bureaus:

- Air Resource Management - Manage and implement state and federal air quality regulations.
- Waste and Underground Tank Management - Regulate and permit hazardous waste, solid waste, underground storage tanks, asbestos control and cleanup, junk vehicle disposal, meth lab cleanup, and septic pumping regulations. Make sure pollutants do not enter water.
- Environmental Management – Includes hard rock mining and Major Facility Siting Act (MFSA) programs. Work closely with the Water Protection Bureau (WPB) to ensure clean water from mine sites.
- Industrial and Energy Minerals - Deal with coal mining and opencut mining. Opencut mining, Mr. DeArment explained, includes things such as gravel, sand, peat, and clay operations. Their work is closely related to water discharge permitting, so they have their own permit writer that coordinates with WPB.
- Public Water Supply - Oversee and permit public water supply systems; wastewater treatment facilities; subdivision water supply, wastewater, and stormwater; and run an operator certification program for water and wastewater treatment.
- Water Protection - In charge of all permitting for all Montana pollution discharge elimination systems.

Next, Ms. Steinmetz introduced Mr. John Arrigo, division administrator for Enforcement (ENF). Mr. Arrigo handed out a summary of the division's fiscal year 2013 work. The division is now trying to resolve violations with administrative orders on consent (AOC), which are an agreement between the entity and DEQ. They are not issuing orders that can be appealed to BER. If they do not come to an agreement, however, ENF will then go to court or issue an order. The division has many AOCs with small municipalities around the state that have wastewater treatment systems that are out of date and which are unable to meet limits. They agree to a consent order with minor penalties for future violations. This gives these entities time to get the grants and loans needed to upgrade their system to meet the new limits. By eliminating appeals, Mr. Arrigo explained that the division is saving DEQ money because, during an appeal, DEQ is required to pay for the board's attorney. Mr. Arrigo said that ENF also responds to citizen complaints about environmental violations. He said that the division gets between 900 and 1000 complaint calls each year, and 33% of those are related to water.

Ms. Steinmetz then introduced Ms. Jenny Chambers, division administrator for Remediation (REM). Ms. Chambers said that Remediation oversees cleanup activities and determines remedial requirements for contaminated sites throughout the state. She said that the division's funding and program areas are associated with specific cleanup activity areas. One of Remediation's program areas is federal superfund sites, of which there are 17 in the state of Montana. These are National Priority Listed (NPL) sites, meaning that they have gone through the federal registry, were proposed at Congress, went out

for public comment and rulemaking, and were eventually listed as federal NPL superfund facilities. Of Montana's NPL sites, four are led by the State, and the rest are led by the Environmental Protection Agency (EPA). There are also a couple of potential NPL sites in the state. One of these is Smurfit-Stone, which has been proposed as an NPL site. Another potential site is the Columbia Falls Aluminum Plant, which is being discussed with the community to see whether it should be federally listed as an NPL site or if there are other state actions that could be used to clean up the site. Ms. Chambers mentioned that, in comparison with neighboring states, Montana has a lot of federal superfund sites. Colorado has 18 NPL sites, while Utah has 16 sites. Wyoming, North Dakota, and South Dakota have between zero to two sites.

Another program within the Remediation Division is the Leaking Underground Storage Tank Program, or Petroleum Cleanup. These deal with leaking underground storage tanks or above-ground storage tanks that have underground transmission lines. According to Ms. Chambers, there are 1,200 active leaking underground storage tanks within the state, though not all of them are considered high risk tanks that would have environmental health or surface water impacts. She said that, on average, the Remediation division closes 100 of these per year, but they also get about 25 new cases each year.

A third Remediation program mentioned by Ms. Chambers is the State Superfund Program. Ms. Chambers said that it mirrors the federal superfund program. There are 208 state superfund hazardous materials sites on Remediation's list and, of those, 30 sites are considered high risk.

Other programs include Federal Facilities, which deals with hazardous waste and petroleum sites, and Brownfields Redevelopment, which works with community authorities to find assessment and cleanup funding for redevelopment projects. Another program is the Abandoned Mines Lands. The focus of that program is abandoned coal mines.

Ms. Chambers said that the Remediation Division has no formal requirement to come to WPCAC, as their program rules are department rules. They do involve stakeholders in rulemaking though, to provide input on rulemaking development. Ms. Chambers said that she is not prohibited from coming to WPCAC to provide updates on areas of interest. All Remediation sites must meet water quality standards. If they do not meet standards, Remediation sites must have institutional controls that protect the remedy. Occasionally, the division provides waivers to certain standards, but only when there are other protections in place that ensure that the remedy is maintained and that DEQ water quality standards are achieved.

One area that Ms. Chambers noted that Remediation is looking at is changing the rules for petroleum mixing zones around storage tanks. In the past, Remediation could not close a site until it met water quality standards, even if it did not present risks. Now, they are looking at having petroleum mixing zones added to sites that do not present environmental risks so that these releases can be closed.

Ms. Chambers said that Remediation has approximately 80 positions and staff members operating off of a budget of \$60 million.

