

Lower Missouri River Basin Advisory Council Recommendation Development Report



Milton Mediation and Facilitation
Roundup, Montana

May 28, 2014



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May 28, 2014

1 SYNOPSIS

The Lower Missouri River Basin Advisory Council (LMR BAC), comprised of twenty members selected from applicants representing a variety of interests in the expansive lower Missouri River area of eastern Montana, began the difficult task of addressing water resource issues of concern in August, 2013. Basin residents were invited to attend a series of six scoping meetings held in September and October. Issues raised during those meetings were winnowed down by the LMR BAC to five core topics detailed in a Final Issues Scoping Report released December 31, 2013. Those issues were Surface Water Availability and Quality, Groundwater Availability and Quality, Water Management, Future Needs, and Implementation Strategies.

In January, 2014, the LMR BAC began meeting to address issues identified in the Scoping Report, with assistance from technical presenters who filled knowledge gaps. The goal was to craft specific recommendations for each issue that could become part of the statewide water plan. As members discussed alternative strategies to employ in solving the state's water resource problems, they relied on some implicitly agreed-upon criteria to filter proposed recommendations.

1. Under Montana's Prior Appropriation doctrine of water rights, all beneficial uses that have a water right, consumptive or non-consumptive, are equal. Beneficial use includes, but is not limited to the following categories: agriculture, domestic, industry, recreation, energy development, commerce, and ecology (i.e., fish, wildlife, habitat, river health.) No single beneficial use will be targeted by the BAC's recommendations.
2. The ultimate success of the Montana Water Supply Initiative and state water plan will depend on education of the public. Members of the BAC learned a great deal as they investigated water resource issues raised during the public scoping process. Adopted recommendations are to be based on facts rather than perceptions.
3. Residents in sub-basins cannot expect the state or federal government to solve all of their water resource problems. Local grassroots organizations can provide an effective vehicle for achieving measurable results. In particular, infrastructure repair or rehabilitation must be attacked at the local level, with costs determined, specific projects prioritized, and funding explored.
4. While many of the BAC's recommendations may have associated costs, it is up to the state legislative and executive branches to set priorities and appropriate funds to implement them.

BAC members are not tasked with nor equipped with the tools necessary to make cost estimates.

5. If there are existing statutes and regulations that satisfactorily address particular issues, those issues will not be addressed by BAC recommendations.

The BAC met a number of times face-to-face and by conference call to develop specific, actionable recommendations for each of the issues outlined in their Final Issues Scoping Report. As those recommendations were vetted by the group, some adjustments in issues statements were necessary. The categories of the Council's final recommendations included Water Use Administration; Storage, Distribution, Infrastructure Maintenance, and Application Efficiencies for Irrigation Water; Water Resource Inventory and Measurement; Groundwater Aquifers: Quantity and Quality; Future Demands on Water Resources; and Watershed Organizations. In addition, issue statements and recommendations were developed by each of the four sub-basin groups represented on the BAC – Judith River, Milk River, Missouri River below Ft. Peck dam, and Musselshell River – for consideration by local watershed groups that might be interested in pursuing implementation in the future.

A draft Recommendation Development Report was released for public comment in mid-April, and four additional meetings in the lower Missouri River basin were scheduled to listen to what citizens had to say about the LMR BAC's efforts. The BAC met again at the end of May, 2014 to modify and finalize the recommendations.

2 INTRODUCTION AND BACKGROUND

To begin the legislatively mandated update of the state water plan, the Department of Natural Resources and Conservation (DNRC) launched the Montana Water Supply Initiative (MWSI). DNRC determined that public involvement was crucial to acceptance of any plan that might be implemented by the state. To find out what water resource issues were of most concern to Montanans, DNRC chose to appoint a 20-member Basin Advisory Councils (BAC) in each of the major river basins in the state for the purpose of conducting public scoping sessions. Because the Missouri River watershed is so large, because its climate and geographical features are so variable, and because the upper reaches of the basin are closed to new water appropriations while the lower reaches are not, it was split into an Upper and Lower basin. In the case of the Lower Missouri River Basin (LMRB), a facilitation contractor was engaged in early July to begin the process of soliciting and selecting BAC members.

Through phone calls, emails, and personal contacts, a list of over one hundred potential candidates, or organizations that might wish to put forth candidates' names, was developed, and letters and/or emails were sent out requesting applications. At the same time, several press releases were disseminated from DNRC headquarters for state-wide distribution, and by the LMRB facilitation

team for local distribution. Cooperation from news media was good, and enough applications were received to constitute broad representation on the LMR BAC. A kick-off meeting of the BAC was held in Malta on October 2, 2013.

Six BAC Scoping Meetings were scheduled in the LMRB, and an advertising campaign successfully produced press coverage of the meeting schedule and purpose by newspapers, regional agriculture publications, watershed newsletters, television stations, and radio stations. Paid display advertisements were also placed in newspapers serving the six areas where meetings were scheduled.

Location	BAC Members	Staff Members	Technical Advisers	Public	Total Attendance
Lewistown, 10-8-13	7	5	4	14	30
Glasgow, 10-23-13	5	7	4	1	17
Culbertson, 10-24-13	7	4	1	13	25
Roundup, 10-30-13	4	7	1	15	27
Harlowton, 10-31-13	5	6	4	22	37
Havre, 11-7-13	6	7	2	16	31

Table 1: LMRB Scoping Meeting Attendance

Total attendance for the six scoping meetings was 167, including 81 members of the public.

Each of the scoping meetings began with introductions around the tables. For purposes of education on the MWSI process and current available data on water resources, DNRC staff members made brief presentations, and the whole group participated in a discussion of water resource issues. The Facilitator made sure that every person attending had an opportunity to express personal concerns about water resources, and participants rated the meetings successful. Some written testimony was presented by participants, or was submitted later, and that testimony is a part of the record for the scoping meetings. (For a complete list of issues developed at the six scoping meetings, refer to Appendix A of the Final Issues Scoping Report available online at [Montana State Water Plan](#)).

At the conclusion of the scoping meetings, the BAC met again to prioritize issues raised by the public, then select issues for which recommendations would be developed during the next phase of the Water Supply Initiative process. Issues selected included:

1. Surface Water Availability and Quality – which includes information required to determine the amount of water that is legally and physically available for existing and future uses; options to capture additional spring runoff; voluntary conservation programs, or in the case of industrial water use, development of recycling technology; addressing aging infrastructure, effects of poor water quality on domestic and agricultural uses; and better coordination among the state agencies charged with managing water quantity and quality.

2. Groundwater Availability and Quality – which includes mapping and characterizing aquifers that might provide opportunities for future uses; increased understanding of recharge rates, quality, and usage of groundwater; better understanding of the interactions between groundwater and surface water; and long-term monitoring of wells to gather information on changes in water quality and groundwater levels in response to climate variability and nearby water use.

3. Water Management – which includes fair enforcement of water rights decrees; protection of senior water rights; the need for streamflow gages to support the work of water commissioners; and management of water levels in reservoirs in the Lower Missouri basin is critical to recreational uses and to the businesses that depend upon those uses.

4. Future Needs – which includes recognition that Montana will need more water rather than less in the future; factors, including climate change, that may affect water supply; changes in the timing of spring run-off may impact access to available water necessitating revisions of water management practices; and recognition that water quantity and quality are directly related, and that poor water quality impacts some types of beneficial use.

5. Implementation Strategies – which include reservations about how a state-wide water use plan can be implemented; the need for local watershed organizations to serve as examples of the positive results of communication and collaboration on local water management issues; and the need for the state-wide water use plan to be adaptable and responsive to changing water resource supply and demand.

3 RECOMMENDATION DEVELOPMENT

In January, 2014, the Lower Missouri River Basin Advisory Council began the process of developing recommendations to address the water resource issues raised during the scoping process. Council members recognized that there were gaps in their knowledge of existing statutes, regulations, policies, and research relating to water, so presentations by state and federal agency staff were scheduled. Information on USGS water quality issues and studies related to energy development in Montana; DEQ water quality monitoring programs; US Bureau of Reclamation operation and information on Milk River projects; US Army Corps of Engineers practices and policies; MT Board of Oil and Gas procedures, policies and authority; and DNRC water rights statutes and regulations was shared and thoroughly discussed.

Water resource issues identified in the scoping process and selected by the LMR BAC for consideration in the recommendations phase of the Montana Water Supply Initiative process were modified during meetings and conference calls in February, March, and the first part of April. Many drafts were considered and debated. Some issues and recommendations were dropped from the process while new ones were added. The recommendations presented in this report are the result of many hours of hard work by BAC members, DNRC staff, and BAC Technical Advisers.

A number of issues were identified as specific to the four sub-basins in the lower Missouri River basin: the Musselshell, the Judith, the Milk, and the Missouri below Ft. Peck Dam. Those issues, drafted by BAC members residing in the sub-basins, appear in Section 5 of this document. They will not be considered by DNRC for inclusion in the final state water plan document, but will instead serve to inform watershed organizations about issues that need to be explored and addressed locally.

The next step in completion of a Recommendation Development Report that will be submitted to DNRC by the BAC by June 15, 2014, was to allow the public in the Lower Missouri River basin time to comment on the proposed recommendations. Four meetings were scheduled to gather comment, and there was also be an opportunity for individuals to submit written comments on the recommendations before the BAC's final meeting May 28. At that meeting, the task of BAC members was to further modify and adopt recommendations to be included in the final report.

3.1 BAC PHASE 2 – SUMMARY OF INFORMATION TRANSFER AND ALTERNATIVES DEVELOPMENT

The Lower Missouri River Basin Advisory Council was assigned “homework” by Facilitator Bill Milton. Each member was to submit at least one recommendation alternative for compilation and distribution to all the other BAC members. A conference call was scheduled for discussion of the submissions. The results were mixed, with some members successfully focusing on recommendations rather than issues, but it was apparent that additional information from technical presenters would be necessary before any meaningful alternatives could be developed. Facilitator Milton also decided that the staff supporting the BAC would draft a list of issue statements based on the group's Final Scoping Report for distribution to and consideration by the BAC. Face-to-face meetings were scheduled for information transfer, with conference calls interspersed to begin hammering out recommendation language for each of the draft issue statements.

3.1.1 Meeting #1 – February 18, 2014, Lewistown

Jill Frankforter, USGS Water Quality Section Chief, Helena, gave a presentation on USGS energy-related surface and groundwater research in the Williston Basin, which extends into northeastern Montana, since the 1980s. The agency has built aquifer modeling systems for shallower aquifers and is now beginning to look at deeper aquifers in the area. One of the most prominent studies was begun on tribal land north of Poplar when contamination from leaking oil wells and brine pits built in the 1950s impacted drinking water. Remediation efforts have been partially successful, but there are on-going problems with water quality and the systems used to transfer water from the Missouri River to residents. (The tribe has also pointed out in a recent news story that aquifers under their land have become unusable for any future purpose, and that has an ongoing economic impact.)

Frankforter went on to say a small groundwater baseline testing program was initiated in the Williston area last year, but there is no way of knowing for sure whether water quality had already been degraded by energy development. Researchers wish the project could have been started six years earlier, and that funding could be assured for long-term follow-up monitoring. USGS is working to coordinate with Montana's DEQ and MBMG to test wells in northeastern Montana as soon as possible. In 2012 some oil production wells were tested to establish their production water's chemical signature in case any contamination occurs in the future.

In addition to aquifer water quality research already under way, USGS planned studies include a groundwater availability “budget” for the Williston Basin, a study on how much water will be required for fracking activities during the expected life of the basin's oil boom, and a groundwater quality study on Blackfeet tribal lands.

The next technical presenter was Clayton Jordan, Bureau of Reclamation Reservoir Operations, Milk River Project. Jordan’s presentation began with a summary of the history of the project. The original authorization was to provide irrigation water to the area, and flood control became a part of the project in 1957. Other uses now include recreation, fish and wildlife, municipal drinking water, and industrial uses. The Montana FWP division, Blackfeet Tribe, NRCS, Army Corps of Engineers, and Milk River Joint Board of Control work together with the Bureau of Reclamation to manage the project.

The entire Milk River Project infrastructure is in need of rehabilitation, but at this time, there is no funding available for major repairs or replacement. The system has not met reliability standards for the past twenty years. A large portion of the cost burden will most likely be borne by project water users, which total 140,000, including Bureau of Reclamation lessees, tribal users, and private water rights users.

Infrastructure failure is not the only concern for Milk River water users. Sedimentation has reduced the capacity of the two lower Milk River reservoirs, Fresno and Nelson. Fresno now holds 92,000 acre/feet at full pool, while it was built for 120,000 acre/feet. Nelson has also lost capacity, and leaks about 1,800 acre/feet per month due to seepage through its dikes. A dam safety project will start next year, but it will not address the seepage issues.

The third and final presenter at Meeting #1 was Tom Richmond, Administrator, Montana Board of Oil and Gas. Richmond displayed several charts showing data for drilling permits issued in Montana. Coal bed methane permits peaked in 2005, and had nearly disappeared by 2008. Natural gas permits peaked in 2006, and oil permits are peaking now. Economic factors play a large role in which types of permits are sought by energy companies. Most of the current oil drilling permits have been issued in Richland and Roosevelt counties, closer to the most productive areas of the Bakken play. Since 2000, 700-800 oil wells have been drilled in Richland County in Montana. Other old wells were re-drilled horizontally to increase production. In areas outside the Bakken, oil drilling permit numbers are at their lowest point since the beginning of the period that started

in 1960. In central Montana, where the rate at which oil can be pumped from the Heath Shale does not match production from the Bakken, drilling is not cost-effective given the current price of oil.

BAC member Eric VanderBeek asked about drilling activity in the Judith River basin, through what process are permits granted by the Board of Oil and Gas, and does the Board ever deny a permit.

Richmond replied that the drilling in the Judith is for “geologic exploration,” even though there is no category for that, so the permits were granted for oil wells. When permits are requested for an area outside of an existing oil field, the Board of Oil and Gas publishes a notice of the application, and there is a 10-day protest period. If a hearing is scheduled, persons who wish to comment must appear at the hearing. The Board of Oil and Gas does not deny permits, as that would be a “taking” of property rights, but there can be conditions attached to the permits. The Minerals Management Bureau of DNRC processes leases on state-owned land, and the BLM is the primary regulatory agency on tribal lands. The EPA monitors drilling activity on private and public lands.

BAC member Kristi Kline asked when the BOG looks at water resource issues in the permitting process, and BAC member Dave Galt asked about fracking chemical disclosure rules.

Richmond said current regulations were developed to protect shallow, good quality aquifers. Oil and gas well casings must be solid from the surface to a point below the lowest fresh water aquifer. No holding ponds are now allowed for production water, the wells must use a closed system. The Board looks at existing water wells in the area of development to determine the depth of aquifers.

In August, 2011, the state adopted rules that require all well fracturing material components be disclosed, and that well fracturing is part of the initial drilling process. If fracturing is contemplated on an existing well, a permit must be obtained. The fracturing material website is at frackfocus.org, and it is a central U.S. depository of data.

BAC member Dick Iversen commented that the footprint of an oil well operation is 5-6 acres, and once surface water leaves the site, the EPA or Montana DEQ is responsible for water quality regulation. Sites are bermed to prevent drilling and production water from leaving the site. Richmond added that energy companies must have a spill control plan approved by the EPA. Generally no enforcement action occurs unless there is an uncontained spill.

DNRC Water Resource Planner Michael Downey mentioned that the Board of Oil and Gas regulates Class 2 injection wells that are used for either enhanced oil or gas production, or for production waste water disposal. BAC member Doug Hitch asked whether all production water is injected.

Richmond replied that production water can be discharged at the surface if it meets water quality standards established by DEQ. He said that much of it is of high enough quality to be used for drilling or fracking purposes. The Board of Oil and Gas regulatory program does not cover water

quality testing. He suggested that private well owners should test their own water and that way the results would remain confidential. The MBMG was allocated \$660,000 by the 2013 Montana Legislature for groundwater monitoring. The agency is considering using the funding for long-term research.

BAC members Dave Galt and Jane Holzer described the MBMG coal bed methane groundwater testing program being administered by conservation districts. About 10-15 wells per county can be tested once by the program. Jane said the program would be more beneficial if more wells in more areas could be tested, especially in far eastern Montana. Some energy development companies have domestic or stock wells tested in the vicinity of their operations, but the results do not become public.

The remainder of the day's meeting was spent developing a short list of possible recommendations related to draft Issue Statement #5, Groundwater Aquifers – Quantity and Quality. Recommendations suggested were:

- Short-term, identify 3-5 major aquifers that should be more thoroughly defined and characterized by research
- Expand funding for aquifer research
- Revise the method for prioritizing research locations so that sparsely populated areas of the state receive the same attention as densely populated areas
- Add a risk factor for contamination to the list of criteria considered in the research prioritization process.
- Tie water quality and quantity together in issuance of new groundwater permits
- Account for wastewater when considering available water quantity

3.1.2 Meeting #2 – March 5, 2014, Ft. Peck Dam Interpretive Center

DNRC Water Resource Planner Michael Downey summarized the basin water plan process, and how the BAC's work will be incorporated into the statewide water plan. At present the Lower Missouri Basin Plan is about 50% completed at 100 pages long. The BAC recommendations that will be adopted by the end of May, 2014, will become a part of the basin plan. The basin plan includes scenarios that consider increasing population, and long-term drought conditions. The statewide water plan will reference the four individual basin plans rather than incorporating them in entirety. Recommendations from the individual basins will be considered for inclusion in the final state plan that will be presented to the 2015 Legislature.

John Daggett, US Army Corps of Engineers presented information on the Corps' management of the Missouri River through and below Ft. Peck Reservoir. All six dams operated on the Missouri by the Corps are treated as one system. The Corps is authorized to manage for flood control,

hydroelectric power, water supply, water control, recreation, fish and wildlife, navigation, and irrigation. The Corps looks at plains snowpack, mountain snowpack, and rainfall each year to determine how much storage capacity may be necessary to store floodwaters.

Reservoir Control Center presents an annual plan for public comment each year. The plan considers hydroelectric needs, endangered species, navigation, irrigation (when possible), and flood control. The hydroelectric facility at Ft. Peck produces about 10 billion KW each year, which markets first to preference customers (non-profit rural electric companies), then to the open market. Water releases year around are ordered every day or so to meet power requirements.

About 140 private irrigators are located between Ft. Peck Dam and the North Dakota border. When possible, especially during drought periods, the Corps tries to release enough water to fill irrigation needs, but there is no contractual obligation to do so. Channel changes and new sand bar formations have interfered with irrigators' ability to reach the river, so higher releases would be necessary to allow easy access to the water. There is water available in the Missouri River below Ft. Peck for additional irrigation, but it may be difficult to access. There are no guarantees, however, that irrigators will receive enough water without having to move their pump sites. The irrigation water authorization only applies to federal water delivery projects, not private irrigators. Tribal rights and water reservation demands must also be met.

During drought conditions, all the federally-authorized purposes pay a price, including recreation facilities. Businesses, especially at the upper end of the reservoir, may be left with the water far from their boat ramps. The Corps tries to help by extending the boat ramps where possible, or putting temporary boat ramps in place.

Water releases vary from day to night, as does the river level below the dam. At night, the release might be 9,000 cfs, and during the heat of the day in the summer, 13,000 cfs. Floating pumps can make use of water more reliably than fixed sites. Some of the conservation districts have helped producers by removing sand bars to improve accessibility to the river. The Corps tries to give producers information in advance of releases. Municipalities haven't had problems accessing water.

BAC member Jim Peterson asked whether DNRC will be doing an analysis of water availability both above and below Ft. Peck, and developing a statistical model to estimate the effects of drought on the statewide water use plan.

Michael Downey replied that there are several modeling efforts going on. The Bureau of Reclamation is studying water availability from the headwaters of the Missouri to Ft. Peck. The water plan that results from the Water Supply Initiative project will raise more questions than it answers on what data is needed for good forecasting of water availability and use.

Peterson asked how a water permit applicant can know whether his application will be granted, with so many agencies involved in determining availability in the Missouri below Ft. Peck.

Michael Downey said there is water available, and DNRC is granting new water right permits. If a downstream state were to try to call for water from Montana, a legal battle would ensue. An individual in Montana who has a water right cannot be forced to give up that right to someone downstream out of state.

The Corps is selling excess water in North Dakota that comes from reservoirs. Last year, barge operations needed more water, and the Corps denied the request. The only releases made are based on the annual operating plans for the reservoir system. The Corps did file for a water right in the 1970s for some of its authorized uses.

Michael Downey gave a short summary of the issue of flowing wells in Montana (artesian wells). There are about 1,500 mostly stock water wells in the Lower Missouri and Yellowstone that run continuously at 10-20 gallons/minute, allowing 24,000 acre/feet to flow onto the ground, down drainage ditches and eventually into rivers. The water quality is probably lower than that of the river. Some of these wells are losing productivity as the water level in the aquifers drops. The BAC could make a recommendation that valves be installed on these wells to control the flows and conserve water, with some cost sharing by federal and state grant programs. This would be a voluntary program that should elicit good support. If a water right holder on a flowing well filed for 100 gallons/minute, by installing a valve that reduces the flow to 10 gallons/minute, the water right beneficial use quantity would not be reduced.

A pilot program in Petroleum and Fergus counties demonstrated that adding valves to flowing wells did make a difference in aquifer water levels.

The group began working through the draft Issue Statements, refining language on both issues and recommendations.

Discussion of Issue Statement #1, Water Resource Inventory

There were differences of opinion about what should be included in Issue Statements #1 and #2. After some discussion, it was decided that Issue Statements #1 and #2 would be handled by an irrigator sub-committee: Bill Bergin, Bob Goffena, Jim Peterson, Peter Marchi, with assistance from Bill Milton, Michael Downey, and any other BAC members who want to participate by conference call.

Issue Statement #3, Storage, Distribution Infrastructure Maintenance

Federal government, the state, and local communities in the Milk River need to get together and plan for the St. Mary's diversion project collaboratively. How should this apply to other areas in the Lower Missouri River basin?

Michael Downey explained that two programs, the Renewable Resource Grant and Loan program and the Reclamation Development Grant program, are used to help share costs for projects that enhance water and other renewable resource projects across the state. DNRC staff ranks grant applications by set criteria, then forwards recommendations to the legislature for funding every two years. Unfortunately, the funding assistance is seldom enough to pay for construction of major projects. Grants can, however, pay for preliminary engineering to help design the projects.

BAC member Dick Iversen suggested that basins use a strategy that in the short-term, project design be accomplished using state grants; medium-term, study the project and do preliminary engineering; long-term, look for funding sources from all stakeholders.

Downey said that the Milk River has been studied and re-studied, and estimated costs determined, which were overwhelming. If the diversion canal failed catastrophically, 80% of the flow of the Milk River would be lost to all users. The agricultural users should not be the only ones who share in the cost of repairs.

BAC member Rhonda Knudsen suggested a recommendation of establishing watershed councils in the short-term to develop funding methods.

BAC member Jim Peterson said the legislature is not likely to respond to a request for enough money to make major repairs. Instead, a package should be developed that might include tax-free bonds, tax incentives, private contributions to combine with state and federal funding sufficient to fund a project. The plan should come from the local citizens who are affected by the project, and there should be some benefits to the private partners in the process. Tax credits might help encourage participation. Establish working groups to assess local capacity, incentives, public/private partnerships, and financial commitments to address infrastructure needs.

BAC member Kristi Kline said that the St. Mary's Working Group came to a standstill because they need a local coordinator to help keep the group going. The groups need assistance from the state to develop capacity and operational security.

Downey suggested adding that the state should provide operational funding to assist in the establishment of the working groups.

Issue Statement #4, Water Measuring Devices

At present, gaging maintenance is a federal/state/local partnership. There is a budget request from DNRC now to increase funding for streamflow gages.

Each sub-basin should make decisions about where new gaging stations should be placed, and how those stations should be paid for.

Issue Statement #5, Groundwater Aquifers: Quantity and Quality

In addition to groundwater quality monitoring, connections between aquifers and surface water should be identified and characterized.

There was some discussion of whether private well owners would want the results of their well testing to be public information. Participation in a groundwater testing program would be voluntary.

Michael Downey explained the Colorado, Wyoming, Utah, and New Mexico have adopted or are in the process of adopting statutes to bring the oil and gas industry back into the regulatory framework for meeting water quality standards. In 2005, the industry was exempted from meeting Clean Water Act Regulations.

Meeting participant Deb Madison, who works for the Ft. Peck Tribe in its environmental issues office, said that after the Poplar aquifer contamination came to light, the tribe has adopted new rules for testing domestic and stock wells within a mile of an oil field or proposed oil field to establish baseline water quality data.

It was decided to recommend that the governor appoint a taskforce to address perceived water quality issues with the energy industry by using standards recently adopted by other western states. This recommendation will be discussed at future meetings when other members of the BAC have had a chance to study it.

Another recommendation was added for supporting federal efforts to deal with flowing wells.

Issue Statement #6, Future Demands

The US Army Corps of Engineers can't promise to make more water available for new water rights permits on the Missouri River downstream of Ft. Peck Dam. Federal law may not allow releases for irrigation. A study in 2009 investigated whether the Corps' original authorizations were still valid, and nothing was changed. There is at present, however, enough water to allow some new permits to be issued.

There was some discussion about keeping the Lower Missouri River Basin Advisory Council going beyond the Water Supply Initiative process. Funding to keep the BACs operating year-round is not a likely scenario, but the legislature might be willing to fund BACs every other year, 6 months before each legislative session. The BACs could evaluate how implementation of their recommendations is going, and what needs to be changed in the statewide water plan.

Smaller, sub-basin groups might be able to function better than a large-scale BAC, especially in eastern Montana where geographical distance impedes collaboration, as do differing issues in each sub-basin.

A recommendation was drafted to support continuation and expansion of the Watershed Capacity Building Program initiated by the 2013 Legislature.

Before the meeting adjourned, BAC members agreed to participate in weekly conference calls, facilitated by Bill Milton, to continue working on issue statements and recommendations.

Location	BAC Members	Staff Members	Technical Advisers	Public/ Presenters	Total Attendance
Lewistown, 2-18-14	14	5	5	5	29
Ft. Peck, 3-5-14	12	5	3	5	25

Table 2: LMR BAC Information Transfer and Alternative Development Meetings

3.2 BAC PHASE 3 – SUMMARY OF RECOMMENDATION DEVELOPMENT

After receiving a quick primer on water resource statutes, regulations and procedures during two information transfer meetings, members of the BAC were ready to begin finalizing the set of recommendations proposed in various forms since the end of January, 2014. Issue statements underwent several re-organizations along the way, and recommendation language was considered and debated during face-to-face meetings and conference calls. By the third week of April, the BAC was ready to present its work to the public for comment.

3.2.1 Meeting #3 – April 10, 2014, Lewistown

After the meeting began, there was a lengthy discussion of how to handle differences of opinion on final recommendations and possible BAC member proxy member participation in those decisions. No resolution of these matters occurred, but members agreed to address the issues either by conference call before the final BAC meeting, or during the final BAC meeting.

Krista Lee Evans, sitting in for BAC member Dave Galt, raised a question about the purpose of the public comment meetings the BAC will schedule for the end of April and beginning of May. DNRC Water Resource Planner Michael Downey responded that a draft recommendation report will be made available to the public prior to the meetings, which will be both informational and provide an opportunity for the public to comment on specific recommendations. It is even possible that new issues will be raised that should be addressed by the BAC. At the BAC’s final meeting, amendments to the draft recommendations report will be considered.

Downey went on to explain the process that will be used by DNRC to draft the statewide water plan that will be presented to the Legislature at the end of summer. DNRC staff will review all the draft recommendations coming from all four river basins in the state, and put together a draft plan. Then two BAC members selected by each basin group will travel to Helena, review the draft

report, and make comments or suggestions for changes. That revised draft will be sent out to all BAC members around the state for additional comment, then DNRC will finalize the plan.

A brief update on sub-basin issue statement and recommendations followed, with BAC members from each sub-basin agreeing to continue meeting locally to finalize language.

Issue Statement #3 – Water Resource Inventory and Measurement

Krista Lee Evans suggested that “physically available” be changed to “legally available” in the first sentence of the issue statement. After some discussion, the group decided to change the phrase to “legally and physically available.” The word “fairly” was struck from the phrase, “It is difficult for managers to fairly distribute water without knowing how much is available,…”

The phrase, “that protect fisheries, and recreational use” was replaced with “and those who want to know streamflow levels” in Goal 1) Objective a).

In Goal 1) Objective b), the word “unmetered” was inserted before “municipal water systems.” In section i) the phrase “point of use” was changed to “point of diversion.”

In Goal 1) Objective c), the \$1 million set amount was changed to “adequate funding.”

There was some discussion about exempt wells and whether there should be a change in language about measuring devices on “large volume” wellheads. The phrase “large volume” was dropped from Goal 1) Objective b). No additional language on exempt wells was added, as the legislature is already addressing the issue in the 2015 session.

Issue Statement #2 – Storage, Distribution, Infrastructure Maintenance, and Application Efficiencies for Irrigation Water

Krista Lee Evans suggested changing references to “streamflow” to “surface water.” There was no objection from BAC members, so the changes were made.

To avoid confusion about state-owned infrastructure in Goal 1), first sentence, the beginning of the sentence now reads, “~~The state's~~ Montana’s aging irrigation water storage and delivery infrastructure inventory must be updated,…”

Tim Davis, DNRC Water Resources Bureau Chief, called in via conference call after lunch. He said he was pleased with the diversity of BAC members, and encouraged by progress made in all four basins around the state. He expects that there will be considerable overlap of issues across all the basins, but recommendations for addressing those issues will vary. DNRC will make sure that BACs are involved in reviewing the draft state water plan before it is finalized for the legislature.

Jim Peterson reminded those present that the water plan will be presented to the 2015 legislature, not for adoption, but for possible amendment by resolution. The Executive Branch will adopt a final plan. Implementation of the recommendations in the plan, however, can be controlled by legislative funding appropriations.

Issue Statement #5 – Future Demands on Water Resources

Michael Downey said that after listening to Bureau of Reclamation and US Army Corps of Engineers representatives at BAC meetings, there is no additional water held in federal projects (Fresno and Nelson) in the Lower Missouri River basin besides Fort Peck (where none is needed) that can be released for new uses. The phrase, “approaching federal water managers with the goal of releasing more impounded water for use within the state,” was dropped from Goal 1) Objective a).

Krista Lee Evans asked that the short-term recommendation of Goal 1) Objective a) be dropped as it targeted the oil and gas industry. The permitting process has already been changed to make it easier to put production water to beneficial use, and BAC member Jim Peterson said no use should be singled out for favor, so the recommendation was dropped.

BAC member Bob Goffena said small off-stream storage projects could help capture spring run-off for use later in the irrigation season, and also retain contract water releases when water users forget to notify water managers that they have finished using their water. A recommendation to explore possible off-stream storage sites was added to Objective a).

A discussion of water banking followed, the group decided to move the first sentence of Objective b) to a Short-term Recommendation: “Water banking strategies should be explored as a tool to facilitate transfers of water to differing uses.”

Issue Statement #1 – Water Use Administration and Enforcement

Several BAC members expressed the view that problems with the adjudication process should not be mentioned in the final Recommendations Development Report. The process needs to be completed as efficiently and accurately as possible, but there should be no implication that any existing problems warrant starting all over again.

Krista Lee Evans outlined the details of a Montana Water Court order and supplemental order that will require re-examination of some claims using a more stringent process than was originally applied to them. Scott Irvin said that the re-examination will still not be as rigorous as that used in many basins, and that adjudication will never result in completely accurate water rights decrees. Peter Marchi reminded the group that objections made before Final Decrees can help clean up inaccuracies. Scott Irvin said keeping a strong change of use process in place will also help resolve issues of acreage expansion, over-stated claims, or abandoned claims. The group agreed to strike language pointing out discrepancies in water right claims from Issue Statement #1. A summary

of the discussion will appear in the final Recommendation Development Report so the public knows that the BAC wrestled with the issue in response to comments made at scoping sessions.

Support for timely completion of the adjudication process was unanimous, and the 2020 deadline for completion of Temporary Preliminary or Preliminary Decrees for all the basins in the state was re-affirmed. An additional deadline of 2027 was added for completion of Final Decrees. An interim deadline of 2024 was added for moving all Temporary Preliminary Decrees to Preliminary Decrees. Once issue remarks and objections have been addressed, both Temporary Preliminary and Preliminary Decrees become enforceable, and eligible for creation of enforcement projects by petition to a district court.

