Lower Missouri River Basin Water Resources Issues Scoping Report

December 31, 2013

Prepared by
Milton Mediation
and Facilitation

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1 Public Involvement

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 drafted for later approval by the Montana Legislature. 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, and because its climate and geographical features so variable, 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 several weeks of phone calls, emails, and personal contacts, a list of over one hundred potential candidates, or organizations that might wish to put forth candidate's names, was developed, and letters and/or emails were sent out requesting applications. At the same time, several press releases were disseminated from both 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 10-8-2013	7	5	4	14	30
Glasgow 10-23-2-13	5	7	4	1	17
Culbertson 10-24-2013	7	4	1	13	25
Roundup 10-30-2013	4	7	1	15	27
Harlowton 10-31-2013	5	6	4	22	37
Havre 11-7-2013	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. Public participation at Glasgow was the biggest disappointment, with only one person representing the public present, but the BAC, Staff, Technical Advisers, and other agency representatives nevertheless carried on a valuable discussion of issues. The best public participation occurred in Harlowton, largely the result of involvement of a local community leader to assist in setting up the meeting and encouraging attendance. The success of this method will guide the LMRB preparations for public meetings during the basin Recommendations hearings phase of the MWSI process.

Each of the scoping meetings began with introductions around the tables, which were arranged in an open square to encourage participation in discussions. For purposes of education on the MWSI process and current available data on water resources, DNRC staff members made brief presentations. The original scoping meeting agenda called for the participants to break into small discussion groups to make lists of issues of concerns, but because of the small size of the gatherings, and the wishes of the public participants, the whole group participated in listing issues at each meeting. The Facilitator made sure that every person attending had an opportunity to express their personal concerns, 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. A complete list of issues developed at the six scoping meetings appears in Sections 4 and 5 of this report.

The facilitation team produced a report for each scoping meeting, listing all participants by name and constituency connection, summarizing the issues raised, and providing a "next steps" section for BAC members and staff. Contact information for public participants was captured so that this Water Resources Issues Scoping Report, and future reports produced by the LMR BAC can be sent to them. The individual scoping meeting reports were sent out to all BAC members and the technical advisers for the LMRB.

2 Lower Missouri River Basin Advisory Council Core Issues

A two-day meeting was scheduled in Lewistown on December 2-3 to allow the LMR BAC members time to consider all the issues, and choose which ones would be selected to be considered in the next phases of the MWSI process. A draft of this report was made available to them prior to the meeting, although no selection of issues of highest concern was made.

Though weather and road conditions limited attendance at the meeting, a conference call allowed participation by BAC members who elected to remain at home. Each member was given the opportunity to choose the most important issues that should be considered during the recommendations phase of the MWSI process.

Discussion and debate of all issues of concern to the public participants captured in the section below entitled **Comprehensive List of Issues Identified at Scoping Meetings**, **by Category** continued during the remainder of the two-day meeting. Two additional meetings conducted via conference calls allowed BAC members to make final decisions on issues to be considered in Phases 2 and 3 of the MWSI.

The issues ultimately selected by the LMR BAC are listed below. Some could be listed under more than one category, but BAC members tried to place issues in the most appropriate category.

2.1 Surface Water Availability and Quality

There is widespread concern among participants in the LMRB scoping process that, given the current status of the state's water rights adjudication process, water compacts, and water resource research, it is not possible to determine how much water is legally and physically available for existing and future uses. A complete inventory of current consumptive and nonconsumptive uses has not yet been compiled by the state. Participants also generally agree that it might be possible to store more water from spring runoff by increasing the capacity of existing reservoirs or by building new small-scale reservoirs. Negotiation for additional lease water from federal storage projects for use within the state may be an option. Water supply might be increased by adoption of voluntary conservation programs, or in the case of industrial water use, development of recycling technology. Permits allowing the mixing of fresh water with water recycled from other uses might be a way to reduce quantity otherwise lost to consumptive uses. Water is lost for use by its original appropriator as it is delivered to a field by aging infrastructure that could more efficiently serve its purpose if repaired or replaced. Residents who rely on surface water for domestic and agricultural uses are concerned about the poor quality of water flowing in many

streams in the LMRB and the need for better coordination among the state agencies charged with managing water quantity and quality.

2.2 Groundwater Availability and Quality

Researchers, working with limited funding, have mapped and characterized some aquifers in the state that might provide opportunities for future uses. Participants in the MWSI process agree that more study is needed on recharge rates, quality, and usage of groundwater, and that interactions between groundwater and surface water should be more thoroughly explored. The Madison Group aquifer, the largest known high quality aquifer underlying the central part of the state, is a possible source of additional water, but limited data exist on its age and the effects large drawdowns might have on its discharge to springs (i.e., Big Springs and Warm Springs.) There is a perception that new monitoring wells should be added to the MBMG's database to gather long-term information on groundwater level response to climate and nearby water use, and on changes in water quality.

2.3 Water Management

Fair enforcement of water rights decrees is important to Montana's water users, and they don't like having to file suit against their neighbors to protect their rights. They also want assurances that their senior rights will be protected whenever new water right permits are granted by the state. Streamflow gages are an important tool used by water commissioners to ensure accurate deliveries, as well as to provide data about how much water might be available for storage or distribution, predict floods, and in some cases provide a method for monitoring surface water quality. Long-term funding for operation and maintenance of existing gages is at risk, and if additional gages were installed in critical areas, water management could improve. Management of water levels in reservoirs in the LMRB is critical to recreational uses and to the businesses that depend upon those uses. Residents are nervous about energy development and the possibility of accidental contamination of aquifers or streams. There is a perception that the permit process for acquiring a new water right or changing the use of an existing one takes too long resulting in slower economic development in some areas.

2.4 Future Needs

Demand for water at a point twenty years into the future is difficult if not impossible to forecast. Global and national economics drive the energy industry through its boom and bust periods, towns grow and shrink in response, and the technology used for exploration and production changes rapidly. Water re-cycling processes are being developed so that industrial water can be re-used. Everyone agrees, however, that the state will need more water rather than less in the future, and various factors including climate change, may affect water supply. Changes such as the timing of spring run-off may interfere with available water supply for beneficial uses, necessitating revisions of water management practices. Water management concerns are no longer limited to irrigation, floods, or hydroelectric power, but now encompass sufficient water supplies for municipalities, recreation, industry, wildlife, and instream flows. There is a recognition that water quantity and quality are directly related, and that poor water quality impacts some types of beneficial use. A healthy river ecology is also an important consideration.

2.5 Implementation Strategies

BAC members and public participants alike expressed reservations about how a state-wide water use plan could be implemented. Such a plan based on recommendations made through the MWSI process will of necessity be complex, and there is concern that our state senators and representatives will be pressed to find time to study and understand it. Implementation will require broad-based support from stakeholders to help legislators understand the critical importance of water to our citizens and our economy. There are watershed organizations in the LMRB that can serve as examples of the positive results of communication and collaboration on local water management issues. The adopted state-wide water use plan will need to be adaptable and responsive to changing water resource supply and demand.

2.6 Issues Specific to LMR Sub-basins

In the Musselshell River basin, the accuracy of the adjudication process is in question because of the method used by the Water Court to determine claimed historical place and amount of use. This basin also suffers more from a burgeoning noxious weed crop than some other basins, the result of weed seed dispersal by the catastrophic 2011 flood.

The Milk River basin is dependent on the St. Mary's diversion canal for much of its water supply for agricultural and municipal use. There are questions of infrastructure condition, project funding, and tribal water rights that need to be addressed before a rehabilitation project can begin. Water quality and shrinking capacity of water storage reservoirs are also critical concerns.

Judith River basin residents are protective of the high quality water flowing from Big Spring, and are concerned that possible high volume production wells proposed for tapping the Madison aquifer might jeopardize the quantity or quality of the spring water. More research needs to be conducted on recharge rates and interactions between surface water and the aquifer. The number and location of oil and gas leases in the Judith River basin is a concern because of potential contamination of the Madison Group Aquifer and its recharge areas. This is due to the unique, complex geology and hydrology of the Judith basin, where shale layers proposed for energy development lie in close proximity to the high quality aquifer. Irrigators are concerned that Ackley Lake will not provide enough water to meet their needs in the future.

Residents in the Missouri River basin downstream of Ft. Peck dam are heavily impacted by water releases made by the Army Corps of Engineers. Water flows can cause river channels to migrate, erosion eats away at productive fields, and the cold water affects the downstream fishery. Because of the almost annual necessity to perform bank stabilization, there may be a need for an expedited permit process for approval of these projects. Energy development in Montana and North Dakota is raising concerns about water quantity and quality in the future.

3 Next Steps

Members of the LMR BAC will meet again in January, 2014, to begin the process of developing recommendations and alternatives that will be forwarded to DNRC for consideration in development of a state-wide water resource plan. Members will work with DNRC staff assigned to the LMRB to achieve specificity and feasibility in their recommendations. Additional meetings will be scheduled in February and March until the work is completed to the satisfaction of both the LMR BAC and DNRC staff. The current contracted facilitation team will continue to provide administrative support to the LMR BAC to coordinate this work.

A draft report of recommendations will be made available for public comment by the end of March, 2014. Hearings held in each basin in spring/summer of 2014 will allow additional opportunities for public participation. After listening to the public's response to the draft recommendations, the LMR BAC will finalize the report by April, 2014 to allow DNRC time to produce a state-wide compilation of recommendations and send it to the appropriate interim legislative committees in time to draft any required bills for implementation of the plan before the 2015 session.

4 Comprehensive List of Issues Identified at Scoping Meetings, by Category

Following is a list of all the issues raised by the public and by members of the LMRBAC during the six scoping meetings that were held in the Lower Missouri River Basin in October and November, 2013. Issues listed do not necessarily represent the views of DNRC or the BAC, and some were not included among the core issues chosen to be considered during the next phases of the MWSI. BAC members spent many hours considering which out of this long list could be reasonably addressed by a state water resource plan. The end result is the much shorter collection of issues listed in the six categories above, pages 6-8.

4.1 Groundwater Issues

1. The state needs a groundwater monitoring network for the Madison Aquifer for water quality and quantity to evaluate how groundwater production affects Big Spring flows over 5-10 years.
2. Better predictive models for groundwater measurement and quality are needed; present models are based on scant data.
3. Baseline groundwater quality testing needs to be done, especially in areas where energy development is likely to occur.
4. More groundwater wells should be monitored for water level (variations due to climate or new wells being drilled in vicinity) and quality.
5. The state should increase the budget for aquifer monitoring and research modeling, including completion of the groundwater model for the Fox Hills – Hell Creek aquifer for the entire areal extent of the aquifer in the state of Montana.
6. The Board of Oil and Gas report on the North Poplar water well pollution, as well as regulations for oil/gas well construction and sealing should be considered by the state water use plan.
7. State statutes and regulations regarding exempt wells (below 35 gpm production) need to be re-examined to protect existing wells in areas where heavy residential development with multiple wells is proposed.

4.2 Surface Water Supply and Storage

1. More streamflow gages, with secure funding sources, are needed on tributaries to the Missouri River to help determine how much water is available for storage and all uses, and to help measure water deliveries.
2. Any water that is stored in federal project reservoirs that has not yet been tapped for use in Montana should be secured through negotiations for the future.
3. Water storage reservoirs are losing capacity because of sedimentation, and the effects are felt by irrigators, municipal water users and recreationists.
4. Many on- and off-stream dams were built in the 1930s and are now in need of rehabilitation to meet safety concerns as well as to allow full storage capacity in reservoirs.
5. New off-stream storage projects that capture spring run-off would benefit both agricultural producers and the recreation industry, but large-scale projects are not likely to gain federal funding support.
6. The state should ask the Army Corps of Engineers for an explanation of its maintenance plan for Ft. Peck dam.
7. Perhaps future water storage projects could also serve to mitigate flood damage.
8. Water users may be able to mitigate new appropriations by transferring claims from unused water rights or unallocated water held in federal water projects

4.3 Adjudication and Water Rights

1. The state adjudication process must be completed promptly and accurately with sufficient funding to do so provided by the legislature, perhaps by tapping new revenue sources tied to water use.
2. Until adjudication reaches at least the Temporary Preliminary Decree stage in a basin, enforcement of decreed rights is not possible and senior water rights holders may lose their water to upstream junior rights holders.
3. Statutes, regulations and court cases relating to abandonment of water rights are neither clear nor consistent.

4. The state needs to adopt a plan for future enforcement of water rights on tributaries and determine how those rights will relate to mainstem river rights after final decrees are issued.
5. As more water right permits for oil and gas development are approved, consideration should be given to how that water will be used when the energy boom fades.
6. At present, there are no water right uses that take precedence over any other. Irrigation and stock watering rights should take precedence over industrial and municipal use rights.
7. The adjudication process should not allow expansion of pre-1973 water use under existing rights unless the expanded use is captured under multiple priority dates.
8. Historic consumptive use is an important element in water rights. Consumptive use should not be allowed to be expanded when water rights are changed.

4.4 Economics of Water

1. The recreational economy of the LMRB is affected by drawdowns of large water storage reservoirs, and should be considered when those decisions are made.
2. The state water use plan should address the economics of water use and develop a method for calculating the time/value/cost relationship when new projects are contemplated.
3. The economic climate of eastern Montana is directly tied to water, and that needs to be considered when the state water plan is drafted.

4.5 Water Quality

1. Many groundwater wells and streams in the LMRB have poor water quality, making rural regional domestic water supply projects a high priority.
2. Better methods of water re-cycling, including municipal and industrial treatment plants, could improve the quality and increase the quantity of available water.
3. If water quality of both surface and ground water is not addressed by the state's water plan, some may allege that its omission was suggested by stakeholders who are most affected by water quality standards.
4. Sedimentation and salinity are concerns all over the LMRB.
5. Burgeoning quantities of oil transported by rail and pipeline are increasing the likelihood of future contamination of both streams and aquifers due to derailments or pipeline failures.

4.6 River Health

1. Maintenance of streamflow throughout the year is critical to a healthy fishery in all streams and rivers.
2. As aging or damaged irrigation structures in the rivers are repaired or replaced in the future, perhaps the costs can be shared by wildlife resource agencies in order to allow fish to freely pass over or around them.

4.7 Water Resource Regulations Enforcement

1. The DNRC and Department of Environmental Quality (DEQ) need enough funding and staff to enforce the statutes and regulations in place now and adopted in the future to prevent illegal uses and protect water quality.
2. The Musselshell River Distribution Project has shown that enforcement of decreed water rights by court-appointed water commissioners benefits both the irrigators and river health by maintaining instream flows throughout the irrigation season. When a basin has no water use monitoring system in place, the only way to stop illegal uses is for neighbors to complain against neighbor, and this does little to foster cooperation and sharing.
3. Large energy development corporations may be buying large quantities of water, even hauling water out of state. DNRC should carefully monitor applications for changes of use and new water permits to make sure that statutory limits for water sold for export are not exceeded.
4. DNRC cannot on its own impose fines for illegal use of water, but must pursue each case in the state courts.
5. The Montana Board of Oil and Gas Conservation, appointed by the Governor according to statutory specifications, enforces compliance with drilling and injection well regulations. There may not be enough enforcement personnel to monitor all the new oil and gas development activity occurring in Montana.
6. Agencies and boards tasked with enforcing statutes and regulations relating to water resources need to improve education programs for staff.

4.8 Water Delivery and Application

1. Water conservation by users could be encouraged by offering incentives.
2. Much of the irrigation infrastructure in the state is over 75 years old, and there is little funding available to assist in the costs of maintenance, repair, or replacement.
3. Methods of applying irrigation water are changing without research to find out how those changes might affect streamflows, groundwater levels, and water quality.
4. The state water use plan should protect irrigation uses from other uses including increased municipal water consumption.
5. The state should encourage the kind of collaboration seen in the Musselshell River basin by helping watershed groups organize and obtain funding to build capacity.
6. Climate change could lead to production of more water-thirsty crops along the northern tier of Montana, increasing the demand for irrigation water.
7. The Bureau of Reclamation should provide the state with its plan for maintenance, repair, or replacement of the aging infrastructure under its control.