Mr. Mitchell Leu asked about the status of the DEQ Downtown Office building, where Remediation used to be located. Ms. Chambers said that when she took over her position in 2012, there had been ongoing complaints of ill health of staff at that location over the course of the six previous years. Ms. Chambers enacted a committee to look at past investigations, take a survey of complaints, and do a comprehensive sampling analysis for the building. The building is located on a landfill and later served

as a shooting range. The first samples taken were for lead, and samples in the plenum were above human health standards. Additional samples of the workplace revealed that there was no occupational exposure risk, but that remediation needed to be done in the plenum and HVAC system. DEQ evacuated in October 2013. Additional samples were taken. Other than lead, these all came out okay. At this point, Remediation is housed in the Cogswell Building, and the Department of Administration (DOA) is continuing further sampling in order to develop a remediation plan so that the building can be occupied again in the future. Ms. Chambers said that the sampling results still do not explain some of the human health symptoms that occurred, but there is an industrial hygienist and occupational physician through the DOA that is looking into this as well.

Mr. Earl Salley asked Mr. Arrigo of ENF whether there are enough resources available to communities that are not in compliance with standards to allow them to come into compliance. Mr. Arrigo responded that he is not sure if there are enough resources. He said that there are some situations where phased construction was planned and then the funding did not come through, so DEQ extended the AOCs. Some of these projects have been five to eight years long. Mr. Arrigo said that this is a problem for small communities that simply do not have the funding. He added that Governor Bullock is working on a proposal to provide funding to eastern Montana communities that have been impacted by oil production. This is problematic across the state, though it is more urgent in eastern Montana, according to Mr. Arrigo. Ms. Stone-Manning added that the issue is when, not if, the communities will come into compliance.

Ms. Kathleen Williams asked about initial DEQ reactions to the EPA proposed Waters of the U.S. (WOTUS) rule. She requested that it be discussed at the next WPCAC meeting. Ms. Stone-Manning said that DEQ is currently taking a close look at that rule. Mr. Mathieus said that the Western State Water Commissioners are having their annual conference in Helena from July 15-18, and DEQ has a tentative goal of having something concrete in place by that time. Mr. Mathieus said that there is an opportunity to comment, as the comment period is open right now. AQUA is offering regular conference calls to seek points of clarification. Mr. Mathieus said that, at this point, DEQ focus is on seeking more clarification. They still have some questions on specifics. Ms. Williams then asked if there would be an opportunity for Mr. Mathieus to present an update on this topic at WPCAC's next meeting on June 13. Mr. Mathieus said that he would be amenable to that. Several WPCAC members communicated their interest in Mr. Mathieus' update.

Water Protection Bureau Introduction/Permitting 101 –

Mr. DeArment introduced members of WPB in attendance at the meeting, including Mr. Paul Skubinna, Ms. Kari Smith, Mr. Bob Habeck, Mr. Jon Kenning, and Mr. Tom Reid. Mr. Skubinna, program manager for the Water Quality Discharge Permits Section, began his presentation with a brief overview of regulation. Mr. Skubinna said that Montana was one of the first states to get delegation of certain CWA programs, specifically the National Pollutant Discharge Elimination System. The Montana Pollutant Discharge Elimination System (MPDES) is Montana's EPA delegated program of the National Fluid Discharge Elimination System.

The permitting program, according to Mr. Skubinna, is responsible for issuing permits, compliance monitoring, conducting inspections, and permit enforcement. WPB is within DEQ's Permitting and Compliance Division. They administer Montana's Water Quality Act laws, which provide authority for MPDES and Montana Groundwater Pollution Control System (MGWPCS). Along with ENF, WPB is responsible for dealing with alleged violations of the Water Quality Act. The bureau is split into a

permitting section, and a compliance and technical support section. Mr. Skubinna explained the responsibilities of each section.

Turning to permitting requirements, Mr. Skubinna said that, according to statute, if you discharge a pollutant into a state water, you need a permit. This is complicated by the fact that statute very broadly defines the terms state waters and pollutants.

The bureau also administers a 318 Authorization, which pertains to providing temporary standards for restoration and reconstruction activities that require moving equipment in, or working within, a wetted perimeter or live water. The program also deals with the state's 401 Water Quality Certifications on Corp of Engineers 404 permits.

Mr. Skubinna then discussed the MPDES general and individual permits that WPB deals with. A general permit is a single permit that covers numerous people conducting the same activity. There are 12 of these that the bureau administers. These permits tend to be restrictive because of their nature and application to several people. There is currently a move toward a notice of intent process for all general permits. This reduces the 30-day timeframe of application processing and permit authorization issuance to 10 days or less. Individual permits, unlike general permits, are site-specific. They typically have a high level of scrutiny, so processing of individual permits tends to take longer than general permits. Mr. Skubinna mentioned several kinds of general permits, including produced water permits pertaining to the oil and gas industry. Ms. Stevie Neuman asked if these permits are related to fracking. Mr. Skubinna responded that they are not, and he mentioned that they do not have authority over fracking or heat water injection wells. He said that underground injection wells are dealt with by DNRC's Montana Board of Oil and Gas.

