



## Executive Summary

This Issues Scoping Report synthesizes results from the first step in updating the Montana State Water Plan for the Clark Fork and Kootenai River Basins. Citizen input summarized in this report will be used by the Montana DNRC and Clark Fork Task Force to carry out the next steps in updating the State Water Plan, including the development of water management alternatives and recommendations, and will ultimately result in a dynamic guide for residents and water managers.

This report provides a summary of water management issues and concerns identified by citizens and organizations as important to the future management of the Clark Fork and Kootenai River Basins. Twenty-one issue categories were identified, ranging from *Aquatic Invasive Species* to *Water Rights Enforcement* and *Water Storage*. Overarching themes included balancing existing water demands with future agricultural, municipal, and industrial needs; improving administrative and institutional tools for water management; and, protecting natural systems, including fisheries, in the future.

Building on the public's priorities, the Task Force has preliminarily decided to develop water planning strategies and recommendations around four broad categories, to be refined in January 2014. Categories include *Meeting Future Water Demand*, *Ensuring Natural Systems Health*, *Maintaining Water Availability*, and *Administering Water Rights*.

Citizen input was gathered between October and December 2013 through two efforts:

- Public meetings were held near Anaconda, Deer Lodge, Hamilton, Kalispell, Libby, and Missoula, and attended by nearly 170 participants.
- A public survey was completed by 57 individuals from 17 different zip codes across Western Montana.

Similar efforts are occurring in the Yellowstone, Upper Missouri, and Lower Missouri River basins as part of the Montana Water Supply Initiative (MWSI), or the DNRC's initiative to update the Montana State Water Plan by 2015.

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## Introduction

In 1987, the Montana Department of Natural Resources and Conservation released a report entitled “State Water Plan Development: a revised approach.”<sup>1</sup> The report details the publication of Montana’s very first comprehensive water plan, and contains the following passage:

*“...water management involves more than just developing and operating water projects. While water development provides the answer to some problems, water projects cannot resolve other issues we face today, such as those concerning interstate water allocation, non-point source pollution, water use efficiency, or the quantification of federally reserved water rights. Such issues require that the planning process examine our administrative programs, laws and policies, funding commitments, and technological capabilities, and develop improved strategies for water management.”*

Later, the report highlights the importance of planning *for the purpose of*

*problem solving* as opposed to “planning simply for its own sake.”

Many of the water issues facing Montana in 1987 continue to pose challenges for water users across the state. Some water issues, including allocation of Montana’s water supply and the quantification of federally reserved rights, seem magnified in today’s world. Now more than ever, the need to plan *for the purpose of problem solving* is front and center among those who rely on Montana’s water to sustain their livelihoods and meet daily needs.

The Montana Department of Natural Resources and Conservation (DNRC) has renewed its commitment to meet the need for solution-driven water planning. In 2013, under direction from the Montana Legislature, the DNRC launched the Montana Water Supply Initiative (MWSI) to work with citizens and community leaders to transform the current Montana State Water Plan into a dynamic guide to help residents and water managers in the state’s major river basins: the Clark Fork/Kootenai, Yellowstone, Upper Missouri, and Lower Missouri. People and organizations from the Clark Fork and