Because of confusion about the status of the Montana Water Compact Commission, the reference to that body was dropped in Goal 2) Objective b) Recommendation i), and the word “state” substituted. The BAC agreed that federally-ratified water compacts with all the tribes in Montana should be in place as soon as possible to end uncertainty about reserved water rights.

Several meeting participants found the language of the second paragraph of the issue statement confusing. It was changed to read, “With regard to illegal water use, there is growing sentiment for enforcement against such use,” but that sentence may be removed if all of the objectives relating to enforcement are removed from 3) Goals. Other objectives in 3) Goals may be retained. Michael Downey will work with Peter Marchi to develop language about possible state-wide standardization of qualifications, pay, liability, accountability, and training for water commissioners. The section encouraging (not mandating) water measuring devices for all diverted water was also considered important. There may also be a more efficient and less antagonistic way to handle illegal use of water, i.e. with a state water use ombudsman, and that issue will be further explored before final recommendations are finalized.

Issue Statement #4 – Groundwater Aquifers: Quantity and Quality

Krista Lee Evans recommended dropping the phrases, “industrial development continues” and “before such development occurs” from the second sentence in the issue statements. There was no objection, although there was some discussion about leaving in the word “development.” It was decided that DNRC couldn’t hold up issuing permits while waiting for additional aquifer research to occur. All BAC members agreed that more aquifer research is necessary and needs to be funded by the state.

Krista Lee Evans asked that Objective b) be dropped. A compromise on language was reached, with the following adopted as a short-term recommendation: “Request that DEQ and DNRC work together to educate and encourage local sub-basin groups to address water quality and other issues associated with water use or activities that affect water quantity or quality.”

Objective c) was modified to include all aquifers for monitoring against over-use, not just the ones where high-volume wells were contemplated or drilled. The question of exempt wells was

discussed again, and there was agreement that a cluster of many exempt wells can use more water than one high-volume well. There was also agreement on the need to spread aquifer research dollars to all four river basins in the state rather than expending funds mainly in the more highly populated closed basin areas of the state. The first short-term recommendation was modified to read, “Support local, state, and federal efforts and increase funding through existing DNRC grant programs to control artesian flowing wells to better conserve groundwater resources.”

Before the meeting adjourned, a schedule for public meetings was adopted:

April 29 – Harlowton
April 30 – Lewistown
May 6 – Havre
May 7 – Wolf Point

The meetings are proposed to begin at 6:30 p.m., and last until approximately 8:00 p.m., or longer if necessary. Copies of the draft recommendations will be made available for public review as soon as possible.

3.2.2 Summary of BAC Conference Calls

Nine facilitated conference calls were conducted by the BAC between January 23, 2014 and May 20, 2014. The primary purpose of the calls was to discuss various recommendation drafts that would be reviewed later by a larger group at face-to-face meetings. They also served to work out details of meeting agendas and procedural issues. At two of the face-to-face meetings, conference calling was made available so that BAC members and technical advisers who were not able to travel to the meetings could participate in discussions.

CC January 23, 2014

Call participants discussed how to encourage the public to attend the meetings scheduled to receive comment on draft recommendations; considered the selection of technical presenters at the upcoming BAC meeting on February 18; reviewed a sample recommendation that had been previously distributed so BAC members would better understand how to frame recommendation language; and talked about the possibility of DNRC lobbying legislators on bills introduced in 2014 to implement some of the BAC’s recommendations (Michael Downey said he would check on DNRC protocol on this issue.)

CC February 6, 2014

Michael Downey reviewed the DNRC guidelines for selecting and presenting recommendations in the final report due May 31, 2014. Concern was expressed by some participating BAC members that criteria listed in the guidelines may limit the work of the BAC, and it may be difficult for BAC

members to know whether a particular recommendation satisfies all the criteria. The BAC should be listening to public input, and not necessarily thinking about the political consequences of certain recommendations.

Other participants said the guidelines will provide a useful framework for determining whether potential recommendations will have a chance for advancement through the entire planning process. They will also serve to remind BAC members that their choices need to be realistic. Advice on whether a particular recommendation meets all the criteria can be sought.

A discussion of the first three draft issue statements prepared by BAC advisers and staff followed.

Draft Issue Statement #1 – Water Resource Inventory

Most participants agreed with both the issue statement and the goal/objective statements. Further work on the idea of how to re-adjudicate basins that inaccurately represent historic consumptive use needs to be done. More questions will arise as the BAC works through implementation alternatives, and it may make sense to have a separate issue statement on the adjudication process.

Draft Issue Statement #2 – Watershed Organizations

There was some discussion about whether local watershed organizations should be established by statute or continue to be varied in structure. Funding may or may not be more readily available for formally established organizations. One major concern about local organizations is lack of on-going funding for staff. Some participants feel that conservation districts provide a good vehicle for staffing and funding, and that partners in the organization should step up and provide funding by self-imposed user fees. These suggestions may be translated into implementation alternatives by the BAC. The group's consensus was to let the organizations be developed as local residents wish, without statutory authority.

Draft Issue Statement #3 -- Storage, Distribution, Infrastructure Maintenance, and Application Efficiencies for Irrigation Water

There was general agreement among call participants that Montana doesn't need any more studies that will sit on a shelf and have no impact on water resource issues. The recommendations should lead to a prioritization method for infrastructure repairs, alterations, or maintenance, and funding to assist local water users once a project is approved. To consider additional funding sources, a sentence was added: "New funding methods that involve all stakeholders who benefit from water projects should be explored." A possible implementation alternative might be to consider the local economic benefit of infrastructure projects when funding is being sought. This issue will need more work by the group during the February 18 meeting.

CC February 11, 2014

Call participants discussed four new issue statements drafted by BAC technical advisers and staff.

Draft Issue Statement #4 -- Water Measuring Devices

Most participants agreed with both the issue statement and the goal/objective statements. All agreed that more measuring devices need to be installed throughout the Lower Missouri River basin, especially on the tributaries to Ft. Peck Reservoir, in light of the new CMR Compact. The language was altered slightly to cover all water users instead of just irrigators in Objective b) ii.

Draft Issue Statement #5 -- Groundwater Aquifers: Quantity and Quality

After some discussion, call participants agreed that this issue statement should be broader in focus, not just targeting the oil and gas industry for water quality concerns. Also, the group agreed that aquifer definition and characterization research and water quality monitoring should occur across the state, not just in eastern Montana. BAC member Jane Holzer said that quite a lot of work is being done right now by several agencies, including the Montana Bureau of Mines and Geology. The BAC needs more information on the monitoring programs already in place. This issue statement will be re-visited during the meeting on February 18 in Lewistown.

Draft Issue Statement #6 -- Future Demands on Water Resources

There was general agreement with this issue statement. BAC members asked DNRC Regional Office Manager Scott Irvin to give a short presentation on the “water banking” idea at the meeting on February 18. One question was raised about negotiating for more water released from federally controlled reservoirs, while still meeting the goal of keeping enough water in them to serve recreational uses. Some language clean-up was accomplished in the first paragraph.

Draft Issue Statement #7 -- Water Use Enforcement

BAC members questioned whether this issue statement should stand alone or be combined with water rights adjudication. The issue or orphaned or abandoned rights was moved to Issue #1, b) ii. More discussion on combining water use enforcement with another issue will follow during the February 18 meeting in Lewistown.

BAC member Eric VanderBeek wondered whether the issue of wells producing less than 35 gallons/minute (excepted from permitting requirement) but manifolded together for larger flows should be included in Issue #7, or another issue statement. That question will be discussed February 18.

CC March 13, 2014

The purpose of the call was to discuss just one issue statement: Water Use Administration and Enforcement. Participants included six BAC members from the Musselshell River and Judith

River sub-basins, two technical advisers, facilitator staff, and Legal Counsel for DNRC Water Rights Division.

BAC members all agreed that the statement, as written, was much too detailed, and more suited to a draft bill for legislative consideration than a water use plan. They had some concerns about allowing DNRC too much administrative authority over enforcement of water rights, and felt it should remain a judicial process.

Technical advisers from DNRC clarified that the intent of the recommendations was to make the process of enforcing against illegal use of water less time-consuming, rather than to enforce lawful water right decrees. Illegal water use was a concern mentioned at most of the public scoping meetings.

There was a discussion of inaccurate Temporary Preliminary decrees and whether they can be re-examined before Final decrees are issued. Walt McNutt and Jim Peterson, who both served as members of the Montana Legislature, said it was not likely that the lawmakers would appropriate additional funds to re-examine basins. Instead, persons who feel there are inaccuracies should file objections at the next opportunity in the adjudication process, where issue remarks will need to be resolved before Final decrees are issued. Inaccuracies could also be corrected during any change of water right use application process.

All participants agreed that the adjudication process should be completed as soon as possible, and the Montana Legislature should provide sufficient funding to do so. Tribal water compacts should also be negotiated and ratified to allow completion of adjudication in basins where water quantities associated with tribal rights have yet to be established.

The recommendations related to enforcement against illegal water use were set aside, to be re-considered by the BAC before adoption of the final Recommendations Development Report.

CC April 1, 2014

Two BAC members, a DNRC water resource planner, and two Facilitator staff members conducted a short conference call to review a revised version of Issue Statement #1: Water Use Administration and Enforcement.

Walt McNutt, BAC member and former Montana legislator, suggested that it would be unwise to raise the issue of possible inaccuracies in the existing water right decrees, and language referring to such inaccuracies should be removed from the issue statement. Bob Goffena, BAC member, and Michael Downey, DNRC water resource planner disagreed. Wendy Beye, BAC Administrative Assistant, reminded call participants that a number of comments were made during the scoping sessions by citizens concerned with inaccuracies in adjudication decrees.

Call participants did agree that DNRC and the Water Court should do a better job of communicating with the public on the progress of adjudication, which is ahead of schedule this year.

There was some discussion of the recommendation for water measuring devices on all points of diversion, and call participants agreed that measurement should be encouraged, but not mandated.

CC April 2, 2014

The purpose of the call was to discuss how to move the issue statements/recommendations process forward, and the best approach for soliciting public comment on the draft Recommendation Development Report.

Most of the seven BAC members participating in the call were reasonably comfortable with the current version of the issue statements.

Walt McNutt said there have been some changes made by conference call in Issue Statement #1, Water Administration and Enforcement. It is important that only legal and accurate statements are included in the state plan, and that public comments are vetted for accuracy and validity. He feels that some special interests have influenced the BAC to include instream flows as a specific beneficial use of water. All uses are equally important. He again stressed that “legal availability” should replace the words “physical availability.”

Eric VanderBeek would like to see some information from the Madison Group/Kootenai aquifer research report considered by the BAC. Water quality and quantity are linked, so both should be included in the state water plan. The energy industry should be brought under the same regulatory umbrella as all other industries for water quality protection.

Doug Hitch asked about the confusion between Temporary Preliminary and Preliminary decrees, and which one will be required in all basins by 2020. Walt McNutt suggested changing the terms to “enforceable decrees.”

Facilitator Bill Milton asked call participants to think about how to approach the public comment portion of this process: where, when, time of day, how do we get the information out in advance of meetings?

Kristi Kline asked that the draft recommendations be sent out by email, as well as publicized in newspapers, on radio, and by television coverage. We also need a way to record on-line comments. To help encourage participation, we should contact conservation districts, watershed groups, water districts, municipalities, counties, and any other groups we can think of. BAC members themselves will have to thoroughly understand the draft report so they can discuss it competently.

Doug Hitch said the draft report should also be available for download or reading on-line, on the MWSI website, and the link could be listed in all advertising.

Participants decided to hold the public meetings in the evening rather than during the day so that the working public would be more likely to attend.

CC April 15, 2014

The purpose of the call was to revise the Lower Missouri River Sub-basin Issue Statements.

Call participants included six BAC members, a Ft. Peck Tribes Environmental Programs Manager, two BAC technical advisers, and Facilitator staff.

Some discussion of the first paragraph of Issue Statement 2.1 resulted in the following language being adopted: “When large releases of water from Ft. Peck Dam occur, the resulting flows damage irrigation infrastructure downstream, and the cold water from the power plant affects warm water fisheries. The fast-moving water also causes channel migration that can prevent water rights holders from accessing water from the Missouri River.”

Dwight Vannatta’s suggestion that irrigation canals along the Milk River be used to hold flood waters raised some questions about flood timing and the canals already being full in years when heavy rainfall in the area contributes to flood problems. The recommendation was modified to read: “Explore capacity of Milk River watershed to help control floodwater.”

Vannatta also suggested as a recommendation that the Missouri River’s banks downstream of the dam be stabilized, especially in areas near pump sites. No large-scale stabilization projects will occur because there is a federal goal of keeping the river as natural as possible, allowing channels to migrate. Dwight said there is a real problem of landowners losing property and mineral rights to the river, as well as having to move or replace pump sites. The recommendation was modified to read, “Encourage bank stabilization along the Missouri River at points of diversion.”

Dave Galt asked that the last sentence of the first paragraph of Issue Statement 2.2 Missouri River and Aquifer Water Quality and Quantity be removed, as it targets the oil and gas industry. He also asked that “oil and gas” be removed from the last sentence in the first paragraph of Goal 1) and that Objective c) include acknowledgment of the existing state Water Pollution Control Advisory Council. A local group should not be drafting legislation.

Michael Downey (DNRC) commented that a local group established to work with DEQ on eastern Montana water quality issues might want to recommend new legislation. The WPCAC does not meet in eastern Montana, so residents feel that their concerns are not being adequately addressed.

Denise Biggar (DNRC) pointed out that statistically, the oil and gas industry uses very little water from the Missouri River and from area aquifers. She compiled use from water depot and other

energy-related permits in the area: 15.3 cfs from the Missouri River; 2.2 cfs from the Yellowstone River; 5.7 cfs from Fox Hills and Sidney aquifers – a total of less than 25 cfs.

Walt McNutt concurred with avoiding singling out any particular industry. The state’s Clean Water Act enforces EPA standards, and unverified concerns should not be included in the state water plan.

Michael Downey said the public concerns about water quality and quantity expressed during the public scoping meetings should be addressed somehow.

Denise Biggar agreed with Downey, and Dick Iversen said he likes the idea of local stakeholders meeting with DEQ to address concerns.

The sentence remained as modified, “Development is impacting both ground and surface water quality in the area.”

The next question was whether the sentence, “Existing laws and regulations governing the oil and gas industry for water quality should be enforced, and perhaps strengthened,” should remain in Goal 1), first paragraph, or should “oil and gas” be removed.

Rhonda Knudsen said that laws and regulations are already being enforced, but Dwight Vannatta feels that once a permit is issued, there is not much enforcement occurring. Dick Iversen concurred, reporting on a personal experience with surface run-off from a drilling pad that impacted a pasture on his property. He reported it to DEQ, and they wrote a letter to the company, but nothing beyond that was done. DEQ told him they did not have the staff available to enforce against the drilling company.

Denise Biggar and Walt McNutt agreed that the sentence should remain, without singling out the oil and gas industry.

Deb Madison thought oil and gas should remain, but suggested that the energy companies should be required to do their own testing and send results to DEQ. The state is not likely to increase funding for enforcement staff and testing costs. Other entities are required to regularly test water quality and submit the results to DEQ.

Dwight said if other industries have to test, then the oil and gas industry should too. Rhonda Knudsen said all industries should pay for testing and report results for surface and ground water.

Dick Iversen agreed that a re-write should include having water permit holders do their own water quality testing and monitoring.

Walt McNutt said DEQ should require water quality testing, then worry about enforcement, but that the problems with contamination will never go away.

Participants agreed that the day's discussion was a good one, and that some new ideas resulted.

CC April 22, 2014

The purpose of the call was to hear a summary of what the state is already doing to address some of the issues raised by the MWSI process, review the latest versions of the issue statements, review the public comment process for LMR BAC draft recommendations, and confirm the date for the last full BAC meeting in May.

Michael Downey (DNRC) explained that DNRC's budget requests will include funding for continuing the work of the four BACs. In addition, shared funding support for some streamflow gages being re-activated, or new ones being installed, by USGS is also included in DNRC's proposed budget for 2015. The requests are submitted through the Executive Planning Process that develops the governor's budget for the next biennium.

Some minor language clean-up was suggested on Issue Statements #1-3, but the general content was satisfactory to call participants.

Issue Statement #4 has a new recommendation added that would require new permit holders for all water uses that can cause ground or surface water contamination to be required to pay for water quality testing and periodic monitoring. This recommendation was added at the request of the lower Missouri River sub-basin group that met by conference call on April 15. The recommendation also appears in the sub-basin issues statements.

Dick Iversen commented that it makes sense for a contaminator to pay for testing, and he would like to see the recommendation remain in the whole basin Issue Statement #4. Rhonda Knudsen concurred, and said that surface water should also be covered by the recommendation, as well as monitoring for any interruption of water source. Arnold Bighorn wanted to see the recommendation stay, so the public can comment on it at the upcoming meetings. Bill Bergin said it makes sense, as he has to monitor water quality around his feedlot. Bob Goffena suggested adding the phrase, "to a substantial degree," to avoid the problem of agricultural producers having to monitor water quality around their fields when they apply fertilizer or herbicides. Doug Hitch and Mike Lawler said the language was perhaps too broad or generic, and the recommendation should be re-written. Eric VanderBeek went along with a re-write, but wants to see the recommendation stay in the report. Delores Plumage concurred.

Walt McNutt said the section should be removed for now, and reconsidered for the final report. Call participants agreed, but were adamant that the recommendation be discussed further at the next BAC meeting in May.

Issue Statement #5 had no new language changes, but Bob Goffena wondered if "water banking" should be defined, as it can mean different things to different people. Michael Downey responded

that the recommendation to explore the possibility of water banking would allow the state and private entities to consider all forms of the concept. Eric VanderBeek felt that some mention of enforcement by the state should be included. Dick Iversen said that the current water leasing statutes and regulations work, and the water transferred is verified by DNRC to make sure there is no over-use of a water right. Mike Lawler pointed out that the language is a suggestion, and details could be worked out by appropriate entities. Walt McNutt agreed with the concept, explaining that the Water Policy Interim Committee has been looking at the issue for ten years.

Issue Statement #6 prompted some discussion of the word “authorize” in the first sentence of Goal 1). Michael Downey said that some of the most successful groups are those that were not set up by the state, but instead arose from grassroots movements. Mike Lawler asked for a word to replace “authorize” that may be stronger than “encourage.” Dick Iversen agreed that “authorize” should be changed to something else, and Rhonda Knudsen suggested “recognize.” Arnold Bighorn liked that proposal. Bill Bergin liked “encourage,” and Doug Hitch said the state should not mandate watershed groups, as that doesn’t work. Walt McNutt and Eric VanderBeek agreed that grassroots organizations work the best. The words “should encourage, and/or authorize and support” were replaced with “should recognize and support.”

Dave Galt asked if there would be a formal state process for public comment on the state water plan, and Michael Downey said yes, a 30-day comment period would be announced for written comments on basin recommendations and the state water plan. The legislature will not, however, vote on the state water plan.

Wendy Beye explained the process of publicizing the public meetings. A press release has already been sent out to all newspapers, television stations, and radio stations in the Lower Missouri River basin, as well as to the Montana Watershed Coordination Council for publication. The press release lists the link to the DNRC MSWI website where a copy of the draft recommendations will be posted as soon as it is complete, and a link to an online survey site to capture public comments. In addition, the draft recommendations will be sent out by email to conservation districts and all the addresses (199) that have been gathered over the past year from public meetings and other contacts. Bill Milton encouraged all BAC members to make personal phone calls to invite the public to the meetings.

Michael Downey reminded call participants that they should be thinking about how they want to handle votes on recommendations where consensus cannot be reached by the BAC. That issue will be addressed during the conference call May 20 so that a procedure will be in place before the last BAC meeting.

CC May 20, 2014

A short conference call to confirm the BAC decision-making process if votes are required at the May 28, 2014 meeting and to discuss a method to address public comments was conducted on May 20, 2014.

Only three BAC members participated in this call, but Michael Downey had conducted an on-line survey on the matter of how to settle issues when no consensus could be reached by BAC members. A slim margin of respondents to the survey voted to require a super majority to adopt a position on an issue or recommendation. All BAC participants in the call agreed to that procedure.

Staff agreed to email a summary of public comments, along with an itemized list of actionable suggestions to all BAC members before the May 28 meeting to help focus the discussion.

Other items placed on the agenda for the May 28 meeting included:

1. Decisions on whether minority reports will be necessary, and who will be responsible for writing them.
2. Selection of two BAC members to represent the Lower Missouri River BAC in July to work on the draft state water plan.
3. Review the steps in the MSWI process after the BAC submits its Recommendations Development Report June 15, 2014.
4. Review the effectiveness of the entire MWSI process.
5. Briefly review the sub-basin issue statements for any possible modifications.

There was some discussion of the minority report process. Call participants wanted to be sure that minority reports were expressions of concern rather than an offering of alternative recommendations. The Recommendation Development Report should not present conflicting recommendations. Any minority reports written will be presented in an appendix to the final recommendations report.

Location	BAC Members	Staff Members	Technical Advisers	Guests/ Public	Total Attendance
Lewistown, 4-10-14	13	5	3	2	23
Conf. Call, 1-23-2014	11	3	0	0	14
Conf. Call, 2-6-2014	9	3	2	0	14
Conf. Call, 2-11-2014	6	2	3	0	11
Conf. Call, 3-13-2014	7	3	2	1	13
Conf. Call, 4-1-2014	2	3	0	0	5
Conf. Call, 4-2-2014	7	3	2	0	12
Conf. Call, 4-15-2014	6	3	2	1	12
Conf. Call, 4-22-2014	11	3	0	0	14
Conf. Call, 5-20-2014	3	3	0	0	6

Table 3: LMR BAC Recommendation Development Meetings and Conference Calls

3.3 PUBLIC MEETINGS FOR REVIEW OF DRAFT RECOMMENDATIONS

Four public meetings were held in the Lower Missouri River basin:

Harlowton, April 29
Lewistown, April 30
Havre, May 6
Wolf Point, May 7

The meetings each began at 6:30 p.m. with a brief review of the MWSI process by DNRC Water Resource Planner Michael Downey. An announcement of the meetings was sent to all newspapers, radio and television stations in the area, and emailed to a list of 199 individuals who had participated at some point in the MWSI process in the Lower Missouri River basin. The emails also contained a copy of a report containing the draft recommendations and a brief summary of how the MWSI process worked.

3.3.1 Harlowton, April 29

The public comment meeting in Harlowton lacked public participation. Only a few people not associated with the MWSI process attended. In spite of that deficiency, there was a good discussion among agency representatives (DNRC, MT FWP, a county Weed Coordinator, a conservation district council Director, and a project manager for a water users association) on the value of considering fishery health when irrigation infrastructure projects and reservoir water releases are contemplated. The group concluded that good communication among all water users is crucial to planning. Several BAC members present lacked information about important fishery cycles that require increased streamflow. Representatives of MT FWP asked that a mention of streamflows to support fish habitat be added to the draft recommendations.

The topic of additional offstream water storage projects prompted comments from FWP and from Kevin Smith, DNRC Water Projects Bureau. Smith said new projects may be prohibitively expensive, and a cheaper alternative might be to improve the efficiency of delivery canals to existing reservoirs, and increasing the holding capacity of reservoirs. That would allow the reservoirs to fill more quickly during periods of run-off, and store more water for use during the irrigation season.

3.3.2 Lewistown, April 30

The meeting in Lewistown was well-attended by the public, with many members representing the Big Spring Creek Watershed Council and the Snowy Mountain Chapter of Trout Unlimited. Some

general comments were made following Michael Downey's presentation on MWSI. Several members of the public were suspicious that the MWSI process would not lead to better management of Montana's water. Others pointed out issues they felt had not been seriously addressed, including streamflows to protect fisheries, the cumulative effect of exempt wells (less than 35 gpm flow), protection of water from downstream out-of-state claims, and how can a water inventory be accurate when the adjudication process has not yet been completed.

Meeting participants agreed with Issue Statement #1 that calls for accurate and timely completion of the water adjudication process.

Issue Statement #2 prompted a comment that water users who benefit financially from infrastructure projects that deliver water should pay for maintenance, repairs, and replacement rather than expecting state taxpayers to foot the bill. If the state believes that irrigation infrastructure universally benefits the public, then it should impose taxes and fees universally to pay for it.

Issue Statement #3, proposing that additional water measuring be installed around the state, especially on tributaries, was accepted by meeting participants. Some had suggestions about where new streamflow gages should be placed.

Groundwater quantity and quality, addressed by Issue Statement #4, prompted more lively discussion. There was a concern expressed about a proposed transfer of water from the Madison Group Aquifer to the Musselshell River basin to serve eight communities. Residents of the Judith River basin are worried that removing water from the Madison aquifer might affect the flow from springs in the Lewistown and Great Falls area. BAC members present assured the public that the concern is being addressed by recommendations encouraging additional groundwater research projects in the area.

Issue Statement #5 raised a question of what is contemplated by "water banking." Andy Brummond of MT FWP explained that the process would allow water rights holders to quantify a portion of their beneficial use to be set aside ("banked") for a different use in the future, without risking the loss of their water right. This would require some changes to existing water right regulations and statutes. Several people pointed out that streamflows to protect fisheries should be a part of this issue statement. Michael Downey mentioned that the existing water leasing regulations do allow water rights holders to lease all or a portion of their water to FWP to enhance instream flows.

Additional comments relating to Issue Statement #5 included a suggestion that it should address future oil and gas industry water uses, and the impacts of energy development on water quality. Dave Galt, BAC member representing the oil and gas industry in Montana reminded meeting participants that the oil and gas industry uses a very small fraction of the total amount of water beneficially used in the state. There are regulations in place to help protect surface and groundwater near energy development sites.

Issue Statement #6, encouraging the state to increase support for local watershed groups, was well-received.

A short discussion of the Judith River sub-basin recommendations followed. The need for research on the Madison Group and Kootenai aquifers was reiterated. The research should be completed as soon as possible, before additional development of the aquifers occurs.

Wrap-up comments included difficulty of funding implementation of a state water plan, future demands for Montana's water from other states, the state's residents need to work together to find solutions to water resource problems, and education of the public is an important step toward solving future problems relating to water.

3.3.3 Havre, May 6

There were some new participants in the MWSI discussion at the Havre meeting. Several county commissioners and state legislators attended, along with a staff member from Congressman Steve Daines' office, a representative of the Montana Water Well Drillers Association, and a reporter from the local radio station.

Issue Statement #1 elicited a comment from two DNRC representatives that water adjudication issues in the Milk River basin are complicated by tribal water rights. Denise Biggar from the Glasgow DNRC office said that while Temporary Preliminary Decrees can be issued before federal water reservation issues have been settled, a Preliminary Decree must wait for resolution of those issues.

Issue Statement #2 is of special importance to the Milk River sub-basin, as the St. Mary's Rehabilitation Project has been languishing for lack of funding for many years. Kris Hansen, a Montana legislator, said that if the state had funded a portion of the project and begun the work immediately, some of the cost escalations might have been avoided. No federal money has been authorized for the project through the Bureau of Reclamation. Randy Reed, BAC member from Chinook, said the project is very complex, involving both the Ft. Belknap and Blackfoot tribes, Canada, and all the water users on the Milk River. A local/state/tribal partnership may be the only way to advance the project, as money is not likely to come from the federal government.

Water measurement, covered in Issue Statement #3, was important to meeting participants. Kris Hansen suggested that all the agencies and entities that measure water should submit data to a centralized place such as the state's GWIC site so the public and water managers can access it easily.

Issue Statement #4 was supported by those present. Kris Hansen said, though, that MBMG isn't likely to hire more hydrologists to complete groundwater research more quickly. The western part of the state has received more research attention because of the many closed basins, where

additional water must be purchased. There is pressure to add new groundwater sources to the mix to meet demand.

For Issue Statement #5, a suggestion was made that existing water storage facilities be expanded rather than building new storage projects to capture additional run-off.

Meeting participants supported Issue Statement #6. Local watershed groups are the best way to address local water resource issues and manage water, and should be better supported by the state with funding.

The discussion then turned to the Milk River sub-basin issues. Kristi Kline, BAC member from Kremlin, said the St. Mary project and the Milk River Bureau of Reclamation system are very different from any other infrastructure problems in the state, so should be handled separately. Repairs are being made to the system each year, funded by the irrigators, but can't keep up with the pace of deterioration. A strategy involving all water users is difficult to craft because the original Congressional authorization of the projects lists only one use: irrigation. Municipalities using the water do pay a portion of repair costs on certain parts of the system. The Milk River Joint Board of Control has prioritized maintenance projects, but emergency repairs disrupt implementation of an orderly plan. Kris Hansen said there is room to ask for more money from the water resource appropriations at the next legislative session rather than waiting for money from the federal government. Local match and support from the Governor's office would speed the process.

Another issue in the Milk River sub-basin is sedimentation of Fresno and Nelson reservoirs. Neither holds as much water as originally designed in spite of dredging efforts over the years. Randy Reed said that the St. Mary's project turned the Milk River, which was a prairie stream, into an irrigation canal that carries more water all year around. Any flood event scours out the vegetation and moves the soil down river and sends it to the reservoir. Cody Nagel, MT FWP, said that without the addition of warm water from the Milk River to the Missouri River below Ft. Peck dam, there wouldn't be a warm water fishery there. There are about 40 species of warm water fish that like the type of water that is present in the Milk River. There is a good population of walleye in the Milk River, but not many people fish because the river is not suitable for float trips.

All those present agreed that the Milk River basin faces many challenges in the years to come, and finding appropriate responses will be difficult.

3.3.4 Wolf Point, May 7

Attendance at the Wolf Point public meeting was sparse. The editor of the Wolf Point Herald did attend and write a story to help inform the public about the BAC recommendations report.

Issue Statement #1 was accepted as presented. Denise Biggar, DNRC Glasgow, pointed out that DNRC is ahead of schedule in water right claim examinations, and now it is up to the Water Court to complete the adjudication process by 2020, the deadline set by the legislature.

Issue Statement #2 addresses the need for funding assistance for irrigation infrastructure repairs all over the Lower Missouri River basin. Denise Biggar said that infrastructure could even include irrigation pump access to the river. Many pump sites have been damaged in the past few years by flood events.

Water measurement is becoming more critical in the state as water demands increase. Issue Statement #3 calls for additional stream monitoring gages to be operated by DNRC and USGS. It was suggested that placement of new gages be determined with assistance from local watershed groups who understand where those gages will be most useful. Darryl Crowley, a rancher, commented that crops grown now may require more water than crops that were grown sixty years ago, and that will affect the volume of water diverted from the river by a water user.

Issue Statement #4 calls for additional aquifer research, especially in the eastern half of the state, which hasn't received the same level of attention as the western half has. The question of whether the recommendations should address exempt wells was raised. Michael Downey, DNRC Water Resource Planner, said that at a previous BAC meeting it was decided to leave the issue up to the legislature and the courts. Dwight Vannatta, BAC member from Bainville, said that it might be helpful if the BAC recommended that the legislature address the issue sooner rather than later, as it is becoming an issue on the lower Missouri River. Denise Biggar explained that we are really talking about wells that are excepted from the water use permitting process – less than 35 gpm and 10 acre/ft per year production. Exempt wells are those that existed before 1973 and the users were not required to file for a water right on them.

There was a short discussion of “water banking” relating to Issue Statement #5. Dick Iversen, BAC member from Culbertson, asked whether anyone had yet taken advantage of the new water leasing statute passed during the last legislative session. Denise Biggar said there haven't been any “takers” yet because irrigation water use is limited to just the irrigating season, and the new users (i.e. water depot sales) need water all year round.

The group discussed Issue Statement #6, and concluded that local watershed groups can play an important role in educating the public about water resource issues. Dwight Vannatta suggested that keeping the BAC functioning might help pull local groups together and keep them running.

The discussion then turned to sub-basin issues on the Missouri River below Ft. Peck dam. Dwight Vannatta asked whether the group could draft a recommendation to deal with the loss of land due to bank erosion, and the ensuing battles over mineral rights underneath where the ground used to be. Once the land is washed away, the new river channel becomes state property. Dick Iversen said that was probably more a land use issue than a water resource issue. There is a recommendation to encourage bank stabilization along the river. Steve Dalbey, MT FWP, said

that his agency is working with the Army Corps of Engineers to include recreational demands and fish habitat needs in the river modeling in the future. He also said that on the western side of the state, Bonneville Power Administration is obligated to provide funds to mitigate the impacts of their dams and powerlines. There is no similar program on the eastern side of the state for the hydroelectric power produced by project dams.