Turning the presentation to individual permits, Mr. Skubinna said that they are broken into surface water and groundwater components. He said that discharge permits implement requirements to protect the state's water quality. These come in various forms that could all be considered effluent limitations. Mr. Skubinna said that the primary basis for those limitations is the main part of permit development, which is discovering and documenting the applicable standards. These come in various forms, such as effluent limitation guidelines or technology based effluent limits (TBEL) created under the federal CWA by EPA. These categorically specific limitations provide the minimum level of control based on the available technology. The other type of effluent limit is a water quality based effluent limit (WQBEL). These are compared to the applicable TBELs. The more restrictive of these two limits is then implemented as the effluent limit in the permit. WQBELs are based on DEQ Rule Sub-Chapter 6, which pertains to water quality standards. This is where the discharge permitting program interfaces with all of the CWA programs of DEQ.

Mr. Skubinna showed an example of a TBEL, and then gave a brief description of the numeric limits of WQBELs. He said that the numeric effluent limits essentially exist to protect the designated beneficial uses of the receiving water. In summary, designated beneficial uses drive the numeric standard and then the permit protects that numeric standard.

Mr. Tyler asked whether it was possible to trace back to the constitutional definition to find the phrase "increase in water temperature" in statute. Mr. Darrin Kron answered that this is addressed in the CWA. Mr. Skubinna said that increase in water temperature is defined as a pollutant in the CWA.

Mr. Skubinna said that other considerations when dealing with WQBELs include new or increased sources. The premise behind non degradation is the idea of keeping clean water clean. Another element is implementing wasteload allocations for 303(d) listed waterbodies. In areas where there is a 303(d) listed waterbody that does not yet have a TMDL completed, there are specific considerations that are examined within the discharge permit as far as establishing main areas of concern and moving ahead of the TMDL until the appropriate limits can be determined for that specific basin. A final consideration is that WQBELs are not necessarily a minimum treatment requirement. In some cases, establishment of a mixing zone serves as the solution to the pollution. Mr. Skubinna added that discharge permits are not allowed to be issued for situations that will contribute to an exceedance of a water quality standard.

Mr. Skubinna then showed an example of a numeric discharge limit set as a visual representation of the state's non degradation policy implementation. He said that once discharge levels are established, monitoring is the next step in assuring that water quality is being protected. He explained that monitoring requirements are an important component of permitting. The basis for the monitoring requirements is often effluent limits. The purpose is that once an effluent limit is established, it becomes a self-monitoring requirement for permit recipients to sample their effluent and make sure that their discharge complies with their permit, which is designed to protect water quality. Sometimes monitoring is conducted for parameters with no effluent limit. For example, when developing a permit, DEQ staff determines that they either need additional information or that the pollutant does not present a concern to the extent that it needs to have an effluent limit established, but it would be worthwhile to keep an eye on the pollutant. In these situations, monitoring is done for the sake of monitoring.

Ms. Karen Bucklin Sanchez asked whether permit owners can assume that, when there is monitoring, there will be a limit established in five years when the permit is due to be renewed. Mr. Skubinna said that this is not the case. Each time a permit is developed, a reasonable potential analysis is undertaken. This is the decision-making method used to determine whether a parameter needs an effluent limit. If there is no reasonable potential to cause or contribute to an exceedance of a water quality standard, they do not necessarily need an effluent limit in that permit. Mr. Skubinna said that they might keep an eye on the parameter; just to be sure they have updated data for analysis for each permit. They revisit that decision at the next permit cycle, but that does not necessarily mean that there will be effluent limits for the next permit.

Ms. Bucklin Sanchez said that, as an engineer working with communities, it can be challenging to try to figure out debt capacity when the debt may last for 20 years when permit cycles are only five years. She mentioned ammonia specifically. Mr. Skubinna said that for ammonia in particular, they have gone through nearly all permits in the last permit cycle. In situations where ammonia needs an effluent limit, it is coupled with a nitrate limit, which gives an idea of where this will be in the future. Mr. Skubinna said that in terms of planning ahead, when permit recipients are doing monitoring during the term of the permit, comparing it to the water quality standard gives a good indicator of whether they will be getting a limit.

Mr. Skubinna said that other components that apply to most permits are special conditions. These include things like compliance schedules, which allow permittees a certain amount of time to return to compliance. Special conditions also include sewage disposal requirements, land-application of treated effluent, and pretreatment requirements.

Ms. Bucklin Sanchez thanked Mr. Skubinna for the presentation and the work that the bureau does. She said that, as an engineer who provides advice to both the private and public community, dialogue needs

to occur to allow for planning. She said that not all engineers who are working with these permits have had an opportunity to hear this kind of presentation. She asked how engineering firms could get this type of education or presentation. Additionally, Ms. Bucklin Sanchez said that while rulemaking is occurring, PPA may not be thinking of how the rules will be interpreted by Permitting staff. She said that there has been really good coordination going on with the development of the Nutrient Rule Package, and she hopes that this kind of communication continues between the different DEQ divisions. Then Ms. Bucklin Sanchez asked how the Permitting Section retains staff in order to keep knowledgeable staff and maintain a feeling of continuity. She asked how many staff members are in Permitting. Mr. Skubinna said that there are 13 folks in his section and 29 people in the bureau. Seven of these people are full-time permit writers. He said that he believes all of the permit writers have been at DEQ for five years or longer.