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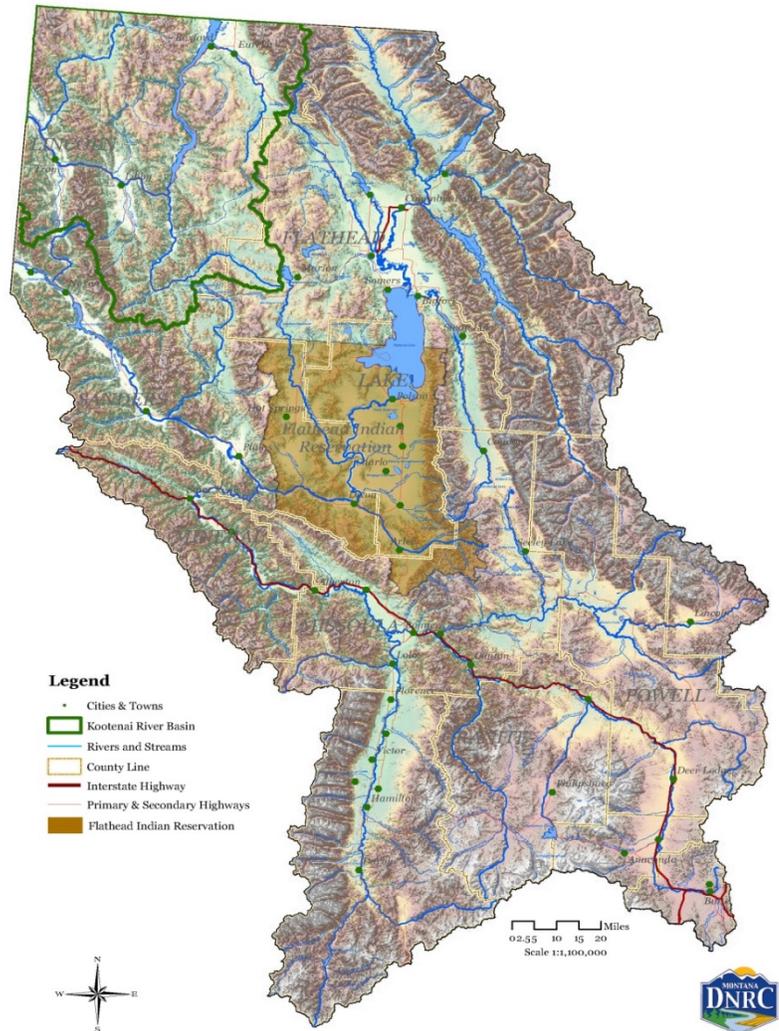
<sup>1</sup> *State Water Plan Development: a revised approach* (1987). Available at:

[http://dnrc.mt.gov/wrd/water\\_mgmt/montana\\_state\\_waterplan/pdfs/state\\_waterplan\\_development.pdf](http://dnrc.mt.gov/wrd/water_mgmt/montana_state_waterplan/pdfs/state_waterplan_development.pdf)

Kootenai River Basins have partnered for the first time to create water management strategies and recommendations applicable throughout Western Montana.

In order to maximize citizen input, the DNRC organized citizen advisory councils in each basin to represent a broad range of interests and to develop strategies and recommendations that address the needs and priorities of those they represent. Twenty volunteers representing agriculture, conservation, industry, local government, and other important interests make up each “Basin Advisory Council.” In the Clark Fork and Kootenai River Basins, the *Clark Fork River Basin Task Force* is serving as the advisory council. Appendix A lists members of the Clark Fork Task Force.

The Clark Fork Task Force was created by the Montana Legislature in 2001 for the purpose of developing the original Clark Fork River Basin Water



Management Plan.<sup>2</sup> Since 2001, the Task Force has collaborated to work on solutions for many of the most complex, challenging water issues in the Clark Fork River Basin, and has diligently taken the task of updating the 2004 water plan for the MWSI.

To kick off the planning process, the Task Force and DNRC developed a two-

<sup>2</sup> *Clark Fork River Basin Water Management Plan* (2004). Available at: [http://dnrc.mt.gov/wrd/water\\_mgmt/clarkforkbasin\\_taskforce/water\\_mgmt\\_plan.asp](http://dnrc.mt.gov/wrd/water_mgmt/clarkforkbasin_taskforce/water_mgmt_plan.asp)

part public scoping approach. First, they hosted six public meetings across the Clark Fork and Kootenai River Basins during October and November of 2013. Second, a survey was made available to the public from October 15<sup>th</sup> to November 15<sup>th</sup> of 2013 to supplement the public scoping meetings.

This report, which was drafted by the Center for Natural Resources & Environmental Policy, synthesizes and summarizes the results of the public scoping meetings, as well as results from the public survey. The results are organized and interpreted to help explain water supply and demand issues and data gaps, as well as other relevant water issues that were identified by citizen participants

throughout the issues scoping process. The purpose of this report is to help inform the Clark Fork Task Force and DNRC, and to assist them in prioritizing categories to develop water planning recommendations during Phases 2 and 3 of the MWSI (*see Next Steps* for more explanation). The report concludes with a set of next steps that serve as a bridge between the scoping process and the next phases of the MWSI.