Location	BAC Members	Staff Members	Technical Advisers	Guests/ Public	Total Attendance
Harlowton, 4-29-2014	4	5	1	8	18
Lewistown, 4-30-2014	6	5	1	28	40
Havre, 5-6-2014	4	5	0	9	18
Wolf Point, 5-7-2014	4	3	1	3	11
BAC Meeting to Respond to Public Ft. Peck, 5-28-2014	13	4	3	1	21

Table 4: LMR BAC Public Meetings and Meeting to Respond to Public Comments

3.4 BAC MEETING TO RESPOND TO PUBLIC COMMENTS, MAY 28

Reports of the proceedings of the four meetings held in the Lower Missouri River basin for the purpose of hearing public comments on draft recommendations were sent to all BAC members. In addition, comments received in writing or via the survey conducted on the internet site SurveyMonkey were compiled and distributed, as well as a list of actionable recommendations gleaned from public input (shown in the section below in italics type.) The LMR BAC met at the Ft. Peck Dam Interpretive Center on May 28, 2014, to consider responses to public comments and suggestions.

As a result of the many meetings and conference calls conducted by the LMR BAC from January to mid-April, several over-arching premises implicitly guided the members' final deliberations on recommendations:

1. Under Montana's Prior Appropriation doctrine of water rights, all beneficial uses that have a water right, consumptive or non-consumptive, are equal. Beneficial use includes, but is not limited to the following categories: agriculture, domestic, industry, recreation, energy development, commerce, and ecology (i.e., fish, wildlife, habitat, river health.)
2. The ultimate success of the Montana Water Supply Initiative and state water plan will depend on education of the public. Members of the BAC learned a great deal as they investigated water resource issues raised during the public scoping process. Adopted recommendations are based on facts rather than perceptions.

3. Residents in sub-basins cannot expect the state or federal government to solve all of their water resource problems. Local grassroots organizations can provide an effective vehicle for achieving measurable results. In particular, infrastructure repair or rehabilitation must be attacked at the local level, with costs determined, specific projects prioritized, and funding explored.
4. While many of the BAC's recommendations may have associated costs, it is up to the state legislative and executive branches to set priorities and appropriate funds to implement them. BAC members were not tasked with nor equipped with the tools necessary to make cost estimates.
5. If there are existing statutes and regulations that satisfactorily address particular issues, those issues will not be addressed by BAC recommendations

Michael Downey, DNRC Water Resource Planner who acted as a liaison for the Lower Missouri River BAC, began the meeting with a reminder that the Recommendation Development Report adopted by the group is not the end of the MWSI process. Recommendations included in the state water plan will come too late for any action by the 2015 Montana Legislature. The planning process for water resource management is just beginning, and adjustments to the state plan will be made periodically into the future.

The BAC then tackled actionable recommendations (in italics type) offered by the public.

Issue Statement #1

The public and agencies are in agreement with this issue statement and its associated recommendations.

A suggestion made through the SurveyMonkey site: Reverse temporary ruling that individuals may lease their water rights to energy companies.

BAC members agreed that because the water rights prior appropriation doctrine does not favor any one beneficial use over another, there should be no limits placed on the kinds of beneficial uses water may be leased to fulfill.

Another SurveyMonkey suggestion made by a number of responders for Objective b), Recommendation i): Education is of absolute importance in issues such as this however the verbiage "importance of a robust change process" leaves an intimidating connotation and should be removed from the recommendation.

There was a discussion about whether the word "robust" was slightly intimidating. The focus of the recommendation is education, rather than the change process itself, so the word "robust" was dropped.

Issue Statement #2

There was a suggestion to add “increasing funding for the current grant and loan program” to Objective a), Recommendation ii).

Walt McNutt, BAC member and former legislator reminded the group that funding for the grant and loan program comes from coal severance taxes, and the amount is dependent upon what is being mined, not an act of the legislature. The phrase was modified to read “...increase funding caps for currently authorized grants and loans,” and added to the recommendation. This would allow DNRC more discretion in awarding financial assistance for infrastructure projects that may require larger grants and loans than are currently available.

It was suggested that the state could stipulate that there is a universal public benefit from use of water storage and supply infrastructure, and there should then be universal payment to support its continued existence – through user fees, taxes, etc. – a multi-pronged approach to funding.

BAC members agreed that the state cannot “stipulate” a public benefit, and that state taxpayers are already helping to pay for infrastructure projects through the coal severance tax on a resource that belongs to all the residents of the state. Infrastructure repairs will be accomplished one project at a time, with costs shared by water users and the state through grants and loans.

In regard to the St. Mary’s diversion, a local/state/tribal partnership may be the only way to advance the project, as money is not likely to come from the federal government. If local users and the state can set aside funding to begin working on the project a piece at a time, catastrophic failure of the system might be avoided.

The group decided that the St. Mary’s Rehabilitation Project should be addressed at the sub-basin level, and in fact, affected water users have been meeting again to work through the funding issue. Kristi Kline, BAC member from the Milk River sub-basin said that since the Bureau of Reclamation controls the project, there isn’t much the state can do. The original authorization by Congress limits financial responsibility for repairs or replacement to irrigators and the Bureau of Reclamation.

Montana FWP suggests encouraging consideration of fishery issues when infrastructure repair or replacement is in the planning stage so that costs can be shared and the public benefited.

BAC member Peter Marchi asked why beneficial use of water to support fisheries should be highlighted above other uses. Andy Brummond of FWP said that sometimes planning for infrastructure projects is too far along by the time fisheries issues are considered. The group decided that conservation districts, who issue 310 permits for work along streams, must involve FWP in the early planning stages, and that provides sufficient opportunity for collaboration.

Issue Statement #3

Any new streamflow gages added to the existing network should be placed in consultation with local watershed groups and water users.

This item was already addressed in Objective a) ii) of Issue Statement #3.

Data from streamflow, canal, and water diversion measurement devices operated by entities other than USGS and DNRC are not often made public. Tribes, the Dept. of Agriculture, water user associations, and other entities should be encouraged to share data.

Several BAC members pointed out that stream gages operated by entities other than USGS or DNRC may not be as accurate, may not measure anything other than flow rate, and do not transmit data electronically, so it is not feasible to include them in the state's public network.

Changes in the types of crops irrigated are changing the amount of water being put to beneficial use. Without water measurement, the impacts of the changes cannot be anticipated.

Rhonda Knudsen, BAC member from Glasgow, said that producers plan their water use for the thirstiest crop they may plant. Some years they use all their water right, others, they don't, but the full amount is accounted for.

Issue Statement #4

A suggestion from SurveyMonkey: The Montana Water Supply Initiative (MWSI) should include estimation of the water resources needed for oil and gas production, how extraction of these resources will impact groundwater aquifers and where those water resources will come from. Groundwater Control Areas should be established by the state where groundwater withdrawals in recent decades have outstripped the pace of recharge.

Again, BAC members declined to single out any one industry for special attention in its recommendations. Groundwater Control Areas are already authorized as a tool to be used by DNRC.

Several members of the public expressed concern about inter-basin groundwater transfer projects. A recommendation about how to address these transfers might be something the BAC should consider.

BAC members decided that the issue was already addressed by Objective c) ii) in this issue statement.

Wells that are excepted from the water use permitting process – less than 35 gpm and 10 acre/ft per year production – were a topic of discussion at several of the public meetings. It was suggested that the Montana Legislature be encouraged to resolve the issue.

Walt McNutt, former legislator, said a legislative committee is already working on addressing the issue.

According to several members of the public, the question of how the oil and gas industry will impact the state's aquifers should be in the water use plan.

A lengthy discussion of oil and gas development's effects on water supply led to an uneasy agreement among BAC members that again, a particular beneficial use should not be singled out for attention by a state water plan. The state's Groundwater Assessment Steering Committee is already in the process of revising its method of choosing aquifers to be the subject of research, and will likely begin looking at more aquifers on the eastern edge of Montana. Public education on how energy development uses water, and in what quantities, will be necessary to offset perceptions that may not be based on fact. Denise Biggar, DNRC Glasgow, said that all permitted groundwater uses are quantified and water right holders must submit reports to DNRC. Dave Galt, BAC member, said that the quantity of water disposed of in injection wells is also documented and reported to the Board of Oil and Gas. Montana has a strict fracking chemical reporting system, and all the data are available to the public, with much of it posted on websites. Walt McNutt pointed out that in heavily populated areas of western Montana, there is a risk of groundwater contamination from multiple septic systems, so again, a particular beneficial use of water should not be singled out for regulation.

The following came from SurveyMonkey:

Add Short term recommendation, Objective a): DEQ and DNRC to be tasked to provide more on-the-ground inspectors to ensure accurate tracking and record-keeping system is properly employed.

BAC member Rhonda Knudsen said that state agencies should not be told how to spend their budget, for example by hiring additional staff. Their funding is finite, and they may have other priorities in mind. Michael Downey suggested that a recommendation wouldn't force an agency to hire more staff, but would highlight the importance of an issue raised by the public. The BAC decided not to add the recommendation.

The draft recommendations would benefit by including a mention of the importance of groundwater springs on fish & wildlife.

Once again, the BAC decided not to favor any particular beneficial use. When aquifer research is undertaken, all uses of the water will be considered.

Add the following as stated objectives: 1- Permits for uses that could contaminate groundwater should require the applicant to test and periodically monitor for contamination, sending results to DEQ and the GWIC public database at the Montana Bureau of Mines and Geology. 2- The

Montana Board of Oil and Gas Conservation and the Department of Environmental Quality should jointly analyze data to project the volumes of hydraulic fracturing flow back water and produced water that will need to be disposed of in the next decade in Montana. They should establish as soon as practicable a system to track and account for each truckload of flow back and produced water, to ensure safe and legal disposal methods are used and to track and verify the actual volumes of water involved. 3-MSU Energy Research Institute, Montana Board of Oil & Gas, the Department of Environmental Quality and the Water Resources Division to provide analysis and assistance to the energy industry to recycle and reuse flow back and produced water to minimize destruction of clean water.

Several BAC members pointed out that any number of beneficial uses of water could contaminate groundwater. A permit that does not normally involve discharge of wastewater does not require any monitoring. Dick Iversen, BAC member from Culbertson, said that local governments have the power through existing statutes to regulate proposed development that might contaminate groundwater. Dwight Vannatta BAC member from Bainville said that in several instances, DEQ said they didn't have sufficient staff to investigate incidents of surface water contamination when they were reported. A decision was made to not add the recommendation, as many BAC members were of the opinion that there is no way to guarantee 100% compliance with regulations, no matter how many inspectors are deployed by the state.

Issue Statement #5

At all the public meetings, the need for instream flows to protect native fisheries was a topic of discussion, with the issue raised by both FWP and the public. The new water leasing procedure has not helped improve winter river flows because most water rights are only effective during the summer irrigation months. FWP needs to make sure water users understand their local fishery's critical water needs so that water can be managed using the "rule curve" approach. In developing rule curves, simulated models of water flows are created based on estimates of how much water will be available each year, and water managers try to follow the plan, even through the winter months.

Andy Brummond, MT FWP, explained the "rule curve" approach to reservoir water release management. He also said that FWP reserved water rights for instream flows are very limited in quantity, and are only sufficient to "wet the backs" of fish rather than enhance habitat. Additional instream flows not associated with a water right or water reservation are not considered by DNRC when new water use permits are considered. He suggested adding an addition to Objective a) i), "...considering both consumptive and non-consumptive uses, which may or may not have associated water rights, existing on the stream." After some discussion and questions, and a reminder from Denise Biggars, DNRC, that the agency is not allowed by statute to consider non-consumptive uses that have no associated water right or water reservation, the BAC decided not to add the phrase to the recommendation. A compromise was suggested by Kristi Kline, to add "...which may include consumptive or non-consumptive uses" to Goal 1).

A suggestion was made that the title of Issue Statement #5 should be changed, as it doesn't address future oil and gas industry water use or the impacts on water quality.

This suggestion was addressed by the decision to not single out a specific beneficial use of water.

From SurveyMonkey, Objective a): Add short term recommendation ii: Establish areas where groundwater withdrawals in recent decades have outstripped the pace of recharge and whether or not establishment of Groundwater Control Areas is appropriate, to avoid drawing down of water table. Add short term recommendation iii: It should be noted that increasing water supplies is the only strategy to meet future demands. State resource agencies also should work together to conserve water supplies by restricting and monitoring water use that cannot be returned to the aquifer. The US Geological Survey (USGS) notes that available surface water supplies have not increased in 20 years, and groundwater tables are dropping at an alarming rate. As water supplies diminish, the majority of water used in hydraulic fracturing (fracking) cannot be recycled and cannot return to the hydrological cycle.

This proposed recommendation was not adopted for the same reasons given above – no particular beneficial water use should be singled out in the state water plan.

Also from SurveyMonkey, a specific recommendation: A statement demonstrating that thorough evaluation of water development alternatives and their impacts not only to water users, but also to natural systems and fish & wildlife resources, is needed in the BAC's recommendations.

Again, no special attention should be given to a particular beneficial water use.

A suggestion from SurveyMonkey for Objective b): Add short term recommendation ii: Review specific industrial uses of water (for example, exploratory and oil and gas drilling) that deplete the supply of usable water by extracting ground and surface water and mixing it with toxic chemicals. Once used, this produced water cannot be returned to the water supply and is instead stored indefinitely in tanks or ponds. In comparison, water used for agricultural and livestock can be recycled back into our water supply.

Even though the end results of water use for industrial purposes as compared with agricultural uses may differ, no distinction should be made among beneficial uses.

Issue Statement #6

There was wide-spread public support for the state playing a financial role in helping watershed organizations thrive. They can look at citizens' values in a way the state can't, and those values should underlie the state water plan in addition to data and facts. The state might benefit by asking local watershed groups for input whenever the state water plan is updated in the future.

DNRC is likely to ask for input from local groups when the state water plan is next updated.

A responder to SurveyMonkey suggested for Objective b): Add short term recommendation iii: DNRC, DEQ and other "water regulatory" agencies need to provide a single voice (including funding requests) to the Montana Legislature.

Members of the BAC decided that this goal is unattainable.

The following section of this report contains the recommendations, as modified after consideration of public comment, adopted by the Lower Missouri River Basin Advisory Council.

4 ISSUE STATEMENTS AND RECOMMENDATIONS

4.1 WATER USE ADMINISTRATION

The principle of beneficial use is a cornerstone of the Prior Appropriation Doctrine. Beneficial use is the basis and measure of a water right. The accuracy of water right processes is paramount to the protection, administration and enforcement of valid water rights. The accuracy of existing claims is critical to the future development of state waters. Any strategy to meet future water demand needs to include examination of Montana's water right system to more closely align water use with established priority and legal availability. The water rights adjudication process must be accurately completed to determine how much water is legally and physically available for existing and future use.

There is growing public sentiment for enforcement against illegal water use. Montana's water users are hesitant to file suit against their neighbors. They want assurances that existing water rights will be protected whenever new water right permits and changes in use are granted by the state. Water users also want a more efficient, less expensive, and less adversarial approach to the enforcement of water rights.

- 1) **Alignment of Adjudication with Actual Historic Use** – **Goal:** The support of efforts and processes to address claims of water use, and proposed changes to claimed water rights is essential for the protection of existing, valid water rights. It is also critical for determining how much water is available for future development and beneficial use.
 - a) **Objective:** Water right decrees should accurately reflect the status of existing water rights as they historically existed prior to July 1, 1973. By strengthening the existing water right system, water managers would be in a better position to ensure that water is allocated according to established historic beneficial use.

- i) **Short-term Recommendation:** The state and the state's Congressional delegation must continue working to complete all the tribal water compacts still in process.

4.2 STORAGE, DISTRIBUTION, INFRASTRUCTURE MAINTENANCE, AND APPLICATION EFFICIENCIES FOR IRRIGATION WATER

Montana's irrigation water storage and distribution infrastructure is in many cases nearly a century old, and has become increasingly inefficient in storing spring runoff and delivering it to crops during the irrigation season. Once the water reaches the end user, application efficiency may be improved by a switch to, for instance, pivot sprinkler systems, but the switch may have unanticipated effects on surface water or groundwater. There is a lack of research on the consequences of changing delivery systems and application methods.

- 1) **Strategy for Updating Infrastructure – Goal:** Montana's aging water storage and delivery infrastructure inventory must be updated, and a prioritization process for repair, alteration, or replacement implemented. In addition, more research on the positive and negative consequences of changing methods of water application will help avoid unintended consequences in the future.
 - a) **Objective:** The cost of maintaining and/or altering water storage and delivery infrastructure is often too high to be paid by local water users alone. The state needs to develop a project prioritization strategy to use available funding in the most efficient manner possible. New funding methods that involve all stakeholders who benefit from water projects should be explored
 - i) **Short Term Recommendation:** Support operational funding to develop public/private partnerships to assess local capacity, incentives and financial commitments necessary to support state and federal authorizations that are adequate to complete infrastructure rehabilitation efforts.
 - ii) **Short-term Recommendation:** Set up an infrastructure improvement funding program to address problems with water storage and delivery systems, and increase funding caps for currently authorized grants and loans.
 - b) **Objective:** Improvements in water storage and delivery efficiency may have either positive or negative effects on surface water. Improved methods of water application on crops may conserve water, but the effects of changing methods on return flows, groundwater, soil, and water quality vary from site to site, and need to be carefully explored before any particular method is encouraged.
 - i) **Short-term Recommendation:** Quantify the surface water-ground water impacts from changes in irrigation water distribution, application methods and timing across watersheds to account for wide-ranging precipitation patterns, geology and topography.

4.3 WATER RESOURCE INVENTORY AND MEASUREMENT

The current status of water measurement and water resource research makes it difficult to determine how much water is legally and physically available for existing and future uses. Wise management of the state's water resources requires an adequate assessment of surface and groundwater availability and an inventory of how much water is beneficially used. The state's network of streamflow gages does not cover enough streams to provide critical water quantity and quality data in all the sub-basins. In addition, many water delivery systems have no accurate method of recording the quantity supplied to a specific user. It is difficult for managers to fairly distribute water without knowing how much is available, and how much is arriving at the place of use. The State of Montana needs to increase its water measurement and monitoring program so that it is sufficient to understand water supply and use, enforce water right decrees and compacts, and better understand the relationship between water quality and quantity.

1) **Streamflow Gages** -- **Goal:** Funding for Montana's existing streamflow gage network must be ensured, and new gages installed to monitor flows on streams that lack historical data. Selected water quality parameters should also be monitored by many of the gages. As demand for water within and outside the state increase in the future, measurement of water availability and water deliveries to end users will be essential for sound water management.

a) **Objective:** Partnerships among federal, state, and local agencies and organizations should be supported to fairly pay the costs of installing and maintaining streamflow gages. The data collected needs to be immediately available to anyone who needs the information for impending flood warnings, water availability, distribution of water, wastewater releases, water quality, and those who want to know streamflow levels.

i) **Short-term Recommendation:** Maintain the existing stream gage network operated by the USGS for key mainstem and tributary gages via the USGS/DNRC Cooperative Agreement Program.

Note: USGS maintains approximately 180 gages in Montana; there are many local, state and federal cost-share partners on these gages. DNRC provides cost-share on 43 of these gages with annual budget of \$296,000. The cost share program is continually facing reductions federal funding forcing Lower Missouri Basin users to make choices between gages—Musselshell River gages are examples.

ii) **Short-term Recommendation:** Institute a telemetered (real-time) stream gage program operated by DNRC/MBMG. Sub-basin watershed organizations should submit recommendations for new streamflow gage installation sites.

b) **Objective:** In order to distribute available water to users, measuring devices should be installed on pumps, headgates, unmetered municipal water systems, and all non-exempt wells in all watersheds.

- i) **Medium-term Recommendation:** DNRC should develop a program to encourage and incentivize the installation of measuring devices at the point of diversion.

- c) **Objective:** A good understanding of surface and groundwater resources is necessary to ascertain the status of water resources in Montana. Surface and groundwater research, whether accomplished by federal, state, or contracted private entities, must be funded, starting with the most critical areas first, and eventually the entire state.
 - i) **Short-term Recommendation:** Adequate funding should be appropriated for research on surface and groundwater quantities in the state.

 - ii) **Short-term Recommendation:** The Ground Water Steering Committee should re-evaluate project funding criteria for the Ground Water investigation Program to better reflect statewide priorities and directly implement priorities reflected in the State Water Plan.

4.4 GROUNDWATER AQUIFERS: QUANTITY AND QUALITY

There is a need for additional research on the quality and quantity of Montana's aquifers. As more users tap the state's groundwater sources, it is essential to document the quality and quantity of groundwater. Water quality must be periodically monitored using site-specific parameters. An aquifers' ability to recharge at a rate that meets water withdrawals/discharge must be monitored to avoid depleting the resource.

- 1) **Groundwater Monitoring -- Goal:** A more comprehensive system of groundwater monitoring for quantity and quality should be adopted by the state.
 - a) **Objective:** Montana's aquifers and groundwater/surface connections must be defined and characterized.
 - i) **Short-term Recommendation:** Support additional funding for groundwater assessments and investigations so that additional aquifers and groundwater/surface connections can be defined and characterized.

 - ii) **Short-term Recommendation:** Identify and develop public/private partnerships to accomplish the stated objectives.

 - iii) **Short-term Recommendation:** Change the Ground-Water Assessment Steering Committee prioritization process for groundwater research to divide the funding among all four state river basins. This will balance priorities across rural-urban conflict

situations, emerging ground water needs/limitations and quantifying new ground water resources.

- b) **Objective:** Statewide groundwater testing data should all be included in the existing public web portal. The availability of improved data will help inform and protect all water users.
 - i) **Short-term Recommendation:** Request that DEQ and DNRC work together to educate and encourage local sub-basin groups to address water quality and other issues associated with water use or activities that affect water quantity or quality.
- c) **Objective:** As more groundwater is used for beneficial operations, aquifers must be monitored to avoid overuse or adverse impacts to surface water connected to aquifers.
 - i) **Short-term Recommendation:** Support local, state, and federal efforts and increase funding through existing DNRC grant programs to control artesian flowing wells to better conserve groundwater resources.
 - ii) **Medium-term Recommendation:** Increase funding levels for the Ground Water Assessment Program (GWAP) and the Ground Water Investigation Program (GWIP) administered through the MT Bureau of Mines and Geology to advance more projects across all four major river basins. Funding needs to address the increased need for information and keep pace with rising research costs.

4.5 FUTURE DEMANDS ON WATER RESOURCES

Basin scoping meeting participants agreed that more water from spring runoff should be captured by increasing the capacity of existing reservoirs, by building new small-scale off-stream reservoirs, or by enhancing natural floodplain wetlands water storage. Negotiation for additional water from federal storage projects to meet demand within the state is a possibility, keeping in mind the role full reservoirs play in recreation. Adoption of voluntary conservation programs, or in the case of industrial water use, development of recycling technology, might free up water for reallocation to additional uses. Some of the state's aquifers contain water of sufficient quantity and quality to help meet new demands. A water banking program could serve as a tool to help facilitate transfers of water to uses associated with rapidly changing demands.

- 1) **Future Demands -- Goal:** There may be strategies that if adopted would increase the quantity and quality of water available to help meet future resource demands for both consumptive and non-consumptive uses.
 - a) **Objective:** State water resource agencies should work together to increase water supplies by actively exploring additional storage opportunities, considering incentives for voluntary

water conservation by users, instituting more aquifer monitoring programs, and testing new wastewater recycling technologies.

- i) **Short-term Recommendation:** Explore the potential for small off-stream storage projects in the Lower Missouri River basin

- b) **Objective:** Water banks would create greater certainty for prospective water users, thereby enhancing economic development and providing options to boost stream flows during periods of drought.
 - i) **Short-term Recommendation:** Various water banking strategies should be explored as a tool to facilitate transfers of water to differing uses.

4.6 WATERSHED ORGANIZATIONS

During the Montana Water Supply Initiative scoping meetings in the Lower Missouri River Basin, four facts became evident. First, local watershed organizations provide a very important structure for promoting communication and collaboration on water resource issues. Second, local watershed organizations provide an effective forum that earns the trust and respect of participating stakeholders. Third, functioning watershed and sub-basin groups provide a workable and cost-effective structure for local stakeholders, state agencies, and federal agencies to communicate more effectively and arrive at solutions that all parties support and are willing to implement in good faith. Fourth, local mediation efforts reduce the need for costly judicial solutions to water resource management.

A number of sub-basins across the state have established watershed organizations with a goal of promoting communication and collaboration on water resource-related issues -- efforts that have reduced the need for costly judicial solutions to water resource problems. Existing groups, including the Clark Fork Coalition, the Musselshell Watershed Coalition, the Big Springs Watershed Council, the Greater Gallatin Watershed Council, the Big Hole Watershed Committee, and the Blackfoot Challenge were organized for different reasons, yet they all provide a trusted forum for discussion of issues. These organizations can serve an educational function, assist in the periodic updating of a statewide water use plan, and evaluate successes and failures in implementation of the statewide plan.

- 1) **Watershed Organizations -- Goal:** The state should recognize and support autonomous grassroots organizations in watershed basins. These organizations will help local, state and federal agencies, organizations, and citizens work from the same water resource playbook in order to optimize collaborative problem-solving efforts.
 - a) **Objective:** Local citizen groups allow diverse interests to come together to discuss and adopt water management strategies to solve problems that are critical in their watershed. If water management strategies are to be successful, water users need to trust and respect

the decisions of water managers. Watershed organizations provide a forum for building that trust. Current technical and financial support of these groups by state and federal agencies is a key to their success, but additional funding for general staffing of the organizations is needed.

- i) Short-term Recommendation:** Support continuation and expansion of the Watershed Capacity Building Program initiated by the 2013 Legislature.
 - ii) Short-term Recommendation:** Build on Montana’s Watershed Coordination Council’s work, to increase the capacity of sub-basin community forums to function collaboratively with agencies to identify, respond, and resolve important water quantity and quality issues within their region.
 - iii) Short-term Recommendation:** Utilize the MT Watershed Coordination Council to distribute financial and technical assistance to existing and new watershed groups.
- b) Objective:** To request that state and federal agency representatives work with water users, local watershed groups, municipalities, tribes, and conservation districts to improve cooperation and facilitate shared dialogue among all stakeholders in Montana’s water resources.
- i) Short-term Recommendation:** Enhance education opportunities through the state’s conservation districts to more broadly address water resource issues by providing additional grant funding opportunities.
 - ii) Short-term Recommendation:** Review the roles of resource agencies in data collection, data analysis, data publication, collaboration with other state and federal agencies, and enforcement of laws and regulations. Make necessary changes to clarify roles, responsibilities and effectiveness. Create a user-friendly template to communicate all of the above to those who work with and depend on water.
- c) Objective:** Evaluate continuation of the BACs in each region to help support, network, facilitate, and evaluate the implementation of recommendations adopted in the final state water plan.
- i) Short term recommendation:** Convene water resource agencies, BAC members, and local sub-basin stakeholders for conferences and workshops to assess the merits, purpose and structure for ongoing BACs in all the four regions.

5 SUB-BASIN ISSUE STATEMENTS

The issue statements in this section were developed by BAC members residing in each of the four sub-basins of the lower Missouri River basin. Specifically, these sub-basins are the Judith River Sub-basin, Milk River Sub-basin, Musselshell River Sub-basin, and the Lower Missouri River Sub-basin, which is the Missouri River below Fort Peck Dam. These sub-basin issues and recommendations are meant to inform the public of priority issues in each of the sub-basins that emerged through the course of this process. They will not be included in the final state water plan developed by DNRC at the conclusion of this phase of the Montana Water Supply Initiative. Instead, they will serve to inform watershed organizations, conservation districts and other entities in the sub-basins about issues that should be addressed locally.

5.1 JUDITH RIVER

5.1.1 Madison Group and Kootenai Aquifers in the Judith River Basin

Judith River basin residents are protective of the quality and quantity of water flowing from Big Spring. There is a concern that development of high volume wells tapping the Madison Group and Kootenai aquifers, and an increase in activities that could contaminate the aquifer, will jeopardize the quantity or quality of the water.

- 1) **Aquifer Research** – **Goal:** A better understanding of the dynamics of the Madison Group Aquifer's recharge capacity and of the hydrological connections between the aquifer and the surface water of the Judith River basin, is essential to protection of water quality and quantity.
 - a) **Objective:** The state should conduct additional research on how the Madison Aquifer functions, and on the connections between the aquifer and its surface outlets.
 - i) **Short-term Recommendation:** The BAC supports the 2014 RRGL application by the Central Montana Regional Water Authority to characterize the hydrology of the Madison Group and Kootenai aquifers.
 - ii) **Medium-term Recommendation:** The BAC supports development of private/public partnerships to explore the effects of large volume groundwater water withdrawals on springs and other wells to ensure no adverse effects on existing water rights in the Judith River basin.
 - b) **Objective:** Effective regulations addressing monitoring and control of possible sources of contamination of the Madison Group, Kootenai, and other shallower aquifers should be adopted as soon as possible.

- i) **Short-term Recommendation:** Regulations governing surface and groundwater quality monitoring should be strengthened, and agencies involved in enforcement or monitoring activities encouraged to share data with each other and the public.

5.2 LOWER MISSOURI RIVER BELOW FT. PECK DAM

5.2.1 Impacts of Water Releases from Ft. Peck Dam and Flood Waters From Tributaries

When large releases of water from Ft. Peck Dam occur, the resulting flows damage irrigation infrastructure downstream, and cold water from the power plant affects warm water fisheries. Fast-moving water also causes channel migration, causing water rights holders additional expense to access their water from the Missouri River.

- 1) **Mitigation of damage – Goal:** The state, municipalities, landowners, the Fort Peck Tribes, and the Army Corps of Engineers need to discuss ways to mitigate damage caused by releases of water from Ft. Peck Dam.
 - a) **Objective:** Agencies that have interests in the Missouri River below Ft. Peck Dam, i.e., the Army Corps of Engineers, county DES offices, Montana FWP, irrigation districts, municipal water departments, should work together to develop joint plans to address potential damage caused by water released from the dam.
 - i) **Short-term Recommendation:** Explore capacity of Milk River watershed to help control floodwater.
 - ii) **Short-term Recommendation:** Encourage bank stabilization along the Missouri River at points of diversion. Initiate at a minimum bi-annual stakeholder meetings to monitor and assess what is working and what is not working in mitigation efforts

5.2.2 Missouri River and Aquifer Water Quality and Quantity

There is increasing development along the Missouri River and its drainages below Ft. Peck Dam. This leads to a concern that new water uses could contribute to increased sediment levels, chemical contamination and excessive aquifer depletion of the water resources. Development is impacting both ground and surface water quality in the area.

- 1) **Water Quality and Quantity in Lower Missouri River Watershed – Goal:** Water quality in the Missouri River below Ft. Peck Dam should be monitored for contaminants. Existing laws and regulations governing water quality should be enforced, and perhaps strengthened.

The major aquifers, such as the Fox Hills Formation, need additional study and monitoring to determine the recharge capacity. Currently the aquifers have no quantity limits on withdrawal.

- a) **Objective:** DEQ should implement practices and policies to require testing by all entities holding permits under Montana's Clean Water Act to make sure water quality standards are being met:
 - i) **Short-term Recommendation:** Agencies charged with enforcement of water quality standards and drilling practices must be given the resources to do their job.
 - ii) **Short-term Recommendation:** Permits for uses that could contaminate groundwater or surface water should require the applicant to test and periodically monitor for contamination after the permit is issued, with test results submitted to DEQ and/or the GWIC public database at the Montana Bureau of Mines and Geology. This would require a change in existing statutes.
 - iii) **Short-term Recommendation:** Install streamflow gages on tributaries, and include water quality monitoring for sedimentation and contamination of surface water.

- b) **Objective:** The study of the Fox Hills aquifer should be completed in the next two years. This should determine the recharge quantity and withdrawals allowed to achieve sustainability in the aquifer. It has been shown recently that over-withdrawal effects others' ability to get water at an artesian level and also threatens the aquifer itself with possible collapse.
 - i) **Short-term Recommendation:** Adequate funding is needed for this additional study.
 - ii) **Short-term Recommendation:** A locally-driven group, with state DNRC guidance, needs to help monitor the aquifer.