Mr. Skubinna then responded to Ms. Bucklin Sanchez's other comments and questions. He said that, as a bureau, they are extremely active in outreach events. They also have formalized training programs that the bureau implements. These include stormwater training, which is done by Ms. Smith's section. Ms. Smith said that the stormwater construction training schedule is listed for up until spring of 2015. Trainings typically occur in the spring and fall. In the past, they have been partnering with the Montana Contractors Association, but this coming fall the training will be offered to other entities. They are reaching out to the stormwater construction folks, which are their largest group of permittees. They are focusing on explaining what is needed for permit compliance. So, DEQ is working on their Stormwater Pollution Prevention Training. The lead on this, according to Ms. Smith, is Chris Romankiewicz. He is based out of DEQ's Bozeman office. Any of DEQ's inspectors would be able to assist though. DEQ has one inspector in Missoula, one in Billings, and two in Helena. They also do on-site, upon request trainings. Additionally, they are working on doing trainings for small, publically-owned treatment facilities.

Mr. Skubinna said that as permits are getting close to needing renewal, he strongly encourages permit recipients to get in contact with Permitting staff ahead of submission of their renewal application. He said that pre-permitting meetings frequently occur, and they are very valuable. Permitting is piloting a program to seek permittees with upcoming renewals so that they can advise them and work through the process of putting together a complete permit application their first time through. They anticipate a great increase of efficiency with this process.

Mr. Skubinna then turned to the topic of agency communication. He said that there has been an agency-wide effort in Water Integration. The idea is identifying areas to improve communication. He said that there may be a bit of a misconception about a lack of communication in the agency though. Mr. Skubinna said that he talks with people from WQPB on a daily basis. So, there is already an established dialogue between the divisions that are engaged in different portions of the CWA regulation process.

Mr. Skubinna then addressed Ms. Bucklin Sanchez's question on staff retention. He said that this can be a difficult job. Staff members often deal with displeased people, and there is a backlog of work in addition to an already high workload. He said that there are a pretty stable core group of staff members, however, who have stayed at the agency.

Ms. Steinmetz said that in the Standards Section staff meeting on May 1, 2014, it was determined that the Standards developers will be learning the permit writing process. This will help them to write standards that are easier to implement in permits. Mr. Kron mentioned that select individuals in the TMDL and Monitoring Sections will be educated in general permitting as well.

Tintina Exploration Briefing –

Mr. Warren McCullough, chief of DEQ's 16 person Environmental Management Bureau (EMB), began his presentation by saying that EMB is responsible for administering both the MFSA and the Metal Mine Reclamation Act. They regulate the investigation and development of metallic mineral deposits in Montana through exploration licenses, operating permits, and small miner exclusions. At any given time, Mr. McCullough said EMB has over 100 exploration licenses on the books, but many of them will be inactive because exploration cycles fluctuate with commodity prices. Exploration requires four elements: an approved operating plan, a license, reclamation requirements, and a bond that is calculated and held by the state or in conjunction with federal partners. If exploration takes place on US Forest Service or Bureau of Land Management (BLM) land, DEQ has memorandums of understanding (MOU) in place to define how they will work together.

Mr. McCullough explained that the Tintina project is an exploration project, and not a mine. It is located 17 miles north of White Sulfur Springs. It is 20 stream miles upstream from the Smith River, and it is not the Smith River Copper Mine. The activity that has occurred has been on private property that is leased by the company. The company's target is a copper deposit that was discovered in the 1970s and was drilled and explored in the 1980s, and then closed in the 1990s. Mr. McCullough was the inspector responsible for closing it out in 1995 and 1996. The project geologist from that time is now with Tintina Resources, and he brought the company back to the area for another round of exploration. Mr. McCullough said that it is fairly common for companies to revisit areas for repeated rounds of exploration throughout the years.

Under exploration license number 710, since September 2010, the company has drilled 168 holes in the project area, and they have blocked out a resource of approximately one billion pounds of copper. According to Mr. McCullough the resource in the ground has a theoretical value of several billion dollars, but that does not necessarily mean that it is an economic deposit or that is going to be a mine.

The company has also drilled monitoring wells and wells for water pump tests. They have done these according to their bonded plans, and reclaimed disturbances when appropriate. Mr. McCullough said that EMB has been a frequent visitor to the site for inspections.