We hope that readers find this report helpful to understanding the issues that water users in the Clark Fork and Kootenai River Basins prioritize most. The Clark Fork Task Force and DNRC would like to thank all participants for their participation and input.

## I. Clark Fork Task Force Prioritized Issues

This report synthesizes and summarizes water issues collected from citizens throughout the public scoping process in October and November of 2013. The issues that emerged offered a comprehensive set of priorities, concerns, and data needs for water resources management in the Clark Fork and Kootenai River Basins. The University of Montana Center for Natural Resources and Environmental Policy (CNREP) staff organized all of the issues prioritized by the public into 21 categories, which are explained in more detail in Section II, **Public Scoping Meetings**. All of the issue categories are important and valid, however, the categories had to be downsized to a realistic scope of work. Therefore, building on the issues prioritized by the public, the Clark Fork Task Force

prioritized issues in December 2013 in order to develop a set of categories to address with recommendations in the next phases of the MWSI. The Task Force preliminarily selected the following categories:

- **Meeting Future Water Demand**, which includes future growth and development (industrial, municipal, and agricultural), water storage, and groundwater wells
- **Ensuring Natural Systems Health**, which includes fisheries, instream flow, riparian areas, and water quality
- **Maintaining Water Availability**, which includes water conservation and efficiency and drought readiness
- **Administering Water Rights**, which includes the water rights change process, water rights enforcement, water allocation, and adjudication

In January 2014, the Task Force and DNRC will begin work to frame each of the categories above in a way that will lead to the development of options and alternatives for water planning strategies and recommendations.

## II. Public Scoping Meetings

In October and November of 2013, the Clark Fork Task Force and DNRC hosted public scoping meetings throughout the Clark Fork and Kootenai River Basins so that citizens could help identify and prioritize water issues that should be addressed through the water planning process. Public meeting locations were chosen based on input from the Task Force and DNRC, and meetings were advertised through local newspapers, radio, various listservs, an online video, and word-of-mouth. The CNREP assisted the Task Force and DNRC by designing the public meeting format and coordinating each meeting.

## PUBLIC SCOPING MEETINGS

### BY THE NUMBERS

# 6

PUBLIC SCOPING MEETINGS

#### MISSOULA

10.15.2013  
University of Montana  
41 Participants

#### HAMILTON

10.17.2013  
Hamilton City Hall  
Community Center  
30 Participants

#### ANACONDA

10.24.2013  
Fairmont Hot Springs  
13 Participants

#### KALISPELL

10.29.2013  
Best Western Plus  
38 Participants

#### LIBBY DAM

10.30.2013  
Libby Dam Visitor's Center  
21 Participants

#### DEER LODGE

11.13.2013  
Powell County  
Community Center  
26 Participants

NEARLY **170** PARTICIPANTS

# 308

RECORDED WATER ISSUES

Each public scoping meeting followed the same format. Doors opened at 6:00 PM. Following a 30-minute “open house,” Task Force representatives kicked off the meetings at 6:30 PM with a welcome and introduction of the planning process. DNRC Resource staff then presented on the following topics:

- **Montana Water Supply Initiative: A Watershed Approach to Updating the Montana State Water Plan**
- **Clark Fork and Kootenai River Basin Water Resources and Water Use: An Overview and Discussion of Data Needs for the Montana Water Supply Initiative**
- **Water Rights Basics and Tools to Accommodate Change**

Appendix B lists DNRC resource staff who presented at each meeting (and contact information).

Following the series of informational presentations, participants broke into small, facilitated discussion groups to brainstorm their priority issues. Lively discussion followed the brainstorming period. Ultimately, participants ranked priorities within their groups, and all groups reported their top three priorities back to the plenary at the end of the night for consideration by all participants. *Those priorities are synthesized and discussed on the following pages.* Please look to Appendix C for a full list of priorities that emerged at each meeting, and to Appendix D for a list of *all* issues captured at the meetings.