- c) **Objective:** The MT DEQ director has agreed to meet and discuss local water quality concerns. A small (working) group made up of all concerned and affected parties should be organized. This group will help guide DEQ on real, not perceived, issues, help to assure that current laws are followed, and that local individuals and companies are educated on the current laws. If current laws are not adequate, then this group would recommend changes.
 - i) **Short-term Recommendation:** Organize a local watershed group to work with DEQ to address water quality concerns.

5.3 MILK RIVER

5.3.1 St. Mary's Diversion Project

The Milk River contains “natural flow” from runoff that originates in the basin and “project water” from the Bureau of Reclamation (BOR) Milk River Irrigation Project that includes an inter-basin transfer water from the St. Mary River Basin and diversion structures. Without this transfer of water, natural flows alone would not keep the Milk River flowing 6 out of 10 years. The majority of the infrastructure of the St. Mary's Diversion and Conveyance Project is 100 years old and in danger of failure. In addition to tribal water claims, the project serves ten to fifteen thousand domestic users and approximately 700 farms comprising more than 110,000 irrigated acres on the Milk River. The loss of the diverted water from the St. Mary's river would be catastrophic for the individuals that depend on this source as well as for the river ecosystem.

- 1) **Address St. Mary Diversion and Conveyance Works infrastructure** – **Goal:** A collaborative effort for repairing or replacement of the St. Mary Diversion and Conveyance Works infrastructure should be implemented before catastrophic failure occurs.
 - a) **Objective:** Create sufficient capacity for the St. Mary's Rehabilitation Working Group to achieve its ultimate goal for a complete rehabilitation.
 - i) **Short-term Recommendation:** Provide funding to hire a coordinator for the St Mary's Rehabilitation Working Group.
 - ii) **Short-term Recommendation:** Secure support from the Governor's office to recognize and elevate this project as priority within its administration.
 - iii) **Short-term Recommendation:** Secure support from Montana's Congressional Delegation to prioritize this project at the national level.
 - iv) **Medium-term Recommendation:** Develop the local capacity and financial commitments across the Milk River sub-basin necessary to support a state and federal authorization that is adequate to complete the rehabilitation project.

5.3.2 Milk River Basin Erosion and Sedimentation

Increased siltation occurring in storage facilities at Fresno Dam is reducing storage capacity. Riverbed siltation downstream from Fresno Dam has presented extra management for operation of water intakes/pumps along the river for irrigators and municipalities. Flooding events erode stream banks and move sediment in the river basin, affecting water quality. Riverbed siltation

downstream from Fresno Dam has presented extra management for operation of water intakes/pumps along the river for irrigators and municipalities.

- 1) **Milk River Water Quality** – **Goal:** Better understanding of the Milk River water quality issues and storage capacity concerns to improve protection of water quality and quantity.
 - a) **Objective:** Investigate and research storage capacity improvements to Fresno Dam facility while addressing water Final ratification of the Blackfeet Tribal Water Compact should occur quality issues within the Milk River Basin.
 - i) **Short-term Recommendation:** Investigate the options and benefits of adding storage to Fresno Dam facility with an inflatable bladder dam.
 - ii) **Short-term Recommendation:** Establish collaborative effort with stakeholders to develop ideas and solutions

5.3.3 Tribal Water Compacts

Until water rights compacts within the Milk River Basin have been ratified by Congress and the Tribes, planning for rehabilitation of the St. Mary's Diversion Project is difficult.

- 1) **Establish Communication** -- **Goal:** Tribal leadership and the Montana Water Compact Commission should be encouraged to communicate and work to resolve differences.
 - a) **Objective:** Final ratification of Tribal Water Compacts should occur within the next five years.
 - i) **Short-term Recommendation:** Re-establish the legislative authority of the Montana Water Compact Commission and fund its work until all the compacts have been ratified by Congress and the tribes.

5.4 MUSSELSHELL RIVER

5.4.1 Musselshell River Water Rights Adjudication

The water rights adjudication process in the Musselshell River basin occurred at an accelerated pace during a period when water disputes were common and creation of a water enforcement

project was an immediate necessity. The claims verification process used was less stringent than that used in some other basins around the state, and the inaccuracies have yet to be corrected. Most of the Musselshell's tributaries have not yet been adjudicated. All three of the Musselshell River's adjudicated sub-basins, and the tributaries, would benefit from accurate completion of the adjudication process to the point of Preliminary decrees.

- 1) **Water Rights Adjudication** – **Goal:** Accurate adjudication of all three Musselshell River basins.
 - a) **Objective:** Bring water rights adjudication in the Musselshell basins up to the same standards that were applied in examination of other basins in the state.
 - i) **Short-term Recommendation:** DNRC should review claims in the Musselshell basins' Temporary Preliminary decrees using resource surveys, and any other data available, to determine which should have issue remarks to be resolved.
 - b) **Objective:** Bring Musselshell tributaries up to the same standards imposed on the mainstem for water measurement and distribution by the time Preliminary decrees are issued.
 - i) **Short-term Recommendation:** Water Court and DNRC need to complete Temporary Preliminary decrees on the Musselshell River tributaries.
 - c) **Objective:** Create a uniform process for accurate distribution and measurement of decreed water upon issuance of a Preliminary decree.
 - i) **Short-term Recommendation:** Encourage the Lower Missouri River Basin Advisory Council to support uniformity of decreed water distribution in all basins in the state.

5.4.2 Off-Stream Water Storage

The Musselshell River frequently experiences short, intense periods of spring run-off that can cause flood damage to homes and infrastructure. The existing off-stream storage projects (Martinsdale Reservoir and Deadman's Basin Reservoir) do not have inlet canals of sufficient size to divert more than a small fraction of the run-off, so most of it goes on downstream through Ft. Peck Reservoir, and out of state, its use lost to Montana.

- 1) **Water Storage** – **Goal:** More spring run-off should be stored within the Musselshell River watershed for use during periods of limited precipitation.
 - a) **Objective:** Additional off-stream water storage sites should be evaluated and funded. The state should identify more funding partners for potential projects, including recreational

users, flood control agencies, wildlife resource agencies, hydroelectric companies, and irrigators.

- i) **Short-term Recommendation:** Water users interested in pursuing off-stream storage projects should work to secure funding sources and the state should support their efforts through grant funding.

5.4.3 Riparian Weeds

The 2011 flood delivered millions of weed seeds to the banks and gravel bars of the Musselshell River. There is no coordinated effort among all the counties through which the river runs to control the resulting infestations, which have now gained a firm foothold.

- 1) **Noxious Weeds – Goal:** To successfully combat noxious weeds, infestations must be controlled by cooperative efforts throughout a watershed.
 - a) **Objective:** The state should encourage counties to pool allocations from the weed trust fund to establish cooperative weed management areas, and provide additional sources of funding to combat weeds in riparian areas.
 - i) **Short-term Recommendation:** The state could allow bonus grants of Weed Trust funds when multi-county cooperative weed management areas are established.

5.4.4 Musselshell Watershed Coalition

The Musselshell Watershed Coalition (MWC), established in 2009, has brought stakeholders in the basin together to work collaboratively to manage water resources and improve the ecological health of the river. By working together, the partners have implemented a number of successful strategies and projects with funding assistance from DNRC, DEQ, NRCS, and non-profit organizations. Many of the administrative functions of MWC have been provided by volunteers. The organization has reached a point in its evolution where secure funding for a Coordinator is a necessity.

- 1) **Capacity-Building – Goal:** MWC needs some assurance that its efforts on behalf of helping to better manage the state’s water resources will be supported into the future by secure funding assistance.
 - a) **Objective:** MWC partners should adopt long-range goals for capacity-building for the organization.

- i) **Short-term Recommendation:** MWC should work with the Montana Watershed Coordination Council to develop a long-range plan for building capacity and securing funding.
- ii) **Short-term Recommendation:** The state should allocate a portion of its water resource budget to support local watershed organization staff expenses now and into the future.

6 APPENDICES

6.1 LOWER MISSOURI RIVER BASIN ADVISORY COUNCIL MEETING MINUTES

6.1.1 Lewistown, February 18, 2014

**Lower Missouri River Basin Advisory Council
Recommendation Meeting Report
Lewistown, February 18, 2014**

Present: Bill Milton, Facilitator
Michael Downey, Water Resource Planner, DNRC
Wendy Beye, BAC Administrator
Jill Frankforter, USGS
Tom Richmond, Montana Board of Oil and Gas
Clayton Jordan, US Bureau of Reclamation
Eric VanderBeek, BAC member
Arnold Bighorn, BAC member
Bill Bergin, Sr., BAC member
Peter Marchi, BAC member
Mike Lawler, BAC member
Kristi Kline, BAC member
Dave Galt, BAC member
Rhonda Knudsen, BAC member
Jim Peterson, BAC member
Mike Nieskens, BAC member
Dick Iversen, BAC member
Jane Holzer, BAC member
Doug Hitch, BAC member
Monty Sealey, BAC Technical Adviser, Central Montana Regional Water Authority
Andy Brummond, BAC Technical Adviser, FWP
Scott Irvin, BAC Technical Adviser, DNRC
Attila Foltagy, Groundwater Hydrologist, DNRC
Dave Amman, Hydrologist, DNRC
Dianna Hewitt, Lewistown City Commissioner
Adam Haight, Northern Resource Council

Present Via Conference Call: Dolores Plumage, BAC alternate member
Mark Ockey, BAC Technical Adviser, DEQ
Denise Biggar, BAC Technical Adviser, DNRC

Facilitator Bill Milton called the meeting to order at 10:05 a.m. Introductions included an answer to the question, “What have you learned so far from the Water Supply Initiative process?”

Answers included: water resource issues haven't changed much over the years; there is a great deal of overlap in issues from basin to basin; data on water resources is available, but may be difficult to locate; the eastern part of the state and groundwater have not received as much attention as the western part of the state and surface water have; even though issues have remained constant, the social, political and economic context has changed.

Presentation – Jill Frankforter, USGS Water Quality Section Chief, Helena

The USGS has been conducting energy-related surface and groundwater research in the Williston Basin, which extends into northeastern Montana, since the 1980s. The agency has built aquifer modeling systems for shallower aquifers and is now beginning to look at deeper aquifers in the area. One of the most prominent studies was begun on tribal land north of Poplar when contamination from leaking wells and brine pits built in the 1950s impacted drinking water. Funding for this project came from USGS, EPA, the Ft. Peck Tribe, and some of the energy companies involved. Remediation efforts have been partially successful, but there are on-going problems with water quality and the systems used to transfer water from the Missouri River to residents. (The tribe has also pointed out in a recent news story that aquifers under their land have become unusable for any future purpose, and that has an ongoing economic impact.)

Another research project involves the Prairie Pothole Region, mostly in North Dakota, where oil and gas production brine chemical signatures have been found in naturally-occurring wetlands. Impacts on plants and invertebrates that populate the wetlands are still unknown, but natural remediation would occur very slowly if the contamination sources were removed.

A small groundwater baseline testing program was initiated in the Williston area last year, but there is no way of knowing for sure whether water quality had already been degraded by energy development. Researchers wish the project could have been started six years earlier, and that funding could be assured for long-term follow-up monitoring. USGS is working to coordinate with Montana's DEQ and MBMG to test wells in northeastern Montana as soon as possible. In 2012 some oil production wells were tested to establish their production water's chemical signature in case any contamination occurs in the future.

Additional USGS studies planned include a groundwater availability “budget” for the Williston

Basin, a study on how much water will be required for fracking activities during the expected life of the basin's oil boom, and a groundwater quality study on Blackfeet tribal lands.

Some discussion about the USGS research followed. Dave Galt pointed out that Montana regulations require release of the list of chemicals used by companies in the fracking process after the process has been completed. The lists are available online. He asked whether baseline testing results on private wells are made public. The answer was yes, through the MBMG's Ground-Water Information Center, where it is possible to discover the owners of the wells tested.

Presentation – Clayton Jordan, Bureau of Reclamation Reservoir Operations, Milk River Project

The Milk River Project was authorized by the Secretary of the Interior in 1903 and constructed over the next decade. The original authorization was to provide irrigation water to the area, and flood control became a part of the project in 1957. Other uses now include recreation, fish and wildlife, municipal drinking water, and industrial uses. The Montana FWP division, Blackfeet Tribe, NRCS, Army Corps of Engineers, and Milk River Joint Board of Control work together with the Bureau of Reclamation to manage the project.

Lake Sherburne collects water from the mountains of Glacier Park, and a canal moves it to the Milk River where it flows north into Canada, then south through Havre to the Missouri. Fresno and Nelson reservoirs store the water for use during the summer months. The Bureau of Reclamation coordinates with the Army Corps of Engineers for flood control, monitoring snowpack to estimate reservoir inflows and storage requirements. The Milk River Joint Board of Control uses the inflow and estimated water quantities available to determine what amounts will be available to irrigators each season.

The entire Milk River Project infrastructure is in need of rehabilitation, but at this time, there is no funding available for major repairs or replacement. The system has not met reliability standards for the past twenty years. A large portion of the cost burden will most likely be borne by project water users, which total 140,000, including Bureau of Reclamation lessees, tribal users, and private water rights users.

Sedimentation has reduced the capacity of the two lower Milk River reservoirs, Fresno and Nelson. Fresno now holds 92,000 acre/feet at full pool, while it was built for 120,000 acre/feet. Nelson has also lost capacity, and leaks about 1,800 acre/feet per month due to seepage through its dikes. A dam safety project will start next year, but it will not address the seepage issues.

Presentation – Tom Richmond, Montana Board of Oil and Gas

Tom Richmond displayed several charts showing data for drilling permits issued in Montana. Coal bed methane permits peaked in 2005, and had nearly disappeared by 2008. Natural gas permits peaked in 2006, and oil permits are peaking now. Economic factors play a large role in which types of permits are sought by energy companies. Most of the current oil drilling permits have been issued in Richland and Roosevelt counties, closer to the most productive areas of the Bakken play. Since 2000, 700-800 oil wells have been drilled in Richland County in Montana. Other old wells were re-drilled horizontally to increase production. In areas outside the Bakken, oil drilling permit numbers are at their lowest point since the beginning of the period that started in 1960. In central Montana, where the rate at which oil can be pumped from the Heath Shale does not match production from the Bakken, drilling is not cost-effective given the current price of oil.

Eric VanderBeek asked about drilling activity in the Judith River basin, through what process are permits are granted by the Board of Oil and Gas, and does the Board ever deny a permit.

Tom replied that the drilling in the Judith is for “geologic exploration,” even though there is no category for that, so the permits were granted for oil wells. When permits are requested for an area outside of an existing oil field, the Board of Oil and Gas publishes a notice of the application, and there is a 10-day protest period. If a hearing is scheduled, persons who wish to comment must appear at the hearing. The Board of Oil and Gas does not deny permits, as that would be a “taking” of property rights, but there can be conditions attached to the permits.

The Minerals Management Bureau of DNRC processes leases on state-owned land, and the BLM is the primary regulatory agency on tribal lands. The EPA monitors drilling activity on private and public lands.

Kristi Kline asked when the BOG looks at water resource issues in the permitting process.

Tom said current regulations were developed to protect shallow, good quality aquifers. Oil and gas well casings must be solid from the surface to a point below the lowest fresh water aquifer. No holding ponds are now allowed for production water, the wells must use a closed system. The Board looks at existing water wells in the area of development to see how deep the aquifers are located.

Dave Galt asked about fracking chemical disclosure rules.

In August, 2011, the state adopted rules that require all well fracturing material components be disclosed, and that well fracturing is part of the initial drilling process. If fracturing is contemplated on an existing well, a permit must be obtained. The fracturing material website is at frackfocus.org, and it is a central U.S. depository of data.

Jim Peterson asked about relative depths of the Heath Shale and the Madison Group Aquifer. Oil wells that end in the Heath Shale are above the depth of the Madison Group Aquifer. Eric VanderBeek asked, how can water that discharges in surface springs be protected?

Tom said that there is no known oil in the Heath Shale formation above the Madison Group Aquifer where water quality is high. If there are any connections between those layers, the oil was probably flushed from the shale by moving water in the geologic past.

Dick Iversen commented that the footprint of an oil well operation is 5-6 acres, and once surface water leaves the site, the EPA or Montana DEQ is responsible for water quality regulation. Sites are bermed to prevent drilling and production water from leaving the site.

Tom added that energy companies must have a spill control plan approved by the EPA. Generally no enforcement action occurs unless there is an uncontained spill.

Michael Downey mentioned that the Board of Oil and Gas regulates Class 2 injection wells that are used for either enhanced oil or gas production, or for production waste water disposal.

Doug Hitch asked whether all production water is injected.

Tom replied that production water can be discharged at the surface if it meets water quality standards established by DEQ. He said that much of it is of high enough quality to be used for drilling or fracking purposes. The Board of Oil and Gas regulatory program does not cover water quality testing. He suggested that private well owners should test their own water and that way the results would remain confidential. The MBMG was allocated \$660,000 by the 2013 Montana Legislature for groundwater monitoring. The agency is considering using the funding for long-term research.

Dave Galt and Jane Holzer described the MBMG coal bed methane groundwater testing program being administered by conservation districts. About 10-15 wells per county can be tested once by the program. Jane said the program would be more beneficial if more wells in more areas could be tested, especially in far eastern Montana. Some energy development companies have domestic or stock wells tested in the vicinity of their operations, but the results do not become public.

LUNCH

After the lunch break, the group began working on Issue Statement #5, Groundwater Aquifers: Quantity and Quality.

Some suggested recommendations included:

- Short-term, identify 3-5 major aquifers that should be more thoroughly defined and characterized by research
- Expand funding for aquifer research
- Revise the method for prioritizing research locations so that sparsely populated areas of the state receive the same attention as densely populated areas
- Add a risk factor for contamination to the list of criteria considered in the research prioritization process.
- Tie water quality and quantity together in issuance of new groundwater permits
- Account for wastewater when considering available water quantity

Next Steps

- Milk River Sub-basin meeting, March 4 in Havre, early afternoon
- Kristi Kline will find a place for the Havre meeting and invite participants
- BAC meeting March 5 at Ft. Peck Dam Interpretive Center, beginning at 10:00 a.m.
- Michael, Bill and Wendy will draft and send out an agenda
- BAC members will participate in a conference call or have a face-to-face meeting once a week until the recommendation process is completed
- Recommendation suggestions can also be emailed to Wendy, Bill, and Michael for drafting and incorporation into the final report.

The meeting adjourned at 4:00 p.m.

6.1.2 Ft. Peck, March 5, 2014

**Lower Missouri River
Basin Advisory Council
Report on Meeting March 5, 2014
Ft. Peck Dam Interpretive Center**

Present: Bill Milton, Facilitator
Michael Downey, DNRC Water Resource Planner
Jennifer Patrick, BAC member
Rhonda Knudsen, BAC member
Kristi Kline, BAC member
Dick Iversen, BAC member
Jane Holzer, BAC member
Arnold Bighorn, BAC member
Mike Nieskens, BAC member
Jim Peterson, BAC member

Bill Bergin, Sr., BAC member
Thomas Probert, BLM, BAC Technical Adviser
John Daggett, US Army Corps of Engineers, BAC Technical Adviser
Denise Biggar, DNRC, BAC Technical Adviser
Darin McMurry, US Army Corps of Engineers
Mike Dailey, DNRC
Nate Ward, DNRC
Nancy Heins, Valley County Conservation District
Cody Fulton, Agri-Industries
William Rathert, Rancher
Irene Rathert, Rancher

Present By Conference Call: Eric VanderBeek, BAC member
Dwight Vannatta, BAC member
Bob Goffena, BAC member
Wendy Beye, BAC Administrative Assistant

Facilitator Bill Milton called the meeting to order at 10:00 a.m.

Michael Downey summarized the basin water plan process, and how the BAC's work will be incorporated into the statewide water plan. At present the Lower Missouri Basin Plan is about 50% completed at 100 pages long. The BAC recommendations that will be adopted by the end of May, 2014, will become a part of the basin plan. The basin plan includes scenarios that consider increasing population, and long-term drought conditions. The statewide water plan will refer to the four individual basin plans rather than incorporated in entirety. Recommendations from the individual basins will be considered for inclusion in the final state plan that will be presented to the 2015 Legislature.

John Daggett, US Army Corps of Engineers, presented information on the Corps' management of the Missouri River through and below Ft. Peck Reservoir. All six dams operated on the Missouri by the Corps are treated as one system. The Corps is authorized to manage for flood control, hydroelectric power, water supply, water control, recreation, fish and wildlife, navigation, and irrigation.

About 16% of storage is reserved for flood control each year, with top 7% serving as exclusive flood control. Storage is just under 19 million acre/feet in Ft. Peck. The Corps looks at plains snowpack, mountain snowpack, and rainfall each year to determine how much storage capacity may be necessary to store floodwaters. At present, the Corps is estimating about 30 million acre/feet will enter the reservoir system this spring when the snow melts.

Revisions of the management plan in 2004 and 2006 allows more water to be retained in the reservoirs during drought periods to help protect recreation. Reservoir Control Center presents an annual plan for public comment each year. The plan considers hydroelectric needs, endangered

species, navigation, irrigation (when possible), and flood control. The hydroelectric facility at Ft. Peck produces about 10 billion KW each year, which markets first to preference customers (non-profit rural electric companies), then to the open market. Water releases year around are ordered every day or so to meet power requirements.

About 140 private irrigators are located between Ft. Peck Dam and the North Dakota border. When possible, especially during drought periods, the Corps tries to release enough water to fill irrigation needs, but there is no contractual obligation to do so. Channel changes and new sand bar formations have interfered with irrigators' ability to reach the river, so higher releases would be necessary to allow access to the water.

During drought conditions, all the authorized purposes pay a price, including recreation facilities. Businesses, especially at the upper end of the reservoir, may be left with the water far from their boat ramps. The Corps tries to help by extending the boat ramps where possible, or putting temporary boat ramps in place.

Maintenance costs for the Ft. Peck Dam facility totals about \$8.3 million annually, about \$3.4 appropriated funds, or 40%, paid for by electric power sales. The 2011 flood left the Corps with \$43 million in repairs, mostly at the spillway and a stilling basin to dissipate water energy below the spillway. Congress had to authorize these expenditures. There is also a \$15 million turbine renovation project that will begin late this year.

There is water available in the Missouri River below Ft. Peck for additional irrigation, but it may be difficult to access. There are no guarantees, however, that irrigators will receive enough water without having to move their pump sites. The irrigation water authorization only applies to federal water delivery projects, not private irrigators. Michael Downey commented that after a conversation with the Reservoir Control Center, water uses below the dam are taken into consideration in the annual management plans. Tribal rights and water reservation demands must be met.

Water releases vary from day to night, as does the river level below the dam. At night, the release might be 9,000 cfs, and during the heat of the day in the summer, 13,000 cfs. Floating pumps can make use of water more reliably than fixed sites. Some of the conservation districts have helped producers by removing sand bars to improve accessibility to the river. The Corps tries to give producers information in advance of releases. Municipalities haven't had problems accessing water.

Jim Peterson asked whether DNRC will be doing an analysis of water availability both above and below Ft. Peck, and developing a statistical model to estimate the effects of drought on the statewide water use plan.

Michael Downey replied that there are several modeling efforts going on. The Bureau of Reclamation is studying water availability from the headwaters of the Missouri to Ft. Peck. The

water plan that results from the Water Supply Initiative project will raise more questions than it answers on what data is needed for good forecasting of water availability and use.

Jim Peterson asked how a water permit applicant can know whether his application will be granted, with so many agencies involved in determining availability in the Missouri below Ft. Peck.

Michael Downey said there is water available, and DNRC is granting new water right permits. If a downstream state were to try to call for water from Montana, a legal battle would ensue. An individual in Montana who has a water right cannot be forced to give up that right to someone downstream out of state.

The Corps is selling excess water in North Dakota that comes from reservoirs. Last year, barge operations needed more water, and the Corps denied the request. The only releases made are based on the annual operating plans for the reservoir system. The Corps did file for a water right in the 1970s for some of its authorized uses.

Michael Downey gave a short summary of the issue of flowing wells in Montana (artesian wells). There are about 1,500 mostly stock water wells in the Lower Missouri and Yellowstone that run continuously at 10-20 gallons/minute, allowing 24,000 acre/feet to flow onto the ground, down drainage ditches and eventually into rivers. The water quality is probably lower than that of the river. Some of these wells are losing productivity as the water level in the aquifers drops. The BAC could make a recommendation that control valves be installed, with some cost sharing by federal and state grant programs, on these wells to control the flows and conserve water. This would be a voluntary program that should elicit good support. If a water right holder on a flowing well filed for 100 gallons/minute, by installing a valve that reduces the flow to 10 gallons/minute, the water right would not be reduced.

A pilot program in Petroleum and Fergus counties demonstrated that adding valves to flowing wells did make a difference in aquifer water levels.

Bill Milton reminded people attending the meeting that the BAC's goal is make recommendations for measurable actions that will help resolve the issues that were raised in the Lower Missouri River Basin during the scoping meetings held last fall.

Issue Statement #1, Water Resource Inventory

Bill Bergin asked to remove the word "consumptive" from the first sentence.

Bob Goffena said that "historic consumptive use" should be considered whenever a change in a water right is applied for.

At the Milk River sub-basin meeting, participants asked that in the future, when changes are made to the issues statements, they should be tracked so BAC members can better understand how the document has been revised.

Doug Hitch emailed some information on streamflow gages to Michael to be added to this issue statement.

Jim Peterson said that we now have a whole issue statement devoted to streamflow gaging, and maybe that is where that information should be placed.

Michael Downey modified some of the language of the objectives and recommendations based on BAC member comments, and these changes will be reflected in the next version of the issue statements.

The issues raised by Bob Goffena on issue remarks not being a part of the Musselshell River basins decrees will be considered by conference call of the sub-basin irrigator group later. Denise Biggar commented that DNRC does not have the authority to go back and re-open issues on decreed basins at this point. The Water Court would have to order a re-examination based on filed objections.

Dwight Vannatta had to leave the conference call, so will email his comments on issues to Wendy and Michael.

LUNCH

Bill Milton suggested that the afternoon session be spent touching base on all the rest of the issue statements.

Issue Statements #1 and #2 will be handled by an irrigator sub-committee: Bill Bergin, Bob Goffena, Jim Peterson, Peter Marchi, Bill Milton, Michael Downey, and any other BAC members who want to participate.

Kristi Kline asked about water reservations made by municipalities and whether they can be lost through water compacts or adjudication process. Kristi also wondered about whether water compacts issue on the Milk River should be added to Issue Statement #1.

Michael Downey said no, they cannot be lost.

Issue Statement #3, Storage, Distribution Infrastructure Maintenance

Federal government, the state, and local communities in the Milk River need to get together and plan for the St. Mary's diversion project collaboratively. How should this apply to other areas in the Lower Missouri River basin?

Michael Downey explained that two programs, the Renewable Resource Grant and Loan program and the Reclamation Development Grant program, are used to help share costs for projects that enhance water and other renewable resource projects across the state. DNRC staff ranks grant applications by set criteria, then forwards recommendations to the legislature for funding every two years. Unfortunately, the funding assistance is seldom enough to pay for construction of major projects. Grants can, however, pay for preliminary engineering to help design the projects.

Dick Iversen suggested that basins use a strategy that in the short-term, project design be accomplished using state grants; medium-term, study the project and do preliminary engineering; long-term, look for funding sources from all stakeholders.

Michael Downey said that the Milk River has been studied and re-studied, and estimated costs determined, which were overwhelming. If the diversion canal failed catastrophically, 80% of the flow of the Milk River would be lost to all users. The agricultural users should not be the only ones who share in the cost of repairs.

Rhonda Knudsen suggested a recommendation of establishing watershed councils in the short-term to develop funding methods.

Jim Peterson said the legislature is not likely to respond to a request for enough money to make major repairs. Instead, a package should be developed that might include tax-free bonds, tax incentives, private contributions to combine with state and federal funding sufficient to fund a project. The plan should come from the local citizens who are affected by the project, and there should be some benefits to the private partners in the process. Tax credits might help encourage participation. Establish working groups to assess local capacity, incentives, public/private partnerships, and financial commitments to address infrastructure needs.

Kristi Kline said that the St. Mary's Working Group came to a standstill because they need a local coordinator to help keep the group going. The groups need assistance from the state to develop capacity and operational security.

Michael Downey suggested adding that the state should provide operational funding to establish the working groups.

Bill Milton explained that there is now a grant program through DNRC that provides \$10,000 per year for two years to help watershed groups hire coordinators and develop funding strategies that would allow the groups to continue operating.

The second objective concerning water storage and delivery efficiencies should perhaps be included in the water availability section of Statement #1. Michael will work on that.

Issue Statement #4, Water Measuring Devices

At present, gaging maintenance is a federal/state/local partnership. There is a budget request from DNRC now to increase funding for streamflow gages.

Each sub-basin should make decisions about where new gaging stations should be placed, and how those stations should be paid for.

Issue Statement #5, Groundwater Aquifers: Quantity and Quality

In addition to groundwater quality monitoring, connections between aquifers and surface water should be identified and characterized.

There was some discussion of whether private well owners would want the results of their well testing to be public information. Participation in a groundwater testing program would be voluntary.

Michael Downey explained the Colorado, Wyoming, Utah, and New Mexico have adopted or in the process of adopting statutes to bring the oil and gas industry back into the regulatory framework for meeting water quality standards. In 2005, the industry was exempted from meeting Clean Water Act Regulations.

Deb Madison, who works for the Ft. Peck Tribe in its environmental issues office, said that after the Poplar aquifer contamination came to light, the tribe has adopted new rules for testing domestic and stock wells within a mile of an oil field or proposed oil field to establish baseline water quality data.

It was decided to recommend that the governor appoint a taskforce to address perceived water quality issues with the energy industry by using standards recently adopted by other western states. This recommendation will be discussed at future meetings when other members of the BAC have had a chance to study it.

Another recommendation was added for supporting federal efforts to deal with flowing wells.

Issue Statement #6, Future Demands

The US Army Corps of Engineers can't promise to make more water available for new water rights permits on the Missouri River downstream of Ft. Peck Dam. Federal law may not allow releases for irrigation. A study in 2009 investigated whether the Corps' original authorizations were still valid, and nothing was changed. There is at present, however, enough water to allow some new permits to be issued.

Issue Statement #7, Watershed Organizations

Michael Downey commented that many of the watershed organizations around the state do not consider irrigation infrastructure to be a top priority.

There was some discussion about keeping the Lower Missouri River Basin Advisory Council going beyond the Water Supply Initiative process. Funding to keep the BACs operating year-round is not a likely scenario, but the legislature might be willing to fund BACs every other year, 6 months before each legislative session. The BACs could evaluate how implementation of their recommendations is going, and what needs to be changed in the statewide water plan.

Smaller, sub-basin groups might be able to function better than a large-scale BAC, especially in eastern Montana where geographical distance impedes collaboration, as do differing issues in each sub-basin.

A recommendation was drafted to support continuation and expansion of the Watershed Capacity Building Program initiated by the 2013 Legislature.

Next Steps

The BAC plans to hold four additional public sub-basin meetings in late April and early May to take comments on the draft recommendations report. Participation may be better at these meetings than it was for the scoping sessions, because there will be a document made available to the public, and that will encourage comment. The document could be distributed electronically to the list of persons who have been involved in the Water Supply Initiative in the Lower Missouri over the past 6 months.

After the public meetings, any changes the BAC wants to consider can be incorporated into the final recommendation report that is to be completed by May 31.

The next face-to-face BAC meeting will be in Lewistown at the Calvert Hotel, tentatively on April 10, from 9:30 a.m. to 4:30 p.m. Michael Downey will work on finalizing the date and times.

Weekly facilitated BAC conference calls will be scheduled to continue work on the recommendations until they are finished.

At the next BAC meeting, strategy for involving the public in the recommendation process will be discussed.

Action Items

- Michael Downey and Scott Irvin will work on language for Issue Statements #1 and #2, which may be combined
- The Irrigator BAC Subcommittee will conduct a facilitated conference call to work on water rights issue recommendations.

- Bill Milton will set up weekly conference calls with BAC members, and facilitate them.
- Michael Downey will try to obtain a copy of the criteria used to prioritize groundwater research.