In November of 2012, the company applied to DEQ for an amendment to their exploration license, which would have allowed them to construct a mile long, 18 by 18 foot exploration decline. A decline, Mr. McCullough explained, is an opening into the earth that slopes downward at some angle. The purpose of this request was to gain access to allow them to do more efficient drilling from underground and to gain access to mineralized material so that they could have a sample for bulk testing. Under an exploration license, it is possible for people to take up to 10,000 tons of material for testing. Under statute, mining does not begin until you exceed that 10,000 ton threshold.

While DEQ processed the amendment request, the company conducted geochemical testing of mineralized and unmineralized material representative of what the decline would pass through. EMB completed a draft, mitigated environmental assessment. They issued the final assessment in December 2013, approving the decline, contingent upon a proper bond and the company's submittal of that bond. Mr. McCullough said that EMB would not have taken this step if they had anticipated any unmitigated impacts on water quality or quantity, surface or underground. He said that he feels that this document is the most comprehensive analysis of this kind of project that they have ever done, and there were numerous opportunities for public comment.

Mr. McCullough went on to explain that this is a moot issue now. On March 14, the Montana Environmental Information Center (MEIC) and Earthworks filed a complaint challenging DEQ's decision. Then, on April 7, the company withdrew their application for amendment. He said that he could not speak to the reasons why the company made that decision. Mr. McCullough added that if the council wanted to hear more about this, he felt confident that the company would be willing to send a representative to present on the project details and the intentions behind the venture. The company has announced that they will draw whatever metallurgical and water data they need from additional surface drilling, and that they intend to apply for a full-scale operating permit without the intermediate step of conducting a decline. Mr. McCullough said that this is not an uncommon approach. The company has estimated that this application will be submitted by the summer of 2015.

Most of the public comment that they received came in the form of emails. They received approximately 3,800 communications, and 3,000 of these came from outside of Montana. Mr. McCullough said that he wanted to draw attention to the fact that the Montana Environmental Policy Act process that they conduct is not a vote. A single letter with substantive comments will have far more impact on the final document than numerous non-substantive communications. He said that they did receive many long, substantive letters with significant comments, and the document changed due to those comments. Mr. McCullough also said that EMB are neutral regulators. They analyze applications, and simply administer the law. They are neither in favor of nor opposed to mining. Mr. McCullough then said that many of the comments that were received expressed concerns of this becoming another Berkley Pit. He said that this is not the case. According to Mr. McCullough, there is no legitimate scientific basis for these fears. It is a copper deposit, but it cannot be compared to the Berkley Pit. The Berkley Pit was a 1.2 billion ton open-pit mine. It was made pre-law, and it was unregulated and unbonded. There was no reclamation plan. It simply happened because, at that point in time, folks were willing to accept that sort of thing. This is no longer the case. Mr. McCullough said that this cannot be compared to Zortman Mine either because Zortman was mined in open-pits using technology that is no longer legal in Montana.

Ms. Barbara Chillcott asked if the company will continue to gather information under their existing exploration license. Mr. McCullough responded by saying that once an exploration license is issued, additional activities are permitted under that same license. So, any desired alterations to the exploration license need to be submitted to EMB as a proposed plan of operation. The proposal will then be evaluated, and a bond will be calculated and approved, and then this will be approved upon receipt of bond. If a blanket bond is already in place, a debit will be put against this bond. So, regulatory oversight will continue under the exploration license.

Mr. Salley said that one of the concerns that he has heard is that that the mine will dewater the area. He asked whether there is validity behind these concerns. Mr. McCullough answered that they were not looking at a mine, but at an exploration project. He said that although it is moot now, there were safeguards that would have been in place so that if there was water flowing into the exploration decline, it would need to have been grouted off to keep this to minimal levels. He said that this would all be part of the application and the processing of the operating permit application, and there will be opportunities for public participation and comment when that occurs. Mr. McCullough reiterated that this process may start next year, and it will take at least a couple of years or longer to conclude.

Energy Impacts –

Mr. Jim Stimson, from DEQ's Source Water Protection Section, said that the program's primary mission is helping public water supplies do source water assessments as required under the 1996 Safe Drinking

Water Act. He said that former DEQ employee, Mr. Steve Kilbreath, was in a position to assess what was happening with the oil and gas industry across the state. Mr. Stimson's work involves using GIS and databases that deal with other agencies' data, and he helped to provide Mr. Kilbreath with data for his assessment.

One of the questions that came up early on, according to Mr. Stimson, is why DEQ is interested and involved in this subject. One of the reasons is that DEQ actively interacts with communities in a variety of ways, and the oil and gas exploration cycles of boom and bust affect communities. The staging areas for oil and gas exploration, particularly fracking operations, are large and have the potential to negatively impact state waters. Also, the technology used for drilling can penetrate potable aquifers, creating the potential to impact state waters. Mr. Stimson said that there are legacy issues with the oil and gas industry in Montana. Things left behind may also negatively impact state waters.

Mr. Stimson gave a brief explanation of the reasons why the DEQ review of oil and gas activity in eastern Montana was conducted, also covering the questions that the review sought to answer. Mr. Stimson said that the resources they used for their review were all Montana public records.