4.9 Reserved Rights, Water Compacts, and Water Reservations

1. Water rights and water use on tribal lands directly affect any plan the state adopts. Until tribal compacts have been ratified by Congress and voted on by tribal members, supply and use data cannot be accurately compiled, and the adjudication process cannot be completed.
2. There are water reservations on Musselshell County coalmine water and Missouri River flows that have not yet been developed. Conservation districts and municipalities need to have plans for doing so.
3. If the tribes build water depots to sell water for energy development in eastern Montana and North Dakota, the quantities could seriously impact total water supplies downstream.
4. The state should think about additional water reservations for future energy development use.

4.10 Water Use Planning Implementation

1. Special interest groups are likely to lobby the legislature when bills relating to the state water use plan are presented to the 2015, and future, Montana Legislative sessions, making it difficult to implement some aspects of the plan.
2. BAC members across the state may need to mobilize to provide support for the state water plan.
3. Members of the Montana Legislature are subject to term limits, and only work for a short time every other year. They need a quick education on water resource issues in order to make informed decisions.
4. The public will not support a state water use plan if there is a perception that public input was not welcome.

5 Issues Specific to LMR Sub-basins

5.1 Musselshell

1. The temporary preliminary decree in place in the two defined Musselshell River sub-basins does not accurately reflect historical water uses and should be re-examined.
2. The two Musselshell River sub-basins should be combined to make feasible enforcement by petition on both tributaries and the mainstem to point of use.
3. Salt cedar, Russian olive, knapweed, and other invasive plant species are rapidly gaining ground along the Musselshell River mainstem and its tributaries.
4. The adjudication process should not allow expansion of water use under existing pre-1973 water rights unless the expanded use is captured under multiple priority dates.
5. Historic consumptive use is an important element in water rights. Consumptive use should not be allowed to be expanded when water rights are changed.

5.2 Milk

1. The St. Mary's Diversion Project serves 10,000-15,000 residents on the Milk River, and the system needs to be sustainable and efficient to meet future needs.
2. Priority funding should be obtained for the St. Mary's Rehabilitation Project.
3. The organic contamination that results from spring flooding has become a problem for Havre's municipal water system, which was not designed to remove it to make the water safe for drinking.
4. The proposed Blackfeet Tribal Compact is still being negotiated, and the tribe questions whether the St. Mary's Rehabilitation Project will benefit tribal water uses and economics.

5.3 Judith

1. The quality and quantity of Big Spring water, which arises from the Madison aquifer, may be jeopardized by large production wells drilled farther west in the Judith Basin, and no research is currently being conducted to determine the whether recharge of the aquifer can keep up with future demands for high quality water.
2. Ackley Lake storage may be jeopardized by revival of old water rights on the Judith River upstream of the reservoir.

5.4 Missouri Below Ft. Peck Dam

1. The process for securing a new permit for water use should be streamlined by the state, as Montana may be losing industrial development to North Dakota because of time considerations.
2. When large releases of water are made by the Army Corps of Engineers from Ft. Peck Reservoir, the resulting floods damage irrigation infrastructure downstream and causes channel changes that can prevent water rights holders from accessing their water.
3. Water use by water depots, ready-mix plants, and gravel pits can affect water quality in the Missouri River.
4. Water temperatures in the Missouri River below Ft. Peck dam may be detrimental to fisheries.

APPENDIX A

Lower Missouri River Basin Advisory Council Members & Technical Advisers

Lower Missouri River Basin Advisory Council Members

Baker, Harlan -- Chippewa Cree Tribe -- 16 Prairies St, Box Elder, MT 59521

Bergin, Sr., Bill -- Bergin Land and Livestock -- P.O. Box 219, Melstone, MT 59054

Bighorn, Arnold -- Fort Peck Tribe -- Water Resources, P.O. Box 1027, Poplar, MT 59255

Galt, Dave -- MT Petroleum Assoc -- 25 Neill Ave , Helena, MT 59601

Gibbs, Michelle -- McCone County -- 2913 Horse Creek Rd, Circle, MT 59215

Goffena, Bob -- Musselshell County Commission/ Deadman's Basin WUA -- 152 Goffena Rd, Roundup, MT 59072

Hitch, Doug -- Judith Basin Cons. Dist. -- P.O. Box 368, Hobson, MT 59452

Holzer, Jane -- MT Salinity Control Assoc. -- P.O. Box 909, Conrad, MT 59425

Iversen, Dick -- Richland County Cons. Dist. -- 13749 Circle 32, Culbertson, MT 59218

Kline, Kristi -- Montana Rural Water Systems -- P.O. Box 66, Kremlin, MT 59532

Knudsen, Rhonda -- Retired NRCS/ BIA Irrigator -- P.O. Box 734, Culbertson, MT 59218

Lawler, Mike -- Conservation Hawks -- P.O. Box 1004, Lewistown, MT 59457

Marchi, Peter -- Musselshell River Distribution Project -- P.O. Box 96, Martinsdale, MT 59053

McNutt, Walt -- Richland County Commission -- 110 12th Street, Sidney, MT 59270

Nieskens, Michael -- Dry Prairie Rural Water -- 247 Klein Ave., Glasgow, MT 59230

Patrick, Jennifer -- Milk River Joint Board of Control (alternate for Randy Reed) -- P.O. Box 1731, Havre, MT 59501

Perez, Randy -- Fort Belknap Tribe -- 656 Agency Main Street, Harlem, MT 59526

Peterson, Jim -- MT Legislature -- 501 Peterson Ranch Ln, Buffalo, MT 59418

Plumage, Dolores -- Blaine County Commission -- 420 Ohio, Chinook, MT 59523

Reed, Randy -- St. Mary Rehab Working Group -- 40890 US Hwy 2, Chinook, MT 59523

VanderBeek, Eric -- Madison Aquifer Alliance -- P.O. Box 811, Lewistown, MT 59457

Vannatta, Dwight -- MT Farm Bureau -- HC 58, Bainville, MT 59212

Lower Missouri River Basin Technical Advisers/Ex Officio Members

Biggar, Denise – MT DNRC – P.O. Box 1269, Glasgow, MT 59230

Brummond, Andy – MT Dept. FWP – P.O. Box 938, Lewistown, MT 59457

Daggett, Jim – U.S. Army Corps of Engineers – Army Corps of Engineers, P.O. Box 208, Ft. Peck, MT 59228

Irvin, Scott – MT DNRC – 613 NE Main, Lewistown, MT 59457

Ockey, Mark – MT DEQ – P.O. Box 200901, Helena, MT 59620

Potts, Rick – US FWS – P.O. Box 110, Lewistown, MT 59457

Probert, Tom – BLM – 5 Lasar Drive, Glasgow, MT 59230

Sealey, Monty – Central MT RC & D – P.O. Box 1175, Roundup, MT 59072

Tews, Anne – MT FWP – P.O. Box 938, Lewistown, MT 59457

APPENDIX B

Reports of
Lower Missouri
River Basin
Scoping Meetings

Lower Missouri River Basin Advisory Council
Public Scoping Meeting Report
October 8, 2013, Lewistown, Montana

Present:
Sandy Youngbauer, Fergus County Commissioner
Gladys Walling, rancher
Mike Lawler, LMR BAC member
Andy Brummond, MT FWP
Janet Bender-Keigley, MT Watercourse
Bill Bergin, Sr., LMR BAC member
Joanie Bergin, rancher
Robert Goffena, LMR BAC member
Bill Milton, LMR Basin Facilitator
Wendy Beye, LMR Basin Administrative Support
Robert Peterson, Bos Terra
Adam Haight, Northern Plains Resource Council
Monty Sealey, Central Montana Resource, Conservation, & Development Area
Marite Valencia, Central Montana Resource Council
Kevin Myhre, City of Lewistown
Carl Seilstad, Fergus County Commissioner
Diane Ahlgren, rancher, Petroleum County Conservation District
Douglas Hitch, LMR BAC member
Eric VanderBeek, LMR BAC member
Jim Peterson, LMR BAC member
Scott Irvin, DNRC Lewistown Regional Office Manager
Attila Folnagy, DNRC Groundwater Hydrologist
Michael Downey, DNRC Water Resource Planner
David Amman, DNRC Hydrologist
Don Pfau, Ft. Peck Lake Advisory Committee
Bill Harris, business owner and Representative, MT Legislature
Kristi Kline, LMR BAC member
Wayne Riley, businessman
Anne Tews, MT FWP
Bill Gardner, retired fisheries biologist, MT FWP

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

Those present introduced themselves to the group, and Bill Milton reviewed the agenda.

Background Information Presentations

Michael Downey, DNRC Water Resources Planner, gave a presentation on the Water Initiative Supply Process. The presentation, along with others heard at this meeting, is available at the following website: Lower Missouri River Basin 2015 Montana State Water Supply Initiative (control key/click to go to link).

Facilitator Bill Milton asked Michael to explain how the Water Policy Interim Committee of the Montana Legislature fits into the planning process. State Senator Jim Peterson answered the question, saying that the committee was set up by statute in about 1973 when the Water Use Act was passed by the legislature. The members are appointed equally by political parties, and they can request that legislation be drafted to implement their de-

cisions. In 2014 they will be particularly looking at adoption of a statewide water use plan to be presented to the 2015 legislative session.

Carl Seilstad asked how does a water plan balance out the years that have an overabundance of water with those years that have too little? Michael answered that DNRC is working to determine how much water is being used on irrigated lands, and to see if supply can be determined by using the streamgage network. In a follow-up question, Carl asked how much water is in the tributaries that are a part of the CM Russell Compact. At this time, there is no answer to that question.

David Amman made a presentation on the hydrology of the Lower Missouri River basin. He pointed out some information that might not be readily recognized by just looking at his powerpoint presentation on-line. The Lower Missouri River basin receives the bulk of its water (over six million acre/feet/year) from the Upper Missouri River basin watershed, after the deduction of consumptive uses. Montana sends an average of 7.2 million acre/feet/year across the border to North Dakota via the Missouri, but the volume ranges from 4 million to 17 million acre/feet/year, depending on snowpack and rainfall amounts during the year. From 1950 to 2000, data show a decrease in the amount of snowpack in place in the mountains of central Montana in April – an indication that snowpack is melting earlier than it used to. Water storage projects in the state have helped to redistribute water more consistently through the irrigation season by capturing spring runoff for release during drier months. The goal of water management is to fairly balance competing uses.

Mike Lawler asked whether the statewide water use plan will consider the wide variations in water supply rather than just the averages. David said management alternatives for both excess and short water years have to be part of a plan.

Bob Peterson asked why there isn't more water storage available on the Judith River when there are three large storage projects on the Musselshell, and both watersheds contribute about the same volume of water to the Missouri River. The answer was that during the 1930s when the storage projects on the Musselshell were built, there was a great demand for water in that basin, and a large unemployed workforce available to build the dams and canals.

Jim Peterson asked if any water storage projects were being contemplated right now in the Lower Missouri River basin. Diane Ahlgren replied that the Mosby-Musselshell Watershed Group has proposed a 4,000 acre/feet storage reservoir on the lower Musselshell River, but there has been no funding available to pursue the project beyond the preliminary engineering stage. A water right for the project has already been secured.

Attila Folnagy presented background information on groundwater in the Lower Missouri River basin. His conclusion was that much more research is needed to understand the relationships between wells, aquifers, and streamflows to make informed water management decisions.

Mike Lawler asked, “In terms of groundwater wells, what are the biggest data gaps?” Attila said that the Montana Bureau of Mines and Geology (MBMG) focuses on more heavily populated areas, so little research is conducted in central Montana. Research models need to be developed and tested for accuracy in specific basins in the state, as they all behave differently.

Doug Hitch asked why there are no monitoring wells near Big Spring Creek. Attila said that Giant Springs in Great Falls receives more attention because of the population there.

Carl Seilstad expressed a concern that even the Lower Missouri River basin needs to be split because of the very different concerns in the Judith at the upper end of the basin, and the Bakken fringe at the lower end. How can one plan fit both areas? Michael Downey responded that DNRC split the state into four basins to help address that problem. Carl said that further divisions of the basins may be necessary when a plan is developed.

Bob Peterson asked whether research models were being tested for accuracy, and what is the risk of developing water use planning based on inaccurate models that may not do a good job of predicting future impacts of plan implementation. Attila said the models are checked against what is happening to wells right now, and the models are good enough to make relatively accurate predictions.

Jim Peterson wondered whether it might be wise to begin a research project right away on a deep well or two that taps into the Madison aquifer underlying the Judith basin. Monitoring information over at least a ten-year period, compared to outflows of Big Spring, might give the state a better idea of what can happen if the Madison aquifer is tapped by numerous wells in the future.

Scott Irvin presented the basics of Montana's water rights system. He mentioned that Montana is unique in its water reservation process. In the 1980s, municipalities, conservation districts, and government agencies were able to apply for and reserve water for future public consumption, irrigation, and instream flows. Not all of those reservations have been developed to date. Basin water right closures, whether by Compact, as is the case with the Milk River basin, or by an administrative action, as is the case with the Musselshell River basin, will have an impact on planning for future water use.

Bob Goffena expressed a concern about the accuracy of the water rights temporary preliminary decree in the Musselshell River's two sub-basins.

Carl Seilstad noted the difference in priority of instream flows for fisheries between the portion of the Missouri River above Ft. Peck dam and that portion below the dam. Above the dam, municipalities have first priority, then instream flows, then conservation districts. Below the dam, the priority order is municipalities, then conservation districts (irrigation), then instream flows. Scott said the priority order was determined when the water reservation agreements were approved.

Kevin Myhre asked if there was any effective enforcement of priority date on groundwater well rights. Scott answered that no one can tie up an entire aquifer with a groundwater right. If someone has a well that just penetrates the top of an aquifer, and someone later in time drills a deeper well that draws the aquifer down, the earlier well may not have any priority, and the owner might have to pay to drill deeper. Another problem with groundwater priority is the difficulty of proving the effects of groundwater withdrawals. DNRC is being very careful when considering new applications for groundwater wells that draw more than 35 gallons/minute from an aquifer to be sure that there is no effect on neighboring wells or instream flows.

Doug Hitch asked if there is any restriction against pulling more water from an aquifer than can be replaced by the recharging process. Scott answered that decisions are based on modeling where that is available.

Facilitator Bill Milton asked whether anyone wished to give formal testimony to the group.

Bob Peterson and Adam Haight both read written statements for the record , and Laurie Lohrer sent in a statement (copies attached to this report). Mr. Peterson's concerns were that more water storage projects for irrigation water were needed in the Judith River basin, and that the state needs more information on development of deep groundwater sources for irrigation purposes to understand the implications of such development on deep aquifers. Mr. Haight's main concern related to compromised water quality due to the energy industry's use of water for drilling and fracking. The state should have groundwater baseline data in place before use of chemicals contaminates aquifers, and should require treatment and recycling of water used in fracking operations rather than allowing its injection into deep wells. Ms. Lohrer's testimony stated that Montana DNRC should enact strict water protection, usage regulations and enforcement policies immediately to permanently safeguard Montana’s water supply from possible overwithdrawal and contamination due to rapidly expanding, but short-term, unsustainable non-conventional shale oil and gas exploration & drilling.

Additional Comments, afternoon session

Bill Gardner, who arrived for the afternoon session, had some additional questions and comments on the background presentations, as did other participants. He asked how the Bureau of Reclamation projects including Fresno, Canyon Ferry, and Tiber fit in to a plan for the Lower Missouri River.

Michael Downey answered that DNRC would try to maintain a state/federal balance by cultivating communication among the agencies involved.