## a. Public Scoping Meetings: Water Issues

At each public scoping meeting, participants brainstormed responses to this question:

“Which water resources issues [challenges or opportunities] facing the Clark Fork Basin and/or Kootenai Basin are you most concerned about, in the short and long term?”

Citizens responded by identifying a large number of water issues and concerns, which were prioritized at each public scoping meeting. CNREP staff organized the **top priorities** into broad categories, and then synthesized the priorities, issues, concerns, and data gaps associated with each broad category. The synthesis is captured on the following pages. Priority categories are organized in alphabetical order.

### Aquatic Invasive Species

Issues focused on prevention of aquatic invasive species, or “organisms that are unintentionally brought into Montana from other places,” including clams, fish, mussels, weeds, and disease-causing pathogens.<sup>3</sup> The introduction of an invasive species does or is likely to cause economic or environmental harm or harm to human health.<sup>4</sup>

### Climatic Changes

Citizens may face many challenges as a result of future climatic changes. In

addition to “managing the impact of climate change on water resources” as a more general priority, drought, flooding and snowpack may be affected by climate change. The timing of the delivery of water supplies, which has resulted in earlier spring runoff and late-season “lowered low flows,” was an often-mentioned concern. Related to this issue, some worried that earlier spring runoff and reduced late season availability will lead to diminished water storage over time. Strategies and tools for mitigating the impact of changing streamflow levels, inadequate high mountain water storage, and

<sup>3</sup> *Aquatic Invasive Species* (2012). Available at: <http://fwp.mt.gov/fishing/guide/AIS/>

<sup>4</sup> *Executive Order 13112, Invasive Species* (1999).

Available at:

<http://www.invasivespeciesinfo.gov/laws>

timing of snowmelt on agricultural water supply were primary priorities.

### **Drought Readiness**

Citizens called for an improved drought planning process to help plan ahead for the next five-to-ten years, especially considering the potential impacts of climate change. Also under this category was a priority to improve public education of the hydrologic cycle to assist with understanding drought and other hydrologic impacts.

### **Federal Regulation of Water**

Federal regulation of water supply resulting from Endangered Species Act protections on fish and wildlife was a shared concern, especially regarding how increased regulation could impact existing water rights. Concerns also included regulation of water via dam operation by the U.S. Bureau of Reclamation. Citizens felt that local collaboration could be a useful strategy to address concerns. When changes are proposed as a result of federal action and citizens' water rights or irrigated lands may be affected, more work should be done to clarify the authority for the proposed changes. The process used to notify affected citizens of these

types of changes should also be improved.

### **Fisheries and Instream Flow**

In light of reduced water availability and recent periods of drought, citizens prioritized protection of instream flow in both main stem and tributary streams. The protection of instream flow rights was also a priority, as was preserving water rights for fisheries and ecological purposes in the future, balancing agricultural use with the needs of fisheries, and recognizing interconnections between instream water rights and other existing water rights. Some would also like to see support of ecological function recognized as a non-consumptive beneficial use in Montana.

General fisheries priorities included maintaining stream connectivity, improving riparian habitat, preserving tributary stream health, preventing stream dewatering, and maintaining appropriate stream temperatures. Citizens also prioritized maintaining habitat in and along the Bitterroot River and encouraging the reintroduction of beavers in the Upper Clark Fork to help improve stream storage.

Concerns arose that instream flow should be “junior” in priority to other water rights, and instream flow may be a threat to the priority of historical use under Montana’s water rights process.

### Gages and Monitoring

Priorities included instituting requirements to measure water use associated with water rights and general uses, and properly measuring water systems to monitor water use efficiency.

### Groundwater Wells

Citizens prioritized concerns about legally “exempt” groundwater wells, often describing these exemptions as loopholes in Montana’s legal framework. Understanding the implications of exempt wells on management of water supply and demand was a priority, as was reforming exempt well policies as part of more general municipal development concerns.<sup>5</sup> Conversely, citizens at one meeting placed priority on *not* metering exempt wells in the future. Concerns and issues associated with groundwater

wells also overlap with the categories of Growth and Development, Water Quality, and Water Storage. More information related to groundwater use, availability, and interactions with surface water was requested.