6.1.3 Lewistown, April 10, 2014

**Lower Missouri River
Basin Advisory Council
Report on Meeting April 10, 2014
Calvert Inn, Lewistown**

Present: Bill Milton, Facilitator
 Michael Downey, DNRC Water Resource Planner
 Wendy Beye, BAC Administrative Assistant
 Kristi Kline, BAC member
 Jane Holzer, BAC member
 Arnold Bighorn, BAC member
 Jim Peterson, BAC member
 Bill Bergin, Sr., BAC member
 Dwight Vannatta, BAC member
 Douglas Hitch, BAC member
 Robert Goffena, BAC member
 Walt McNutt, BAC member
 Michael Lawler, BAC member
 Peter Marchi, BAC member
 Eric VanderBeek, BAC member
 Krista Lee Evans, representing BAC member Dave Galt
 Andy Brummond, MT FWP, BAC Technical Adviser
 Scott Irvin, DNRC, BAC Technical Adviser
 Greg Kruzich, Bur. Rec., BAC Technical Adviser
 Attila Foltagy, DNRC Groundwater Hydrologist
 Dave Amman, DNRC Hydrologist
 Justin Kucera, Bur. Rec.
 Joan Bergin, Rancher

Facilitator Bill Milton called the meeting to order at 9:05 a.m. After introductions around the table, he reminded BAC members to refer to the guidelines for discussion and decision-making that were sent out to them when they were first appointed to the BAC, and again a few days prior to this meeting.

Krista Lee Evans commented that in her experience, if consensus could not be reached on a particular issue, that issue was not moved forward in a process, and was not placed in any final

report. If agreement cannot be reached by a group, the issue is not defensible to the public, and confusion arises.

Michael Downey explained that when the BAC guidelines were drafted, DNRC recognized that some issues might be contentious, and thus did not require consensus to move an issue into the final recommendation report.

Bill Milton asked all BAC members present to weigh in on the issue, and it was generally agreed that while consensus is a goal for the group, important issues should not be dropped simply because a few members have differing opinions. Instead, it was suggested that minority opinions on issues be included in the final Recommendations Development Report that will be forwarded to DNRC at the end of May. Several BAC members encouraged open discussion, and hoped that no one would feel constrained to state their opinions. Walt McNutt suggested that on issues and/or recommendations where consensus cannot be reached, a vote be conducted, and a “super majority” (2/3 of BAC members present and voting) would move an issue forward, with a dissenting opinion recorded. After further discussion, the group decided to wait until the final BAC meeting May 21 or 22 to make a decision on the process.

An additional question was raised on whether a BAC member could name a substitute for any meeting, and whether that “proxy” member should be allowed to vote on issues. Michael Downey said he would ask if DNRC wanted to address that issue. He will let BAC members know when he has an answer. The group agreed that no voting would occur at the current meeting.

Krista Lee Evans raised a question about the purpose of the public comment meetings the BAC will schedule for the end of April and beginning of May. Michael Downey responded that a draft recommendation report will be made available to the public prior to the meetings, which will be both informational and an opportunity for the public to comment on specific recommendations. It is even possible that new issues will be raised that should be addressed by the BAC. At the BAC’s final meeting, amendments to the draft recommendations report will be considered.

Michael Downey went on to explain the process that will be used by DNRC to draft the statewide water plan that will be presented to the Legislature at the end of summer. DNRC staff will review all the draft recommendations coming from all four river basins in the state, and put together a draft plan. Then two BAC members selected by each basin group will travel to Helena, review the draft report, and make comments or suggestions for changes. That revised draft will be sent out to all BAC members around the state for additional comment, then DNRC will finalize the plan.

After a short break, the BAC began reviewing the four sub-basin issue statements and recommendations.

The Musselshell River Sub-basin issue statements were questioned by Peter Marchi, who was concerned that they could cause conflict among water users. He agreed to work with Bill Milton, Bob Goffena, and Bill Bergin to revise them via conference call next week.

The Milk River Sub-basin issue statements are not yet complete. Kristi Kline will revise issue #2 and send in proposed changes next week. She would like to see the water compacts addressed in the main Lower Missouri River Basin issue statements.

Judith River Sub-basin issues were revised slightly by sub-basin BAC members at a meeting last week. In addition to research on the Madison Group Aquifer, the shallower Kootenai Aquifer was added as a study subject. Krista Lee Evans asked that the phrase “and rural and municipal water sources” be removed. Eric VanderBeek concurred, and no one else objected, so the change was made. The issue statement relating to Ackley Lake was dropped.

The Lower Missouri River Sub-basin below Ft. Peck Dam issue statements will require another conference call next week.

Issue Statement #3 – Water Resource Inventory and Measurement

Krista Lee Evans suggested that “physically available” be changed to “legally available” in the first sentence of the issue statement. After some discussion, the group decided to change the phrase to “legally and physically available.” The word “fairly” was struck from the phrase, “It is difficult for managers to fairly distribute water without knowing how much is available,…”

The phrase, “that protect fisheries, and recreational use” was replaced with “and those who want to know streamflow levels” in Goal 1) Objective a).

In Goal 1) Objective b), the word “unmetered” was inserted before “municipal water systems.” In section i) the phrase “point of use” was changed to “point of diversion.”

In Goal 1) Objective c), the \$1 million set amount was changed to “adequate funding.”

There was some discussion about exempt wells and whether there should be a change in language about measuring devices on “large volume” wellheads. The phrase “large volume” was dropped from Goal 1) Objective b). No additional language on exempt wells was added, as the legislature is already addressing the issue in the 2015 session.

Issue Statement #2 – Storage, Distribution, Infrastructure Maintenance, and Application Efficiencies for Irrigation Water

Krista Lee Evans suggested changing references to “streamflow” to “surface water.” There was no objection from BAC members, so the changes were made.

To avoid confusion about state-owned infrastructure in Goal 1), first sentence, the beginning of the sentence now reads, “~~The state's~~ Montana’s aging ~~irrigation~~ water storage and delivery infrastructure inventory must be updated,…”

LUNCH

Tim Davis, DNRC Water Resources Bureau Chief, called in via conference call after lunch. He said he was pleased with the diversity of BAC members, and encouraged by progress made in all four basins around the state. He expects that there will be considerable overlap of issues across all the basins, but recommendations for addressing those issues will vary. DNRC will make sure that BACs are involved in reviewing the draft state water plan before it is finalized for the legislature.

Jim Peterson reminded those present that the water plan will be presented to the 2015 legislature, not for adoption, but for possible amendment by resolution. The Executive branch would adopt a final plan. Implementation, however, can be controlled by legislative funding appropriations.

Issue Statement #5 – Future Demands on Water Resources

Michael Downey said that after listening to Bureau of Reclamation and US Army Corps of Engineers representatives at BAC meetings, there is no additional water held in federal projects (Fresno and Nelson) in the Lower Missouri River basin besides Fort Peck (where none is needed) that can be released for new uses. The phrase, “approaching federal water managers with the goal of releasing more impounded water for use within the state,” was dropped from Goal 1) Objective a).

Krista Lee Evans asked that the short-term recommendation of Goal 1) Objective a) be dropped as it targeted the oil and gas industry. Wendy Beye pointed out that the recommendation was the result of a comment made by Dave Galt about the industry being prevented from putting production water to beneficial use because of a two-year limit on the first use of that water. The permitting process has already been changed to make it easier to put production water to beneficial use, and Jim Peterson said no use should be singled out for favor, so the recommendation was dropped.

Bob Goffena said the small off-stream storage projects could help capture spring run-off for use later in the irrigation season, and also retain contract water releases when water users forget to notify water managers that they have finished using their water. A recommendation to explore possible off-stream storage sites was added to Objective a).

A discussion of water banking followed, the group decided to move the first sentence of Objective b) to a Short-term Recommendation: “Water banking strategies should be explored as a tool to facilitate transfers of water to differing uses.”

Issue Statement #1 – Water Use Administration and Enforcement

Bill Bergin and Peter Marchi asked that the entire section on enforcement be dropped. Bill Milton suggested that the group start at the beginning of the issues statement to see if there are other changes suggested.

Several BAC members expressed the view that problems with the adjudication process should not be mentioned in the final Recommendations Development Report. The process needs to be completed as efficiently and accurately as possible, but there should be no implication that any existing problems warrant starting all over again.

Krista Lee Evans outlined the details of a Montana Water Court order and supplemental order that will require re-examination of some claims using a more stringent process than was originally applied to them. Scott Irvin said that the re-examination will still not be as rigorous as that used in many basins, and that adjudication will never result in completely accurate water rights decrees. Peter Marchi reminded the group that objections made before Final Decrees can help clean up inaccuracies. Scott Irvin said keeping a strong change of use process in place will also help resolve issues of acreage expansion, over-stated claims, or abandoned claims. The group agreed to strike language pointing out discrepancies in water right claims from Issue Statement #1. A summary of the discussion will appear in the final Recommendation Development Report so the public knows that the BAC wrestled with the issue in response to comments made at scoping sessions.

Support for timely completion of the adjudication process was unanimous, and the 2020 deadline for completion of Temporary Preliminary or Preliminary Decrees for all the basins in the state was re-affirmed. An additional deadline of 2027 was added for completion of Final Decrees. An interim deadline of 2024 was added for moving all Temporary Preliminary Decrees to Preliminary Decrees. Once issue remarks and objections have been addressed, both Temporary Preliminary and Preliminary Decrees become enforceable, and eligible for creation of enforcement projects by petition to a district court.

Because of confusion about the status of the Montana Water Compact Commission, the reference to that body was dropped in Goal 2) Objective b) Recommendation i), and the word “state” substituted. The BAC agreed that federally-ratified water compacts with all the tribes in Montana should be in place as soon as possible to end uncertainty about reserved water rights.

Several meeting participants found the language of the second paragraph of the issue statement confusing. It was changed to read, “With regard to illegal water use, there is growing sentiment for enforcement against such use,” but that sentence may be removed if all of the objectives relating to enforcement are removed from 3) Goals. Other objectives in 3) Goals may be retained. Michael Downey will work with Peter Marchi to develop language about possible state-wide standardization of qualifications, pay, liability, accountability, and training for water commissioners. The section encouraging (not mandating) water measuring devices for all diverted water was also considered important. There may also be a more efficient and less antagonistic

way to handle illegal use of water, i.e. with a state water use ombudsman, and that issue will be further explored before final recommendations are finalized.

Issue Statement #4 – Groundwater Aquifers: Quantity and Quality

Krista Lee Evans recommended dropping the phrases, “industrial development continues” and “before such development occurs” from the second sentence in the issue statements. There was no objection, although there was some discussion about leaving in the word “development.” It was decided that DNRC couldn’t hold up issuing permits while waiting for additional aquifer research to occur. All BAC members agreed that more aquifer research is necessary and needs to be funded by the state.

Krista Lee Evans asked that Objective b) be dropped. A compromise on language was reached, with the following adopted as a short-term recommendation: “Request that DEQ and DNRC work together to educate and encourage local sub-basin groups to address water quality and other issues associated with water use or activities that affect water quantity or quality.”

Objective c) was modified to include all aquifers for monitoring against over-use, not just the ones where high-volume wells were contemplated or drilled. The question of exempt wells was discussed again, and there was agreement that a cluster of many exempt wells can use more water than one high-volume well. There was also agreement on the need to spread aquifer research dollars to all four river basins in the state rather than expending funds mainly in the more highly populated closed basin areas of the state. The first short-term recommendation was modified to read, “Support local, state, and federal efforts and increase funding through existing DNRC grant programs to control artesian flowing wells to better conserve groundwater resources.”

An agreed-upon schedule for public meetings follows:

April 29 – Harlowton
April 30 – Lewistown
May 6 – Havre
May 7 – Wolf Point

The meetings are proposed to begin at 6:30 p.m., and last until approximately 8:00 p.m., or longer if necessary. Copies of the draft recommendations will be made available for public review as soon as possible.

Next Tasks

Conference Calls: Peter Marchi, Bill Bergin, Bob Goffena, Michael Downey, Bill Milton – to revise language in the Musselshell River Sub-basin Issue Statements.

Kristi Kline, Jennifer Patrick, Dolores Plumage, Michael Downey, Bill Milton – to revise Issue #2 in the Milk River Sub-basin Issue Statements.

Dwight Vannatta, Dick Iversen, Rhonda Knudsen, Walt McNutt, Michael Downey, Bill Milton – to work on Lower Missouri River Sub-basin Issue Statements (below Ft. Peck Dam).

Peter Marchi, Michael Downey – to draft language for standardization of water commissioner program across the state.

All BAC members – to review and accept or reject changes made by calls shown above.

Publicity: Wendy Beye will work with Michael Downey and sub-basin BAC members to publicize public meetings and ensure good participation.

Next Full BAC Meeting: May 21 or 22 at Ft. Peck to make any changes in recommendations after hearing comments at the four sub-basin public meetings, and adopt final Recommendations Development Report.

6.1.4 Ft. Peck, May 28, 2014

**Lower Missouri River
Basin Advisory Council
Report on Meeting May28, 2014
Ft. Peck Dam Interpretive Center**

Present: Bill Milton, Facilitator
Michael Downey, DNRC Water Resource Planner
Wendy Beye, BAC Administrative Assistant
Kristi Kline, BAC member
Jim Peterson, BAC member
Bill Bergin, Sr., BAC member
Dwight Vannatta, BAC member
Douglas Hitch, BAC member
Robert Goffena, BAC member
Walt McNutt, BAC member
Dick Iversen, BAC member
Rhonda Knudsen, BAC member
Michael Lawler, BAC member
Peter Marchi, BAC member

Eric VanderBeek, BAC member
Dave Galt, BAC member
Thomas Probert, BLM, BAC Technical Adviser
Andy Brummond, MT FWP, BAC Technical Adviser
Denise Biggar, DNRC, BAC Technical Adviser
Attila Folnagy, DNRC Groundwater Hydrologist
Joan Bergin, Rancher

Facilitator Bill Milton called the meeting to order at 10:00 a.m. Introductions around the table included a comment on the current water situation in the attendees' areas of the basin.

Milton reviewed the agenda:

1. Adopt final recommendations today after considering public comments received to date (if a vote is required on an issue, a super majority of 2/3 of BAC members present will prevail);
2. If any minority reports are necessary, author(s) will be chosen and a submission deadline set;
3. Review sub-basin issue statements and recommendations for possible changes;
4. Elect representatives to attend a meeting in Helena July 22-23 to work on the draft state water plan;
5. Comment on the Montana Water Supply Initiative process – what worked, and what didn't work.

Michael Downey, DNRC Water Resource Planner, reviewed the next steps that will be taken in the process of arriving at a state water plan by early December. Once the plan has been completed, it will really just be a starting point in an ongoing planning process to address existing and future concerns about Montana's water resources. There is a possibility that the BAC will meet again in September to review the draft state water plan.

The BAC then tackled actionable recommendations offered by the public during the four public meetings, online through SuveyMonkey, and by emailed written comments. Summaries of public comments are shown below in italics type.

Issue Statement #1

The public and agencies are in agreement with this issue statement and its associated recommendations.

A suggestion made through the SurveyMonkey site: Reverse temporary ruling that individuals may lease their water rights to energy companies.

BAC members agreed that because the water rights prior appropriation doctrine does not favor any one beneficial use over another, there should be no limits placed on the kinds of beneficial uses water may be leased to fulfill.

Another SurveyMonkey suggestion made by a number of responders for Objective b), Recommendation i): Education is of absolute importance in issues such as this however the verbiage "importance of a robust change process" leaves an intimidating connotation and should be removed from the recommendation.

There was a discussion about whether the word “robust” was slightly intimidating. The focus of the recommendation is education, rather than the change process itself, so the word “robust” was dropped.

Walt McNutt, BAC member, pointed out that the water right change process has been shortened and simplified in the past few years, but historical use still has to be proven. That is one way to help make water rights decrees eventually align with past documented beneficial use. The existing change process protects other water rights holders on a stream.

Issue Statement #2

There was a suggestion to add “increasing funding for the current grant and loan program” to Objective a), Recommendation ii).

Walt McNutt, BAC member and former legislator reminded the group that funding for the grant and loan program comes from coal severance taxes, and the amount is dependent upon what is being mined, not an act of the legislature. The phrase was modified to read “...increase funding caps for currently authorized grants and loans,” and added to the recommendation. This would allow DNRC more discretion in awarding financial assistance for infrastructure projects that may require larger grants and loans than are currently available.

It was suggested that the state could stipulate that there is a universal public benefit from use of water storage and supply infrastructure, and there should then be universal payment to support its continued existence – through user fees, taxes, etc. – a multi-pronged approach to funding.

BAC members agreed that the state cannot “stipulate” a public benefit, and that state taxpayers are already helping to pay for infrastructure projects through the coal severance tax on a resource that belongs to all the residents of the state. Infrastructure repairs will be accomplished one project at a time, with costs shared by water users and the state through grants and loans.

In regard to the St. Mary’s diversion, a local/state/tribal partnership may be the only way to advance the project, as money is not likely to come from the federal government. If local users and the state can set aside funding to begin working on the project a piece at a time, catastrophic failure of the system might be avoided.

The group decided that the St. Mary's Rehabilitation Project should be addressed at the sub-basin level, and in fact, affected water users have been meeting again to work through the funding issue. Kristi Kline, BAC member from the Milk River sub-basin said that since the Bureau of Reclamation controls the project, there isn't much the state can do. The original authorization by Congress limits financial responsibility for repairs or replacement to irrigators and the Bureau of Reclamation.

Montana FWP suggests encouraging consideration of fishery issues when infrastructure repair or replacement is in the planning stage so that costs can be shared and the public benefited.

BAC member Peter Marchi asked why beneficial use of water to support fisheries should be highlighted above other uses. Andy Brummond of FWP said that sometimes planning for infrastructure projects is too far along by the time fisheries issues are considered. The group decided that conservation districts, who issue 310 permits for work along streams, must involve FWP in the early planning stages, and that provides sufficient opportunity for collaboration.

Issue Statement #3

Any new streamflow gages added to the existing network should be placed in consultation with local watershed groups and water users.

This item was already addressed in Objective a) ii) of Issue Statement #3.

Data from streamflow, canal, and water diversion measurement devices operated by entities other than USGS and DNRC are not often made public. Tribes, the Dept. of Agriculture, water user associations, and other entities should be encouraged to share data.

Several BAC members pointed out that stream gages operated by entities other than USGS or DNRC may not be as accurate, may not measure anything other than flow rate, and do not transmit data electronically, so it is not feasible to include them in the state's public network.

Changes in the types of crops irrigated are changing the amount of water being put to beneficial use. Without water measurement, the impacts of the changes cannot be anticipated.

Rhonda Knudsen, BAC member from Glasgow, said that producers plan their water use for the thirstiest crop they may plant. Some years they use all their water right, others, they don't, but the full amount is accounted for.

Issue Statement #4

A suggestion from SurveyMonkey: The Montana Water Supply Initiative (MWSI) should include estimation of the water resources needed for oil and gas production, how extraction of these

resources will impact groundwater aquifers and where those water resources will come from. Groundwater Control Areas should be established by the state where groundwater withdrawals in recent decades have outstripped the pace of recharge.

Again, BAC members declined to single out any one industry for special attention in its recommendations. Groundwater Control Areas are already authorized as a tool to be used by DNRC.

Several members of the public expressed concern about inter-basin groundwater transfer projects. A recommendation about how to address these transfers might be something the BAC should consider.

BAC members decided that the issue was already addressed by Objective c) ii) in this issue statement.

Wells that are excepted from the water use permitting process – less than 35 gpm and 10 acre/ft per year production – were a topic of discussion at several of the public meetings. It was suggested that the Montana Legislature be encouraged to resolve the issue.

Walt McNutt, former legislator, said a legislative committee is already working on addressing the issue.

According to several members of the public, the question of how the oil and gas industry will impact the state's aquifers should be in the water use plan.

A lengthy discussion of oil and gas development's effects on water supply led to an uneasy agreement among BAC members that again, a particular beneficial use should not be singled out for attention by a state water plan. The state's Groundwater Assessment Steering Committee is already in the process of revising its method of choosing aquifers to be the subject of research, and will likely begin looking at more aquifers on the eastern edge of Montana. Public education on how energy development uses water, and in what quantities, will be necessary to offset perceptions that may not be based on fact. Denise Biggar, DNRC Glasgow, said that all permitted groundwater uses are quantified and water right holders must submit reports to DNRC. Dave Galt, BAC member, said that the quantity of water disposed of in injection wells is also documented and reported to the Board of Oil and Gas. Montana has a strict fracking chemical reporting system, and all the data are available to the public, with much of it posted on websites. Walt McNutt pointed out that in heavily populated areas of western Montana, there is a risk of groundwater contamination from multiple septic systems, so again, a particular beneficial use of water should not be singled out for regulation.

The following came from SurveyMonkey:

Add Short term recommendation, Objective a): DEQ and DNRC to be tasked to provide more on-the-ground inspectors to ensure accurate tracking and record-keeping system is properly employed.

BAC member Rhonda Knudsen said that state agencies should not be told how to spend their budget, for example by hiring additional staff. Their funding is finite, and they may have other priorities in mind. Michael Downey suggested that a recommendation wouldn't force an agency to hire more staff, but would highlight the importance of an issue raised by the public. The BAC decided not to add the recommendation.

The draft recommendations would benefit by including a mention of the importance of groundwater springs on fish & wildlife.

Once again, the BAC decided not to favor any particular beneficial use. When aquifer research is undertaken, all uses of the water will be considered.

Add the following as stated objectives: 1- Permits for uses that could contaminate groundwater should require the applicant to test and periodically monitor for contamination, sending results to DEQ and the GWIC public database at the Montana Bureau of Mines and Geology. 2- The Montana Board of Oil and Gas Conservation and the Department of Environmental Quality should jointly analyze data to project the volumes of hydraulic fracturing flow back water and produced water that will need to be disposed of in the next decade in Montana. They should establish as soon as practicable a system to track and account for each truckload of flow back and produced water, to ensure safe and legal disposal methods are used and to track and verify the actual volumes of water involved. 3-MSU Energy Research Institute, Montana Board of Oil & Gas, the Department of Environmental Quality and the Water Resources Division to provide analysis and assistance to the energy industry to recycle and reuse flow back and produced water to minimize destruction of clean water.

Several BAC members pointed out that any number of beneficial uses of water could contaminate groundwater. A permit that does not normally involve discharge of wastewater does not require any monitoring. Dick Iversen, BAC member from Culbertson, said that local governments have the power through existing statutes to regulate proposed development that might contaminate groundwater. Dwight Vannatta BAC member from Bainville said that in several instances, DEQ said they didn't have sufficient staff to investigate incidents of surface water contamination when they were reported. A decision was made to not add the recommendation, as many BAC members were of the opinion that there is no way to guarantee 100% compliance with regulations, no matter how many inspectors are deployed by the state.

Issue Statement #5

At all the public meetings, the need for instream flows to protect native fisheries was a topic of discussion, with the issue raised by both FWP and the public. The new water leasing procedure

has not helped improve winter river flows because most water rights are only effective during the summer irrigation months. FWP needs to make sure water users understand their local fishery's critical water needs so that water can be managed using the "rule curve" approach. In developing rule curves, simulated models of water flows are created based on estimates of how much water will be available each year, and water managers try to follow the plan, even through the winter months.

Andy Brummond, MT FWP, explained the "rule curve" approach to reservoir water release management. He also said that FWP reserved water rights for instream flows are very limited in quantity, and are only sufficient to "wet the backs" of fish rather than enhance habitat. Additional instream flows not associated with a water right or water reservation are not considered by DNRC when new water use permits are considered. He suggested adding an addition to Objective a) i), "...considering both consumptive and non-consumptive uses, which may or may not have associated water rights, existing on the stream." After some discussion and questions, and a reminder from Denise Biggars, DNRC, that the agency is not allowed by statute to consider non-consumptive uses that have no associated water right or water reservation, the BAC decided not to add the phrase to the recommendation. A compromise was suggested by Kristi Kline, to add "...which may include consumptive or non-consumptive uses" to Goal 1).

A suggestion was made that the title of Issue Statement #5 should be changed, as it doesn't address future oil and gas industry water use or the impacts on water quality.

This suggestion was addressed by the decision to not single out a specific beneficial use of water.

From SurveyMonkey, Objective a): Add short term recommendation ii: Establish areas where groundwater withdrawals in recent decades have outstripped the pace of recharge and whether or not establishment of Groundwater Control Areas is appropriate, to avoid drawing down of water table. Add short term recommendation iii: It should be noted that increasing water supplies is the only strategy to meet future demands. State resource agencies also should work together to conserve water supplies by restricting and monitoring water use that cannot be returned to the aquifer. The US Geological Survey (USGS) notes that available surface water supplies have not increased in 20 years, and groundwater tables are dropping at an alarming rate. As water supplies diminish, the majority of water used in hydraulic fracturing (fracking) cannot be recycled and cannot return to the hydrological cycle.

This proposed recommendation was not adopted for the same reasons given above – no particular beneficial water use should be singled out in the state water plan.

Also from SurveyMonkey, a specific recommendation: A statement demonstrating that thorough evaluation of water development alternatives and their impacts not only to water users, but also to natural systems and fish & wildlife resources, is needed in the BAC's recommendations.

Again, no special attention should be given to a particular beneficial water use.

A suggestion from SurveyMonkey for Objective b): Add short term recommendation ii: Review specific industrial uses of water (for example, exploratory and oil and gas drilling) that deplete the supply of usable water by extracting ground and surface water and mixing it with toxic chemicals. Once used, this produced water cannot be returned to the water supply and is instead stored indefinitely in tanks or ponds. In comparison, water used for agricultural and livestock can be recycled back into our water supply.

Even though the end results of water use for industrial purposes as compared with agricultural uses may differ, no distinction should be made among beneficial uses.

Issue Statement #6

There was wide-spread public support for the state playing a financial role in helping watershed organizations thrive. They can look at citizens' values in a way the state can't, and those values should underlie the state water plan in addition to data and facts. The state might benefit by asking local watershed groups for input whenever the state water plan is updated in the future.

DNRC is likely to ask for input from local groups when the state water plan is next updated.

A responder to SurveyMonkey suggested for Objective b): Add short term recommendation iii: DNRC, DEQ and other "water regulatory" agencies need to provide a single voice (including funding requests) to the Montana Legislature.

Members of the BAC decided that this goal is unattainable.

Sub-basin Recommendations

Facilitator Bill Milton said that each local group will need to work independently on their sub-basin recommendations, but that there will be support from the state for sub-basin watershed groups.

None of the BAC members present offered any changes to the sub-basin issues statements or recommendations.

BAC Representatives to Helena DNRC Draft Water Plan Meeting

There were five volunteers to attend the July 22-23 meeting in Helena to discuss the draft state water plan: Jim Peterson (ranch duties permitting), Bob Goffena, Rhonda Knudsen, Peter Marchi, and Kristi Kline.

Comments on MWSI Process

Several BAC members commented on the diversity of representation on the Basin Advisory Council, and that even with differing opinions, civility prevailed at all the meetings. BAC diversity allowed participants the chance to see the Lower Missouri River basin as a “big picture,” rather than focusing on just their local issues. All the BAC members learned a great deal about water resource issues during the process, thanks to presentations by agency representatives and assistance from the BAC Technical Advisers. Several members said that conference calls were not a satisfactory way to discuss issues, partly due to technology issues, but mostly because face-to-face meetings are a better way to do business. They understood, however, that travel distances and weather concerns required the use of conference calls. Two BAC members felt that not enough time was devoted to the process to allow thorough discussion of all the issues raised by the public.

Next Tasks

- Wendy Beye will prepare the Recommendation Development Report and email it to BAC members in time for comments before the final submission deadline of June 15, 2014.
- At least two of the five BAC members who volunteered to attend the Helena DNRC meeting on the draft state water plan will be there July 22-23, 2014.
- A meeting of the BAC will be arranged in September to review the state water plan draft.
- Michael Downey, Bill Milton, and Wendy Beye will continue to inform BAC members by email of the state water plan’s progress through the end of 2014.

6.2 REPORTS OF PUBLIC MEETINGS ON DRAFT RECOMMENDATIONS

6.2.1 Harlowton, April 29, 2014

**Lower Missouri River
Basin Advisory Council
Report on Public Meeting April 29, 2014
Kiwanis Youth Center, Harlowton**

Present: Bill Milton, Facilitator
Michael Downey, DNRC Water Resource Planner
Wendy Beye, BAC Administrative Assistant
Bill Bergin, Sr., BAC member
Douglas Hitch, BAC member
Robert Goffena, BAC member
Peter Marchi, BAC member
Leon Hammond, Project Manager, Upper Musselshell Water Users Assoc.
Gary Olsen, Wheatland County Weed Coordinator
Rachel Frost, Coordinator Missouri River CD Council
Scott Irvin, DNRC, BAC Technical Adviser

Kevin Smith, DNRC Water Projects
Mike Ruggles, MT FWP Fisheries
Gary Hammond, MT FWP Fisheries
Attila Felnagy, DNRC Groundwater Hydrologist
Dave Amman, DNRC Hydrologist
Joan Bergin, Rancher
Betty Goffena, Rancher

Facilitator Bill Milton called the meeting to order at 6:37 p.m., and outlined that the purpose of the meeting was to hear public feedback on the BAC's draft recommendations for the Montana Water Supply Initiative project. Unfortunately, there was really no public representation present.

Michael Downey gave a brief presentation on the MWSI process. Montana's water resources do not meet all of the state's demands, and a collaborative process may help find solutions for water supply issues. The state water plan that will be the end product of the MWSI project will not be an end to all water resource problems, but rather be the beginning of a long-range, on-going planning effort.

After all four BACs submit their recommendations to DNRC mid-June, an advisory group made up of two members from each BAC will meet in Helena with DNRC staff to help draft a state water plan. That draft will go to the Water Policy Interim Committee of the legislature and the Environmental Quality Committee for comment. Then hearings will begin September 22 to present the plan and once again receive comments from the public. By December 5, 2014, the plan will be finalized for presentation to the 2015 Montana legislative session.

Comments on this draft of the Lower Missouri River BAC's recommendations will be accepted through May 19, and may be made in person at this series of public meetings, online on a survey website, by mail to Michael, Bill Milton, or Wendy Beye, or by email.

Even though the BAC recommendations are still in the draft stage, DNRC has submitted some funding requests that relate to those recommendations. There is a proposal to install new streamflow gages on some of the tributaries in the state, including the Judith River, in cooperation with the Montana Bureau of Mines and Geology. An improved network of water measurement devices is a priority mentioned in all the basins during the scoping meetings.

Bill Milton asked meeting participants to comment on each of the issue statements.

Issue Statement #1

No one had a comment.

Issue Statement #2

Bob Goffena suggested adding “increasing funding for the current grant and loan program” to Objective a), Recommendation ii). Kevin Smith commented that the cost of construction has outpaced increases in cost of living, and it is very expensive to repair or replace irrigation infrastructure.

Issue Statement #3

Gary Olsen said he uses the gage at Harlowton as an educational tool, and asked whether gages are operated year-round. Peter Marchi responded that some are year-round, and others are seasonal; the Harlowton gage operates year-round. The Musselshell Watershed Coalition has solicited funding assistance for the Martinsdale gage for the next two years from cities, counties, conservation districts, and water user associations on the Musselshell. There was a good response to the request.

Issue Statement #4

Peter Marchi pointed out that groundwater may provide additional water for use in the state, but there isn't enough data yet on the state's aquifers to support planning for future use. The BAC is asking that more research be done to characterize aquifers and determine just how much water might be available from them.

Issue Statement #5

Scott Irvin asked the FWP fisheries biologists present what they thought about additional off-stream storage projects.

Mike Ruggles responded that FWP will submit official comments to DNRC using an agency-to-agency protocol. Mike did say that fish need more than just enough water to wet their backs. They need good habitat to thrive. Stakeholders along the Musselshell River need to decide whether they want a sustainable fishery, and then manage water accordingly. Winter flows are as important as summer flows that are supported by releases of water stored in off-stream projects.

Kevin Smith said that building new off-stream storage would be very expensive, and there might not be enough additional water captured to justify that expense. A better option might be expansion of existing reservoirs, or rehabilitation of inlet canals so they could carry more water during run-off periods. Any expansion to capture more water than that allowed by existing water rights would require a new water right permit and priority date.

Bob Goffena asked the fisheries biologists a question: During what periods of the year are instream flows necessary for the health of the Musselshell fishery? For instance, when do sauger spawn, when do the catfish need to move up and down the river, what are the critical periods?

Mike Ruggles said that the 80cfs instream flow for FWP in the lower Musselshell River is just enough to keep banks wet, but is still too low to provide good fish habitat. Montana FWP is beginning to look at “rule curves” for management of water releases of impounded water that would consider all uses, including fisheries, as water levels in reservoirs and the river are managed. In developing rule curves, simulated models of water flows are created based on estimates of how much water will be available each year, and water managers try to follow the plan, even through the winter months.