Kristi Kline explained that the City of Havre has a 1000 ac ft. water contract with the Bureau of Reclamation for potable water use and an additional 1800 ac ft. on reserve, but the Milk River Joint Board of Irrigators must okay the use of any of the additional 1800 ac ft. on a yearly basis. There are also international issues related to the water compact with Canada on the water that ends up in the Milk River. These complicated issues need to be addressed in a water use plan.

(NOTE: Kristi Kline submitted the following request after this report was completed, "On my 1st comment – I was not correct that the Milk River Joint Board of Irrigators must OK the additional 1800 ac ft of water if requested – so I would like to strike that sentence and have this be the clarification:

Kristi Kline, explained that the City of Havre has a 1000 ac ft. water contract with the Bureau of Reclamation for potable water use with an additional 1800 ac ft. on reserve. There are also international issues related to the water agreement with Canada on the Milk River that crosses between the US and Montana. These complicated issues may need to be addressed in a water plan."

Mike Lawler asked if it would be possible for the tech advisers to create a map of the Lower Missouri River basin showing all the overlapping water resource jurisdictions and who has management authority over them.

Eric VanderBeek stressed the importance of considering water quality as well as quantity in the Water Supply Initiative process.

During the hydrology presentation by David Amman, it was noted that the Ft. Peck project was built for flood control and to save water for irrigation. Scott Irvin also mentioned that hydroelectric facilities have water rights that have to be met.

Kristi Kline asked whether the Army Corps of Engineers has a broad water management plan for use of the stored water.

Andy Brummond responded that Congress sets the uses, but the only one specifically allocated so far is the use of the dam for flood control downstream.

Kristi Kline said streamflow gages are very important, but that many are only seasonally operated, so municipalities don't have complete information on water quality and flows.

Bill Gardner asked if historic flow data should be used for predicting supply, or just the current years' data.

David Amman responded that for rigorous research, up-to-date data have to be captured.

Kristi Kline said that along with water storage, construction of the Fresno Dam on the Milk River in 1936 assured water storage to fulfill water contracts with the City of Havre to ensure a year round flow of 25 cubic feet per second for dilution of their wastewater discharge; and for uses by the Great Northern Railway and Utah-Idaho Sugar Company (located in Chinook).

Bill Gardner expressed a concern that many of the dams that were built more than 50 years ago are beginning to silt in and hold less water.

Attila Folnagy mentioned some additional facts in his afternoon presentation, including that contamination of a deep aquifer such as the Madison can take up to 100 years to show up in wells and springs that are many miles from a recharge area. Pressure-related effects of large volume aquifer draws could show up more quickly in the discharge rate of springs and artesian wells.

Monty Sealey asked how much of Montana's groundwater is exported to North Dakota to serve the energy boom. No one had an answer for that question.

Bill Gardner is concerned about aquifer contamination and depletion.

Attila Folnagy responded that shallower aquifers are more susceptible to contamination than deep aquifers. Eric VanderBeek added that the Heath oil shale layer actually lies above the Madison aquifer in eastern Montana, so oil exploration and production could affect the quality of a deep aquifer.

Doug Hitch asked whether there is any way to measure the amount of recharge an aquifer experiences, and where exactly that recharge occurs.

Andy Brummond said that the USGS investigated streams with diminished flow into the Madison aquifer about 40 years ago.

Facilitator Bill Milton asked Bill Gardner if he had any additional questions or comments. Mr. Gardner responded that he was interested in recreational uses of water including fisheries and instream flows. He said that water reservations developed so far for instream flows have not been sufficient, and that boating and floating flows should be considered. Also, streams need periodic floods to regenerate cottonwoods in the riparian area. He would like to see the water reservation documents and find out the potential for future development of water reservations in the Lower Missouri River basin. He would also like to know what the flow data are from the reservoirs in the area, and how much the fisheries need to maintain health.

Concerns and Issues Important to Meeting Participants

The following issues are listed, in no particular order based on relative importance to participants:

1. The state needs to put to beneficial use a deep groundwater well that taps the Madison aquifer in the Judith River basin and study how it affects Big Spring flows over the course of at least 5-10 years.
2. Montana sends about 75% of its water downstream to other states, and doesn't have enough political clout to protect water interests within the state, especially water levels in Ft. Peck Reservoir. A corollary of this concern was “How much of the water that goes downstream has to do so in order to meet downstream water right requirements?”
3. The economy of central and eastern Montana is affected by the draw-down of Ft. Peck Reservoir, and there has been no federal funding available for developing irrigation uses for the water stored there.
4. Montana needs a more accurate understanding of water supply available, and how much is actually used.
5. Montana should enforce the regulations that are already in place, not allowing water to be sold to “the highest bidder,” but rather fairly distributed.
6. It is important that the state complete the adjudication process as soon as possible, and figure out a way to accurately measure water used.
7. Agricultural uses of water should be protected, and offstream storage supported by the state to help level out extremes of too much water or too little in a given year.
8. A one-size-fits all plan for water use will not work for the diverse basins in the state. The plan needs to be flexible.

9. The state should partner with private entities to develop deep aquifer wells in the Judith River basin, and then make baseline quality and quantity measurements.
10. Montana needs better research models for groundwater measurement and quality. Our present models are based on scant data.
11. Water quality may be jeopardized by energy exploration and drilling methods. We need baseline water quality data right away.
12. Water rights adjudication is not always accurate in its representation of what is going on with water use in a watershed. When a user takes more than his fair share, it impacts someone else downstream.
13. More funding is needed to complete the adjudication process on time, and with accuracy.
14. Perhaps there should be water conservation incentives, i.e. an allowance for more acreage irrigated if a producer increases efficiency of water use.
15. The state water plan must address the economics of water use.
16. How much would it cost to pay for research on water supply and use data?
17. How will the recommendations developed by this process be used by the interim legislative committees?
18. More off-stream water storage projects could benefit both agricultural producers and the recreation industry.
19. Written comment received by email from Bill Gardner: Fish and wildlife aquatic needs should be protected, and instream flow requirements should be supported and refined by the state to prevent further over utilization of our water resources.

Wrap-up Comments

Future meeting announcements need to indicate that written comments and/or formal testimony will be accepted by the BAC.

The meeting today did not allow enough time for public discussion – one longer session per venue would work better.

After the BAC drafts its recommendations, more public meetings should be held in the basin.

The next scoping meetings scheduled, with tentative times, are:

Glasgow, October 23, Cottonwood Inn, 10:00 a.m. - 1:30 p.m.
Culbertson, October 24, Public library, 10:00 a.m. - 1:30 p.m.
Roundup, October 30, St. Benedict's Church, 10:00 a.m. - 2:30 p.m.
Harlowton, October 31, Youth Center, 10:00 a.m. - 2:30 p.m.
Havre, November 7, Great Northern Inn, 10:00 a.m. - 1:30 p.m.

Lower Missouri River Basin Advisory Council
Public Scoping Meeting Report
October 23, 2013, Glasgow, Montana

Present:
Mike Lawler, LMR BAC member
Rhonda Knudsen, LMR BAC member
Arnold Bighorn, LMR BAC member
Dave Galt, LMR BAC member
Mike Nieskens, LMR BAC member
Austin Knudsen, MT Legislature, House District 36
Mike Dailey, DNRC Hydrologist/Planner, Glasgow
Denise Biggar, DNRC, Deputy Regional Manager, Glasgow
Steve Dalbey, MT FWP, Fisheries Manager, Glasgow
Thomas Probert, BLM, Hydrologist, Glasgow
Heather Harris, DNRC, Water Resource Specialist, Glasgow
Nate Ward, DNRC, Water Resource Specialist, Glasgow
John Daggett, US Army Corps of Engineers
Bill Milton, Facilitator
Attila Folnagy, DNRC Groundwater Hydrologist
Michael Downey, DNRC Water Resource Planner
David Amman, DNRC Hydrologist

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

Those present introduced themselves to the group, and Bill Milton reviewed the agenda.

Background Information Presentations

Michael Downey, DNRC Water Resources Planner, gave a presentation on the Water Initiative Supply Process. The presentation, along with others heard at this meeting, is available at the following website: Lower Missouri River Basin 2015 Montana State Water Supply Initiative (control key/click to go to link).

David Amman made a presentation on the hydrology of the Lower Missouri River basin.

Attila Folnagy presented background information on groundwater in the Lower Missouri River basin.

Denise Biggar presented the basics of Montana's water rights system.

Concerns and Issues Important to Meeting Participants

The following issues are listed, in no particular order based on relative importance to participants:

1. Details of the 1944 Flood Control Act need to be examined to see if there might be more water resources available from reservoirs built as a result of the act.
2. A state-wide water use plan needs a long-term vision.
3. How does the Army Corps of Engineers plan to fund long-term maintenance needs for the Ft. Peck project?

4. When considering water resource projects in the future, how can the time/value/cost relationship be calculated? What percent of budgets for projects have gone into infrastructure maintenance or upgrades in the past, as compared to water management?
5. The Madison aquifer in the Judith has not been monitored to the extent the Fox aquifer on the eastern edge of the state has – should it be?
6. Data collection locations for water quality and quantity should be prioritized.
7. The oil and gas industry has made 80% of the applications for new water rights in eastern Montana over the past few years. If those water rights applications are approved, what use will be made of the water after the energy boom passes? Will the rights be orphaned or forfeited?
8. To date, 18,000 acre/feet of water have been claimed for energy development uses in North Dakota; 14,000 acre/feet have been claimed in Montana, where there is only a small fraction of the development boom that North Dakota is experiencing. What is this water being used for? Is any being sold to North Dakota energy companies by private individuals or water use partners? (There is a Montana statutory limitation on the amount of water that can be sold out of state. A copy of the statute will be provided to the BAC.)
9. How will climate change affect water resources in Montana?
10. Water quality is already being regulated by DEQ; should quality be a part of the BAC process? If so, how will the BAC address water quality?
Quality shouldn't be addressed in a 20-year plan
Public input on water quality is needed in the state-wide plan
Quality cannot be divorced from quantity
The Yellowstone River BAC placed water quality low when ranking important issues
By not addressing water quality in the state-wide plan, some may allege that the omission was suggested by those stakeholders who are most affected by water quality standards
11. Increasing use of water resources by growing communities should be factored into the state-wide plan.
12. Water uses on tribal lands need to be considered in the plan. Is there any marketing of water on the reservations? Research on and off the reservations should be conducted to understand both surface water and the Clear Lake aquifer supplies.
13. Beneficial use of water for irrigation is about 94% of total use. Industry has used about one billion gallons per year recently, compared to ten billion gallons per day total use.
14. Legislative action is being proposed to speed up the process of acquiring a change of use permit so that water can be leased for industrial use. The water would be metered, and inspectors are needed at the point of use. The oil and gas industry supports the right of prior appropriation.
15. How can the BAC plan for meeting future water resource needs with inadequate data? Can the legislature be convinced to provide funding for additional research?
16. Are some streams dewatered and water quality compromised because of "hazard dams" that need repair or reservoirs that are filling with silt?
17. Irrigation efficiency studies are needed in the Lower Missouri River basin, to determine how improved efficiency affects streamflows, water supply, and water quality.
18. There should be incentives for voluntary water conservation efforts.
19. We need creative water policy decisions based on science rather than politics. How much influence will the BAC have at the political level?
20. How beneficial is flood control when considered as part of an overall water management plan?
21. Can BAC members effectively lobby the Montana Legislature for water resource planning?
22. Can members of the Montana Legislature be expected to understand complex water resource issues when they only work for a short time every other year, and have term limits? Carefully prepared testimony will help educate legislators.
23. With more and more rural housing development occurring, do the rules for exempt wells (less than 35 gallons/minute output) need to be adjusted so that senior wells are not adversely affected?

Wrap-up Comments

1. To recruit participants for the Scoping Meetings, personal contacts will be necessary with BAC members' constituents.
2. In advertising the meetings, the final product of the Water Supply Initiative must sound useful and important to the average citizen, perhaps using a headline such as "Is there a water resource emergency?"
3. Have Montana house and senate seat holders been personally contacted? Can BAC arrange a meeting with them in the Lower Missouri River basin?
4. DNRC Water resource staff needs to provide more detail on groundwater hydrology and the complexities of the resource connections to surface water.
5. Should we hold any night meetings in the future?
6. Does the public tend to care more about water coming out of the faucet rather than the water that is used to irrigate crops or serve energy development needs?
7. Eastern Montana is sparsely populated – will its needs be heard in Helena?

The next scoping meetings scheduled, with tentative times, are:

Roundup, October 30, St. Benedict's Church, 10:00 a.m. - 2:30 p.m.
Harlowton, October 31, Youth Center, 10:00 a.m. - 2:30 p.m.
Havre, November 7, Great Northern Inn, 10:00 a.m. - 2:30 p.m.

Lower Missouri River Basin Advisory Council
Public Scoping Meeting Report
October 24, 2013, Culbertson, Montana

Present:
Mike Lawler, LMR BAC member
Rhonda Knudsen, LMR BAC member
Arnold Bighorn, LMR BAC member + one tribal member
Dave Galt, LMR BAC member
Dwight Vannatta, LMR BAC member
Walter McNutt, LMR BAC member
Dick Iversen, LMR BAC member
Doug Smith, Sheridan County
James Brower, Lower Yellowstone Irrigation Project
Tim Hyatt, Tallgrass Ventures
Irene Rathort, Farmer/Rancher
William O. Rathort, Farmer/Rancher
Dennis Trudell, NE Montana Land and Minerals Assoc.
Rob Bray, Roosevelt County Conservation District
Loren H. Young, Richland County
Tom Ruffatto, Roosevelt County Conservation District
Jeffrey Hintz, City of Sidney
Greg Anderson, City of Sidney
Dana Berwick, Roosevelt County Conservation District/Dry Prairie Rural Water
Denise Biggar, DNRC, Deputy Regional Manager, Glasgow
Bill Milton, Facilitator
Attila Folnagy, DNRC Groundwater Hydrologist
Michael Downey, DNRC Water Resource Planner
David Amman, DNRC Hydrologist

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

Those present introduced themselves to the group, and Bill Milton reviewed the agenda.

Background Information Presentations

Michael Downey, DNRC Water Resources Planner, gave a presentation on the Water Initiative Supply Process. The presentation, along with others heard at this meeting, is available at the following website: Lower Missouri River Basin 2015 Montana State Water Supply Initiative (control key/click to go to link).

David Amman made a presentation on the hydrology of the Lower Missouri River basin.

Attila Folnagy presented background information on groundwater in the Lower Missouri River basin.

Denise Biggar presented the basics of Montana's water rights system.