### Growth and Development

Citizens were concerned that water will not be available for future growth, or if water *is* legally available, improved storage facilities and infrastructure will be necessary to physically allocate water to meet increasing industrial, residential, and municipal demands. New water demands associated with growth and development in the Bitterroot and Kootenai basins were top concerns. In the Kootenai region, for example, citizens prioritized future water availability for industrial uses, and asked that the DNRC recognize the need to accommodate growing industries, especially when those industries may help the local economy. In the Bitterroot, concerns included the reclassification of irrigation rights when a new subdivision is developed, and how growth and development will balance with agriculture.

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<sup>5</sup> For more information on groundwater and “exempt” wells, please see *The Exemption: To Change or not to Change* (2012). Available at: <http://leg.mt.gov/content/Publications/Environmental/2013-exempt-wells.pdf>

From a big-picture standpoint, citizens are concerned that growth and development, increasing population, and associated land use changes will affect water supply issues when combined with potential climate change impacts. Keeping agriculture “in business” was also a prioritized concern, as was the fear that water policy and regulations may hinder economic growth. Finally, there were concerns about supporting future needs (when existing users do not have enough seasonal water) and general loss of farmland and water to land subdivision.

### **Indian and Federal Reserved Water Rights**

Some citizens do not understand or agree with the negotiated settlements Montana has reached with the federal government and tribal governments over federal reserved water rights in Montana.<sup>6</sup> Specific concerns related to the filing of reserved rights by the Bitterroot National Forest and the Confederated Salish and Kootenai

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<sup>6</sup> For information on roles of the federal and state government in managing water, please see *Managing Montana’s Water*. Available at: <http://water.montana.edu/pdfs/headwaters/headwaters6.pdf>

Tribes proposed Water Compact.<sup>7</sup> While many citizens prioritized the “finalization” or “resolution” of the proposed Water Compact, the priorities also focused on developing a better understanding of how the proposed Compact may affect water users both on and off the Flathead Reservation. Questions and concerns also related to the legal framework of “time immemorial” priority dates. Once the effects and legal framework are better understood, citizens suggested that they should work with DNRC to manage and mitigate the potential water resources changes that may result from the Compact’s provisions.

### **Infrastructure and Irrigation**

Prioritized issues included the reduced use of flood irrigation and the resulting effects on return flows, the need for improved irrigation infrastructure and access to agricultural water delivery, and the need to understand the “impact and economic feasibility” of new agricultural infrastructure and water use in the future. One concern focused on the need for additional private dams

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<sup>7</sup> To learn about the Montana Reserved Water Rights Compact Commission, please visit: <http://www.dnrc.mt.gov/rwrcc/>

on tributaries, and one data gap was knowledge of the legal means for water transport to and from a diversion point.

### Recreation

Prioritized recreation-related issues included maintaining Flathead Lake levels for recreation,<sup>8</sup> increasing support for recreational use, and developing a better understanding of the effect of private and commercial recreation on water supply and quality. There was also concern with the possibility of recreation (i.e., floating and fly fishing) having higher priority over other beneficial uses in the future.

### Riparian Areas

Protection of riparian areas was prioritized. One identified data gap was the need to know more about the effects of armored riverbanks (for stabilization purposes) on riparian habitat.

### Water Allocation and Adjudication

Many priorities were connected in some way to completion of the Montana general stream adjudication process.<sup>9</sup>

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<sup>8</sup> See *Appendix F: Public Comment Letter* for more information

<sup>9</sup> For basic information on the adjudication process, please see *Quantifying and Protecting Montanan's Water Rights*. Available at:

For example, citizens prioritized protection and preservation of existing water rights at nearly every meeting. Citizens residing in closed basins were specifically concerned with future groundwater use, especially from municipalities.<sup>10</sup> The effects (short and long term) of an over-allocated/over-appropriated water supply, and how future water demands will be met, were also top concerns. More specific prioritized concerns included the allocation of the Milltown Dam water right (and how that allocation will impact water users) and the legality of Avista water rights. Local sharing of water during shortages was one priority that serves as more of a solution to these identified issues. Identified data gaps include the need to quantify legal and physical water availability and to better understand water consumption.