Bob Goffena said new off-stream storage might help keep water in the river.

Mike Ruggles said the draft recommendations mention FWP funding assistance for projects or research, but don’t mention what benefits might be gained by FWP in exchange for that financial assistance.

Scott Irvin said that the CM Russell compact that is about to be signed will set aside 80cfs in the lower Musselshell, concurrent with FWP’s reservation.

Issue Statement #6

No comments, except Bill Bergin asked why it was so long. Response: The BAC member who worked on drafting the issue statement feels very strongly that watershed organizations should be a critical element in the state water plan.

Musselshell River Sub-Basin Issue Statements

1. Water rights adjudication

Scott Irvin addressed the issue of water rights adjudication. The process has been going on since 1979, and the Water Court is not likely to back up and start over in any basin, even though some were adjudicated using different claim investigative techniques. Prior to the existing judicial process, an administrative adjudication was occurring in southeast Montana (1970s). The administrative process was more intensive towards field inspections, compared to the existing adjudication. That process was eliminated and replaced with judicial adjudication. Under the judicial process the Water Court has relied heavily on the participation of other water users (objectors) in achieving a certain level of accuracy.

Some tributaries in the Musselshell watershed are still in the litigation phase of adjudication, and it is unknown to the DNRC how long it will take to complete the litigation to the point of enforceable decrees in those tributaries. Water rights holders on the tributaries may not be interested in implementing an enforcement project. How tributaries will be rolled into an enforcement program for the mainstem Musselshell is not clear.

Peter Marchi said he had visited with the Water Court and the estimate for time required to clear up all the litigation on the Musselshell tributaries is ten years. Even when a decree is finally issued, that may not provide any extra water for the mainstem of the river, but at least water use in the tributaries will be measured so we know how much we're actually using.

Bob Goffena continues to worry about the expansion of acreage irrigated with no change in priority dates.

2. Off-stream storage

Kevin Smith said that the existing project infrastructure is old and its original efficiency has been lost. If canals were rebuilt to maximize efficiency again, reservoirs could be filled more quickly. If reservoir capacity is increased, new water rights permits would be necessary, with new priority dates.

New off-stream or on-stream storage projects would be very expensive, and would take land out of production if reservoirs are built on existing farmland. If a new project is contemplated, assurance of funding for a 75-year maintenance program should be a part of the planning.

Scott Irvin agreed that a big barrier to capturing more run-off water is the inefficiency of inlet and delivery canals. Kevin Smith said that at some point it might make sense to channel water through pipes rather than canals to gain efficiency. Scott Irvin pointed out that the loss of water due to canal seepage helps recharge aquifers and provides return streamflow as well.

3. Riparian weeds

Rachel Frost likes the cooperative multi-county approach to weed control, and said the Weed Trust Board also favors that approach. A recent meeting in Jordan brought together the BLM, DNRC, US Army Corps of Engineers, county weed boards, conservation districts, MT FWP, US FWS to discuss the salt cedar problem in the lower Missouri River basin. A start to any control plan will be inventory and education.

4. Musselshell Watershed Coalition

No comments.

The group continued the discussion on state fisheries. Bill Milton asked, "If stakeholders don't understand FWP's water needs, how can they cooperate?"

Mike Ruggles said that many people living along the river don't know what types of fish are in it, much less what those fish need to survive. The endangered species or species of interest get the most attention. MT FWP is beginning to attempt to at least maintain fish in prairie streams that are subject to drought.

Bill Milton asked those present to think about whether the recommendations should include a statement about improving fish habitat.

Bob Goffena and Bill Bergin said that irrigators are willing to give up some water to help improve river habitat. Bill said that the river always went dry during the summer until the Musselshell Distribution Project was organized, and now it continues to flow all year round. Mike Ruggles said that bass stocked near Lavina just after the distribution project started are still present in the river.

Bill Milton wrapped up by saying that if people get together on the recommendations, the legislature may be more willing to listen.

Participants agreed that even without a public presence at the meeting, the discussion was valuable.

6.2.2 Lewistown, April 30, 2014

**Lower Missouri River
Basin Advisory Council
Report on Public Meeting April 30, 2014
Yogo Inn, Lewistown**

Present: Bill Milton, Facilitator
Michael Downey, DNRC Water Resource Planner
Wendy Beye, BAC Administrative Assistant
Kristi Kline, BAC member
Mike Lawler, BAC member
Jim Peterson, BAC member
Dave Galt, BAC member
Eric VanderBeek, BAC member
Douglas Hitch, BAC member
Jerry Hanley, Citizen
Cal Frank, Consulting Engineer
Marcia Gans, Citizen
Clint Loomis, Citizen
John Rickert, Citizen
Mary V. Jones, Citizen
Karl Gies, Big Spring Creek Watershed Council (BSCWC)
Michael Chapman, BSCWC and Trout Unlimited

Jerry VanHaur, Citizen
Lonny Bergstrom, Citizen
Jeannie Rickert, Citizen
Mary Schelle, Citizen
Gladys Walling, Citizen
Shelly VanHaur, Citizen
Jacqueline Merceuiier, Citizen
Beckie Williams, Citizen
Dave Ballman, Trout Unlimited
Marite Valencia, Trout Unlimited
Harvey Nyberg, Citizen
Sterling Sundheim, Citizen
Ron Moody, CM Russell Committee
Josh Butcher, Rancher
Bob Dunnagan, Citizen
Laurie Lohrer, Central Montana Resource Council
Charlie Denisen, Lewistown News-Argus
Bill Harris, MT State Representative, District 30
Diana R.C. Hewitt, Lewistown City Commission
Scott Irvin, DNRC, BAC Technical Adviser
Attila Fohnagy, DNRC Groundwater Hydrologist
Dave Amman, DNRC Hydrologist
Clint Smith, MT FWP
Andy Brummond, MT FWP

Facilitator Bill Milton called the meeting to order at 6:35 p.m., and outlined that the purpose of the meeting was to hear public feedback on the BAC's draft recommendations for the Montana Water Supply Initiative project.

Michael Downey gave a brief presentation on the MWSI process. He emphasized that the planning process is a collaborative approach to managing water resources, and that rather than resulting in a static document, the state water plan will be the first step in a continuous planning process.

After all four BACs submit their recommendations to DNRC mid-June, an advisory group made up of two members from each BAC will meet in Helena with DNRC staff to help draft a state water plan. That draft will go to the Water Policy Interim Committee of the legislature and the Environmental Quality Committee for comment. Then hearings will begin September 22 to present the plan and once again receive comments from the public. By December 5, 2014, the plan will be finalized for presentation to the 2015 Montana legislative session.

Comments on this draft of the Lower Missouri River BAC's recommendations will be accepted through May 19, and may be made in person at this series of public meetings, online on a survey website, by mail to Michael, Bill Milton, or Wendy Beye, or by email.

Mary Jones asked how the MWSI process fits in to all the other water resource meetings in years past.

Michael Downey responded that this process, unlike previous planning attempts, is beginning from the bottom up, with issues identified during last fall's public scoping meetings. The plan will not be static, but will be revised and adjusted as conditions and needs change in the future.

A question was raised about how Fergus County issues will fit into the state plan, and Michael Downey said that many issues overlap in the four statewide basins, but any solutions related to specific sub-basin concerns will need to be explored at the local level.

Bob Dunnagan asked whether the state legislature will actually follow the recommendations in the plan, or can influential lobby groups throw it out.

Michael Downey said that the plan is an Executive Branch document that will guide DNRC's management decisions in the future. The state legislature can pass resolutions to amend the plan, but will not vote on the document itself.

Bill Harris, a state representative, said many other western states have problems with water demands in downstream states. They can't win court cases because they don't have good state water plans in place. This plan will help protect Montana's water for use by Montanans.

Michael Chapman said the recommendations draft does not address exempt wells, and that the legislature has refused to address the issue. These wells, co-located in a residential development, can have a detrimental impact on water supply, and contamination of the aquifer is a possibility when many individual septic systems accompany the exempt wells.

Jim Peterson responded that it's not fair to say that the legislature hasn't wrestled with the issue of exempt wells. The issue is very complicated, and legislators will probably be trying to tackle it again next year.

Jerry VanHaur asked how this plan can be in place when adjudication hasn't yet been completed? It may be a waste of time. Also, there should be a BAC member representing agricultural interests in Fergus County.

Bill Milton said an attempt was made to appoint the twenty members who serve on the Basin Advisory Council from as wide a variety of interests and geographical locations as possible. Applications were solicited all across the Lower Missouri River basin, and there are a number of ranchers serving on the Council.

Bill Milton asked meeting participants to comment on each of the issue statements.

Issue Statement #1

Jim Peterson said the BAC's number one priority issue is to complete the adjudication process. Funding to complete the process was appropriated by the legislature, and a schedule developed that aims to complete all basin decrees to at least the point of Preliminary Temporary by 2020.

A participant commented that we need to protect our water from out-of-state claims.

Issue Statement #2

Shelly VanHaur asked whether municipal domestic water users don't already pay for their water.

Bill Milton explained that Issue Statement #2 was more related to large irrigation infrastructure rather than municipal water systems, but that maybe both should be included in the issue statement.

Michael Chapman said people who use the water and benefit from it should pay for infrastructure maintenance.

Mike Lawler asked Mr. Chapman if he could recommend some language to address the issue.

Mr. Chapman suggested that the state could stipulate that there is a universal beneficial use of water storage and supply infrastructure, and there should then be universal payment to support its continued existence – through user fees, taxes, etc. – a multi-pronged approach to funding.

Issue Statement #3

Cal Frank said streamflow gaging and water measurement dovetail with adjudication for distribution of decreed water.

Michael Downey reported that DNRC has made a budget request for 2015 to fund additional streamflow gages on the state's tributaries, including two new gages in the Judith basin, one on Big Spring Creek.

Beckie Williams asked who will monitor data collected by streamflow gages, particularly water quality data. Who decides whether the water has good quality?

Andy Brummond replied that USGS and DEQ monitor sediment, salinity and TMDL.

Mary Jones said that Big Spring Creek should have a gage that could test water quality.

Issue Statement #4

Mike Lawler said that during the course of BAC meetings, it became clear that Montana doesn't have enough "facts" about water. We need more in order to make informed management decisions, and these recommendations encourage the legislature to "count," characterize, and quantify.

Karl Gies commented that the state needs a baseline of how much water we have and what is its quality.

Bob Dunnagan mentioned the groundwater permit about to be issued by DNRC for a well that would make an inter-basin water transfer from the Madison Aquifer to the Musselshell River basin to serve residents there.

Michael Chapman asked if Musselshell water users interfere with spring water production in the Judith basin, is that fair?

Eric VanderBeek said that the Central Montana Water Authority is applying to DNRC for a grant to study the issue and gather facts about the Madison Aquifer before the water project advances.

Shelly VanHaur told the group about a proposal to pull water originating in Montana and flowing down the Missouri River to serve Las Vegas and southern California. Water from Montana is in demand. She asked whether the adjudication process in the Judith basin is starting all over again.

Scott Irvin said the 2005 tax imposed by the legislature will help fund completion of adjudication with Temporary Preliminary decrees in place by 2020. DNRC is ahead of schedule, and has turned its examination material over to the Water Court for action.

Issue Statement #5

Andy Brummond explained the term "water banking." Some people who choose not to use their water for a particular purpose can quantify it through a regulatory process (not yet in place) and "bank" the water for use at some time in the future without losing the water right because of suspension of beneficial use.

Clint Loomis said the recommendations don't mention minimum streamflows for non-human uses such as fisheries.

Scott Irvin said there are some instream flow water rights for FWP, but they have relatively junior rights to other users. The flows are protected, however, from new water right applications in the future.

Michael Downey said there is a statutorily allowed leasing program available now, where agricultural users can lease water to instream flows or other uses.

Clint Smith said instream flows can keep fish wet, but don't necessarily improve habitat or ecosystem function.

A suggestion was made that the title of Issue Statement #5 should be changed, as it doesn't address future oil and gas industry water use or the impacts on water quality.

Dave Galt said that the oil and gas industry uses an insignificant quantity of water in comparison to other uses, and that water quality is monitored.

Bob Dunnagan commented that there can be a large impact on water quantity in a local area because it takes so much water to develop each oil or gas well.

Dave Galt reiterated that the quantity is still not significant compared with other uses such as agriculture.

Beckie Williams asked how the oil and gas industry will impact the state's aquifers. That should be in the water use plan.

Bill Harris commented that a lot of water goes down the river and out of the state. The oil and gas industry can use some of that water, and will help raise the average wage of employees in the state. All users should work together to maintain control of the state's water resources.

Eric VanderBeek said that people need water to drink, and the millions of gallons it takes to fracture an oil well could serve a family for many years. We need to be cautious about impacting water quality, too.

Clint Smith reminded participants that even a non-consumptive use, such as fisheries or recreation, can be good for the state economically, and water has to flow out of the state.

Issue Statement #6

Marcia Gans supports watershed organizations. They can look at citizens' values in a way the state can't, and those values should underlie the state water plan in addition to data and facts.

Judith River Sub-Basin Issue Statements

Jim Peterson said the Judith River basin has some aquifers that people are interested in. We don't even have an accurate measurement of water flowing from Big Spring, much less how much is available in the Madison Aquifer. The only way to see how large water withdrawals will affect the aquifer is to run a long-term (five to ten years) test and monitor other wells and springs in the area. There needs to be a public/private partnership to accomplish this research.

Mike Lawler added that we need facts, and need to consider local values, because we do not all agree on how our water resources should be managed. If the BAC managed to put together these recommendations in a relatively short time, think how much local groups could accomplish.

Doug Hitch said issues raised on the Madison Aquifer will apply in other parts of the state, and in other aquifers located above the Madison. We need more information before the aquifers are developed.

Eric VanderBeek said it's really good to hear public comments. We don't know enough about aquifers and their complex structure and interconnections. All of that needs to be studied more thoroughly. Water is becoming more and more valuable and scarce. Management of water resources shouldn't be a political function.

Meeting Wrap-Up

Bill Milton asked participants to make a final comment on the meeting, the recommendations, the process, or whatever else should be said.

Clint Smith: most concerned about instream flows and natural ecosystems

Jerry Hanley: was a miner for many years, and is glad the state is improving controls on industry, but would hate to see taxpayers further burdened economically

Bob Dunnagan: the MWSI process is moderately useful, but money and politics will probably rule in the end

Michael Chapman: we will all be served by a process that aims to protect, conserve, and reconnect – we need to use water wisely, and fish are the “canary in the mine” for us

Cal Frank: interesting meeting, and it seems that lots of money will be necessary to pay for all we want in the way of research

Marcia Gans: money is not necessarily required – an 8th grader doing a science project discovered PCB contamination in Big Spring Creek

Clint Loomis: the MWSI project is an almost impossible job, and legislators need education to understand the issues

Karl Gies: citizens should stay involved in water resource issues

Gladys Walling: we need to work together

Lonny Bergstrom: funding will be a problem

Shelly VanHaur: we could lose our water – the federal government might take it if we can't prove we are using it

Jeannie Rickart: everyone has to work together

Diana Hewitt: agrees that we need to protect the state's water

Mary Schelle: there should be 100 times as many people here – surely we can find funding for such important issues

Bill Harris: thanks to all who came – we need to figure out exactly what we need to answer questions, and then prioritize to make the most of funding available

Jacqueline Merceurier: is optimistic that solutions can be found

Beckie Williams: we can't survive without water

Sterling Sundheim: differing views are an important part of the conversation

Marita Valencia: our streams may not fit into the “boxes” we want them to

Ron Moody: values are a 1,000-ft view, concerns are a 10-ft view, and this plan is a 40,000-ft view – we do need to complete adjudication, talk about money to clarify issues – hopes the document becomes policy

Josh Butcher: a rancher – feels that water is as valuable as gold because it feeds America – we need to protect our way of life

Bill Milton thanked everyone for coming, and the meeting adjourned at 8:40 p.m.

6.2.3 Havre, May 6, 2014

**Lower Missouri River
Basin Advisory Council
Report on Public Meeting May 6, 2014**

Great Northern Inn, Havre

Present: Bill Milton, Facilitator
Michael Downey, DNRC Water Resource Planner
Kristi Kline, BAC member
Randy Reed, BAC member
Jennifer Patrick, BAC member
Dolores Plumage, Blaine County Commissioner
Michael Wendland, Hill County Commissioner
Bob Nelson, Walleyes Unlimited
Ronda Wiggers, MT Water Well Drillers Assoc.
Cari Kent, Congressman Steve Daines staff
Mike Lang, MT House Dist. 35/33
Kris Hansen, MT House Dist. 33
Brandon Baney, New Media Broadcasters
Attila Foltagy, DNRC Groundwater Hydrologist
Denise Biggar, DNRC Regional Office Manager Glasgow
Kraig VanVoast, DNRC Havre
Cody Nagel, MT FWP
Greg Kruzich, US Bureau of Reclamation

Facilitator Bill Milton called the meeting to order at 6:30 p.m., and outlined that the purpose of the meeting was to hear public feedback on the BAC's draft recommendations for the Montana Water Supply Initiative project.

Michael Downey gave a brief presentation on the MWSI process. The process of updating the state water plan will consider an inventory of both consumptive and non-consumptive uses, consider the possible effects of drought on Montana's water supply, and plan for new water uses. Each of the lower Missouri's sub-basin has some distinct issues not present in the other sub-basins, but the sub-basins also have many overlapping water resource issues. Water planning is an attempt to develop a collaborative approach to solving problems in water management.

Phase 1 of the MWSI created basin advisory councils (BACs) in all four designated state watershed basins. Those councils then conducted public scoping meetings to identify issues of concern, which were then documented in four separate scoping reports. In Phase 2 of the process, the basin advisory councils began considering alternatives for addressing the identified issues. Phase 3 is the recommendation development phase, and the Lower Missouri River BAC is bringing its draft recommendations back to the public for comment.

After the recommendations have been finalized, a Recommendations Development Report from each basin will be submitted to DNRC. Staff will then consider which issues and recommendations represent statewide concerns and those will be combined into the state water

plan, which will serve as a policy document. Future legislative sessions will be able to use the plan for guidance in addressing water resource issues.

Issue Statement #1

Sorting out water rights issues through the adjudication process is a crucial step in determining how much water is being used in the state.

Kraig VanVoast said that both the upper and lower Milk River basins have had Temporary Preliminary decrees issued, and are now in the objection phase. Temporary Preliminary decrees cannot be enforced until issue remarks have been resolved. If Ft. Belknap Tribe rights are considered, the Milk River basin is closed to issuance of any new water rights, and even groundwater access that could affect surface water is reviewed before permits are issued.

Denise Biggar explained that in basins where there are federal water reservations such as tribal water rights have not yet been settled, a Temporary Preliminary decree can be issued, but it cannot progress to a Preliminary decree until the federal rights have been quantified and agreed upon by the parties.

Issue Statement #2

Aging infrastructure and the costs of repairs or replacement is an important issue in all the state's basins.

Michael Downey asked, "Does anyone here have any ideas for how to get the St. Mary's project done?"

Kris Hansen recalled that at one point, if the state could have set aside its share of the costs and accomplished a beginning, the escalating costs faced by the other funding partners by delaying the project might be avoided. The federal government never authorized any funding.

Randy Reed said the issue is very complex, involving the Blackfeet Tribe, the Ft. Belknap Tribe, Canada, and all the water users. A local/state/tribal partnership may be the only way to advance the project, as money is not likely to come from the federal government.

Issue Statement #3

It is necessary to accurately measure the water flowing through Montana's waterways. A network of streamflow gages is now supported by USGS, DNRC, and local entities, but needs to have funding assured into the future. The network also needs to be expanded.

Jennifer Patrick said the Bureau of Reclamation also participates in the streamflow gaging network in addition to the USGS and DNRC.

Michael Downey said that DNRC is installing a new gage on the Milk River. The placement should be determined with assistance of the local groups.

Kris Hansen said there are other entities that place stream gages, including MSU, MBMG, and Dept. of Agriculture. All the agencies should work together. Maybe the gage information should be located in a central database, perhaps on GWIC, but that might not solve the problem of public information.

Kristi Kline said all the gages measure different parameters. We still need to have the information on streamflows.

Michael Downey said there are few gages on tributaries. There is a lack of information for water management.

Jennifer Patrick said the Milk River has a lot of gages (30 or so), including some in Canada. Ft. Belknap Tribe quit gaging their canal.

Issue Statement #4

The state's aquifers need to be better understood before they are accessed for new water uses.

Kris Hansen said the legislature authorized research in the Fox Hills aquifer, but there aren't enough hydrologists at MBMG. The legislature will not want to add hydrologists permanently just to hurry a project along or add more projects.

Kristi Kline pointed out that the eastern portion of the state has not received much funding for research because the focus has been in the western part of the state.

Kris Hansen said that because in a closed basin, new water has to be purchased so groundwater research is more valuable. That's a reason that groundwater research projects are concentrated in the western part of the state. She doubts that the legislature will want to increase the number of research projects.

Issue Statement #5

Are there additional ways that water can be stored for future uses, or can existing storage facilities be expanded to hold more water?

Issue Statement #6

Local watershed groups are the best way to address local water resource issues and manage water, and should be better supported by the state with funding.

Milk River Sub-basin Issues

Kristi Kline said that the St. Mary project and the Milk River BurRec system are very different from any other infrastructure problems in the state, so it should be handled separately.

A new coordinator for the St. Mary's Working Group has been hired. The Governor's Office has been approached to prioritize the project. The recommendation to ask Montana's Congressional delegation to support the St. Mary's project may not be practical.

Kris Hansen said that it would be better to fix the project before it fails rather than wait for a catastrophe, maybe a piece at a time so that one large sum of money isn't needed all at once.

Randy Reed said that some maintenance has been done piecemeal every year, but that doesn't keep up with the decaying infrastructure.

Kristi Kline said "Who decides what gets fixed each year? The irrigators or the BurRec?"

Randy Reed said the issue is getting more complex each year, with more stakeholders involved in decision-making.

Jennifer Patrick said the Joint Board of Control has worked to repair or replace by charging water users a fee, but there's never enough money to fix all the problem areas.

Bill Milton asked whether some bonding mechanism involving cities, counties, irrigators, tribes, and the state might work to pay for major upgrade of the system to keep it running for many more years.

Dolores Plumage responded that public interest has to be generated. The working group did well at the beginning, but the state and federal governments were never really engaged. Members of the group need to be united with one purpose to get the attention of the state and federal players.

Mike Lang said he's been to the working group meetings many times, but some players don't come, especially the cities. If there were a catastrophe, would the state have to come in and fix the siphon? What do we have to spend to fix the project as if there were going to be a catastrophe tomorrow? Maybe it would be cheaper if the federal government wasn't involved, and having to worry about fish issues.

Jennifer Patrick said if something failed catastrophically, the irrigators would be on the hook for the costs of repairs, as the authorization for the BurRec project was one purpose -- irrigation. BurRec also has to consider fish issues. If the diversion dam structure repair could be paid by FWS that would help with costs of the whole project.

Randy Reed said the annual maintenance costs keep creeping up, and it's becoming a burden on the irrigators.

Bill Milton said that a wider group of stakeholders would show the federal and state governments that the project has strong support and a funding match is committed for.

Delores Plumage said that as water is measured in the future, and it becomes more important, a water use authority might be necessary to spread the costs. If the Milk River goes dry in the event of failure of the St. Mary's siphon, all the water to fulfill compact rights will be gone. What is the group not saying to the Congressional delegation that would make a difference?

Cari Kent said that plans that are actionable are necessary before Congress can do anything about appropriating money. Engineering needs to be done, plans drawn up before the request is made. Congressman Daines is pushing for adoption of House Resolution 4422 that would provide some funding for rural water projects, including the North Central Montana Water Authority.

Randy Reed said we shouldn't do any more studies, but get started with actual projects, one step at a time.

Jennifer Patrick agreed that one small project at a time should be pursued.

Michael Downey asked whether a prioritization of small projects has occurred.

Randy Reed said the Canadians have a vision called "Water for Life" that places great importance on water. Canadian law allows water to be quantified, and then used wherever the water right owners want to. Water is strictly a property right in Canada.

Jennifer Patrick said they do have prioritized projects, but failures in unexpected places interfere with implementation of the plan. Changing who is responsible for paying for repairs would require a re-authorization of the whole project by Congress. That was proposed as part of the Blackfeet Compact, but Congress took it out.

Kristi Kline asked whether the prioritized project list could be given to new Congressional members as they are elected rather than re-explaining the whole concept each time.

Randy Reed said that there are other places in the state that have the same infrastructure problems. The state needs to step up in funding repairs or replacement. The loan and grant program in place doesn't provide enough money to make the big repairs.

Kris Hansen and Michael Downey emphasized that there has to be a local match to get money for projects from the state. Kris Hansen said there is room to ask for more money from the water resource appropriations at the next legislative session rather than waiting for money from the

federal government. Local match and support from the Governor's office would speed the process.

Bill Milton went on to review the Fresno Reservoir sedimentation issue.

Kristi Kline said there is a public concern about the level of sedimentation at Fresno Reservoir. It's losing capacity and harming the fishery. The Milk River bed is just naturally erodible, and that occurs when higher water flows through the basin. The sediment builds up behind the Fresno dam as well as affecting water quality.

Randy Reed said that the St. Mary's project turned the Milk River, which was a prairie stream, into an irrigation canal that carries more water all year around. Any flood event scours out the vegetation and moves the soil down river and sends it to the reservoir.

Bob Nelson says that the additional water in the Milk River supports a robust walleye population, but no one fishes because the river isn't floatable.

Cody Nagel said that without the addition of warm water from the Milk River to the Missouri River below Ft. Peck dam, there wouldn't be a warm water fishery there. There are about 40 species of warm water fish that like the type of water that is present in the Milk River.

Kristi Kline said that snowpack is melting earlier in the year because of climate change, which will necessitate changes in water management.

The next issue is ratification of tribal water compacts. Bill Milton asked whether the state should push for that, or the federal government?

Kristi Kline said the Milk River was named in the both the Blackfeet compact and the Ft. Belknap compacts.

Wrap-up

Michael Downey repeated where comments that can be sent.

Randy Reed said he'd really like to see a project turn dirt.

6.2.4 Wolf Point, May 7, 2014

**Lower Missouri River
Basin Advisory Council
Report on Public Meeting May 7, 2014**

Elks Club, Wolf Point

Present: Bill Milton, Facilitator
Michael Downey, DNRC Water Resource Planner
Arnold Bighorn, BAC member
Dick Iversen, BAC member
Rhonda Knudsen, BAC member
Dwight Vannatta, BAC member
Darryl Crowley, rancher
John Plestina, Editor Wolf Point Herald
Attila Felnagy, DNRC Groundwater Hydrologist
Denise Biggar, DNRC Regional Office Manager Glasgow
Steve Dalbey, MT FWP

Facilitator Bill Milton called the meeting to order at 6:30 p.m., and outlined that the purpose of the meeting was to hear public feedback on the BAC's draft recommendations for the Montana Water Supply Initiative project.

Michael Downey gave a brief presentation on the MWSI process. The process of updating the state water plan will consider an inventory of both consumptive and non-consumptive uses, consider the possible effects of drought on Montana's water supply, and plan for new water uses. Each of the lower Missouri's sub-basin has some distinct issues not present in the other sub-basins, but the sub-basins also have many overlapping water resource issues. Water planning is an attempt to develop a collaborative approach to solving problems in water management.

Phase 1 of the MWSI created basin advisory councils (BACs) in all four designated state watershed basins. Those councils then conducted public scoping meetings to identify issues of concern, which were then documented in four separate scoping reports. In Phase 2 of the process, the basin advisory councils began considering alternatives for addressing the identified issues. Phase 3 is the recommendation development phase, and the Lower Missouri River BAC is bringing its draft recommendations back to the public for comment.

After the recommendations have been finalized, a Recommendations Development Report from each basin will be submitted to DNRC. Staff will then consider which issues and recommendations represent statewide concerns and those will be combined into the state water plan, which will serve as a policy document. Future legislative sessions will be able to use the plan for guidance in addressing water resource issues.

Bill Milton outlined the process for reviewing issue statements and recommendations for the whole Lower Missouri River basin, as well as the sub-basin around the Missouri River below Ft. Peck Dam.

Issue Statement #1

Recommendations were developed to encourage prompt completion of water rights adjudication.

Denise Biggar said that the legislature has a schedule for examining claims, and DNRC is ahead of schedule in completing claims examination process, so now it's up to the Water Court to finish the adjudication. Issue remarks and objections will have to be looked at before Preliminary decrees are issued.

Issue Statement #2

Infrastructure for storing and delivering water need maintenance, repair, or replacement, so the BAC recommended looking at options for funding that work.

Bill Milton said the Musselshell and the Milk river sub-basins have more infrastructure needs than the lowest portion of the Missouri.

Rhonda Knudsen and Arnold Bighorn described the Ft. Peck Tribes irrigation project west of Wolf Point, funded by BIA, that needs repairs, and is not receiving enough funding.

Steve Dalbey commented that FWP is participating in infrastructure repair or replacement designs to help local fisheries. Awareness of fishery issues is limited in some areas of the state.

Denise Biggar said that pump access to the river could be considered as an infrastructure issue.

Issue Statement #3

A water management plan assumes that managers know how much water is available for use, and how much is being used. The BAC recommends that water gaging stations be added to the network, and funding should be assured.

Dwight Vannatta said he had talked to some people about their concerns, but they couldn't make it to the meeting. They wondered what other streams should be gaged, and where the gages should be placed. Quantity of water used should be monitored, and should all streams be gaged, or just the larger ones. This would help when new appropriations are considered.

Bill Milton suggested that local groups make decisions about where they want to see gages placed.

Michael Downey said that even though there are a number of gages on the Milk River operated by the irrigation districts, the data is not public. They are used for internal accounting of water distributed.

Arnold Bighorn said there are two gages on the reservation, one on the Big Muddy River near the Missouri River and one near Poplar.

Dwight Vannatta said people would like to see gages where the tributaries enter the Missouri River to help with determination of availability of water for new appropriations.

Dick Iversen said the BAC was originally concerned that a number of gages were being deactivated due to lack of funding.

Michael Downey asked if anyone had a comment on the recommendation to encourage measuring devices at water diversions.

Dick Iversen wondered if there are accurate measuring devices available for irrigation pumps.

Bill Milton and Denise Biggar said that all contract water used from the Milk River and the stored water projects on the Musselshell must be accurately measured, and the water commissioners feel that the measuring devices are satisfactory.

Meeting participants agreed that at some point in the future, the state will have to require that all water being used be measured.

Darryl Crowley, a rancher, commented that crops grown now may require more water than crops that were grown sixty years ago, and that will affect the volume of water diverted from the river by a water user.

Issue Statement #4

Aquifer development should be approached cautiously so that quantity and quality can be understood and monitored. If aquifer water quality is compromised, then quantity available for future use will be decreased.

Dwight Vannatta asked whether exempt wells should be addressed in this section.

Michael Downey explained that the issue was discussed at a Lower Missouri River BAC meeting, but it was decided that the legislature and the courts will have to sort that out.

Dwight Vannatta said it is becoming a serious problem in the Lower Missouri Sub-basin, and maybe the BAC should encourage the legislature to deal with the issue.

Denise Biggar explained that we are really talking about wells that are excepted from the water use permitting process – less than 35 gpm and 10 acre/ft per year production. Exempt wells are those that existed before 1973 and the users were not required to file for a water right on them.

Issue Statement #5

Future water demand, and possible additional storage or water banking were considered in this issue statement.

A question was raised about what is meant by “water banking.”

Michael Downey explained that in this instance, a person holding a water right could “bank” the right, and not use it in a traditional way, but re-allocate it to someone else for a different use in the future without risking loss of the right.

Dick Iversen asked if anyone in the area had taken advantage of the new statute that allows water leasing for a new use.

Denise Biggar said there haven’t been any “takers” yet because irrigation water use is limited to just the irrigating season, and the new users (i.e. water depot sales) need water all year round.

Issue Statement #6

All these issues may be addressed more specifically by local watershed groups that will need additional funding support to maintain their operations.

Michael Downey asked whether the Basin Advisory Council is an effective forum, or should there be more small sub-basin groups to handle local issues?

Arnold Bighorn said the BAC is effective, but local issues need to be addressed.