Mr. Stimson said that the results of what oil and gas activity in Montana looks like are surprising. The first oil and gas activities in Montana occurred at surface seeps. The first recorded report of an oil seep occurred in 1864 along the Bozeman Trail in the Pryor Mountains. Early drilling followed in 1889. In looking at all oil and gas wells in Montana and North Dakota, the results show that wells date back to 1890 in Montana and 1922 in North Dakota. North Dakota's activity is primarily focused in the Williston Basin, which has been depressing for a long time. The Bakken formation is located in the center of the basin, which is about 160 feet thick. Montana's portion of the Bakken, by comparison, is only about 20-40 feet thick. As of recently, the number of oil rigs in Montana is eight, while North Dakota has about 191.

Mr. Stimson then showed a slide depicting the number of currently producing wells in Montana and North Dakota. Montana has varied production taking place across the state, while North Dakota's production is occurring in the western portion of the state. Mr. Stimson then examined horizontal wells, which include directional drilling and true horizontal. When comparing that illustration with one depicting only currently producing horizontal wells, the number of wells in Montana dwindles. In North Dakota, the numbers stay much the same.

Mr. Stimson then discussed how Montana compares to North Dakota in terms of production, and whether North Dakota's activities are affecting Montana communities and resources. Looking at historic monthly oil production for the two states shows that Montana had been going along steadily, with a brief peak in production around 2007 before production dropped back to what it had been prior to that time. Conversely, North Dakota's production continued to climb sharply after 2007. North Dakota is producing far more oil than Montana. An examination in rig counts shows similar trends. The production in North Dakota has put continued pressure on eastern Montana communities.

To address the question of whether public water supplies are threatened, Mr. Stimson turned to the East Poplar oil field as an example. Oil was discovered here in 1952. Large volumes of highly saline water were produced along with the hydrocarbons. This water was placed in unlined pits and injected. The area contains very shallow freshwater aquifers, and these were impacted by the saline water. The flow of the groundwater carried the highly saline water down to the Poplar city water supply, and also impacted a number of private wells. As groundwater flows slowly, the problem in this area did not

become noticeable until the 1970s. To examine the threat to public water supplies, Mr. Stimson and Mr. Kilbreath looked at proximity. They focused on public water supplies that are within one mile of a producing oil and gas well. There are about 40 of these in the state. They then repeated this process looking at private water wells within one mile of a producing oil and gas well. Mr. Stimson said that there were more wells, but that this is to be expected because of how they are scattered.

Community public water supplies and non-transient, non-community public water supplies will take more samples of water for detailed analyses on various schedules. One of the things that they sample for is BTEX, which is benzene, toluene, ethylbenzene, and xylenes. The number of public water supplies that have detected BTEX is 105. This number varies through time. Of the 105, seven are within one mile of a producing oil and gas well. Oil and gas activities are not the only source of BTEX. Leaking underground storage tanks are another source. As far as whether public water supplies or surface waters are affected or threatened, Mr. Stimson said that this is hard to determine with his data. More information is needed. At this point, Mr. Stimson turned the presentation over to Mr. Kron, supervisor of the Monitoring and Assessment Section (MAS) of DEQ's Water Quality Planning Bureau.

Mr. Kron said that while Mr. Kilbreath and Mr. Stimson were working to characterize conditions and potential water quality impacts from oil and gas development across the state, MAS was fielding a lot of questions about what monitoring was being done in association with oil and gas activities. Mr. Kron started a dialogue with other federal and state agencies, as well as conservation districts, to see what kind of monitoring was being done. Under the permitting rules of the Board of Oil and Gas, there is no requirement for monitoring. Mr. Kron's search turned up few results for characterizing the conditions of groundwater or surface water in these potentially at-risk areas. The section began a monitoring network in conjunction with other monitoring that they were already doing. Starting in 2012, the monitoring was all done in the Lower Missouri watershed, as the section already had a program established in the area. In 2013, the monitoring was expanded into areas of the Elm Coulee region, along with a few more sites in the Williston Basin region. Mr. Kron said that they will be continuing with these 2013 sites this coming year. Mr. Kron showed a list of these sites, as well as a list of surface water monitoring parameters.

When speaking with other federal and state agencies, Mr. Kron said that a gap in information that could be reported back to Montana's public was readily apparent. So, this project was implemented. DEQ is primarily using BLM funding for the surface water monitoring. DEQ has had a long-term MOU with BLM, where BLM funds pieces of the program focusing on BLM lands. They came to DEQ and have allowed MAS to use their money, formerly funding other monitoring programs, to fund this oil and gas development monitoring.

Mr. Kron then turned the discussion to groundwater monitoring. The US Geological Survey has sampled about ten wells in the Williston Basin for production water constituents. The parameters that they are analyzing are not as extensive as what DEQ is looking in the surface water. Montana Bureau of Mines and Geology (MBMG) has primarily been doing water quantity analysis in this area, rather than water quality. EPA only had one site in Montana for their national monitoring program. So, DEQ is coordinating with these other efforts. There have been a lot of questions about groundwater monitoring. DEQ put a groundwater monitoring program grant application in House Bill 6 during the last legislative session. They received part of the requested funding. The program also received partial funding from DNRC. They are coordinating closely with DNRC on the groundwater monitoring portion of the program; analyzing for the same parameters, and ensuring that there is no overlap on sites. Mr. Kron said that, in the end, all of the data from both DNRC and DEQ's programs will be stored in MBMG's groundwater

database. Additionally, Mr. Kron mentioned that they are not drilling any new wells for monitoring. They are selecting sites that have existing drinking water or livestock wells.