### Water Availability

Water availability priorities included the ability to forecast water yield and identify new sources of water supply,

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[http://dnrc.mt.gov/wrd/water\\_rts/adjudication/HB22/pdfs/protectingmtswaterrights.pdf](http://dnrc.mt.gov/wrd/water_rts/adjudication/HB22/pdfs/protectingmtswaterrights.pdf)

<sup>10</sup> For general information on basin closures, see *Montana's Basin Closures and Controlled Groundwater Areas*. Available at:

[http://www.dnrc.mt.gov/wrd/water\\_rts/appro\\_info/basinclose-cgw\\_areas.pdf](http://www.dnrc.mt.gov/wrd/water_rts/appro_info/basinclose-cgw_areas.pdf)

the importance of fully inventorying existing water supply and accurately measuring stream flow, and concerns that ground and surface water supplies are being depleted and aging forests will negatively affect forest stream yield. Maintaining the supply of water received from wilderness areas (at the headwaters) was also a prioritized issue.

### **Water Conservation and Efficiency**

Priorities included increasing water use efficiency (and increasing/promoting programs to meet this end), increasing conversion to more efficient irrigation practices in order to increase instream flows, improving awareness of opportunities for water conservation, and mitigating the implications of increased energy costs on a water user's choice of irrigation methods.

### **Water Marketing**

Improved efficiency and flexibility for water marketing and leasing was prioritized, and citizens encouraged legal and regulatory changes to streamline the processes.<sup>11</sup>

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<sup>11</sup> For basic information on water marketing in Montana and other states, please see *Water Marketing 101* (2005). Available at: <http://leg.mt.gov/content/Committees/Interim/2>

### **Water Planning**

Of primary concern was the need for a new water plan, and several citizens voiced a lack of trust for the DNRC's planning process. For example, citizens from the Kootenai area were concerned that "the historic state water planning process essentially failed the Tobacco Valley," and therefore did not trust that a new planning process will consider local input, and be useful to local water users. Another concern focused on scale, with several citizens lamenting that a "one-size-fits-all" planning approach does not suit Montana, and should be replaced with a basin-scale management and regulatory scheme. In the same vein, citizens requested that the plan be "actionable" so that local parties can execute recommendations.

### **Water Quality**

In addition to the need to improve and protect water quality for humans and wildlife, more specific prioritized concerns focused on metals contamination and nutrient conditions in Silver Bow Creek (in the Upper Clark Fork). Other priorities included addressing groundwater pollution from

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[007 2008/water\\_policy/staffmemos/watermarketing101.pdf](http://leg.mt.gov/content/Committees/Interim/2007_2008/water_policy/staffmemos/watermarketing101.pdf)

septic systems and non-point source pollutants to meet Total Maximum Daily Loads (TMDLs).<sup>12</sup> Citizens also prioritized aquifer protection, maintenance of water quality and temperature, managing the impacts of growing population, land use changes, and addressing the effect of climate change on water quality.

### **Water Rights Change Process**

Citizens prioritized better understanding of the water rights change process, especially when the change involves instream flow, and finding an “efficient, economic, and fair process for water rights changes.”

### **Water Rights Enforcement**

Priorities included enhancing DNRC authority to enforce water rights, and increasing enforcement among users (with specific concerns about ditches and groundwater well use). There were also prioritized concerns focused on the water courts, the high cost of defending a water right (and the economic impact on agricultural users), and the feeling

that “Montana should defend rights on behalf of those they are decreed to.”

### **Water Storage**

The most frequently mentioned priority was to increase water storage. More specifically, citizens mentioned all forms of new water storage (e.g., groundwater, wetlands, aquifers, ponds, reservoirs, etc.), protection of natural storage, maintenance of manmade storage structures, increased funding for water storage improvements, and the need to address storage issues as they relate to spring flow, flood control, and carry-over from wet to dry years. There was interest in understanding how increased storage could benefit users, seeking new opportunities to store excess water during spring runoff, finding tools to protect and restore natural storage, and exploring prospects for new storage reservoirs.