Concerns and Issues Important to Meeting Participants

The following issues are listed, in no particular order of relative importance to participants:

1. Recreational needs should be met with sufficient water in large storage reservoirs.
2. There is a concern that the wildlife refuges and the reservations claim more water than is available in their watersheds.
3. Water temperature in the river below Ft. Peck dam may be detrimental to fisheries.
4. Is there enough water available for large-scale water storage or delivery projects?
5. Montana DNRC is taking too long to approve applications for new water right permits.
6. Given the limited number of active streamflow gages and monitoring wells in the Lower Missouri River basin, the data sample size may be too small to accurately predict changes in water resource models.
7. Can water be better re-cycled and re-used?
8. Floods, especially the 2011 flood, damage irrigation infrastructure on the Missouri below Ft. Peck dam, which then creates issues with access to decreed water because of channel changes. Some producers with senior water rights may no longer have access, and have had to apply for changes in diversion points.
9. The Fox Hills and Hell Creek Aquifer Monitoring and Modeling Project should be better funded.
10. How much water will be needed for energy development?
11. Water quality is an issue for both ground and surface water.
12. There are concerns about water use for ready-mix plants, water depots, and gravel pits that can affect water quality.
13. Montana may be losing industrial development to North Dakota because of the difficulties and time required for the water right permitting process in Montana.
14. Agricultural beneficial use of water should have priority in the water rights process.
15. Industrial uses in eastern Montana seem to take precedence over irrigation use.
16. More information on water reservations in the Lower Missouri River basin needs to be made available – how much has been developed, and how much is still reserved for future use?
17. Is stream depletion a wise use of water?
18. Should a single agency be able to object to a particular water right application?
19. Is the mitigation process a legitimate way to transfer water resources to different points of use?
20. How are conservation districts handling their water reservations?
21. At the Sidney Annex, are water rights at the water depot in order, and is there sufficient supply to meet demand?
22. Has there been any pollution of shallow aquifers (above 2,000' depth) by fracking in Montana?
23. The Bureau of Oil and Gas report on the North Poplar water well pollution and regulations for oil/gas well construction and sealing should be considered by the state water use plan. There are insufficient numbers of inspectors to visit all the new and existing wells.
24. How much pollution of groundwater wells has there been from pesticides, herbicides, fertilizer, and septic systems?
25. How much water is available for planning purposes, both groundwater and surface water?
26. When will the water rights adjudication process be completed?
27. How much water do the state's waterways actually produce? There should be gages on the tributaries as well as the mainstem rivers, but how will this be paid for?
28. Downstream state claims on water may limit what we can retain and use within the state.
29. How is the plume of contamination progressing within the aquifer at Poplar?
30. Water reservations will become more important in the future.
31. There should be more water quality monitoring wells in addition to groundwater level monitoring wells.
32. The town of Scobey is dealing with poor water quality.
33. Agencies that enforce rules and regulations for water quality need better education for staff.
34. The public also needs better education on water quality issues.
35. The Army Corps of Engineers needs to remember that Ft. Peck dam operations affect people living downstream with erosion, flooding, and contamination of groundwater wells close to the river.
36. Can DNRC staff prepare a summary of water use by percentage by industry and other interests?

Wrap-up Comments

1. How does this Water Supply Initiative process work, and what are the next steps?
2. Participants asked not be be broken into small discussion groups, but rather work as a single group.
3. Montana's water should be protected whenever possible so that we don't suffer the same problems Colorado faces.
4. Education of the public is essential – get the word out about where to find information.
5. Where will water come from to meet the needs of the oil and gas industry?
6. How can Montana with its limited population maximize its political power when competing with higher population states downstream?

The next scoping meetings scheduled, with tentative times, are:

Roundup, October 30, St. Benedict's Church, 10:00 a.m. - 2:30 p.m.
Harlowton, October 31, Youth Center, 10:00 a.m. - 2:30 p.m.
Havre, November 7, Great Northern Inn, 10:00 a.m. - 2:30 p.m.

Lower Missouri River Basin Advisory Council
Public Scoping Meeting Report
October 30, 2013, Roundup, Montana

Present:
Mike Lawler, LMR BAC member
Bill Bergin, Sr., LMR BAC member
Robert Goffena, LMR BAC member
Eric VanderBeek, LMR BAC member
Teri Hice, Deadman's Basin Water Users Assoc. Project Manager
Greg Seder, Deadman's Basin Water Users Assoc. Director
Bette Goffena, Rancher
Shirley Parrott, Lower Musselshell Conservation District Supervisor
Doug Parrott, Rancher
Ken Minnie, Snowy Mountain Development
David Stout, Lower Musselshell Conservation District Big Sky Watershed Corps
Donna Pedrazzi, Lower Musselshell Conservation District Administrator
Carmoleda Giebel, Citizen
Ray Giebel, Citizen
Lance Lehigh, TREC, Inc., Environmental Management Consultants
Stacey Hellekson, TREC, Inc., Environmental Management Consultants
Joanie Bergin, Rancher
Bob Price, Water User
Joe H. Stahl, Water User
Bill Milton, LMR Basin Facilitator
Wendy Beye, LMR Basin Administrative Support
Attila Folnagy, DNRC Groundwater Hydrologist
Michael Downey, DNRC Water Resource Planner
David Amman, DNRC Hydrologist
Doug Mann, DNRC Water Resource Specialist
Mike Ruggles, MT FWP
Ken Frazer, MT FWP

Facilitator Bill Milton called the meeting to order at 10:05 a.m.

Those present introduced themselves to the group, and Bill Milton reviewed the agenda.

Background Information Presentations

Michael Downey, DNRC Water Resources Planner, gave a presentation on the Water Initiative Supply Process. The presentation, along with others heard at this meeting, is available at the following website: Lower Missouri River Basin 2015 Montana State Water Supply Initiative (control key/click to go to link). In this presentation, he mentioned the concept of "water spreading," or allowing spring floodwaters to spread across larger areas of the floodplain to boost later season streamflows. This might be a more feasible approach to water storage than large storage reservoir projects. He also talked about "mitigation" water – for instance, water rights for land that is subdivided for residential use – that might be transferred to other land for beneficial use.

David Amman made a presentation on the hydrology of the Lower Missouri River basin.

Mike Lawler asked whether water diverted from a river for use could be plotted on a graph of streamflow over a year's time. Is there enough water to meet needs during an average year?

Bill Bergin responded that on the Musselshell, there is not enough water to meet demand, even with stored water releases, and there is no decreed water available at all late in the season.

Mike Lawler asked if there is any research in Montana that attempts to measure how much water could actually be captured and stored during the high water season.

Bill Bergin said that the inlet canal for Deadman's Reservoir can divert 600 cfs from the river, which is only a small portion of an above-average high spring flow, though some years the mainstem high water flow is below 600 cfs.

Mike Lawler commented that some of Montana's storage reservoirs hold less than they originally did because of the build-up of silt behind dams.

Dave Amman said that Frenchman Reservoir in far northeastern Montana holds only half of what it originally did, and Fresno Reservoir is down by 30% because of silt.

Bill Bergin said that Deadman's Reservoir is dredged periodically to remove silt.

Attila Folnagy presented background information on groundwater in the Lower Missouri River basin. He emphasized that more studies are needed to see how wells, especially large volume irrigation wells in areas close to streams, affect surface water availability. Wells in the alluvial aquifers along the Musselshell River are very climate- and water use-related. The state also needs to monitor water levels in more wells, as only about 1% of the wells in Montana are monitored now. Other data gaps include baseline groundwater quality and quantity in the Madison aquifer; a complete Fox Hills aquifer model; changes in both surface and groundwater quantity and quality when irrigation methods change from flood to sprinkler.

Bill Milton asked whether there are any areas in Montana where pivot sprinklers are operated with groundwater.

Attila Folnagy said there are areas on the far eastern edge of the state where that is the case.

Joanie Bergin asked whether fracking water deep injection wells can pollute groundwater aquifers in Montana.

Attila Folnagy responded that the injections are generally 5,000' below potable water aquifers.

Doug Mann presented the basics of Montana's water rights system, and added information specific to the Musselshell River basin. There is a water reservation approved for the Lower Musselshell Conservation District to use water from abandoned coal mines for irrigation, but the reservation is not yet developed. Once the CM Russell Compact is approved by Congress, its water right from the Musselshell River will be junior to all state-based water rights as of the date the Compact is ratified. The Compact will also reserve .5 or 1.0 cfs flow on 68 streams that contribute to water in the wildlife refuge.

Bill Bergin asked whether water rights can be enforced on all the Musselshell tributaries yet.

Doug Mann said that a petition for enforcement on the tributaries could be filed, but that the district court might want to wait until all existing conflicts have been examined and settled.

Eric VanderBeek commented that there is concern in Central Montana about the drawdown of Ft. Peck Reservoir for out-of-state downstream uses. Can Montana withhold any of that water?

Doug Mann said that's why it's important to be able to accurately determine how much water is being beneficially used in Montana to defend it against downstream demands.

Michael Downey added that once water is captured in Ft. Peck Reservoir, the uses for which the dam was built have to be balanced with Montana's uses of the water.

Mike Lawler compared the water in Ft. Peck to Deadman's Basin contract water, except that it's a contract between Congress and Montana.

David Stout said the US Forest Service is declaring instream flow rights when streams originate within federal lands.

Michael Downey said that Compacts between the federal government, tribes, and the state are negotiated to pin down distribution of water arising on or flowing through federal and tribal lands. Montana is unusual because it has a standing Compact Commission to work on such negotiations. Treaties with Canada also affect water that flows into Montana across the Canadian border.

Wendy Beye presented a short summary of the water history project entitled "Drought, Flood, Saving, and Sharing," that she wrote for the Musselshell Watershed Coalition to assist in development of a long-range basin-wide water use plan for the Musselshell River watershed.

The summary prompted a discussion among participants about noxious weeds and the need to control them soon, as well as a lively debate about the pros and cons of converting irrigation water use from flood to sprinkler. The conclusion reached was that research on soil and water salinity issues; return flow effect on downstream water supply; changes in water quantity used for crops; total quantities of water used by both methods; evaporation losses; long-term effect on soil conditions and productivity; irrigation labor expense and availability, among others, was needed before producers can make informed decisions about switching methods.

Concerns and Issues Important to Meeting Participants

The following issues are listed, in no particular order based on relative importance to participants:

1. Mike Ruggles commented that Musselshell River fish have bounced back from the days of regular summer river de-watering because of the success of the distribution project. As diversion dams are repaired or up-graded, they offer an opportunity to build fish-friendly structures that allow the fish to move up and down the river to access deeper pools during the summer months. Funding assistance would be essential to accomplish the improvements.
2. Ken Frazer worked as a fisheries biologist on the Musselshell River. The state should take advantage of flood recovery to make improvements in fish habitat by providing funding assistance for such projects.
3. Ken Minnie is concerned about how new wells will affect the area's aquifers. We need to understand the relationship between wells and aquifers, and protect stock water wells that exist now.
4. Greg Seder is concerned about the expansion of irrigated acres above the original place of use when water rights were first filed. There should be a re-examination of the Musselshell River temporary preliminary decree before it becomes final.
5. Ray Giebel said that Russian olive should receive the same attention as salt cedar for eradication along the Musselshell River.
6. Teri Hice would like to see adjudication lead to final decrees, but is concerned that the process be accomplished with care. Treating the Musselshell River basin as one hydrological unit would make more sense for purposes of petitioning for the enforcement project.
7. Doug Mann suggested adding tributaries one at a time to the enforcement project.
8. Joanie Bergin just wants to see water continue to come down the river year-round.

9. Lance Lehigh participated in a state-wide irrigation infrastructure assessment several years ago, and noted that there hasn't been any funding available from the state or federal government for repair or upgrade projects that would result in more efficient use of water. There needs to be a better funding mechanism for these projects.
10. Stacey Hellekson is concerned with water quality and quantity in service of the Bakken oil play. Where will the water come from to meet the new need? The use will be consumptive, and groundwater quality may be compromised by leaks in well casings. The state should institute a statewide baseline testing program, starting in the east where effects of drilling will occur first.
11. Donna Pedrazzi said that in order for producers to take advantage of NRCS programs to replace irrigation infrastructure lost to the flood, they were required to upgrade their systems, sometimes to pivots. How do those changes affect groundwater supplies and quality? Doug Mann said that when he was researching a change of use for a producer, he found that the pivot system being installed would use 2.6" per acre more water than the old flood system did, due to longer duration of sprinkler operation over the season. Teri Hice that one advantage of pivot systems for her is that streamflows are maintained more smoothly when many pivots are operating, but that when rain softens the ground in a field and the pivot has to be shut down, she has to quickly adjust water releases or water is lost downstream.
12. Mike Lawler reported that at the Culbertson scoping meeting, the politics of water resource use was raised. Special interest groups are likely to be lobbying the legislature when bills implementing the state-wide water use plan are presented in 2015. The BAC needs to be organized to testify and contact legislators to garner support. Perhaps a workshop for legislators would help in this effort. Michael Downey said that the legislature asked DNRC to set up Citizen Advisory Councils to advise and make recommendations on the State Water Plan directly to DNRC so that the public would have some ownership in the final plan. Bill Milton suggested meeting with influential members of the legislature to enlist their help.
13. Eric VanderBeek said that even if a watered-down plan is finally adopted by the legislature, it won't solve water resource problems unless it is enforced, and there are too few people working in enforcement divisions to monitor the whole state, especially in the oil and gas development areas. Mike Lawler expressed the same concern.
14. Bill Milton raised the issue of diminishing funding for streamflow gaging stations, and participants agreed that continued availability of data from these stations is essential to monitoring water use. In fact, the gages need to collect water quality information as well as streamflow, and there should be additional gages installed in critical areas.
15. There was a general discussion of enforcement projects, and it was clear that there cannot be fair enforcement until there is fair adjudication in place that includes the tributaries. The state is still not sure how the tributaries will be added to the enforcement process, and what will constitute a hydrological unit. Michael Downey suggested that the BAC might recommend that enforcement become just a part of the final decree in the adjudication process, rather than using the petition process to accomplish enforcement. Producers in the Musselshell River basin are already used to paying for water commissioners based on the water rights they hold. Teri Hice said that water commissioners should be able to monitor water use right up to the point of use rather than just to the point of diversion. Then everyone would be receiving exactly what they're entitled to – no more and no less.

Wrap-up Comments

1. The BAC should make an effort to present its report to producers' organizations such as the Stockgrowers and the Farm Bureau for comment.
2. The BAC needs to send out its information to legislators in the Lower Missouri River basin so they have time to consider it before the 2015 session begins.
3. Because the Musselshell River watershed has shown the positive results of cooperation among water users, the state should continue to provide support. This basin could serve as an example for other basins where the idea of cooperation has not yet taken hold.
4. Water resource planning is a Montana issue, and we should advertise it as such.

The next scoping meetings scheduled are:

Harlowton, October 31, Youth Center, 10:00 a.m. - 2:00 p.m.
Havre, November 7, Great Northern Inn, 10:00 a.m. - 1:30 p.m.

Lower Missouri River Basin Advisory Council
Public Scoping Meeting Report
October 31, 2013, Harlowton, Montana

Present:
Mike Lawler, LMR BAC member
Robert Goffena, LMR BAC member
Eric VanderBeek, LMR BAC member
Jim Peterson, LMR BAC member
Peter Marchi, LMR BAC member
Teri Hice, Deadman's Basin Water Users Assoc. Project Manager
Lynn Rettig, Delphia-Melstone Canal Water Users Assoc. Project Manager
Leon Hammond, Upper Musselshell Water Users Assoc. Project Manager
Garth French, Ackley Lake Water Users Assoc.
Gary Olson, Wheatland County Weed Coordinator
Diane Morse, Rancher
Joe Morse, Rancher
Bill Jones, Rancher
David Voldseth, Rancher
Vance Voldseth, Rancher
John Whelan, Rancher
Pat Whelan, Rancher
Ken Wegner, Rancher
Shirley Wegner, Harlowton Times Editor
Richard Moe, Rancher
James Taber, Rancher
David Waldner, Duncan Ranch Colony
Randall Reinhart, Rancher
Bette Goffena, Rancher
Charles Thomas, Rancher
Mark Wichman, Rancher
Adam Haight, Northern Plains Resource Council
Bill Milton, LMR Basin Facilitator
Wendy Beye, LMR Basin Administrative Support
Paul Azevedo, DNRC Water Management Bureau Chief
Attila Folnagy, DNRC Groundwater Hydrologist
Michael Downey, DNRC Water Resource Planner
David Amman, DNRC Hydrologist
Scott Irvin, DNRC Regional Manager, Lewistown
Mike Ruggles, MT FWP
Andy Brummond, MT FWP
Rick Potts, US FWS

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

Those present introduced themselves to the group, and Bill Milton reviewed the agenda.

Background Information Presentations

Michael Downey, DNRC Water Resources Planner, gave a presentation on the Water Initiative Supply Process. The presentation, along with others heard at this meeting, is available at the following website: Lower Missouri River Basin 2015 Montana State Water Supply Initiative (control key/click to go to link). In this presentation, he mentioned that the demand for water to service energy development may have prompted the 2013 bill in the legislature that changed water lease law.