Mr. Kron said that he knew Mr. Stimson was working with Mr. Kilbreath, so he teamed up with them. Although MAS is leading the financial and reporting components of the project, Mr. Kron said that is truly a team effort across different bureaus.

Mr. Stimson said that they approached well selection by developing scoring criteria with two stages. The first stage was for oil and gas wells and the second was for drinking water wells. For oil, gas, and injection wells, selection criteria included age, production volume, injection volume, and whether it was vertical or horizontal. Old, horizontal wells with high production or high injection volume were scored highest. The second step was to do a proximity analysis to examine water wells that were in close proximity to high scoring oil, gas, or injection wells. Using this, and other criteria, they identified the highest scoring water wells in proximity to the highest scoring oil and gas wells.

According to Mr. Stimson, the difference between DEQ's and DNRC's approaches is that DNRC is asking landowners if they want their well tested, while DEQ is using risk-based scoring to identify the wells.

Mr. Stimson showed a map of the three areas that MAS will be focusing on. Ms. Bucklin Sanchez asked if there is a correlation with older regions. Mr. Stimson and Mr. Kron responded to her question. Mr. Stimson said that they included age in their scoring process, and they focused on these three areas because this is where a lot of the North Dakota activities are affecting Montana. Additionally, Mr. Kron explained that they focused on these areas because that is where they got the most support from the conservation districts through the grant application process. He said that there is plenty of interest in other areas that have potential for further exploration and production. Mr. Kron said that they did not receive the full resources they requested, so they had to focus their efforts and let DNRC work with the conservation districts in other areas to help concerned land owners.

Wrapping up the presentation, Mr. Stimson discussed the ongoing effort. Mr. Kilbreath recently retired, and there is no one who will be taking on Mr. Kilbreath's former role in this project. Mr. Stimson will be maintaining a mapping program that will upload new oil and gas data on a quarterly or semi-annual basis. They will be looking at newly initiated wells. They are concerned about scattered activity in areas where it is not anticipated. Mr. Stimson said that there is a four to six week lag time before this information becomes available, so the data that he gets is not current. Mr. Stimson will continue to work on this, and monitoring will also play a role in whether this project expands.

Mr. Kron said that all of the monitoring that MAS is doing is ambient water quality monitoring. It is characterizing baseline conditions at this current point in time. They are not using a random approach. They want to protect human health in the state, so they are using a targeted approach to ambient monitoring.

Mr. Smith asked what kind of information is being shared between Montana and North Dakota. Mr. Stimson said that he is not aware of any information exchange taking place at DEQ's level. Mr. Kron said that as far as monitoring, he does not believe that North Dakota has an ambient groundwater or surface water program. They do respond to spills, as DEQ does. Mr. Kron noted that anything on the drilling pads, or anything that gets injected back into the ground, is not regulated by the CWA. He explained that DEQ takes action if there is offsite movement of produced water, but otherwise they do not get involved. The same is true in North Dakota.

Ms. Bucklin Sanchez asked if Mr. Kron was saying that it is not a violation of the federal CWA for people to do whatever they want on private property. Mr. Kron said that this is true if it is on the permitted area. Mr. Kron said that in the early 2000s there was a federal omnibus bill provision exempting all of this activity from the purview of the CWA.

Mr. Salley asked about the disposal of the water used in fracking. Mr. Stimson said that the fracking water has to be of a certain quality. After it is used for fracking, some of that water is returned. This water either needs to be treated to be kept at the standard that they need for continued use, or it needs to be shipped offsite to be injected into dedicated injection wells. Sometimes these can be in the same area, and sometimes they are further off.

Ms. Bucklin Sanchez said that Mr. Kilbreath had previously mentioned that equilibrium must be maintained between the water used for production and the water that is disposed of. She asked whether that effort is being maintained. Mr. Stimson replied that he and Mr. Kilbreath were looking at the volume of produced water versus the volume of injected water. He said that this seems to be pretty balanced for the most part, but he noted that the database maintained by the Board of Oil and Gas does not contain information that always answers all of those questions. This is something that needs to be revisited. When Mr. Stimson looked at this a few months ago, he and Mr. Kilbreath examined Richland, Sheridan, and Dawson counties and their amounts of water produced versus injected seemed pretty close.

Ms. Steinmetz said it was her understanding that Mr. Habeck was scheduled to take over some of Mr. Kilbreath's former responsibilities. Mr. Kron said that he had heard about that, and he emailed Mr. Habeck to find out about his role. It sounds like his role is still being determined but perhaps, over time, he may move into taking over some of the components of Mr. Kilbreath's former position.