Rhonda Knudsen suggested using a similar structure to create local councils to work on solving local issues. A BAC structure might give the local groups more clout in affecting state political decisions.

Bill Milton said that officially organized groups don’t work as well as those that are created from the ground up by local interested partners, but those local groups need state financial support.

Rhonda Knudsen said that ad hoc councils work well if there is a crisis to drive motivation.

Bill Milton said local groups can serve to educate citizens about water quality issues and develop good working relationships between residents and agencies involved in water resource issues.

Dick Iversen said the Lower Missouri Coordinated Resource Management Group has been working for twenty years to educate water users and work through local issues.

Dwight Vannatta said that keeping the BAC functioning might help pull local groups together and keep them running.

John Plestina, a newspaper editor who wrote an article on the radioactive drilling socks that were found near Bainville, said that a local group would be helpful in educating the public and getting information on water quality distributed.

Steve Dalbey said it's a good idea to have a venue in place to handle issues as they arise.

Lower Missouri River Sub-Basin below Ft. Peck Dam

Dwight Vannatta raised the question of bank stabilization so that landowners do not lose land during flood events. There are lawsuits in court right now over ownership of the mineral rights underlying new channels. If there is a drill site for oil or gas near the areas that are shifting, there is a question of who should receive royalties.

Dick Iversen said it may not be an issue for the BAC to tackle as it does not affect water supply, but rather land use. North Dakota hasn't figured out how to deal with the issue either.

Bill Milton suggested that Dwight Vannatta submit comments to the BAC for discussion at the last BAC meeting scheduled May 28.

Denise Biggar said that DNRC and MBMG will be working together to present information on the Fox Hills/Hell Creek Aquifer issues to the Area 2 Conservation District meeting next September. The presentation will include the flowing well issue.

Dick Iversen said that adequate funding to study the Fox Hills Aquifer is a good idea, and the BAC should support that.

Steve Dalbey said that MT FWP is working with the Army Corps of Engineers to include recreational demands and fish habitat needs in the river modeling in the future. He also said that on the western side of the state, Bonneville Power Administration is obligated to provide funds to mitigate the impacts of their dams and powerlines. There is no similar program on the eastern side of the state for the hydroelectric power produced by project dams.

Wrap-Up

John Plestina asked about the meeting at Ft. Peck on May 28.

Michael Downey said that meeting will allow the BAC to complete its recommendation report, but the public is welcome to come and listen.

Public comment is still being accepted through the website link, and will be until May 19.

6.3 WRITTEN PUBLIC COMMENTS SUBMITTED ON DRAFT RECOMMENDATIONS

6.3.1 Montana Fish, Wildlife and Parks



May 12, 2013

Michael Downey
Lower Missouri Basin Advisory Council
Montana Dept. of Natural Resources and Conservation
PO Box 201601
Helena, MT 59620-1601

RE: Comments on Lower Missouri River Basin Advisory Council Recommendations

Dear Mr. Downey:

Since last fall the Lower Missouri River Basin Advisory Council has undertaken the formidable task of exploring the water issues facing the basin. Montana Fish, Wildlife & Parks (FWP) values greatly the time and effort of these volunteer council members.

During the scoping phase, I provided you with comments covering several issues. I appreciate that the Council addressed most of these issues in their recommendations. Like all water users in the basin, FWP shares the need and desire for a complete and accurate adjudication, a much greater understanding of aquifers in the basin, support of local watershed groups, further stream gauging, and the other recommendations put forward by the Council. FWP supports the recommendations of the Council.

At the same time, I am concerned that very important issues relating to instream flow have been overlooked. I appreciate that the Council took the position that one particular purpose of use should not be elevated above any other. That approach is consistent with the prior appropriation doctrine in Montana which does not prioritize by purpose of use. I am not advocating that instream flow be elevated above any other purpose of use, but it does need to be further considered in terms of future water demands.

In my scoping comments I pointed out that while FWP holds many instream flow water rights in the Lower Missouri River Basin, these rights do not reflect the entire flow regime needed to protect and restore native and wild fish. In applying for these water reservations, FWP was constrained by statute which limited the reservation to 50% of the mean annual flow on gauged streams. Given this constraint, the methodologies used to develop these instream flow water rights did not provide for intra- or inter-annual variability (high flow) necessary for proper channel and riparian function. Neither did they address connectivity (fish passage) nor water quality concerns such as temperature. Any ecologically based comprehensive instream flow regime must include all these attributes, which are not fully represented by existing instream flow water rights.

Within the Lower Missouri River Basin, several native species face uncertain futures. The federally endangered pallid sturgeon lives in the full length of the Missouri River within the Council's focus area. Other native species such as sauger (Montana Species of Concern) are on the decline in streams within the Lower Missouri River Basin. As more demand is put on our rivers and streams, these key species will struggle even more to hang on. Even more adaptable

native and non-native wild fish species, such as channel catfish, rely on a comprehensive flow regime in order to thrive.

Statute directs the Council and DNRC to include an inventory of consumptive and non-consumptive uses **associated with existing water rights**. However, the full instream flow regime to support ecological health of our rivers and streams is not being adequately considered in the required inventory, as the existing instream flow water rights lack a number of important attributes noted above. For this reason, the additional instream flow needs may be best considered as future demands on the water resources, even though the demand is already present. Meeting future demands should include meeting the needs of Montana's native and wild fish and aquatic life and in particular the native species that are at greatest risk due to diminishing water supplies.

Connectivity, or the ability for fish to move up and down a river, is also a key for many fish to complete their life cycle. The **Storage, Distribution, Infrastructure Maintenance, and Application Efficiencies for Irrigation Water** issue statement and recommendations identify the problem of degrading water infrastructure throughout the basin, projects to rebuild or replace infrastructure on rivers and streams will be common in the years to come. Such projects should be designed and built to accommodate passage of fish. This is a necessity if funding methods are to include all stakeholders.

Specific to the Lower Missouri below Ft. Peck sub-basin, recommendations to mitigate damage due to water releases from Ft. Peck Dam should also include sloughing easements and riparian buffers as alternatives to or in addition to traditional bank stabilization. Such alternative approaches would need to be used in conjunction with relocation of points of diversion or modifications to the diversion systems to accommodate changes in bank conditions. These alternative approaches provide for the hydraulic processes necessary to provide important habitat for aquatic species reliant on the river. In addition, a more normative flow regime is needed to provide for these hydraulic processes. Further, the releases of water from Ft. Peck Dam create cold-water pollution which is an additional water quality concern beyond contaminants that needs to be addressed.

Thank you for the opportunity to again provide input into this important water planning process.

Sincerely,


Bruce Rich
Fisheries Division Administrator

Cc: Bill Milton (electronic)
Wendy Beye (electronic)

6.3.2 Snowy Mountain Chapter, Trout Unlimited

Snowy Mountain Chapter of Trout Unlimited

302 8th Avenue, North
Lewistown, MT 59457
May 19, 2014

Mr. Michael Downey
DNRC Water Resource Planner
P.O. Box 201601
Helena, MT 59620
mdowney2@mt.gov

Submitted electronically

Dear Mr. Downey:

The Snowy Mountain Chapter of Trout Unlimited has the following comments regarding the Lower Missouri River Basin Advisory Council Draft Recommendations for the Montana Water Supply Initiative. We represent central Montana as a group dedicated to the conservation of cold water habitats and their associated communities of plants and animals.

- There is a miserable lack of consideration for the long and short term water needs of fish and wildlife and associated riparian communities. We believe that a failure to consider fish and wildlife as part of this process is a travesty. A lack of this input ignores major portions of the ecosystem that will accrue to the next generations. There is a lack of consideration for in-stream flows needed to maintain fish and wildlife as well as riparian and upland resources. We see these in-stream flows as a critical component of the surface water community in the lower Missouri River Basin.
- This planning process has failed to consider or evaluate the long and short term water trends that will result from climate change. This plan makes recommendations with major implications for water use planning without considering the current science related to a major world wide factor that is changing not only Montana but the entire planet. We strongly recommend that you consider the influence of climate change as a part of the plan.
- There is currently a real lack of base line surface and sub surface water data. It seems important that this data be the basis for future use decisions. However, there appears to be little incentive to spend the funds necessary to acquire base line data on water quantity or quality. Without this data recommendations will be flawed and often times useless and misleading.

- Oil and gas development is not addressed in the document. This activity must receive the same treatment as other elements. If the plan fails to treat a current and ongoing activity because of political or lobby influences the plan will lose credibility in our eyes as well as those of the general public.
- Exempt wells are not addressed in the draft recommendations. We can only wonder, why? The long term impacts on sub-surface water will be profound if we continue to allow development via a system of exempt wells and individual septic systems that have the potential to profoundly affect ground water over time.
- We are concerned with proposals for inter-basin transfer of water. Locally we have an example of this issue which purports to transfer quantities of cold clean water from the Madison aquifer to the Musselshell drainage. We in the Judith basin are concerned that this loss of water to another basin will not only directly affect us but it will artificially encourage development in a dryer area and thus exceed capacity by artificial means at extremely high cost which will be borne, in large part, by taxpayers from outside. This is an unwise long term strategy from both a water use and economic perspective.
- There is no mention of the impacts of stream dewatering. In a state where most streams, and many other water sources, are already over allocated, the plan should address this issue as well as the long and short term effects it has on fish and wildlife and humans.

In summary, we find the draft recommendations lacking in their consideration of fish and wildlife resources as well as in addressing current significant issues such as oil and gas development, climate change, inter-basin transfers and others noted above. We request that you strongly consider inclusion of these items in the final plan.

Thank you for the opportunity to comment.

Sincerely,

Mike Chapman
President, Snowy Mountain
Chapter of Trout Unlimited

Copies furnished:

Wendy Beye
LMR BAC Administrative Assistant
wbeye@bitterroot.net

Bill Milton
LMR BAC Facilitator
billmiltonmt@gmail.com

6.3.3 Northern Plains Resource Council

Michael Downey, Section Supervisor/Water Resource Planner
Montana Department of Natural Resources and Conservation
1424 9th Avenue PO Box 201601 Helena, MT 59620

Re: Montana Water Supply Initiative Lower Missouri Basin Advisory Council Draft Recommendations

Thank you for your work on the Montana Water Supply Initiative's Lower Missouri Basin Advisory Council, and for the opportunity to comment on the draft recommendations. Water is Montana's most important natural resource, and its use over the next twenty years is incredibly important. Water is the lifeblood of our citizens, agriculture and economy.

Throughout the initiative's process, Northern Plains Resource Council has commented on the need to study the specific impacts the oil and gas industry's water consumption will have on future demand and availability. Recent events in Carbon County have illustrated why we feel the oil and gas industry's water consumption must be specifically considered in the 2015 water plan.

This week Energy Corporation of America (ECA) began drilling a controversial oil well three miles northeast of Belfry. Trucks were seen taking water from a nearby gravel pit and delivering it to the ECA drill site. Currently, there is no water right or permit for use of the water in the gravel pit. Local farmers and members of Carbon County Resource Council filed a complaint to the Department of Natural Resources and Conservation (DNRC) to report the illegal use of water. The DNRC requires a water right for the use of any new water, and an additional permit for the use of surface water, such as this gravel pit. Taking water from the source until the permit is received is strictly illegal.

ECA's gross violation of Montana's water law and permitting process exemplify why impacts of oil and gas development must be considered in any truly comprehensive state water plan. As an agricultural state we must respect water rights and our neighbors. We must ensure everyone is following the same rules, and confirm that the state has enough water to meet traditional uses, in addition to the growing demand posed by the oil and gas industry.

Throughout the recommendation process the Lower Missouri Basin Advisory Council has also consistently compared the oil and gas industry's water use to other (consumptive) uses, such as agriculture. We have multiple concerns with this comparison that we believe must be addressed.

Water quality

First, we are concerned about threats to water quality from oil and gas development. Although the state has regulations that provide for minimal chemical disclosure, most of the chemicals used in oil and gas drilling are kept undisclosed as trade secrets. This makes it extremely hard to do any solid baseline water testing. Baseline testing is essential to prove that clean water existed before oil and gas development. The state of Wyoming, through their 2013 energy policy entitled "Leading the Charge," is recommending "baseline pre-development water quality

testing.” According to the plan, “this initiative seeks to establish minimum baseline water quality testing requirements and standards for oil and gas operators prior to development.” The state of Montana, potentially through the Montana Water Supply Initiative, should develop a similar approach to gauge the quality of our water resources.

Even if baseline testing is implemented, the water supply can still be contaminated by irresponsible practices of oil and gas companies. Although the current public debate focuses on contamination from hydraulic fracturing, other deficiencies such as faulty well casing, cement failure, and surface spills are all major threats to water quality and are the most common ways that water becomes contaminated in drilling operations. Earthjustice has documented with an interactive map many of the known contamination cases across the US. However, considering the water contamination from old oil wells the Fort Peck Indian Tribe is facing is not on the map, it is certain that other contamination incidents in Montana are also not accounted for.

There are ways to prevent some of this oil and gas pollution, and neighboring states such as North Dakota have already implemented regulations to do so. According to a recently released report by the Western Organization of Resource Councils (*Gone for Good: Fracking and Water Loss in the West*, 2013), “after 47 reserve pits overflowed during the spring thaw of 2011, the state Department of Mineral Resources initiated new rules that essentially eliminated reserve pits at the sites of fracked wells.” This water management practice is called a closed-loop system and is a very effective practice for preventing water pollution at well sites. Interestingly, despite this step forward, the filter socks that strain frack water have been exceeding federal radioactivity limits. This is an entirely new threat to our water system and, since the Montana Bakken stems from the same formation, it is a likely threat in Montana as well.

Overall, although it may not be up to the Lower Missouri BAC to prevent contamination from oil and gas, contamination should be accounted for as a possibility in the proposed water budget and a quantity of fresh water should be reserved in case of an emergency. If any of our groundwater or surface water is contaminated by drilling chemicals, fracking chemicals, or radioactive waste water there is no turning back. We need to be extremely careful during this process and make sure the state is prepared to protect our supplies of clean water.

Water quantity

On the other side of the water issue are quantity concerns. Oil and gas development uses large amounts of fresh water. However, there is no single state agency that documents the amount of water used, and lost, from the system by oil and gas development.

In the 2013 Wyoming energy policy report, the state is requiring a “unified groundwater database” that “will share groundwater data that has been collected by water quality, land quality, and solid and hazardous waste divisions within the agency. This system will lead to eliminating redundant data collection, reducing data collection needs, reducing costs, and will enable more informed decision making.” Montana also needs to consider this approach. We need to know exactly what our resources are in order for a budget system to work.

As part of this approach, Montana needs to document the water lost to oil and gas drilling operations. As mentioned above, the WORC report “Gone for Good” states that EPA believes between 70 and 140 billion gallons of water are used each year for fracking. This water is

completely lost to the system since the water is contaminated with drilling and fracking chemicals and much of it is disposed of into deep-injection wells. This type of water use contrasts with agricultural water use. Agriculture is the largest water user in Montana, but the water used is sent right back into the overall water cycle. This is not the case with water used for oil and gas development.

To alleviate some of this water loss from oil and gas operations, the State should require recycling of drilling and frack water. Oil and gas companies have the technology to do this and, in Pennsylvania where there are only a few injection wells in the state and no hazardous waste water treatment facilities, water treatment companies are in high demand. Unfortunately, in Montana, deep injecting the water is cheaper at this point despite the fact that the water is lost to the system.

Water marketing

On top of other concerns, we are concerned that our state allows water marketing without truly gauging how much water is available. The 2013 Legislature enacted HB 37 that would allow for temporary water leasing. We believe this bill incentivizes leasing any excess water that water rights holders may have. This bill was specifically developed in response to illegal use and demand from the oil and gas industry. During the summer of 2012, the Department of Natural Resources and Conservation (DNRC) discovered a number of illegal water depots in operation. Instead of enforcing the current law, however, the DNRC pushed HB 37 forward. This kind of ad hoc water management poises serious concerns in the future. As water comes into higher demand, water marketing will become a bigger concern. The LMBAC needs to strongly consider this issue in its water budget.

The possibility that agricultural water rights will be permanently changed into rights for oil and gas use should also be carefully documented and considered. As mentioned above, agriculture returns water to the water cycle, but oil and gas uses contaminate the water and pump it into deep injection wells. A large number of agricultural rights transferred to oil and gas uses will result in a decrease of available water in the system.

Therefore, in order to address these concerns Northern Plains Resource Council asks the Lower Missouri Basin Advisory Council to incorporate the following recommendations in its final recommendations.

- 1.** The Montana Water Supply Initiative (MWSI) must estimate, or recommend studies that seek to estimate, the water quantity needed for oil and gas production, how extraction of these resources will impact groundwater aquifers, and which water resources will be used. The analysis should include projections for future water demands, aquifer recharge rates, and available water to meet those demands.
- 2.** Establish a state wide task force made up of industry, tribes, citizen groups, and government agencies. This task force will be tasked with exploring and researching what other oil and gas producing states are doing to deal with water quality and quantity issues related to energy development. Such a task force must have the ability to set policy while remaining accountable to the specific needs of localized residents. A state wide task force will also allow the positive

work accomplished through the Montana Water Supply Initiative to continue, while enabling citizen participation on decisions regarding our state's most valuable resource.

3. The Governor should appoint a statewide task force to investigate the current condition of all Class 2 injection wells. The task force should project the number and capacity of injection wells that will be required over the next decade and plan for their development and monitoring.

4. A Montana well plugging program should be developed that: 1) includes public outreach efforts to landowners and industry to help identify unplugged wells; 2) implements an inspection program to prioritize and address unplugged bore holes, oil and gas, and uranium wells; and 3) establishes a fund to help plug these wells in an accelerated fashion with active drilling areas prioritized. Establishing a plugging program is critical to maintaining water quality as presence of abandoned wells significantly heightens the risk of methane migration and contamination during oil and gas drilling. Where active drilling and hydraulic fracturing operations take place in the vicinity of abandoned and unplugged wells, the natural protections assumed to be provided by underground geology no longer exist because abandoned wells may act as direct pathways for methane to travel to the aquifer and surface.

5. The Montana State University Energy Research Institute should collaborate with the Montana Board of Oil and Gas Conservation, the Department of Environmental Quality and the Water Resources Division to provide analysis and assistance to the energy industry. This collaboration should encourage recycling facilities and the reuse of flow back and production water to the maximum extent feasible for oil and gas drilling and hydraulic fracturing.

Thank you again for the opportunity to comment and please contact us at 406-248-1154 if you have questions.

Sincerely,

A handwritten signature in black ink that reads "Steve Charter". The signature is written in a cursive, flowing style.

Steve Charter, Chair
Northern Plains Resource Council

6.3.4 Mike Ruggles, Montana FWP

One of the issues I brought to the table was dewatering of the Musselshell River and connectivity. This isn't reflected in the comments. Currently Deadmans is taking all (most) the water with well over 100% snowpack coming off and Deadmans is nearly full. Over 150 cfs above and 9cfs at Shawmut with only a trickle coming from the Deadmans Diversion. I attached photos from last week showing how little water is being released only leaking water is getting by.

It seems to me if people want MTFWP to help out with funding more storage projects and irrigation projects there needs to be some alterations to current conditions that improve conditions for fish and wildlife. Improvements for fish and wildlife have economic benefits and is considered beneficial use.

It seems this water planning process is ignoring this beneficial use for fish and wildlife while saying at times convenient for some users that this plan and some activities will improve conditions.

Mike Ruggles

MT FWP

April 24, 2014



6.3.5 Roy O'Connor, Shawmut, Montana

From: Roy O'connor [mailto:rsoc2001@yahoo.com]
Sent: Friday, April 25, 2014 8:52 AM
To: Downey, Michael
Subject: Lower Missouri River Basin

Dear Sir, I am a landowner on the Musselshell River, with approximately 2-3 miles of the Musselshell River flowing thru my OK Bar Ranch, near Shawmut. I wish to make a few comments regarding state plans for the future of the river basin.

I am very concerned about the lack of foresight with respect to a very critical issue in the basin, that being the dewatering of the river, and the lack of fish passage. I am very involved in these issues in the Clark Fork basin, and am on the Governors Advisory committee for NRDC claims re the superfund designation there. Hundreds of millions of dollars are being expended to recover the rivers and riparian areas health, and we do not want to get in a similar situation in our drainage.

Fish and wildlife are an integral part of Montana's heritage, and our enjoyment of life here. Historically native species migrated up the Missouri into the Musselshell and other tributaries to spawn and fill in vacant niches, this is no longer possible! Any future plan for these rivers and water use must take into account both fish passage, and a minimum water flow. The Musselshell is considered and named a river, yet at my ranch, after water draws for Deadmans Basin and irrigation, the flow often drop below 2 CFS. This will not support good fish population, especially the historical species such as catfish, sauger, and ling.

Reestablishing healthy water conditions and fish populations is doable, and needs to be part of your basin plan. All the landowners in the basin will benefit, and all the visitors as well. Now is the time to act, and work with FWP, who are committed to helping us landowners work out a viable solution to this problem.

Thank you for considering my comments,
Roy O'Connor
OK Bar Ranch
1191/2 Hwy 12
Shawmut, Mt

6.3.7 Robert Dunnagan, Lewistown, Montana

4/30/2014

Lower Missouri River Basin Adjudication

Comments:

1. There seems to be a miserable lack of consideration for the long and short term water needs of fish and wildlife in this process. Failure to consider fish and wildlife as part of this adjudication would, in my opinion, is a travesty. A lack of this as a major input ignores major parts of the ecosystem.
2. The interbasin transfer of water is a real and current concern. As a current example there is a proposal to drill a number of water wells in the Judith Basin and transfer that water across a hydrographic divide into the Mussleshell Basin. I am first concerned for the loss of a rare commodity, cold clean water, from the Madison aquifer and then transferring that water to a different basin without fully understanding the short and long term impacts of the transfer seems ridiculous. In addition this proposal will be so expensive and require so much of my tax money that I think it is an unwise project. The eventual cost of the water after its long journey to Roundup and beyond may well be in the vicinity of \$1 per gallon and that cost will have to be subsidized from my taxes. I believe that this type of transfer of ground water from the Madison aquifer is unwise, unnecessary, and should be avoided at least until we have a much better understanding of the function of the Madison aquifer.
3. It appears to me that we as a community and the adjudication process have failed to consider and evaluate the long and short term trends that are and will result from climate change. We propose to adjudicate without knowledge or projections of the effect of climate change on the recharge area for the Madison aquifer and the basin in general. I think this will have a profound effect on humans, flora, and fish and wildlife. To make long term recommendations and changes without using the very best science available would be another travesty.
4. I see no evaluation of in stream flow and how it will affect fish and wildlife as well as the riparian environment. In stream flow is a critical component of the surface water community in the lower Missouri River Basin.
5. There is, in my opinion, a real lack of current and historical information about stream flow. Without this baseline information recommendations for adjudication of water use will be flawed and oft times useless.
6. Need to monitor oil & gas development use of water, limit water use & recharge until we understand the impacts on the greater community,

Robert D. Dunnagan, 53 Pine Ridge Lane, Lewistown, Mt 406.366.2730

6.3.8 Tim Gill, CEO ML Ag Credit Inc.

From: Tim Gill <tim@ag-credit.com>
Date: May 22, 2014 at 5:09:56 PM MDT
To: "timdavis@mt.gov" <timdavis@mt.gov>
Subject: State water plan comments

May 22, 2014

Mr. Tim Davis,
DNRC Water Resources Administrator

Thank you for the opportunity to comment on the State Water Plan. Below are just a few concerns we have with a few of the issues presented.

Prioritization: Each water right carries a priority date based on first use, so there should be no prioritization of water or resources of one source over another. Montana water rights should be used according to their order of priority, not a preferred use. Prioritization should follow The Prior Appropriation Doctrine.

Water Quality monitoring at stream flow gauges: Water quality monitoring should not be part of the State Water Plan as the Montana DEQ has the authority to establish water quality standards, not the DNRC.

Measurement of diverted water: In Montana, water rights are property rights. Water users have the right to use their water and that right is protected. Any kind of measurement of diverted water should be voluntary not mandatory. Mandatory reporting could lead to fees as well as fines, for what the government deems improper or insufficient reporting of information. Measurement of diverted water should be voluntary.

Continuation of the Basin Advisory Committees: There are already local watershed groups. These groups need to be more recognized by the state and used for water resource issues. Please discontinue the Basin Advisory Committees.

Respectfully submitted,

Tim H. Gill
President / CEO
ML Ag. Credit Inc.
406.442.3740

6.3.9 Comments Submitted Online via SurveyMonkey

Michael Downey, DNRC Water Resource Planner, set up a survey on the website SurveyMonkey. A total of 45 individuals participated in the on-line survey. Following are specific comments (in red type) captured via that survey.

4 ISSUE STATEMENTS AND RECOMMENDATIONS

4.1 WATER USE ADMINISTRATION

1. Alignment of Adjudication with Actual Historic Use – Goal: The support of efforts and processes to address claims of water use, and proposed changes to claimed water rights is essential for the protection of existing, valid water rights. It is also critical for determining how much water is available for future development and beneficial use.

a) Objective: Water right decrees should accurately reflect the status of existing water rights as they historically existed prior to July 1, 1973. By strengthening the existing water right system, water managers would be in a better position to ensure that water is allocated according to established historic beneficial use.

i) Short-Term Recommendation: The Water Court and DNRC need to do a better job of communicating the adjudication process generally and the process of filing appropriate objections specifically to ensure the most accurate adjudication process possible.

1. Few know how the adjudication really works

2. As long as Montana is the front line in all talks and has a major role in anything going on

3. WE AS ORIGINAL FIRST NATIONS PEOPLE (SPECIFICALLY "TRADITIONAL NATIVE AMERICANS") OWN AND WILL "ALWAYS OWN" "ALL OF THE ENTIRE WATER BASE ON "TURTLE ISLAND" (WHICH IS REFERRED TO AS THE NORTH AMERICAN CONTINENT). THE GROS VENTRE TRIBES AND ALL OF THE TRIBES IN THE MISSOURI RIVER BASIN (AS IT IS REFERRED TO) CLAIM AND RETAIN WATER, GATHERING, HUNTING & FISHING AND TRAVELING RIGHTS IN "ALL USUAL AND ACCUSTOM PLACES"; FROM THE "HEAD-WATERS OF THE MISSOURI" AT THREE FORKS, MONTANA (AND EVEN AS FAR UP IN THE BIG ROCKY MOUNTAINS WHERE THE SPRINGS AND STREAMS ORIGINATE). AND THIS IS ACCORDING TO THE NON-NATIVE AMERICAN LAWS AND THE LAWS OF OUR "CREATOR" (GOD ABOVE). AND AS OUR NATIVE AMERICAN HISTORY "DICTATES" WE WILL "SHARE AND/OR SELL OUR GOD GIVEN "PRECIOUS LIFE GIVING LIQUID WATER SPIRIT" TO OUR PITIFUL NON-NATIVE AMERICAN BROTHERN....

ii) Long-term Recommendation: Evaluate and develop processes to ensure water rights are accurately and consistently defined across Montana. DNRC and the Water Court should work together to develop a post-adjudication strategy to address issues such as place of use on claims

that were verified by a less demanding process than current examination methods. This effort will ensure a more consistent evaluation of all water right claims across Montana.

1. They should do a good job first ,that way they would not have to go back and fix mistakes
2. The need to complete adjudication cannot be used as an excuse to do nothing else in the meantime. All the issues discussed in this report and others need to be addressed simultaneously.
3. Reverse temporary ruling that individuals may lease their water rights to energy companies.
4. When are they going to fix all the problems with over-stated and abandoned claims?
5. Montana should have the right to work with ALL water rights

b) Objective: Analysis of historic water use in DNRC's change application process is important for the protection of existing water rights. The DNRC administrative process is more rigorous than that conducted for adjudication purposes, and is science based. DNRC must maintain the integrity of its change process and continue to analyze water right claims for actual, historic beneficial use, including consumptive volume. However, there are issues of trust and credibility that undermine implementation of the change process. Better understanding among the public on the change process would strengthen this system.

i) Short term Recommendation: DNRC needs to educate water users and other appropriate agencies and entities of the importance of a robust change process. DNRC also needs to provide a better explanation of measures that have streamlined and simplified the current change process.

1. Education is a good idea but need more information on what robust change means
2. I agree that education is good but should strike the words " importance of a robust" in the recommendation.
3. Remove the words "importance of a robust" I believe it's important to educated water users on what the change process is rather than the "importance" of the process.
4. Education can be a good thing, but not sure what a "robust" change process means. The term "importance of a change process" should suffice.
5. Education is of absolute importance in issues such as this however the verbiage "importance of a robust change process" leaves an intimidating connotation and should be removed from the recommendation.
6. Education is good but should remove the words "importance of robust". This issue deals with those with water right, many current holders do not like the current change process and feel it is too difficult already.
7. Strike the words "importance of a robust"
8. Please remove "importance of a robust"

9. I wouldn't call this a "robust" change.
 10. I have no issue educating water users, but at this time do not support the current change process.
 11. They need every one who is part of any on going plan to either reject any plan
2. Completion of Adjudication -- Goal: Completion of the adjudication process is critical to the ability of water users and water managers to understand, manage, enforce, and defend Montana's water resources.
 - a) Objective: The completion of water rights adjudication process will determine how much water is put to historical beneficial use. The process must be completed as efficiently and accurately as possible.
 - i) Short-term Recommendation: Provide the tools (funding and personnel) necessary for the Water Court and DNRC to complete the adjudication process at least to the point of Temporary Preliminary or Preliminary decrees not later than 2020.
 1. Not able to approve this without knowing the costs.
 2. This sounds like I'm signing a blank check. It would seem that the plan should give an idea of the cost of such a recommendation.
 - ii) Medium -term Recommendation: Support funding and if necessary extension of the Adjudication Program to move Temporary Preliminary to Preliminary decrees to complete an accurate adjudication process by 2024 and Final Decrees by 2027.
 1. Water right holders would like to see the current adjudication process completed. The plan should include existing funding and I'm concerned about the additional costs.
 2. There needs to be an explanation of necessary funding in the future.
 3. Perhaps it would be good to define what those funding levels are and what appropriate funding means.
 4. Plan should include existing funding to the effort and define what is meant by "necessary funding in the future".
 5. This should include existing funding to the effort and define what is meant by "necessary funding in the future".
 6. Plan should include existing funding to the effort and define what is meant by "necessary funding in the future"

7. Define "necessary funding in the future" and include existing funding
8. Support the existing funding.

b) Objective: The resolution of outstanding federal and tribal reserved water rights presents an obstacle to the final adjudication of state water rights. The state must continue its efforts to negotiate water compacts with tribal nations, and advocate for ratification by Congress.

i) Short-term Recommendation: The state and the state's Congressional delegation must continue working to complete all the tribal water compacts still in process.

1. If this is not done, then the courts will do it. That result may not be in the best interest of all involved.
2. failure to complete tribal and federal compacts will force the courts to do so
3. failure to complete tribal and federal compacts will force the Courts to do so.

4.2 STORAGE, DISTRIBUTION, INFRASTRUCTURE MAINTENANCE, AND APPLICATION EFFICIENCIES FOR IRRIGATION WATER

Montana's irrigation water storage and distribution infrastructure is in many cases nearly a century old, and has become increasingly inefficient in storing spring runoff and delivering it to crops during the irrigation season. Once the water reaches the end user, application efficiency may be improved by a switch to, for instance, pivot sprinkler systems, but the switch may have unanticipated effects on surface water or groundwater. There is a lack of research on the consequences of changing delivery systems and application methods.

1) Strategy for Updating Infrastructure – Goal: Montana's aging water storage and delivery infrastructure inventory must be updated, and a prioritization process for repair, alteration, or replacement implemented. In addition, more research on the positive and negative consequences of changing methods of water application will help avoid unintended consequences in the future.

a) Objective: The cost of maintaining and/or altering water storage and delivery infrastructure is often too high to be paid by local water users alone. The state needs to develop a project prioritization strategy to use available funding in the most efficient manner possible. New funding methods that involve all stakeholders who benefit from water projects should be explored

i) Short Term Recommendation: Support operational funding to develop public/private partnerships to assess local capacity, incentives and financial commitments necessary to support state and federal authorizations that are adequate to complete infrastructure rehabilitation efforts.

1. cost information needs to be provided.