Marck Wichman asked whether this planning process will affect existing water rights, and Michael Downey said no.

Diane Morse asked whether any updates are planned for the water resource surveys that were conducted in the late 1940s and subsequent years. Michael Downey said that will take legislative action to accomplish.

David Amman made a presentation on the hydrology of the Lower Missouri River basin.

Charles Thomas said that much of the flow that the Judith River basin contributes to the Missouri River is from Big Spring Creek rather than from the upper reaches of the river.

Attila Folnagy presented background information on groundwater in the Lower Missouri River basin.

Eric VanderBeek asked why groundwater levels are going down in the lower Yellowstone River basin, and Attila responded that there is heavier use of wells in that area and recharge has been diminishing.

Scott Irvin presented the basics of Montana's water rights system. Because the accuracy of adjudication, or at least the result of the verification process used in the Musselshell River basin, has been an issue in the Musselshell, he said that the legal remedy is to petition the Water Court by using a process outlined in state statute.

Eric VanderBeek asked whether even though the mainstem of the Musselshell River has been closed for most new water right applications, can a change of use be accomplished?

Scott Irvin said changes such as moving a point of diversion or changing the purpose or point of use, can be accomplished; however, the process can be complex and serves to protect other water right users.

Eric VanderBeek raised the question of multiple filing requirements for the same water right during the adjudication process that was begun in 1973.

Scott Irvin responded that there was initially one claim filing process, followed by a late claim filing process. Once a filing was made, that fulfilled the Water Court requirement. He recommended that holders of unfiled exempt water rights, particularly for stock or domestic wells consider filing now to ensure that the historic date of first use is recorded. Then those claims will be examined as part of the adjudication process.

Wendy Beye presented a short summary of the water history project entitled “Drought, Flood, Saving, and Sharing,” that she wrote for the Musselshell Watershed Coalition to assist in development of a long-range basin-wide water use plan for the Musselshell River watershed.

The summary prompted another discussion among participants about noxious weeds and the need to control them soon. Comments were also made that the Musselshell River basin water users have made great progress toward cooperative sharing of the water resources available to them and that installation of measuring devices by all water users on the mainstem has improved water delivery efficiency.

Concerns and Issues Important to Meeting Participants

The following issues are listed, in no particular order based on relative importance to participants:

1. James Taber is concerned that senior water rights are protected, even against future municipal water demands as communities grow.
2. Lynn Rettig commented that the Musselshell River Distribution Project has been an extremely valuable tool for water management. The infrastructure used to store and deliver water in the Musselshell River basin is aging, and money will be needed for repairs and replacement to improve efficiency and safety. Water user associations are already being stressed financially from repairs that were necessary after the 2011 flood. Leon Hammond agreed with these comments.
3. Richard Moe believes that more water should be captured and stored from spring run-off, and that Russian olive should be better controlled.
4. Rick Potts says the state needs to take a "big picture" look at water resources.
5. Mark Wichman said that the Ackley Lake water users are considering asking for a water commissioner for contract water. He is concerned that old water rights that should be considered abandoned are being re-filed and that water won't reach Ackley Lake with enough flow to fill the lake. Also, as more pipelines are being installed to replace irrigation water ditches, less water is returning to the river.
6. Charles Thomas asked for more DNRC enforcement activity. Now, neighbors have to file complaints against neighbors when there is illegal use or inaccurate water right claims, and this causes problems. Scott Irvin responded that there can be an enforcement project associated with a temporary preliminary decree, but any pending court cases on that decree have to be settled first.
7. Pat Whelan would like to see all existing beneficial uses and acreage irrigated protected against new uses for whatever purpose. Also, the legislative 10-year rule for "use it or lose it" on water rights may be too short because of the drought cycles in eastern Montana. Scott Irvin clarified that the statute adds the condition: "if water is available" to the abandonment statute to account for drought years. In addition, the abandonment statute does not apply to existing water rights until final decrees have been issued.
8. Adam Haight raised a question about foreign industrial corporations using up water resources and wondered how Montana would protect against that. Scott Irvin responded that the quality of adjudication can set the stage for enforcement. All change requests must be reviewed by DNRC, and the agency won't allow any changes that harm another right. The process of review is even more rigorous if water will be exported out of the state. Sometimes DNRC is unaware of a change because the user has failed to make application, but water users are legally required to be authorized by DNRC to change water rights.
9. Eric VanderBeek pointed out that the Montana Constitution confirms that surface and groundwater is owned by the state. Could it ever be privatized? Discussion about Missoula's private water system being sold followed. An out-of-state company purchased the storage and delivery system, and the water is being beneficially used to meet residents' needs.
10. Mike Lawler wondered whether state agencies tasked with enforcement have enough staff and financial resources to do the job. Scott Irvin said that though DNRC has the statutory authority to pursue enforcement when water is being illegally used, it cannot levy fines. Cases must be filed in district courts. The court process consumes a great deal of personnel time before fines can be authorized and imposed.
11. Gary Olson, as weed coordinator for Wheatland County, is very concerned that salt cedar has been spreading upstream and is even present on some distant tributaries. Because the Musselshell River serves as a "canal" to deliver contract water downstream, perhaps the water user associations should consider helping to pay for noxious weed control along the river.
12. Bill Jones agrees that water right adjudication is important. American Fork and Big Elk Creek have water rights that were decreed by district court in 1918, but there are still some challenges that need to be settled before an enforcement project could be organized by petition. As generational changes occur in ranch ownership, the agreement of water right holders may be easier to obtain. Water has been measured on American Fork for 10-12 years.
13. Jim Peterson said that water adjudication has been a hot topic in the legislature for decades, and many senators and representatives believe that water users should pay for the adjudication process. Other important issues include groundwater quality and quantity from deep aquifers; stored water management when that water is mixed with decreed water in a river; exempt wells, when, for example, several wells with production below 35 gallons/minute are manifolded together to serve a subdivision.

14. Peter Marchi is concerned that gaging stations will be decommissioned due to lack of maintenance funding. They are valuable tools used by water commissioners to efficiently deliver water. Paul Azevedo said that gage maintenance costs between $8,000 and $16,000 per year, depending on the type of gage and whether it operates all year long or only seasonally, and whether it monitors water quality as well as streamflow.
15. Teri Hice believes cooperation and trust are essential to fair delivery of water. Any encouragement the state can provide for partnerships such as the Musselshell Watershed Coalition will help develop that collaborative atmosphere in all the state's river basins.
16. Bob Goffena reiterated his concern that adjudication be completed with proper, later water right priority dates on expanded uses.
17. Mike Ruggles has seen improved streamflows since the Musselshell River Distribution Project began, and those need to be maintained if fish are to survive. There have been opportunities since the 2011 flood to modify diversion dams for fish passage.
18. Bill Milton believes that funding partnerships can be developed to help maintain irrigation infrastructure.

Wrap-up Comments

1. All participants felt that this scoping session served its purpose of allowing public participation in the state's water resource planning process.
2. Participants interested in keeping up with the next phase of the planning process can access information and resources at the DNRC Water Supply Initiative website, at http://www.dnrc.mt.gov/wrd/water_mgmt/state_water_plan/lower_missouri/default.asp

The next scoping meeting scheduled is:

Havre, November 7, Great Northern Inn, 10:00 a.m. - 1:30 p.m.

Lower Missouri River Basin Advisory Council
Public Scoping Meeting Report
November 7, 2013, Havre, Montana

Present:
Mike Lawler, LMR BAC member
Jane Holzer, LMR BAC member
Kristi Kline, LMR BAC member
Rhonda Knudsen, LMR BAC member
Robert Goffena, LMR BAC member
Arnold Bighorn, LMR BAC member
Thomas Probert, BLM Hydrologist
Dolores Plumage, Blaine County Commissioner
Frank DePriest, Blaine County Commissioner
Dave Peterson, City of Havre
Charles Kulbeck, Blaine County Commissioner
Tara Taborsky, Malta Irrigation District/Dodson Irrigation District
Gerald Lunak, Blackfeet Tribe/Upper Missouri River BAC
John Blankenship, City of Chinook Water Treatment Plant
David Carlson, Advanced Engineering and Environmental Services, Inc.
Art Kleinjan, Rancher
Joe Brummer, Alfalfa Irrigation District
Kay Blatter, Milk River Joint Board of Control
Jennifer Patrick, Milk River Joint Board of Control
John Brown, Rancher
Mark Peterson, Hill County Commissioner
Garth Moody, City of Havre Water Treatment Plant
Michael Wendland, Hill County Commissioner
Bill Milton, LMR Basin Facilitator
Matt Miles, DNRC, Water Resource Specialist, Havre
Denise Biggar, DNRC Deputy Regional Manager, Glasgow
Lynn Hester, DNRC, Water Resource Specialist, Havre
Attila Folnagy, DNRC Groundwater Hydrologist
Michael Downey, DNRC Water Resource Planner
David Amman, DNRC Hydrologist
Cody Nagel, MT FWP

Facilitator Bill Milton called the meeting to order at 10:07 a.m.

Those present introduced themselves to the group, and Bill Milton reviewed the agenda.

Background Information Presentations

Michael Downey, DNRC Water Resources Planner, gave a presentation on the Water Initiative Supply Process. The presentation, along with others heard at this meeting, is available at the following website: Lower Missouri River Basin 2015 Montana State Water Supply Initiative (control key/click to go to link). He mentioned that federal water planning for the Lower Missouri River basin in the 1960s only addressed flood control issues and water for barge traffic downstream in the Missouri and the Mississippi.

David Amman made a presentation on the hydrology of the Lower Missouri River basin. He pointed out that Fresno, Nelson, and Frenchman reservoirs are all affected by siltation, with water storage capacities reduced by 30-50%.

Attila Folnagy presented background information on groundwater in the Lower Missouri River basin. A study categorizing groundwater use that ended in 2010 will be released very soon. When he discussed the Fox Hills/Hell Creek Aquifer study conducted by North Dakota, he added that many of the stock wells in the area are artesian, and when groundwater levels drop below the ground's surface, ranchers must install pumps to provide water to their livestock.

Rhonda Knudsen asked whether there was any information on how many new wells have been drilled in the Fox Hills/Hell Creek Aquifer. Attila Folnagy said that information for Montana would be available from the Montana Bureau of Mines and Geology, but he didn't have it for this meeting.

Kay Blatter said the ancient Missouri River bed is accessible at Havre, under about 200 feet of silt. Attila Folnagy said that the ancient river aquifer is productive in the Culbertson and Bainville area, but that it has quality issues.

Matt Miles presented the basics of Montana's water rights filing process. A question was raised about the definition of "orphan" water rights. They are rights that exist on paper but have either never been developed, or not been used for a number of years. The Montana Water Court will have to review them as part of the adjudication process. Another question was raised about whether "vested" water rights will be considered during adjudication, the rights in question being domestic and livestock historical use rights.

Denise Biggar responded that 1979-1982 was the filing period for historical claims, but some were exempt from filing. Now persons with rights that were exempt from filing in the adjudication (stock watering or domestic use claims from streams or wells) can file to protect their historical date of first use.

Bill Milton added that the Compact Commission dealt with the issue of "vested" water rights during the negotiations for the CMR Compact.

Concerns and Issues Important to Meeting Participants

The following issues are listed, in no particular order based on relative importance to participants:

1. Mark Peterson, Hill County Commissioner, is concerned about the deterioration of water quality in the Milk River. Silt deposits have been steadily moving downstream, and Fresno Reservoir is losing storage capacity. The City of Havre gets about 50% of its water from Fresno. Dredging projects have not been successful in controlling silt. Can the Fresno dam be raised to increase reservoir capacity, or should new dams and reservoirs be built to store run-off water? He also said that flood irrigation allows water to be used for crops, and then the excess runs back to the river for use downstream. Some flood irrigation in the area is very efficient.
2. Dolores Plumage wondered why the St. Mary diversion rehabilitation project is still far down on a waiting list for funding. The only activity promised so far is a future assessment of the existing problems with the system. As part of the as-yet unratified Ft. Belknap Compact, there is a proposal to change the St. Mary's diversion from single-use (irrigation) to multi-use.
3. Dave Peterson said that the Milk River serves 10-15,000 people, and the system needs to be sustainable to allow for future growth. The City of Havre pulls its water from the river, with emergency back-up wells available, but they have poor water quality.
4. Mike Lawler asked how much the quantity of water used has changed. Dave Peterson responded that there hasn't been an increase in municipal water use in the past 30-40 years, as populations of towns has remained steady. Havre has a 40-year water service contract with the Bureau of Reclamation with a guaranteed quantity

of 1,000 acre/ft with another 1,800 available for the future. Right now Havre uses about 1,800 acre/feet total per year.
5. Kristi Kline pointed out that the cities on the Milk River have contracts with the Bureau of Reclamation, and no water rights on the river.
6. Charles Kulbeck is concerned about water storage shrinking in the future.
7. Tara Taborsky wants to be sure that the rights of the irrigators are protected in the state water plan. Michael Downey commented that the BAC will be thinking about how irrigators' needs can be helped by the state water plan. Tara Taborsky said that help could come in the form of funding for repair or replacement of the sometimes 100-year old irrigation infrastructure. The irrigation districts in the area now pay for all maintenance, even though the projects were built by the federal government.
8. Dave Peterson said that sometime in the future, the Havre city water system will be connected to the North Central Rocky Boy water system.
9. Gerald Lunak said that the Blackfeet Compact will affect the Lower Missouri and the Milk rivers. There are still many unknowns to be worked out. The Blackfeet Tribe has not developed much of its water from the 1855 treaty claim date, but that may change in the future as the tribe attempts to improve its economic situation. The Compact has not been ratified by Congress, which is asking the state and the tribe to continue negotiations on some issues. After that process is complete to Congress's satisfaction, the Compact will go back to the tribe for a vote. It's a difficult process, involving 15-20 different agencies and entities that all want to weigh in on the details. Dolores Plumage, who is an enrolled member of the Salish Kootenai Tribe, asked whether the St. Mary's rehabilitation project can be elevated in importance in the Blackfeet Compact. Gerald Lunak said St. Mary is very important to the Compact, but the question is, how do the Blackfeet benefit from it?
10. Jane Holzer said that most wells in the Milk River area are too salty for irrigation. The Central Rocky Boy Rural Water System would provide better water for everyone.
11. John Blankenship said that the city of Chinook has a contract for 700 acre/feet of water from the Bureau of Reclamation from the Milk River. The flooding over the past few years has raised the organic content of water for months on end and the water treatment system was not built to handle it. Mike Lawler asked if two problems – flood control and water storage – could be solved with one project.
12. Dave Carlson asked what the BAC is looking at in relation to energy development and increased water use. Will water come from municipal supplies?
13. Rhonda Knudsen said the 2011 flooding in the Culbertson area contaminated city water there, too. Water depots are being built by private individuals, pulling water from the Lower Missouri. The tribes in that area are also looking at the possibility of building water depots to sell water for energy development use. Could there be a water reservation made for future energy development use? Is there enough water available in the river? The state really needs a water supply inventory.
14. Cody Nagel said that the Lower Missouri River is one of the most species-rich rivers in the state. Fish, Wildlife and Parks is concerned about water levels in the river meeting fishery needs, especially during the winter months. As irrigation infrastructure in the basin is slated for update and repair, water users need to consider fish passage, and then FWP may be able to share construction costs. As the St. Mary rehabilitation project is considered, there is a need to make sure water transfer for irrigation is efficient. In the Milk River area, there is little organized collaboration going on during the St. Mary project planning.
15. Bob Goffena explained how the Deadman's Basin Water Users Association project to repair its diversion dam in the Musselshell River will benefit fish. The old dam will be covered with large cobblestones, built up into ramps upstream and downstream, with a low spot to allow passage of fishermen's boats and fish. This is turning out to be an economical fix, and the association is working with FWP to obtain cost-share funding. The water commissioners on the Musselshell mainstem work hard to keep water flowing in the channel throughout the irrigation season.
16. In 2010, Thomas Probert went to a St Mary project meeting and someone presented models for flow rates and sedimentation. He will try to obtain more information for the BAC.
17. Art Kleinjan said that one of the main reasons he came to the BAC meeting was to emphasize that the economics of the area depends upon water.
18. Joe Brummer said that irrigators using water from Fresno Reservoir have improved their efficiency out of necessity because there is 30,000 acre/feet less water available than there was when the reservoir was first built,