Mr. Kron mentioned that MAS has been looking at surface water data, but they have not started the groundwater monitoring. He said that they saw some high levels of metals and radioactivity in the Cedar Creek area, but they do not have enough information yet to say whether that is naturally occurring. They are aware that there are some high natural sources in this area, but they can also be associated with these activities. They have changed up some of the monitoring parameters to use the groundwater and surface water samples to see if they can identify where the water is coming from and find the sources of these high levels.

Mr. Salley asked if they could get Mr. Stimson and Mr. Kron to come back in a year for an update. Mr. Stimson and Mr. Kron agreed that they could return.

Public Comment –

Mr. Jim Jensen, with MEIC, congratulated DEQ staff on working to overcome the siloing that has traditionally occurred within the agency. He said that the idea of improving communication between folks with different job responsibilities is a good one. He also said, however, that this effort does not go far enough. He urged WPCAC to consider the idea that Montana needs a department of water resources. Mr. Jensen said that even with all the work being done at DEQ, water quantity and water rights implications for water quality are completely missing. These two areas need to be better integrated and related. Mr. Jensen said that it is his, and MEIC's, position that having a department dedicated to water resources of the state makes a lot of sense.

Mr. Jensen then brought up the topic of the Smith River Mine. He said that he speaks for MEIC and others when he says that he will be watching very closely what happens next on this proposed mine. He said that Mr. McCullough, while declaring neutrality, made it clear that his recommendation was to have the mining company send a representative to give a presentation to the council. Mr. Jensen said that a better neutral position would have been either to have the agency make its presentation or to have both sides of the issue brought before the council. He said that MEIC and the company both have legitimate concerns.

Mr. Jensen mentioned that he and Mr. McCullough have spoken about Zortman-Landusky. He explained that Zortman-Landusky was a completely different kind of mine, but the technical basis upon which the permit was granted was nearly identical to the one used at the Smith River Mine. The largest fine ever against a mining company for violating the CWA for acid mine drainage was \$38 million, and it occurred at Zortman-Landusky, said Mr. Jensen. He said that the real issue is the science and process, not the type of mining.

Mr. Salley asked if he correctly understood Mr. Jensen that if Tintina Resources sent a representative to give a presentation to WPCAC, Mr. Jensen would be willing to have someone from MEIC present at the same time. Mr. Jensen said that he could, though he did not believe that a debate would benefit the council. Mr. Salley and Mr. Leu agreed that a debate would not serve the council but that hearing two presentations of different opinion could be of value.

Agenda Items for Next Meeting –

Chairperson Trevor Selch mentioned Ms. William's recommendation of having Mr. Mathieus present an update on DEQ's position on the definition of state waters rule package. This will be added to WPCAC's June 13, 2014, agenda. Ms. Steinmetz said that at the next meeting Mr. Reid will be discussing new and amended rules for permitting. Additionally, Mr. Dean Yashan will be speaking about TMDLs.

Ms. Steinmetz asked the council if they would like to try to get representatives from MEIC and Tintina Resources to come and speak at the next meeting. Mr. Leu suggested that this might be better to present in a year when Tintina Resources turns in their application for an operating permit. Mr. Salley mentioned that he has been to Tintina, and the company is willing to explain what they are doing. The council agreed that it would be a good idea to keep tabs on their permit application. Discussion ensued over WPCAC's role in this subject. The council agreed that it is not an issue that they have an active role in, but that presentations on the subject could be valuable for informative purposes. Ms. Steinmetz mentioned that as WPCAC members are stakeholders, in addition to advisory council members, a goal of the meetings is to keep them informed about pertinent issues.

Chairperson Selch asked that WPCAC members send any other agenda items of interest either to him or Ms. Steinmetz.

ADJOURN

Chairperson Selch moved to adjourn the meeting and Mr. Leu seconded the motion. All were in favor; the meeting adjourned at 1:03 p.m.

REFERENCED LINKS FOR MEETING MATERIALS

(Sites last updated 5/2/2014)

May 2, 2014 Agenda -

http://deq.mt.gov/wqinfo/WPCAC/agendasMinutes/2014/May2/AGENDA_5-2-14.pdf

Agenda Links:

Approved Minutes from February 21, 2014 -

<http://deq.mt.gov/wqinfo/WPCAC/agendasMinutes/2014/May2/2-21-2014ApprovedMinutes.pdf>

DEQ Organization/Leadership Introductions -

<http://deq.mt.gov/wqinfo/WPCAC/agendasMinutes/2014/May2/DEQOrgPresent.pdf>

Water Protection Bureau Introduction/Permitting 101 -

<http://deq.mt.gov/wqinfo/WPCAC/agendasMinutes/2014/May2/Permitting101WPCAC.pdf>

Energy Impacts -

http://deq.mt.gov/wqinfo/WPCAC/agendasMinutes/2014/May2/DEQ_Review_of_OG_Activity_043014.pdf

Submitted by,

Sarah Norman 5/19/2014