2. Cost data should be provided
3. please provide cost data
4. Costs should be provided.
5. I might support this but just how much is it going to cost and where is the funding going to come from.
6. cost data should be provided

ii) Short-term Recommendation: Set up an infrastructure improvement funding program to address problems with water storage and delivery systems.

1. need cost information.
2. Please ensure the cost data is provided when making these decisions.
3. Cost data should be provided
4. please provide cost data
5. Costs should be provided.
6. You're inconsistent with the short term recommendation above, because you don't know the effect of the public/private partnerships the previous recommendations seeks to develop.
7. I also every spring run of would be an ideal place for water storage just make sure take a place is close by
8. cost data should be provided
9. Again where is the funding going to come from

iii) Short-term Recommendation: Utilize the MT Watershed Coordination Council to distribute financial and technical assistance to existing and new watershed groups.

1. Need cost information.
2. cost data should be provided
3. Where is the financial assistance going to come from
4. Cost data should be provided

5. please provide cost data
6. Costs should be provided.
7. The recommendation should be clear that it supports the status quo.
8. I'm not so sure the MWCC should actually distribute funds, but instead provide assistance for preparation of grant applications, and technical assistance in development of long-range plans to help watershed groups be more effective.

b) Objective: Improvements in water storage and delivery efficiency may have either positive or negative effects on surface water. Improved methods of water application on crops may conserve water, but the effects of changing methods on return flows, groundwater, soil, and water quality vary from site to site, and need to be carefully explored before any particular method is encouraged.

i) Short-term Recommendation: Quantify the surface water-ground water impacts from changes in irrigation water distribution, application methods and timing across watersheds to account for wide-ranging precipitation patterns, geology and topography.

1. Cost data should be provided
2. "wide-ranging precipitation patterns" should be identified as based on historical data. NOT a prediction of what might be possible in a model driven scenario.
3. The Montana Water Supply Initiative (MWSI) should include estimation of the water resources needed for oil and gas production, how extraction of these resources will impact groundwater aquifers and where those water resources will come from. Groundwater Control Areas should be established by the state where groundwater withdrawals in recent decades have outstripped the pace of recharge.

4.3 WATER RESOURCE INVENTORY AND MEASUREMENT

The current status of water measurement and water resource research makes it difficult to determine how much water is legally and physically available for existing and future uses. Wise management of the state's water resources requires an adequate assessment of surface and groundwater availability and an inventory of how much water is beneficially used. The state's network of streamflow gages does not cover enough streams to provide critical water quantity and quality data in all the sub-basins. In addition, many water delivery systems have no accurate method of recording the quantity supplied to a specific user. It is difficult for managers to fairly distribute water without knowing how much is available, and how much is arriving at the place of use. The State of Montana needs to increase its water measurement and monitoring program so

that it is sufficient to understand water supply and use, enforce water right decrees and compacts, and better understand the relationship between water quality and quantity.

1) Streamflow Gages -- Goal: Funding for Montana's existing streamflow gage network must be ensured, and new gages installed to monitor flows on streams that lack historical data. Selected water quality parameters should also be monitored by many of the gages. As demand for water within and outside the state increase in the future, measurement of water availability and water deliveries to end users will be essential for sound water management.

a) Objective: Partnerships among federal, state, and local agencies and organizations should be supported to fairly pay the costs of installing and maintaining streamflow gages. The data collected needs to be immediately available to anyone who needs the information for impending flood warnings, water availability, distribution of water, wastewater releases, water quality, and those who want to know streamflow levels.

i) Short-term Recommendation: Maintain the existing stream gage network operated by the USGS for key mainstem and tributary gages via the USGS/DNRC Cooperative Agreement Program.

1. A secure funding program to keep all existing gages operating, and to install new gages where needed is essential.

ii) Short-term Recommendation: Institute a telemetered (real-time) stream gage program operated by DNRC/MBMG. Sub-basin watershed organizations should submit recommendations for new streamflow gage installation sites.

1. A state-operated gage network would supplement the USGS gage network.

b) Objective: In order to distribute available water to users, measuring devices should be installed on pumps, headgates, unmetered municipal water systems, and all non-exempt wells in all watersheds.

i) Medium-term Recommendation: DNRC should develop a program to encourage and incentivize the installation of measuring devices at the point of diversion.

1. This seems overly costly. Most streams do not have this and I am not sure what it would gain.

c) Objective: A good understanding of surface and groundwater resources is necessary to ascertain the status of water resources in Montana. Surface and groundwater research, whether accomplished by federal, state, or contracted private entities, must be funded, starting with the most critical areas first, and eventually the entire state.

i) Short-term Recommendation: Adequate funding should be appropriated for research on surface and groundwater quantities in the state.

1. Needs to include cost data.

2. Cost data should be provided
3. This should include the cost data
4. The plan should include cost data, not the vague "adequate" amount of funding.
5. please provide cost data
6. Cost needs to be addressed.
7. Costs should be provided.
8. Plan should define "adequate" funding.
9. We need this if fracking is in our areas we don't need what others State are put up with
10. The state must characterize its aquifers as soon as possible, and determine whether they are being depleted or contaminated before irreparable damage occurs.

ii) Short-term Recommendation: The Ground Water Steering Committee should re-evaluate project funding criteria for the Ground Water investigation Program to better reflect statewide priorities and directly implement priorities reflected in the State Water Plan.

4.4 GROUNDWATER AQUIFERS: QUANTITY AND QUALITY

There is a need for additional research on the quality and quantity of Montana's aquifers. As more users tap the state's groundwater sources, it is essential to document the quality and quantity of groundwater. Water quality must be periodically monitored using site-specific parameters. An aquifers' ability to recharge at a rate that meets water withdrawals/discharge must be monitored to avoid depleting the resource.

1) Groundwater Monitoring -- Goal: A more comprehensive system of groundwater monitoring for quantity and quality should be adopted by the state.

a) Objective: Montana's aquifers and groundwater/surface connections must be defined and characterized.

i) Short-term Recommendation: Support additional funding for groundwater assessments and investigations so that additional aquifers and groundwater/surface connections can be defined and characterized.

1. Cost data should be provided.

2. Cost data should be included

3. Cost data should be provided
 4. please provide cost data
 5. At what cost? Needs to be addressed.
 6. The draft recommendations would benefit by including a mention of the importance of groundwater springs on fish & wildlife.
 7. Costs should be provided.
 8. Yet again, this is like a blank check. How much spent now? How much more is needed to be considered adequate?
 9. Add Short term recommendation: DEQ and DNRC to be tasked to provide more on-the-ground inspectors to ensure accurate tracking and record-keeping system is properly employed.
- ii) Short-term Recommendation: Identify and develop public/private partnerships to accomplish the stated objectives.
1. Add the following as stated objectives: 1- Permits for uses that could contaminate groundwater should require the applicant to test and periodically monitor for contamination, sending results to DEQ and the GWIC public database at the Montana Bureau of Mines and Geology. 2- The Montana Board of Oil and Gas Conservation and the Department of Environmental Quality should jointly analyze data to project the volumes of hydraulic fracturing flow back water and produced water that will need to be disposed of in the next decade in Montana. They should establish as soon as practicable a system to track and account for each truckload of flow back and produced water, to ensure safe and legal disposal methods are used and to track and verify the actual volumes of water involved. 3-MSU Energy Research Institute, Montana Board of Oil & Gas, the Department of Environmental Quality and the Water Resources Division to provide analysis and assistance to the energy industry to recycle and reuse flow back and produced water to minimize destruction of clean water.
 2. I don't know what this is
- iii) Short-term Recommendation: Change the Ground-Water Assessment Steering Committee prioritization process for groundwater research to divide the funding among all four state river basins. This will balance priorities across rural-urban conflict situations, emerging ground water needs/limitations and quantifying new ground water resources.
1. The oil and gas industry is impacting aquifers in the far eastern portion of the state, but funding for research there has been very limited. Population should not be the basis for distribution of groundwater research funds.

b) Objective: Statewide groundwater testing data should all be included in the existing public web portal. The availability of improved data will help inform and protect all water users.

i) Short-term Recommendation: Request that DEQ and DNRC work together to educate and encourage local sub-basin groups to address water quality and other issues associated with water use or activities that affect water quantity or quality.

1. Need cost information
2. Costs should be provided.
3. Isn't that what they are supposed to do anyway?

c) Objective: As more groundwater is used for beneficial operations, aquifers must be monitored to avoid overuse or adverse impacts to surface water connected to aquifers.

i) Short-term Recommendation: Support local, state, and federal efforts and increase funding through existing DNRC grant programs to control artesian flowing wells to better conserve groundwater resources.

1. Need Cost information
2. Cost data should be provided
3. Provide cost data.
4. A lot of water going to waste out here

ii) Medium-term Recommendation: Increase funding levels for the Ground Water Assessment Program (GWAP) and the Ground Water Investigation Program (GWIP) administered through the MT Bureau of Mines and Geology to advance more projects across all four major river basins. Funding needs to address the increased need for information and keep pace with rising research costs.

1. Need cost information
2. This is important work for the Bureau and should be continued. Cost data, however, should be provided.
3. Cost data should be provided by the Bureau of Mines and Geology
4. This needs to be done by the MTBMG exclusively (not farmed out to university graduate programs), and a budget needs to be supplied.
5. Costs should be provided.

6. Wow, do you have a whole pad of blank checks? Don't you think you should put some kind of funding ideas in a question like this? I think you should.

4.5 FUTURE DEMANDS ON WATER RESOURCES

Basin scoping meeting participants agreed that more water from spring runoff should be captured by increasing the capacity of existing reservoirs, by building new small-scale off-stream reservoirs, or by enhancing natural floodplain wetlands water storage. Negotiation for additional water from federal storage projects to meet demand within the state is a possibility, keeping in mind the role full reservoirs play in recreation. Adoption of voluntary conservation programs, or in the case of industrial water use, development of recycling technology, might free up water for reallocation to additional uses. Some of the state's aquifers contain water of sufficient quantity and quality to help meet new demands. A water banking program could serve as a tool to help facilitate transfers of water to uses associated with rapidly changing demands.

1) Future Demands -- Goal: There may be strategies that if adopted would increase the quantity of water available to help meet future resource demands.

a) Objective: State water resource agencies should work together to increase water supplies by actively exploring additional storage opportunities, considering incentives for voluntary water conservation by users, instituting more aquifer monitoring programs, and testing new wastewater recycling technologies.

i) Short-term Recommendation: Explore the potential for small off-stream storage projects in the Lower Missouri River basin.

1. This whole section of the report is mis-named. This section addresses strategies to eke out additional small amounts of water from an already almost wholly allocated or over-allocated system. If you were really talking about future demands you would be seriously addressing the potential impacts of oil and gas development.

2. Add short term recommendation ii: Establish areas where groundwater withdrawals in recent decades have outstripped the pace of recharge and whether or not establishment of Groundwater Control Areas is appropriate, to avoid drawing down of water table. Add short term recommendation iii: It should be noted that increasing water supplies is the only strategy to meet future demands. State resource agencies also should work together to conserve water supplies by restricting and monitoring water use that cannot be returned to the aquifer. The US Geological Survey (USGS) notes that available surface water supplies have not increased in 20 years, and groundwater tables are dropping at an alarming rate. As water supplies diminish, the majority of water used in hydraulic fracturing (fracking) cannot be recycled and cannot return to the hydrological cycle.

b) Objective: Water banks would create greater certainty for prospective water users, thereby enhancing economic development and providing options to boost stream flows during periods of drought.

i) Short-term Recommendation: Various water banking strategies should be explored as a tool to facilitate transfers of water to differing uses.

1. NEEDS MORE SPECIFIC GAGING PROCESS

2. Fish and Wildlife are a defined beneficial use of water in the state of Montana. As such, any water plan should mention the impacts of future water use/development on fish and wildlife and the ecosystems that support them, ideally emphasizing the benefits of natural systems and flow regimes (i.e. habitat development, life-history triggers, floodplain function, fish passage & connectivity, etc.). The draft plans developed by the other basins in the state have some acknowledgement of the relationship between water planning and fish & wildlife. It is highly recommended that the Lower Missouri River Plan put in place similar considerations. Additionally, there are numerous references to increasing off-stream storage reservoirs. It should be noted that the development of new off-stream storage would come at a cost to the natural systems that support fish & wildlife, mentioned above. Careful deliberation should be taken when considering off-stream storage and its impacts to water quality and quantity. Holding more water back via off-stream storage would degrade the natural systems and the fish & wildlife benefits they provide. Also, increasing off-stream storage would have detrimental effects to water quality from a fish & wildlife perspective, such as altered temperatures, nutrient inputs, and turbidity. However, off-stream storage might have fewer detrimental impacts than alternatives such as groundwater aquifer development. A statement demonstrating that thorough evaluation of water development alternatives and their impacts not only to water users, but also to natural systems and fish & wildlife resources, is needed in the BAC's recommendations. Regarding increased storage in the Judith River Sub-basin, it should be clearly understood by the members of the Lower Missouri BAC and any recommendations developed, that by far the majority of water that enters the Lower Missouri River from the Judith River Sub-basin comes from Big Spring and Warm Spring Creek. Historic USGS gage data on the Judith River near Utica averaged 55 CFS from 1919-1975, which yields approximately 40,000 Acre-Feet per Year (AFY). Based on the Judith River Sub-basin contribution provided by DNRC (211,600 AFY*), the approximate historic contribution of the Judith River above Big Spring Creek is 19% of the total contribution of the sub-basin. By contrast, estimates based on base-flow levels from Big Spring (120 CFS) and Warm Spring Creek (100 CFS) indicate that, combined, they contribute approximately 75% of the sub-basin contribution to the Lower Missouri. This information does not support the idea of increasing off-stream storage capacity in the Upper Judith River Basin and suggests that careful consideration would be required to determine if enough water is available for further off-stream storage from the Judith River above Big Spring Creek.

*Amman, D. 2013. Lower Missouri River Basin: Surface Water Supply Overview. http://www.dnrc.mt.gov/wrd/water_mgmt/state_water_plan/lower_missouri/presentations/surface_water_supply_overview

3. Same as above

4. Add short term recommendation ii: Review specific industrial uses of water (for example, exploratory and oil and gas drilling) that deplete the supply of usable water by extracting ground and surface water and mixing it with toxic chemicals. Once used, this produced water cannot be returned to the water supply and is instead stored indefinitely in tanks or ponds. In comparison, water used for agricultural and livestock can be recycled back into our water supply.

4.6 WATERSHED ORGANIZATIONS

During the Montana Water Supply Initiative scoping meetings in the Lower Missouri River Basin, four facts became evident. First, local watershed organizations provide a very important structure for promoting communication and collaboration on water resource issues. Second, local watershed organizations provide an effective forum that earns the trust and respect of participating stakeholders. Third, functioning watershed and sub-basin groups provide a workable and cost-effective structure for local stakeholders, state agencies, and federal agencies to communicate more effectively and arrive at solutions that all parties support and are willing to implement in good faith. Fourth, local mediation efforts reduce the need for costly judicial solutions to water resource management.

A number of sub-basins across the state have established watershed organizations with a goal of promoting communication and collaboration on water resource-related issues -- efforts that have reduced the need for costly judicial solutions to water resource problems. Existing groups, including the Clark Fork Coalition, the Musselshell Watershed Coalition, the Big Springs Watershed Council, the Greater Gallatin Watershed Council, the Big Hole Watershed Committee, and the Blackfoot Challenge were organized for different reasons, yet they all provide a trusted forum for discussion of issues. These organizations can serve an educational function, assist in the periodic updating of a statewide water use plan, and evaluate successes and failures in implementation of the statewide plan.

1) Watershed Organizations -- Goal: The state should recognize and support autonomous grassroots organizations in watershed basins. These organizations will help local, state and federal agencies, organizations, and citizens work from the same water resource playbook in order to optimize collaborative problem-solving efforts.

a) Objective: Local citizen groups allow diverse interests to come together to discuss and adopt water management strategies to solve problems that are critical in their watershed. If water management strategies are to be successful, water users need to trust and respect the decisions of water managers. Watershed organizations provide a forum for building that trust. Current technical and financial support of these groups by state and federal agencies is a key to their success, but additional funding for general staffing of the organizations is needed.

i) Short-term Recommendation: Support continuation and expansion of the Watershed Capacity Building Program initiated by the 2013 Legislature.

1. NOT EXPANSION

2. Cost data should be provided by DNRC

3. DNRC should provide data cost

4. Cost data.
5. Costs should be provided.
6. The "and expansion" in the above recommendation resembles a blank check.

ii) Short-term Recommendation: Build on Montana's Watershed Coordination Council's work, to increase the capacity of sub-basin community forums to function collaboratively with agencies to identify, respond, and resolve important water quantity and quality issues within their region.

1. Cost data should be provided by DNRC
2. DNRC should provide data cost
3. NOT EXPANSION
4. Costs should be provided.

b) Objective: To request that state and federal agency representatives work with water users, local watershed groups, municipalities, tribes, and conservation districts to improve cooperation and facilitate shared dialogue among all stakeholders in Montana's water resources.

i) Short-term Recommendation: Enhance education opportunities through the state's conservation districts to more broadly address water resource issues by providing additional grant funding opportunities.

1. Cost data should be provided by DNRC
2. DNRC should provide data cost
3. Cost data. This should not be funded at the expense of the inventory projects.
4. Costs should be provided.
5. Blank check.
6. The Conservation Districts are a key tool to educating citizens and stakeholders and working with local community groups to protect and preserve water, soil & air quality.

ii) Short-term Recommendation: Review the roles of resource agencies in data collection, data analysis, data publication, collaboration with other state and federal agencies, and enforcement of laws and regulations. Make necessary changes to clarify roles, responsibilities and effectiveness. Create a user-friendly template to communicate all of the above to those who work with and depend on water.

1. Cost data should be provided by DNRC

2. DNRC should provide data cost
3. Costs should be provided.
4. Add short term recommendation iii: DNRC, DEQ and other "water regulatory" agencies need to provide a single voice (including funding requests) to the Montana Legislature.
5. Why don't they just do their jobs.

c) Objective: Evaluate continuation of the BACs in each region to help support, network, facilitate, and evaluate the implementation of recommendations adopted in the final state water plan.

i) Short term recommendation: Convene water resource agencies, BAC members, and local sub-basin stakeholders for conferences and workshops to assess the merits, purpose and structure for ongoing BACs in all the four regions.

1. I have seen some of the BAC groups in action and the work seems overly broad and ineffective. The BAC structure should not be formalized because the DNRC already does good work.
2. Typically a waste of time. Not totally opposed but not in favor.
3. Costs should be provided.
4. Would rather see sub basin watershed councils. A basin wide council like the ones that created this plan would be too large to adequately represent all of the users.
5. I don't know what this is

Other General Comments

1. Thank you for your commitment to doing a good job on this process and thank you for taking into account facts for all the discussions. Agriculture has been -- and will continue to be -- the primary water user in Montana. There will be a push to put more focus on industrial use, but that is minor compared to everything else. Please resist attempts to put more financial burden on industry.
2. I support the effort and I am grateful that the facts show that industrial water use in Montana is minimal as compared to the water use in the state as a whole.
3. I support the effort and particularly the fact that you have followed the major discussions over the course of the BAC's work and am thankful for their use of facts and understanding that industrial water use in Montana is very minor when compared to state wide water use and the document reflects this fact.
4. THE LEGISLATURE DOES NOT HAVE UNLIMITED MONEY ,SO WE NEED TO PRIORITIZE

5. I am absolutely incredulous that Montana's 20-year Water Plan will not address one of the state's most critical water issues today – the massive consumptive use and water contamination issues presented by the practice of fracking by the oil-and-gas industry. Montana's water resources and legitimate beneficial users are too critical to our state and our state's economies to ignore this pertinent issue. The oil-and-gas industry is not regulated like other beneficial water users and, frankly, is exempt from many of the regulations those entities must follow. For those on the Lower Missouri River Basin Advisory Committee who believe that this issue is too political or somehow not related to the other water issues you are addressing, you are WRONG. Your decision to look-the-other-way and disregard this critical issue will have long-term negative consequences for Montana's water resources. Our water is truly more precious than gold – or oil or gas or any other finite extractable natural resource. Please reverse your decision to ignore this issue and stand up for Montana's water resources by including an honest discussion of fracking impacts on water in Montana's 20-year Water Plan.

6. Regulate and monitor gas and oil water use in the basin.

7. This needs to be based on historical and current data. Hypothetical future conditions and sources of pollution have no place in this process and are just that, hypothetical. The Supreme Court clearly states that the possibility that something could pollute cannot require regulation.

8. The plan should include clear acknowledgement of the value of instream flow for fish and wildlife and the values to society that they support. The plan should discuss the option of acquiring private water rights through purchase from willing sellers in order that the use of these water rights may be changed to support instream flow.

9. After I read the report, it's obvious that its focused on the primary users of water in Montana as it should be.

10. While I have indicated support for all the recommendations, my support is qualified in two ways: 1. They would require a large expenditure of public money that I don't see coming. I don't think there exits the political will for most of those recommendations to be acted on. 2. You have left out some very important issues: water for healthy maintenance of fish and wildlife and ecological integrity and impacts of oil and gas development, both existing in eastern MT and potential elsewhere. Given the above, I believe that you need to look at a COMPLETE list of recommendations and then prioritize them.

11. IMPORTANT info. missing from DNRC's proposals on the Lower Missouri region that could have a dramatic impact on the Milk River, Musselshell River, Missouri River? There is nothing in the proposal that acknowledges the need to work within the confines of the aquatic ecosystem, maintain minimum flows and ensure the overall health of the river systems from an environmental standpoint. The following language is found in the Yellowstone River Proposal: "INSTREAM FLOW MAINTENANCE: Despite the lack of on-stream main stem storage reservoirs, the natural hydrology of the Yellowstone River has been significantly altered by present-day levels of development. Instream flow maintenance pertains to maintenance of a stream's complete hydrologic regime. Maintenance of instream flows is a significant issue, not only on the main stem Yellowstone River and its larger tributaries, but also on smaller tributaries

necessary for the functionality of the river system." Why is there no such language in the Lower Missouri proposal? The previous Montana Water plan (1989) had an instream flow protection subsection present, that has now all but disappeared in your current plan for the lower Missouri River. Montana law states 85-1-101 (5) The water resources of the state must be protected and conserved to assure adequate supplies for public recreational purposes and for the conservation of wildlife and aquatic life. 75-5-101 also states: (1) conserve water by protecting, maintaining, and improving the quality and potability of water for public water supplies, wildlife, fish and aquatic life, agriculture, industry, recreation, and other beneficial uses. Please consider adding this language to your proposal. This will ensure proper respect is given in conserving adequate supplies of water for the conservation of our aquatic ecosystem in the Lower Missouri River watershed. Thank you for your time and consideration. If you'd like to visit further, please contact me through email.

12. Add recommendation: Treatment and recycling options for produced water (from industrial activities including but not limited to Oil and Gas exploration and drilling, mining, etc): Encourage the MSU Energy Research Institute, Montana Board of Oil & Gas, the Department of Environmental Quality and the Water Resources Division to provide analysis and assistance to energy, mining etc industries to recycle and reuse flow back and produced water to minimize destruction of clean water.

13. With all of the oil development going on in eastern montana it is hard for me to believe that there aren't any recommendations concerning this issue. People are really worried about their water out here and all of your recommendations are to support bigger programs in Helena. Nothing on fracking, nothing on monitoring, Really! Is the Oil and gas industry running this group. Sure looks like it to me. BTW - nothing on recreation or fish and wildlife? What a joke.

14. I do believe the Montana folks work hard to use their water right fairly some sore spots but can be worked out

15. I would support more specific recommendations addressing the impacts of the oil and gas industry on surface and groundwater quality and quantity. I am not confident that the current regulatory system and level of enforcement can sufficiently protect our most precious natural resource.

16. I read through the Lower Missouri River Basin Advisory Council Recommendations and it all looks very good. As a Life Science Teacher for the past 32 Years at Lewistown Junior High School, my students every year have done water quality studies on Little Casino Creek and Big Spring Creek here in our community. It was one of my students who discovered the PCB contamination in Big Spring Creek. That issue is resolved now and the water is cleaned up. I feel that monitoring Water Quality is very important in Montana. I also liked the idea of Telemetered Stream Gage Program. We look at Snotel sites in the winter months to see how much snow is in the mountains. We also use a flow meter to measure flow rates in the two streams here but to be able to go to a computer and have my students look at real time data in waterways in Central Montana would be very educational. As a member of he Central Montana Search and Rescue Unit here we were called out during the flooding in 2012 to warn families in the valley that flood waters were coming. If Disaster and Emergency Services agencies could forecast flooding events through the monitoring of these Telemetered Stream Gages, they may even be able to save lives. Good work on the part of the advisory council.

5 SUB-BASIN ISSUE STATEMENTS

5.1 JUDITH RIVER

1. I support the recommendations, but again there is need to address how they would be prioritized in light of limited resources.
2. Include short term recommendations: 1-Include an estimation of the water resources needed for oil & gas production and address how extraction of these resources will impact groundwater aquifers 2- Establish areas where groundwater withdrawals in recent decades have outstripped the pace of recharge and whether or not establishment of Groundwater Control Areas is appropriate. 3- Oil & gas exploration and drilling is appropriate in "non sensitive" areas. The Basin Advisory Council should in future outline areas where the water supply should be exempt from drilling to protect our water supply for families, farming and ranching.
3. Cleaning up the PCB's in Big Spring Creek was a huge boost to clean water issues in Central Montana,

5.2 LOWER MISSOURI RIVER BELOW FT. PECK DAM

1. "Existing laws and regulations governing water quality should be enforced, and perhaps strengthened." Remove "perhaps strengthened". - Objective A states, the State should implement practices and policies to require testing by all entities holding permits under Montana's Clean Water Act. The State already does require this testing!! During development the BLM and DEQ require baseline and monthly/quarterly monitoring and samples for the life of the projects. This is how we determine what class of water we are dealing with. Short term recommendation ii - asks that permits for uses that could contaminate ground or surface water should require testing. The Supreme Court has a ruling that states the possibility something COULD pollute, cannot require regulation.
2. Remove "perhaps strengthened" from the sentence: "Existing laws and regulations governing water quality should be enforced, and perhaps strengthened." 2) Under Objective A, it states that the State should implement practices and policies to require testing by all entities holding permits under Montana's Clean Water Act. POINT OUT THAT THEY ALL READY DO!
3. There are existing laws and regulations governing water quality that should be enforced before going out and implementing new ones that are redundant or are already on the books. Any entities holding permits under the Montana Clean Water Act already require testing so why are they pushing so hard for baseline testing when it already exists.
4. Remove "perhaps strengthened" from the sentence: "Existing laws and regulations governing water quality should be enforced, and perhaps strengthened." Under Objective A, it states that the State

should implement practices and policies to require testing by all entities holding permits under Montana's Clean Water Act but they already do this.

5. Needs to be a better understanding of what the current law is Remove "perhaps strengthened" from the sentence: "Existing laws and regulations governing water quality should be enforced, and perhaps strengthened". Under Objective A, it states that the State should implement practices and policies to require testing by all entities holding permits under Montana's Clean Water Act. They already DO.

1) Remove "perhaps strengthened" from the sentence: "Existing laws and regulations governing water quality should be enforced, and perhaps strengthened." 2) Under Objective A, it states that the State should implement practices and policies to require testing by all entities holding permits under Montana's Clean Water Act. POINT OUT THAT THEY ALL READY DO!

6. The existing laws and regulations governing water quality are only in need of proper monitoring and enforcement. Until this is properly implemented, strengthening these regulations is unwarranted, unnecessary and irrelevant.

7. I have no issue with recommendation 5.2.1. They are good. However, 5.2.2 I disagree with the words "perhaps strengthen" in subpart 1. Montana water laws are already too strict, and any suggestion that they need to be strengthened is ridiculous. 5.2.2 (1) (a) objective ii is very strange. All permits for uses that currently discharge into surface or ground water are required to monitor now. The state cannot regulate uses that COULD pollute. 5.2.2 (1) (c) How in the world can you have a small group made up of ALL concerned and affected parties, such a group already exists by statute.

8. See earlier comments

5.3 MILK RIVER

1. NEED TO HAVE A PLAN TO KEEP THE ST. MARY'S PROJECT VIABLE IN THE FUTURE!

2. Montana law states 85-1-101 (5) The water resources of the state must be protected and conserved to assure adequate supplies for public recreational purposes and for the conservation of wildlife and aquatic life. 75-5-101 also states: (1) conserve water by protecting, maintaining, and improving the quality and potability of water for public water supplies, wildlife, fish and aquatic life, agriculture, industry, recreation, and other beneficial uses. I have been on the river during the drought years, where the river is literally flowing BACKWARDS. This has dramatic impacts on the river ecosystem as a whole and can be devastating to our native fish populations. Please be mindful and good stewards of this public resource.

3. I do know some things about this water should be measured going in to Canada and what is coming back this need to be taking care of

5.4 MUSSELSHELL RIVER

1. NEED MORE STORAGE IN THE LOWER BASIN TO KEEP THE RIVER FLOWING

2. Montana law states 85-1-101 (5) The water resources of the state must be protected and conserved to assure adequate supplies for public recreational purposes and for the conservation of

wildlife and aquatic life. 75-5-101 also states: (1) conserve water by protecting, maintaining, and improving the quality and potability of water for public water supplies, wildlife, fish and aquatic life, agriculture, industry, recreation, and other beneficial uses.

3. Water rights adjudication -- strongly agree with all the recommendations Off-stream water storage -- agree with the recommendation Riparian weeds -- agree with the recommendation Musselshell Watershed Coalition -- agree with recommendations

6.3.10 Survey Data from SurveyMonkey

DNRC Water Resource Planner Michael Downey created a survey using the website SurveyMonkey to gauge public response to the Lower Missouri River Basin Advisory Council's Draft Recommendation Report. Each recommendation section was presented separately, and available rankings included Strongly Support, Support, Support With Modification, Oppose, Strongly Oppose, as well as a field for comments, which are listed in Section 6.3.9 above.

Most of the respondents were individuals who did not represent a constituency, while 9.3% represented business and development. Other categories represented by one or two respondents each were statewide organizations, municipalities or local governments, local organizations, conservation groups, recreation, researchers, and state or federal agencies.

Nearly all of the recommendations presented drew support or even strong support from a majority of respondents. Exceptions were:

- 1. DNRC needs to educate water users and other appropriate agencies and entities of the importance of a robust change process. DNRC also needs to provide a better explanation of measures that have streamlined and simplified the current change process.** This recommendation received support and strong support, but 30% of respondents checked "support with modification," and comments indicated a problem with the word, "robust."
- 2. Support funding and if necessary extension of the Adjudication Program to move Temporary Preliminary to preliminary decrees to complete an accurate adjudication process by 2024 and Final Decrees by 2027.** This received support, strong support, but also nearly 40% of respondents checked "support with modification," presumably related to costs of implementation.
- 3. Utilize the MT Watershed Coordination Council to distribute financial and technical assistance to existing and new watershed groups.** Most respondents supported this recommendation, but 20% supported with modification, again most likely due to unspecified cost information.
- 4. DNRC should develop a program to encourage and incentivize the installation of measuring devices at the point of diversion.** This recommendation was almost evenly split between "support" or "strongly support" and "oppose" or "strongly oppose." It may be that some respondents believed the recommendation would require measuring devices at the point of diversion.

5. **Adequate funding should be appropriated for research on surface and groundwater quantities in the state.** While most respondents checked “support” or “strongly support,” 19% checked “support with modification.” Cost of funding seemed to be the issue.
6. **Support additional funding for groundwater assessments and investigations so that additional aquifers and groundwater/surface connections can be defined and characterized.** A majority of respondents checked “support” or “strongly support,” but 23% checked “support with modification.” Cost was again mentioned as a reason.
7. **Increase funding levels for the Ground Water Assessment Program (GWAP) and the Ground Water Investigation Program (GWIP) administered through the MT Bureau of Mines and Geology to advance more projects across all four major river basins. Funding needs to address the increased need for information and keep pace with rising research costs.** This recommendation drew support or strong support, but 21% checked “support with modification,” because of unknown costs of implementation.
8. **Various water banking strategies should be explored as a tool to facilitate transfers of water to differing uses.** This recommendation received support and strong support, but 19% supported with modifications, mostly related to providing more water for support of fisheries.
9. **Convene water resource agencies, BAC members, and local sub-basin stakeholders for conferences and workshops to assess the merits, purpose and structure for ongoing BACs in all the four regions.** This recommendation was supported by 42% of respondents, while 64% either opposed or strongly opposed it.