due to sedimentation. His suggestion was to raise the level of the reservoir by up to four feet by installing an inflatable bladder across the existing spillway. A problem with that solution, however, is that the dam was found to be unstable during a 2009 assessment, and would have to be rehabilitated to hold more water. He said that a project to rehabilitate the Nelson dikes northeast of Malta to the tune of $7 million will be paid by the Bureau of Reclamation. The upper Milk River needs more water storage, and if the purpose of the Fresno Dam was changed to include recreational use and instream flows, maybe it would have a better chance of obtaining funding. Kristi Kline said that the city of Havre, Burlington Northern Railway, and the Idaho Utah Sugar Company also help pay for maintenance costs, along with irrigators, of the Fresno Dam. The Bureau of Reclamation needs to be a part of the water use planning conversation. Mike Lawler wondered if a change in the use of the reservoir could garner more political clout.
19. Mike Lawler, who has attended all six BAC scoping sessions, said he has come to understand that a water use plan cannot be approached as a "one size fits all" program. He has seen the sub-basin collaboration is essential to successful water management.
20. Kay Blatter said there was once a discussion of building a canal from the Tiber Reservoir to the Milk River below Fresno Dam, but it was dropped. The irrigation districts served by Fresno must pay up-front each year to the Bureau of Reclamation for maintenance costs, but the districts have been able to save money by handling repairs and maintenance with volunteer work. The Bureau of Reclamation has refunded money to the districts this year. The average cost of water from the Milk River is $20/acre foot.
21. A comment was made that while everyone is asking for more water storage on the Milk, that's not likely to happen because projects in the west are not high on the federal governments list of priorities. Denise Biggar said that Frenchman Reservoir was drawn down for repairs and the capacity of 2,700 acre/feet was measured at that time. There is currently a feasibility study being reviewed with proposals ranging from abandonment of the dam to re-building the project to a 50,000 acre/feet capacity. Nothing has been approved yet. Michael Downey added that new large in-stream storage projects face their own set of problems, including displacement of ranchers and towns in the bottomlands along rivers that might be dammed. Approval of such projects would be very contentious. Off-stream storage projects could be more acceptable to landowners.
22. Dolores Plumage said that county governments are concerned about the increasing traffic in railcars carrying oil along the river routes in eastern Montana. Derailments, with contamination of the rivers, are bound to happen. Sometimes people living in this area feel like no one is paying attention to their problems.
23. Kay Blatter said in years past, there used to be plenty of water in the Milk, and producers even grew sugar beets. The outlet canal at Fresno was always full of water, whether it was being used or not. Now there is more careful control, and there isn't enough water to grow beets.
24. Bill Milton raised the question of water rights adjudication. Denise Biggar and Lynn Hester said that the process is coming along in the Milk. The Middle and Lower Milk basins have been decreed. The Tribal compacts for the Blackfeet and Ft. Belknap tribes have not yet been ratified by Congress or the Tribes. Final decrees are many years down the road. The claims on the mainstem of the Milk River have gone through the examination process rather than the verified method that was used on the Musselshell River.
25. Gerald Lunak questioned Michael Downey's statement that all water belongs to the state. Michael Downey clarified the issue, by adding, all water except that reserved for federal and tribal lands. The Compact negotiations are supposed to work out just how much water should belong to those lands. Gerald Lunak said that a real understanding of tribes, treaties, and sovereignty must be a part of this planning process. Tribal rights have to be recognized in any resulting statewide plan.

Wrap-up Comments

Scoping meeting participants made the following observations about the Water Supply Initiative planning process:

1. There are many unknowns that will affect how future water demands are met, including climate change and lack of data on the amount of water available right now.
2. Each sub-basin has its own set of problems, and those will have to be addressed by a statewide plan.

3. There are many different viewpoints about water management, and the goal of achieving collaborative agreement that makes everyone happy is daunting.
4. The focus of a plan should not be solely on water quantity, but should address many other issues as well.
5. Preservation of groundwater quality, and rural water systems that bring higher quality water to communities, need to be a part of the plan.
6. Tribal members in the state need to be educated in water issues to help build communication among all water users.
7. Water users must recognize that we are all dependent upon one another in the management process.
8. The state needs to be cautious about allowing water to become a commodity available to those who can afford it. This group needs to work hard to strengthen Montana's voice.

APPENDIX C

Written
Testimony Submitted
During or After
Scoping Meetings

Oct 3, 2013

Michael Downey
DNRC

Re: Comments for Montana State Water Plan for Lower Missouri BAC

Concerns:
1. Set limits on amount of water that can be used for gas and oil exploration and drilling in Montana, to assure it will not impact area water supply. To create limits, an updated analysis of aquifer rechage rates and capacity is required.
2. Create legistation that requires recycling of wastewater (produced water) from O/G exploration and drilling.
3. Mandatory fines for O/G companies that operate water depots without permits or use water obtained illegally.
4. Establish means of enforcing water limits, wastewater recycling and fines for illegally obtained water. My understanding is of the nearly 18,000 active oil and gas wells in Montana, 58% have NOT been inspected in the last years. There are simply not enough inspectors available to monitor current operations. Regulations without adequate enforcement makes violations more likely.
5. Establish legislation that prevents permanent transfer of temporary water rights from landowner or state to oil and gas companies.

Conclusion:
DNRC and the Montana State Legislature must enact strict water protection, usage regulations and enforcement policies immediately to permanently safeguard Montana's water supply from possible overwithdrawal and contamination due to rapidly expanding, but short-term, unsustainable non-conventional shale oil and gas exploration & drilling.

Thank you for your efforts to maintain our water supply and it's purity. Our Montana lifestyle, livelihoods and revenue depend on available, uncontaminated water…. for ranching, farming, recreation & tourism and businesses.

Sincerely,

Laurie Lohrer
466 Snowberry Lane
Lewistown MT 59457
406-538-5187

My Sobering Research on Oil and Gas Drilling Production Rates

Conventional Oil Drilling example
Vertical drilling
Ghawar Fields, Saudi Arabia
Initial Production /day: 5 million barrels
Projected life span/well: 100 years?
Source: Greg Croft Inc.

Non-Conventional Oil Drilling Example
Horizontal drilling (fracking technology)
Colorado, N Dakota, Texas, Pennsylvania etc
Initial Production /day: 750 barrels
Projected life span / well: 7-8 years?
Source: Richard Heinberg, Post Carbon Institute

Analysis of Natural Gas Drilling Production Rates
Arthur Berman, veteran petroleum geologist specialist in well assessment, used existing well extraction data for major shale gas regions in the US since the boom started, to conclude:
"Three decades of natural gas extraction from tight sandstone and coal-bed methane show that profits are marginal in low permeability reservoirs. Shale reservoirs have orders of magnitude lower reservoir permeability than tight sandstone and coal-bed methane. So why do smart analysts blindly accept that commercial results in shale plays should be different? The simple answer is found in high initial production rates. Unfortunately, these high initial rates are made up for by shorter lifespan wells and additional costs associated with well re-stimulation. Those who expect the long-term unit cost of shale gas to be less than that of other unconventional gas resources will be disappointed…the true structural cost of shale gas production is higher than present prices can support, and per-well reserves are about half of the volumes claimed by operators".

David Hughes, geoscientist with Canadian Geological survey for 31 years, now with Post Carbon Institute:
"Shale gas production has grown explosively to account for 40 percent of US natural gas production. Nevertheless, production has been on a plateau since December 2011. Individual well decline rates are high, ranging from 79 to 95 percent after 36 months. Although some wells can be extremely productive, they are typically a small percentage of the total and are concentrated in sweet spots."

The very high decline rates of shale gas wells require continuous inputs of capital—estimated at $42 billion per year to drill more than 7,000 wells—in order to maintain production. In comparison, the value of shale gas produced in 2012 was just $32.5 billion." Source: Arthur E. Berman, After the Gold Rush

One estimate of projected shale gas decline suggests the peak will pass well before the end of the decade, perhaps in four years, followed with a rapid decline in volume.

Conclusion:
DNRC and the Montana State Legislature must enact strict water protection, usage regulations and enforcement policies immediately to permanently safeguard Montana's water supply from possible overwithdrawal and contamination due to rapidly expanding, but short-term, unsustainable non-conventional shale oil and gas exploration & drilling.

Research and conclusion by:
Laurie Lohrer
466 Snowberry Lane, Lewistown MT 59457
Montana Concerned Citizen
October 3, 2013

TESTIMONY OF COUNCIL MEMBER SHANNON AUGERE, BLACKFEET NATION ON S.434

BEFORE THE UNITED STATES SENATE COMMITTEE ON INDIAN AFFAIRS

MAY 8,2013

Chairman Cantwell, Ranking Member Barrasso, and members of the Committee, my name is Shannon Augare. I am a Councilman of the Blackfeet Tribal Business Council. I am honored to be here on behalf of the Blackfeet Tribe in support of the Blackfeet Water Rights Settlement Act. I want to thank the Committee for holding this hearing on S. 434, a bill that is critical to the future of the Blackfeet People. I also want to thank Senator Max Baucus and Senator Jon Tester for their strong support of the Tribe in introducing this bill, and their understanding of the importance of this bill to the Blackfeet Tribe. I also want to thank their staff and the Committee staff for their hard work on this bill.

The Blackfeet Water Rights Settlement is the culmination of over two decades of work by the Tribe. It represents a historical breakthrough in the Tribe's over century long battle to secure and protect its water rights. S. 434 ratifies the Blackfeet-Montana Water Rights Compact, resolves significant water related claims against the federal government, and most importantly provides the critical resources needed for the development of a self-sustaining economy on the Blackfeet Reservation and a permanent homeland for the Blackfeet People.

The Blackfeet Reservation and the Blackfeet People

The Blackfeet Reservation was established by treaty in 1855. The Reservation is located along the Rocky Mountains in north central Montana, adjacent to Glacier National Park, Lewis and Clark National Forest and the border with Canada. Our Reservation is renowned for its spectacular mountains, majestic plains and abundant natural resources. The Blackfeet People have occupied this area since time immemorial. As we say: "We know who we are and where we come from. We come from right here. We know, and have always said, that we have forever lived next to the Rocky Mountains."

Our treaty, known as Lame Bull's Treaty, was signed in 1855. Executive orders and statutes followed, each taking large areas of our traditional land. We ended up with the land that was most sacred to us: our present day reservation. In 1896, the Northern Rockies were taken from us because speculators believed there were rich minerals to be had. When mineral riches did not materialize, this most sacred part of our homeland became part of Lewis and Clark National Forest and a portion later became part of Glacier National Park in 1910. To this day, we question the legitimacy of the 1896 transaction. While the Tribe retained hunting, fishing and timbering rights in the area taken, we hope that one day our claims to this area will be resolved.

The present Blackfeet Reservation is about 1.5 million acres. Although the United States had promised our Reservation would never be allotted in the 1896 Agreement by which the Northern Rockies were lost, the federal government went back on its word and allotted lands within the Reservation to individual Tribal members under allotment acts in 1907 and 1919.

The Tribe now has over 17,000 members, about half of whom live on the Reservation. Our people have worked hard to survive in the sometimes harsh climate of the Rocky Mountains, and to live in the modern world while maintaining the cultural and spiritual ties to the land and its resources.

The Critical Importance of Water

Water is critical to the Blackfeet People. It is central to our culture and our traditions. It is an essential element of our way of life, and is crucial to our continuing survival culturally, traditionally and economically. Six different drainages are encompassed within the Reservation: the St. Mary, the Milk
Cut Bank Creek, Two Medicine River, Badger Creek and Birch Creek. These are the veins and arteries of the Reservation and provide life to the Blackfeet People and bind us together as a People. Water is the source of creation to the Blackfeet People. We believe that rivers and lakes hold special power through habitation of Underwater People called the Suyitapis. The Suyitapis are the power source for medicine bundles, painted lodge covers, and other sacred items. Contact with supernatural powers from the sky, water and land is made through visions and dreams and manifests itself in animals or particular objects. The beaver ceremony is one of the oldest and most important religious ceremonies, and beaver bundles
have particular significance. The ceremonial importance of water is especially present in the use of sweat lodges as a place to pray, make offerings, cleanse and heal. The sweat lodge remains a part of the religious and spiritual lives of many tribal members.

Water is truly the lifeblood that sustains the Blackfeet people and our way of life. The water resources of the Blackfeet Reservation are essential to make the Reservation a productive and sustainable homeland for the Blackfeet people and for our communities to thrive and prosper. Safe and clean drinking water supplies are vital for the growing population on the Reservation, and water is critical to our economy which is heavily dependent on stock raising and agriculture. The Blackfeet Reservation's location along the eastern Rocky Mountain Front makes it the home of abundant fish and wildlife, which depend directly on the water resources of the Reservation to support them and allow them to thrive. Large game animals, including moose, elk, and deer abound. The Reservation provides significant habitat for grizzly bears and other bears, and for other animals such as lynx, pine marten, fisher, mink, wolverine, weasel, beaver, otter, grey wolf, swift fox and others. Numerous bird species are also found on the Reservation including bald eagle, golden eagle, osprey, feruginous hawk, northern goshawk, harlequin duck, piping plover, whooping crane, and all migratory and shoreline birds, as well as game birds such as the sharptail grouse, ringnecked pheasant, mountain dove, Hungarian partridge and two other species of grouse. The fishery on the Reservation is renowned, and includes the west slope cutthroat trout, northern pike, lake trout,
rainbow trout, mountain white fish, lake white fish, brook trout, brown trout, Yellowstone cutthroat trout, walleye, and many others. The threatened bull trout is also be found on the reservation. The habitats of these wildlife and fish species depend directly on the water resources of the Reservation to support them and allow them to thrive.

The Reservation also possesses significant timber, oil and gas resources and other natural resources. Oil and gas production has occurred on the Reservation since the i930s, and the Tribe has recently experienced a significantly increased interest in new development on the Reservation. The Tribe has also been working hard to develop wind energy and the hydroelectric potential on the Reservation. All of these activities are dependent on adequate supplies of water.

Fortunately, we are blessed with an abundant supply of water. Over 518 miles of stream and 180 water bodies, including eight large lakes, are located on the reservation. More than 1.5 million acre-feet of water arise on, or flow through, the Blackfeet Reservation on an annual basis - the St. Mary River alone
contributing over one-third of the total supply. Despite the significant water supply, or maybe because of it, historically, others have sought to appropriate it for themselves, and water has become a precious resource in more modern times.

Historical Water Conflicts

In 1909, just a year after the historic Winters decision involving the Milk River, the United States entered into the Boundary Water Treaty with Canada, which, among other things, divided the Milk River and St. Mary River

between the two countries. However, not a word in the Treaty, or the negotiations leading to it, mention the Blackfeet, that these steams arise on or near the Blackfeet Reservation, or that the Blackfeet have rights to water in these streams. Not long after the Boundary Waters Treaty, the United States withdrew significant lands on the Blackfeet Reservation under the 1902 Reclamation Act, and began construction of the St. Mary facilities to divert most of the United States' share of the St. Mary River off the Reservation for use by the Bureau of Reclamation Milk River Project over a hundred miles away. The United States pursued this course notwithstanding that there was an equally feasible project on the Blackfeet Reservation where the water could have been brought. The diversion is accomplished through facilities on the Reservation, including Sherburne Dam, and a twenty-nine mile canal through the Reservation that eventually empties into the Milk River. The Milk River flows north into Canada and then back into the United States near Havre, Montana, where it is heavily utilized by the Milk River Project and by the Fort Belknap Reservation.

There are few historical acts, other than loss of land, that have engendered more passion and outrage than this wholesale transfer of Reservation water to serve non-Indians far downstream, without a word about, or any consideration of, the Blackfeet Tribe's water rights or the Blackfeet water needs. The Tribe is left not only with no access to and no benefit from, its own water, but a tangled web of confusing and nonexistent rights of way and easements for the St. Mary Diversion facilities on the Reservation. Plans to rehabilitate the hundred year-old St. Mary Diversion facilities so that the diversion of water off the reservation can continue and perhaps increase, have further raised water right concerns, and have emphasized the need for a final resolution of the Tribe's water rights.

At the same time that the St. Mary diversion was taking place, non-Indian water users south of the Reservation built a dam on Birch Creek, the southern boundary of the Reservation, which was intended to appropriate Birch Creek water for use by the non-Indian water users off the Reservation. In Conrad Investment Company v. United States, decided by the Ninth Circuit in 1908, the same year as the Winters case, the court upheld the Tribe's prior and paramount right to the water. But the court did not award the full amount of water necessary to irrigate all of the Tribe's irrigable lands, leaving it open for the Tribe to claim additional water in the future. United States v. Conrad Investment Company, l56 Fed. 123 (D. Mont. 1907), aff'd Conrad Investment Co. v. United States,161 Fed. 829 (9th Cir. 1908). In the meantime, Birch Creek has been fully appropriated through non-Indian development of 80,000 acres of irrigation immediately off and adjacent to the Reservation.

Allotment brought the third serious conflict between the Tribe and non-Indian water users. In an attempt to control the water through the land, the Conrad Investment case served as the springboard to the first Blackfeet Allotment Act in 1907. Over a span of two congresses, the Blackfeet Allotment Act moved forward with various water rights provisions intended to make Blackfeet water rights subject to state law, to enjoin the United States from prosecuting any further suits against water users, and to give preference to settlers on surplus lands to appropriate water on the Reservation. See, John Shurts, Indian Reserved Water Rights: The Winters Doctrine in its Social and Legal Context, l880s-1930s (University of Oklahoma Press, 2000), Chapter 6. These efforts largely failed, thanks in part to a veto from President Theodore Roosevelt, but the 1907 Allotment nevertheless became law notwithstanding the promise that the Reservation would never be allotted. See Agreement of September 26, 1895, ratified June 10, 1896, 29 Stat 32l,353, Art. V. With allotment, many of the prime irrigation lands on the Reservation quickly went out of trust, and the Tribe's water rights have gone unprotected from the use of water by non-Indian development on the former allotments. Numerous disputes have arisen over the years of varying severity, and the need to resolve the Tribe's water rights has increasingly become critical.

The 1907 Allotment Act also authorized the Blackfeet Irrigation Project. However, from the outset, the BIA built the Blackfeet Irrigation Project with undersized and inadequate delivery systems and storage facilities, thereby ensuring that the economic promise of the Project would be unfulfilled for the Tribe and Tribal members. Project lands continue to have problems in receiving a full supply of water because of the early BIA decisions to undersize the Project. Traditionally, the Tribe has taken the approach of sharing the resource cooperatively, but increased shortages during the late irrigation season, and the dilapidated condition of the Blackfeet Irrigation Project, have become serious impediments to water use within the Reservation.

Water Rights Compact

Given the historical water rights issues on the Reservation, the Blackfeet Water Rights Compact is truly a milestone achievement after nearly two decades of negotiations among the Tribe, the Montana Reserved Water Rights Compact Commission and the Federal Government. The Compact was completed in December 2007. The Montana Legislature approved it in April 2009 (85-20-1501 MCA), and it is now before Congress for ratification in the Blackfeet Water Rights Settlement Act. It will further require approval of the Tribe through a vote of the Tribal membership.

In general, the Compact confirms the Tribe's water rights to all streams on the Reservation. It brings certainty to the Tribe's water rights and protects the Tribe's use of the water for the Tribe's growing population and need to make the Reservation a productive and sustainable homeland. The Compact:

-- Establishes the Tribe's water right as all surface and groundwater less the amount necessary to fulfill state water rights in all drainages except for the St. Mary River and Birch Creek;

-- Establishes a St. Mary water right of 50,000 acre-feet, and requires the parties to identify how the water will be provided to fulfill the Tribe's water right;

-- Establishes a Birch Creek water right of 100 cfs, plus 25 cfs for in stream flow during the summer and 15 cfs during the winter;

-- Protects state water right non-irrigation use and some irrigation uses through "no-call" provisions;

-- Provides for water leasing off the Reservation;

-- Closes on-reservation streams to new water appropriations under state law;

-- Provides for Tribal administration of the Tribal water and State administration of state law water rights and creates a Compact Board to resolve disputes between Tribal and State water rights;

-- Provides for an allocation of water stored in Tiber Reservoir; and

-- Mitigates the impacts of the Tribe's water rights on Birch Creek water users through a separate Birch Creek Agreement by which the Tribe defers new development on Birch Creek for 15 years over and above the current Conrad Investment decree, and provides 15,000 acre-feet of water per year to Birch Creek water users from Four Horns Reservoir, the total agreement not to exceed 25 years.

State Approval and State Contribution

As part of the State approval of the Compact, the State committed to contribute $20 million to the Compact. These funds were fully authorized and are available when the Compact becomes final. In 2007, the Montana Legislature also appropriated $15 million for Birch Creek mitigation. Of these funds, $14.5 million has been placed in an escrow fund for the Tribe as part of the Birch Creek Agreement, and $500,000 was used for engineering studies for the Four Horns enlargement. In the recent 2013 Legislature, the State also committed an additional $14 million to the Blackfeet settlement, bringing the total State contribution to $49 million. This is a very major contribution on the part of the State, and the largest for an Indian water rights settlement in Montana.

Blackfeet Water Rights Settlement Act

The Blackfeet Water Rights Settlement Act will: (l) ratify the Tribe's water compact with the State of Montana; (2) resolve the Blackfeet Tribe's water-related claims against the United States; and (3) provide the necessary resources needed for the Tribe to put its water to use and to develop a self-sustaining economy on the Blackfeet Reservation.

Specifically, the bill:

-- Ratifies the Compact and authorizes the Secretary to sign it;
-- Requires the Secretary to enter into contracts with the Tribe for the delivery of (l) 5,000 acre-feet per year of St. Mary River water through the Milk River Project facilities to the Tribe and (2) any additional avail able St. Mary water that is identified;
-- Compensates the Tribe for deferring its St. Mary River Water Right;
-- Expressly provides for the Milk River Project purposes;
-- Requires the Secretary to implement the Swift Current Bank Stabilization Project;
-- Provides the Tribe with the exclusive right to develop and market hydroelectric power from the St. Mary S torage Unit of the Milk River Project;
-- Directs the Secretary to allocate to the Tribe 56,000 acre-feet per year of water stored in Lake Elwell and authorizes the Tribe to enter into leases or other agreements for the use of that water for any beneficial p urpose subject to certain conditions;
-- Requires the Secretary, acting through the Commissioner of Reclamation, to:
    -- carry out deferred maintenance and Four Horns Dam safety improvements relating to the Blackfeet Irrigation Project;
    -- carry out the Birch Creek Mitigation Project to provide water from Four Horns Reservoir to state water rights users on Birch Creek;
    -- plan, design, and construct the Municipal Rural and Industrial water system (involving water intake, treatment, pumping, storage, and pipeline facilities); and
    -- construct the Blackfeet Water, Storage, and Development Projects.
-- Establishes the Birch Creek Mitigation Fund to mitigate the impacts of development of the Birch Creek tribal water right on the Birch Creek water supplies of the Pondera County Canal and Reservoir Company P roject;
-- Authorizes federal funding for the water-related projects authorized in the legislation;
-- Confirms the Tribe's instream water rights in the Lewis and Clark National Forest;
-- Requires the Blackfeet Tribe to work with the Fort Belknap Indian Community on resolving any conflict between their respective Milk River water rights, and directs the Secretary of the Interior to resolve such conflict if the Tribe and Community are unable to do so provided certain conditions are met;
Provides for the waiver and release by the Tribe of water rights claims against Montana and the United States in return for recognition of the tribal water rights and other benefits provided under the Compact and this Act.

Waivers/Funding:

The Tribe has water-related claims against the federal government in excess of the funds authorized in the legislation for, among other things: (l) the diversion of St. Mary water off the Blackfeet Reservation to the Milk River Project for approximately 100 years; (2) the environmental and resource damage caused by the St. Mary diversion facilities; (3) claims relating to the 1909 Boundary Waters Treaty; (4) the United States' unfulfilled promise to construct a new storage facility on Two Medicine River after a catastrophic flood in the 1960s; and (5) the failure of the United States to protect the Tribe's water rights from development by others, particularly on Birch Creek, Cut Bank Creek and the Milk River.

S.434 authorizes the Tribe to waive these claims in consideration for approximately $400 million in federal funding for the vital drinking water projects, water storage projects, and irrigation and stock development on the

Reservation. Importantly, since 20l2, the Tribe has agreed to reduce the amount of the funding authorized in the legislation by more than $190 million to address concerns raised by the Department of the Interior. Moreover, the State is contributing $49 million towards the Blackfeet Settlement, the largest contribution the State has made to any Montana water settlement to date. The Tribe's technical consultant, DOWL HKM of Billings, Montana, has assisted the Tribe in the development of the above projects and has prepared reports on each of the projects and the associated costs. Separate costs have been developed for each of the projects.

Critical Tribal Need for Water Supply Infrastructure

The water projects authorized in the legislation include a regional water system to provide a long term municipal water supply to Reservation communities, funding for the United States' deferred maintenance obligations and safety of dams obligations associated with the Bureau of Indian Affairs' Blackfeet Irrigation Project, putting new lands outside the Project into production through new irrigation facilities
and small water storage projects, stock water and domestic water developments, lake and fishery improvements and enhancements, and energy development projects. Settlement funds would also fund the implementation of the Compact and the administration of the Tribal water right through the Tribal Water Code.

In particular, it is critical to establish a long-term supply of water to Reservation communities. The Tribe has continually had to address community water supply problems by cobbling together short term fixes. At the same time, the Reservation population has significantly increased, and projections are that such
increases will continue. A long term supply will provide the necessary stability that will allow for long term community growth.
At the time the Reservation was established, it was acknowledged that "[t]here is an abundant supply of water arising on or near the Blackfeet Reservation," but much of that water is now diverted off the Reservation. Along with the lack of storage capacity for on-Reservation use and a dilapidated BIA irrigation project, numerous barriers are created for the Tribe in its efforts to protect and put to use its
valuable water resources. These challenges in part account for the high unemployment and devastating poverty rate that has plagued the Reservation for generations. Unemployment runs as high as 70Yo and more half of the employed are below the poverty level. Securing control of and actively managing Reservation water resources would be an important step towards improving economic conditions on the Reservation and creating the homeland envisioned in the numerous treaties and agreements that serve as the foundation of the United States and Blackfeet Tribe's relationship.

Litigation Will Continue if S. 434 Does Not Become Law

In 1979, the United States filed suit in federal court seeking to quantify the Blackfeet Tribe's water rights. In 1983, the federal district court litigation was stayed pending the outcome of the Montana State court water adjudication proceedings. The adjudication of the Blackfeet tribal water rights in the State court proceedings have been stayed pending finalization of the Compact and the Blackfeet settlement legislation. Should the negotiated settlement of the Blackfeet Tribe's water right claims fail to be ratified by Congress, then the claims of the Blackfeet Tribe will be litigated before the Montana Water Court. Moreover, if the settlement fails, the Tribe will pursue its monetary claims described above against the United States, resulting in years of litigation and potentially a judgment against the United States that exceeds the funding authorized in the legislation.

Conclusion

The Blackfeet Water Rights Settlement has critical importance to the future of the Blackfeet people and represents decades of hard work by many people. The legislation will secure the water rights of the Tribe through ratification of the Tribe's water rights compact, and will also provide the necessary funding for
the Tribe to develop its water rights for the benefit of the Tribe and its members. The settlement will significantly contribute to the development of a strong Reservation economy, jobs for Tribal members, and a better life for the Blackfeet people.

Finally, although the Department of the Interior was involved in our negotiations every step of the way in the decades long process, and was intimately involved in the drafting of the Compact, the Administration has raised a number of issues relating to S. 434. We are engaged in discussions with the Department of the Interior to address these concerns, and expect most of the concerns will be resolved in a satisfactory manner to both parties.

We thank the Committee and Committee staff and look forward to responding to any questions you may have.

From: Stacey Hellekson [mailto:shellekson@treccorp.com]
Sent: Thursday, October 31, 2013 2:28 PM
To: Downey, Michael
Subject: Lower Missouri BAC MT Water Supply Initiative

Hi Michael,

It was nice meeting and listening to all of the people present at the Roundup meeting yesterday and I really appreciate having the opportunity to express my concerns. Even though I don't reside within the Lower Missouri watershed, I believe water is a resource that should be of global concern. To expand on my concerns regarding water quantity and quality and oil development please see below.

Water quantity

Similar to the letter submitted by the Northern Plains Resource Council (NPRC), I am concerned over the amount of water that is wasted through the fracking process. Fracking requires millions of gallons of water per well and the water needs to be relatively low in Total Dissolved Solids (TDS) and bacteria for use in the process. Because of these needs, most of the water is from fresh water; in North Dakota, a majority of the water is provided through Lake Sakakawea and the Missouri river – surface water. It is also anticipated that fracking water needs will increase 900% by 2020 which causes me concern over availability and the increased potential for illegal obtainment of surface water and rights being sold from farmers and local communities. The high demand could prompt all sorts of 'Wild West' attitudes. I agree with Walter Archer (NPRC); the State needs to require recycling of the recovered water. I also think the BAC should consider assessing the brackish/non-potable aquifers as an option for Oil and Gas companies to pump and treat this water for fracking methods instead of using surface water and potable aquifer resources. If this option was pursued or put into a State requirement, Montana wouldn't have to worry so much about the large amount of surface and potable water being lost to the fracking process.

Although water rights is not something I understand completely, I don't think it beneficial for water rights to be sold to O&G entities. In my mind, I wonder if leasing water rights is an alternative to selling the rights to these companies.

Water quality

My primary concern for water quality is being able to hold drilling parties responsible if a water source becomes contaminated. This requires establishing baseline water quality data. As a part of the scoping process for the Water supply initiative, I would like to see a defined, standard list of analytes/constituents that are to be monitored before, during and after the drilling process. I also would like to see funding provided for the State to initiate and compile baseline data. Rules and regulations needs to be put in place requiring drilling companies to monitor the groundwater in the area during drilling and for a period of time following proper abandonment of a well. Adequate funding for inspection and enforcement is also a concern; if we can't enforce the standards, they won't be upheld.

Thank you for taking the time to consider my concerns. All watersheds are important; not just the one I live in! This is a very important issue for me and I want to stay as involved as I possibly can. If there is a direct mailing list for this issue through the DNRC, please add my name to the list. Also, if I can be of assistance for anything, please don't hesitate to ask.

Thanks again and I hope your meeting today went well!

Regards,

Stacey

Stacey Hellekson, PE

Senior Project Engineer

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NORTHERN PLAINS
RESOURCE COUNCIL

October 7, 2013

Michael Downey, Water Planner
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Re: Lower Missouri Basin Advisory Council scoping on the Montana Water Supply Initiative

Thank you for the opportunity to comment on the Lower Missouri Basin Advisory Council's scoping process for the Montana Water Supply Initiative. Northern Plains Resource Council is a grassroots conservation and family agriculture organization that organizes Montana citizens to protect water quality, family farms and ranches, and our unique quality of life. Many of Northern Plains' members reside in eastern Montana where the annual precipitation is between 10 to 14 inches each year. Water is vital to their survival, and we completely support a state water budget.

However, we want to highlight a few major concerns that we believe need to be considered during this process.

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 secret. 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 become 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.[1] However, since the water contamination that the Fort Peck Indian Tribe is facing from old oil wells is not on the map, it is certain that other incidents are also not accounted for.

There are ways to prevent some of this 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.[2]" This water management practice is called a closed-loop system and is a very effective practice for preventing some water pollution. Interestingly, despite this step forward, the filter socks that have been straining 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, it 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 that 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 to 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 it is contaminated with drilling and fracking chemicals and much of it is disposed of into deep-injection wells. This is in contrast to 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.

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[1] "Fracking Across the United States", Earthjustice, May 2011
http://earthjustice.org/features/campaigns/fracking-across-the-united-states

[2] "Gone for Good: Fracking and Water Loss in the West," Western Organization of Resource Councils, 2013.
http://worc.org/userfiles/file/Oil%20Gas%20Coalbed%20Methane/Hydraulic%20Fracturing/Gone_for_Good.pdf

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, our state is currently promoting 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[3]. Instead of enforcing the current law, however, the DNRC pushed HB 37 forward. As water comes into higher demand, water marketing will become a bigger concern. The YBAC 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, agricultural water uses return 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.

Thank you again for the opportunity to comment and please contact us at 406-248-1154 if you have questions.

Sincerely,

Walter Archer

Walter Archer, Chair
Northern Plains Resource Council

[3] Water Policy Interim Committee Meeting Audio, July 12, 2012 http://leg.mt.gov/css/Committees/Interim/2011-2012/Water-Policy/Meeting-Documents/meetings.asp#meeting6

Robert Peterson
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Tuesday October 8, 2013

Missouri River Water Advisory Council
Lower Missouri River Basin Advisory Council

RE: Montana Water Supply Initiative – Future Water Management

Bos Terra LP is an agricultural business located near Hobson Montana in Judith Basin County with primary activities of custom cattle feeding, cereal grain and cereal silage production, and pasture cattle management. Irrigation water for Bos Terra LP irrigated farm lands is currently sourced from surface water from the Judith River, Ross Fork River, and Olsen Creek. In 2013 Bos Terra LP successfully completed an application for a ground water permit with the primary purpose of supplying water for cattle housed at the custom cattle feeding operation near Hobson MT. Similar to other agriculture operations in the Lower Missouri Basin, the future success of Bos Terra LP is greatly dependant on access to and utilization of water. Bos Terra LP believes opportunities exist in the Lower Missouri Basin to meet increasing water demands while also protecting existing water users.

Increasing the size of current water storage facilities, and/or increasing the number of water storage facilities, could increase access to water for agriculture purposes. For example, the Judith River currently has one storage facility, Akley Lake. Akley Lake has a storage capacity of 6,000 Acre Feet (AF)[1]. By comparison, the Musselshell River has three water storage facilities; Bair, Martinsdale, and Deadman's Basin, totaling 102,320 AF[1]. The Musselshell River contribution to the Lower Missouri River Basin is 198,500 AFY, whereas the Judith River contribution to the Lower Missouri River Basin is 211,600 AFY[1]. These data support the concept of increasing storage capacity of Akley Lake and/or adding additional storage facilities along the Judith River or its tributaries. Additional water storage capacity could be filled during periods of high water on the Judith River or its tributaries.

Information should be gathered concerning opportunities for developing groundwater for agriculture purposes from deep aquifers. A recent study reported the top eight Kansas counties (105 total counties in Kansas) for agriculture production together sold more than $4.7 billion in crops and livestock[2]. The $4.7 billion represents one-third of the total agricultural revenue for the entire state of Kansas[2]. The one commonality that ties those top eight counties together is a vast water resource – the Ogallala Aquifer[2]. Bos Terra LP believes the Montana Department of Natural Resources and Conservation and the Montana Bureau of Mines and Geology should coordinate joint research initiatives with private industry aimed at better understanding the implications of developing deep water aquifers in the Lower Missouri River Basin.

REFERENCES

[1]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.pdf. Web Site Accessed October 7, 2013.
[2]Allen, K. 2013. Top Ag-Producing Kansas Counties Overlay the Ogallala Aquifer. http://www.ksre.k-state.edu/news/story/Kansas_counties100213.aspx. Web Site Accessed October 7, 2013.

Bob Goffena

HOW THE MUSSELSHELL RIVER WORKS

The Musselshell River is a complicated river system around 300 river miles long. With a little study it can, however, be understood. The top portion consisting of the North and South Fork and the top of the main stem are mostly perennial streams running to some degree year round. Inner spaced between these headwater streams are many intermittent streams that add flow only during events such as rainstorms or snowmelt. Lower down river the tributaries have larger drainage areas and can produce much higher volumes during an event. Also return flows from irrigation have an increasingly larger effect as one heads down river. Areas with clay soils shed water quickly and more completely producing much higher volumes than mountain tributary events. Also being lower on the river there are less users who have the ability to use this lower event water. This is how our system works, and we have to live by these realities.

Priority dates have to fit the blueprint of the river. For example, snow melt or mountain rains enter; say the North Fork, the flow will increase in that tributary when the water enters. For ease of control, the North Fork is divided into a zone. That zone should see an immediate rise in priority date. This date should rise so that the North Fork takes a share which equals the share by priority that the next zones down the river will take when that event water reaches each zone. The priority date in the next zone will rise only when the water reaches that zone. If the correct assumption is made, the same priority date will rotate down the river one zone at a time until it reaches the end of our system and is consumed. The South Fork, however, will not share that date, as water does not run upstream. A snow melt or mountain rain event on the South Fork is the only thing that can raise a priority date on the South Fork, which will then rotate down the river to the bottom. It takes at least eight days for water to travel the length of the system, so a priority date below Melstone would probably not rise for a week or more after an event in the mountains.

The next scenario is an event in a lower tributary such as Currant Creek which enters seven miles above Roundup. When this water enters the river, the priority date from that point in zone 3 to zone 2 should rise. This date should be much more junior than a mountain event, as there are fewer users from this point downstream in the system. The event also has a potential for a much larger volume which would also make for a more junior date than a mountain event. The new priority date, with the correct assumption, will rotate down to zone 2. The flow event from Currant Creek down the river should then be used equitably by priority date from this point down, remembering that later in the season; return flows can exaggerate flows in the lower river. Water cannot run upstream, so the date above Currant Creek should see no change.

As water leaves the upper reaches, from an event in the mountains the priority date in the top zone should become more senior to reflect reduced flows. This senior date should then rotate down the river one zone at a time. If the correct assumption is made, the same senior date will work in each zone until the last of the water is used in the bottom zone, excluding return flows in the lower system. The times that the same date would be in effect in each zone simultaneously should be very rare. The river must stay equal in a

flow that matches the priority date used in each of the North and South Forks for eight days or more for that date to rotate to the bottom of the river. In this time, no other water can enter the system as return flows or from lower tributaries as it would upset the priority date. This just about will never happen, even if we separate the North or South Fork out.

To manage the system so that all users are served fairly by their point on the river and their priority date, we must live with the river, the way it collects water, and the way this water moves through the system. This is how the priority dates should work.

Until we manage the river and the priority dates correctly, the ability to mix in contract water and deliver it accurately is compromised. Every time contract water goes down a ditch as decreed, it harms the contract user who was to get the contract water in a timely delivery of his property right. When contract water is lost out the end of the system due to improper priority dates, all contract users lose as delivery losses rise. This destroys the delivery plan and wreaks havoc on the bottom of the river and rotations in lower canals and ditches. The ability to deliver contract water without shortages or complete losses out the end of our system is complicated at best. It becomes impossible without correctly rotating the priority dates. (It is necessary to realize that some balancing of the books between contract and decreed water must take place, however this should be minimized by our best efforts to work with the river on its own time schedule.)

When the priority date is held artificially low to replace contract water, a junior decreed user is harmed. When it is artificially high, and going into decreed ditches some junior users receive a benefit of which they are not entitled. When a date does not roll down the river, it harms those who are senior to that date but have no water in the lower system to divert. This also causes a bias to the benefit of some users in the top of the system when their date does not fall with diminishing flows. The very reason for the Musselshell River Enforcement Project is to as fairly as possible deliver water to users by priority date. If the priority date is not set appropriately, we are not getting the job done to the best of our ability.

Montana Fish, Wildlife & Parks

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November 18, 2013

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

RE: Lower Missouri River Basin Water Planning Scoping Comments

Dear Mr. Downey:

With the scoping phase of the Lower Missouri River Basin planning process winding down, I offer Montana Fish, Wildlife & Parks' (FWP) comments. FWP staff attended several of the scoping meetings and found that the concerns of FWP related to the interests we protect aligned with most Montanan's despite the diversity of interests represented at the meetings. As is most often the case in Montana, an open, honest public discourse such as that provided in the water planning process, results in the identification of common ground on which ideas for the future of Montana's water resources can be developed.

A common theme across the basin is that the existing uses of Montana's water be provided for and protected, whether that use is water for irrigation of crops, municipal, domestic, industrial needs, recreation, fish and wildlife, stock water or protection of water quality. While not every existing water use is equally important to every person, on the whole it is in the interest of all to protect and provide for current water uses and to better match water supplies to demands where shortages do or will occur. This should be the primary focus of the current planning process.

Deep Groundwater Development in Central Montana

Resources should be dedicated to evaluating the nature of high quality and prolific deep aquifers (Madison and Kootenai) of Central Montana and the potential impact of future development of these aquifers to important resources such as Big Spring and Warm Spring. The development of these aquifers potentially affords the opportunity for economic development that may not exist in other areas. Unfortunately, the nature of these aquifers and the impacts of new development on existing spring discharges are not well understood. Such an understanding is needed in order for

development to proceed while protecting important resource such as Big Spring and Warm Spring.

Ft .Peck Reservoir Operations

Ft. Peck Reservoir water levels that provide for full recreational access and promote a robust fishery have been an issue for years. While political and regulatory forces outside the control of Montana currently drive the operations of Ft. Peck, it remains incumbent on the State of Montana to remain fully engaged in formal processes regarding operations of the Missouri River main-stem reservoir system. Additionally, the State should continue to work with stakeholders to develop strategies that influence the politics and regulations governing the operations of Ft. Peck.

Operations of Ft. Peck Reservoir can also negatively affect the Missouri River. For example, downstream from Fort Peck, extreme variation in flows to maximize hydropower and an unnatural temperature regime due to the release of cold water from the bottom of the reservoir imperil native species, including the endangered pallid sturgeon. At the same time, elevated winter flow levels exacerbate ice scour that damages riverbanks, forcing irrigators to rebuild, relocate or otherwise modify pump sites. These issues must be considered in balance with desired lake levels in promoting changes to operations of Ft. Peck Reservoir.

Musselshell River

The epic Musselshell River flood of 2011 provided a unique opportunity for many different stakeholders to work together to help replace irrigation infrastructure and, at the same time, eliminate barriers to fish movement in the river. An examination of what has worked and what has not should be undertaken to identify regulatory and bureaucratic limitations that may be addressed through the water planning process.

Accuracy of Adjudication

FWP participated in the litigation that resulted in the adoption of the Claim Examination Rules to replace the "verification" process and is keenly aware of the significant differences in level of review afforded by both, particularly with respect to irrigation water-right claims. These differences were documented in contemporaneous DNRC reports but were ignored by the Water Court. Since then, these significant differences have been disregarded, seemingly to assist in the more expedient completion of the adjudication. State law provides for a petition process whereby 15% of the water users in a basin can effectuate a re-examination under the Rules. This requirement is a very tall hurdle, particularly for water users in a different basin downstream of the basin in need of re-examination. Statue should not thwart, but rather promote, the re-examination of irrigation claims in basins that were previously reviewed under the "verification" process.

Adequacy of Instream Flow Water Rights

While FWP holds many instream-flow water rights in the lower Missouri River basin, they do not represent the entire flow regime needed to protect and restore native and wild fish. These water rights are mainly based on the wetted perimeter method. The wetted perimeter-based flow prescriptions are not an adequate, year-round flow prescription. If flow were held to these levels at all times of the year, the existing aquatic habitat would degrade, as would the dependent

fishery. The wetted perimeter method provides an instream-flow prescription appropriate for the low-flow season during summer and fall. It does not provide intra- or inter-annual variability (high flow) necessary for proper channel and riparian function. It also does not address connectivity (passage), as well as water quality, including temperature. Any ecologically based, comprehensive instream-flow regime must consider these other attributes.

Further, FWP's instream-flow water rights were limited by statute to not more than 50% of the mean annual flow. For example, the low summer flow for Big Spring Creek was established by the wetted perimeter method at 110 cfs, yet was reduced to 53.5 cfs, which is too low to fully support the fishery. Planning efforts should consider not only existing water reservations for fish and wildlife uses, but the actual water needs, particularly of native species that are at greater risk due to diminishing water supplies.

New Water Demands

Hydraulic fracturing places new demands on water supplies, sometimes in areas already limited. When considering hydraulic fracturing, water quantity and quality are inextricably intertwined and should be considered conjunctively in this planning process to the extent possible.

Conversion from flood to sprinkler irrigation and the urbanization of previously irrigated lands has reduced, and will continue to further reduce, return flow contribution to groundwater and surface water. These impacts do and will affect water users anywhere the existing supply does not meet the demand at all times. The related groundwater/surface water interactions warrant further study and could potentially justify policy changes to address the impacts.

With climbing energy costs, new hydropower development is again gaining traction within the basin. While being a renewable energy source, hydropower often comes with substantial negative impacts to aquatic life. The planning process should only consider policies that promote hydropower development where potential impacts are fully mitigated or avoided.

Changes in Available Water Supply

The past 30 years have demonstrated the variability of water supply within the Lower Missouri River basin. While the reasons for this variability may lack consensus, the occurrence of significant variability in water supply is fact, and should be evaluated and addressed in this planning process.

Storage to Meet Existing and Future Water Demands

Water yield in the basin varies widely, but a sustained increase in yield to meet existing and future demands is highly unlikely. In fact, conservative planning would dictate that yields should be considered to be declining. Water storage undoubtedly plays an important role in meeting existing and future demands. Conventional surface water storage within the basin should be evaluated to determine if it could be better used to meet more needs.

The likelihood that significant, new, conventional, surface-water storage can be economically developed within the basin seems limited. However, more novel groundwater storage concepts should be investigated. Such projects not only could provide increased local supply, but could also be used to provide storage that is moved via streams and rivers to supply downstream needs.

Enforcement of Water Use Violations

Several people at the scoping meetings mentioned the need for increased enforcement of water-use violations. Members of the public at times contact FWP asking us to pursue enforcement of possible violations. These contacts often occur in situations where the citizen does not feel they can pursue a complaint with DNRC because they must identify themselves and sign the complaint. Such a requirement makes it almost impossible to preserve neighborly relations. In other circumstances, FWP is contacted because the citizen is unable to financially pursue a civil complaint in situations where DNRC is not able or willing to pursue a violation. FWP may choose not to become involved, unless the situation very directly affects a FWP water right, because FWP simply does not have the resources to police water-use violations, nor is it our agency mandate to do so. It is clear not only from the scoping comments, but also from the nature of the public contacts received by FWP with respect to this issue, that possible improvements in enforcement of Water Use Act violations relating to water use should be considered.

Thank you for the opportunity to provide input into this important water planning process. My staff will continue to work with you to provide relevant data and analysis, as well as provide additional input regarding the issues raised herein. Please contact Andy Brummond at 538-4658x224 or abrummond@mt.gov, if you have any questions.

Sincerely,

James E. Darling
for
Bruce Rich
Chief of Fisheries

C: Bill Milton (electronic)
Wendy Beye (electronic)
Andy Brummond (electronic)