Concerns included addressing loss of natural storage due to loss of wetlands, addressing loss of manmade storage due to breached dams, understanding the impact of storage on spring flows (as a detriment to ecological function), and future management of Kerr Dam.

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<sup>12</sup> For more information on TMDL’s see TMDL Frequently Asked Questions, available at: <http://deq.mt.gov/wqinfo/TMDL/FAQ.mcp.x>.

## b. Public Scoping Meetings: Water Issues

### Examined by Place

While citizens described many similar water issues at all public meetings, each meeting also highlighted unique regional issues and concerns across the Clark Fork and Kootenai River Basins.

At the **Hamilton Public Scoping Meeting**, citizen issues focused on agriculture, growth and development, and ecological health. Agricultural concerns included the timing of water supply, aging irrigation infrastructure, loss of natural water storage, and water rights enforcement. Growth and development concerns focused on the Bitterroot basin's status as a "closed basin" and the need to balance new water demands in the Bitterroot Valley (from a growing population and industrial sector) with the need to preserve water quality, agricultural land, and riparian areas.

Many concerns centered on groundwater use and potential aquifer impacts. Citizens also prioritized the protection of instream flow rights, maintenance of water levels in tributary streams, and protection of habitat along

the Bitterroot River. Solutions focused on increasing water storage, including the need to identify funding for storage improvements.

At the **Kalispell Public Scoping Meeting**, priorities focused on several issue areas. First, citizens discussed water availability, focusing on the changes to water flow levels and timing that may result from climate change, storage and carry-over of excess water from wet to dry years, and the potential for reduced snowpack in the future. The need for information was also a central theme, ranging from forest yield data to more readily available stream inventory information. Finally, water quality was also a focus area, with priorities linked to mitigating non-point source pollutants, preventing aquatic invasive species, and meeting TMDLs.

At the **Libby Dam Public Scoping Meeting**, priorities focused on the future availability of water in the Kootenai region for industrial development and municipal growth. With this focus in mind, citizens discussed the need to understand: annual and projected water consumption, potential impacts resulting if the federal government regulates water, for example, through dam operations or endangered species protections, and the interconnections between instream water rights and other water rights. Citizens prioritized local collaboration, and voiced their support for the use of tools and strategies that would benefit specific areas such as the Tobacco Valley.

At the **Missoula Public Scoping Meeting**, primary issues focused on mitigating and adapting to changes that may result from climate change, land-use, and growing population. These concerns included increased drought and flooding, reduced snowpack, lowered instream flows, detrimental impacts to water quality, increased pollution, and loss of natural/wetland storage. Administrative and

institutional tools were also a focus, with priorities covering the need for an improved water rights change process, more flexibility in water rights marketing, and improved measurement and monitoring of water rights.

In the **Upper Clark Fork River Basin** (with public meetings held in Anaconda and Deer Lodge), citizens were primarily concerned with agricultural, industrial, and ecological issues. Concerns focused on with the need to sustain future water availability, as highlighted by priorities to protect and enforce existing water rights, increase natural and manmade water storage, provide water for industrial and residential development, and better understand proposed regulatory changes that may affect water availability.

Citizens also prioritized the protection of water quality and maintenance of instream flow for fisheries. Solutions to pressing concerns were discussed, and citizens prioritized the development of a drought management plan, programs to increase water use efficiency, and an improved water rights change process.

## c. Public Scoping Meetings: Requested Data and Information

At the end of each public scoping meeting, citizens were asked to fill out a form with a second question:

**What water resources information and data would be beneficial to you and/or your community?**

Responses collected at each meeting fall into these categories:

### Access to information

Participants requested improved availability of water resources data and information. Compiling adjudication information, flow data, and other useful sources for all basin streams in to a user-friendly, online application was one suggestion. Others simply suggested making “more” information available via the internet, in a manner that can be easily digested by citizens without legal or scientific expertise. One idea was to publicize a list of “resource people” with water expertise for citizens to contact with specific questions.

Participants also asked for information specific to their sub-basin. The Bitterroot and Tobacco Valley attendees expressly requested more information for their

area. Desired water-related information included historic water use, snowpack, metals clean up, and water quality data sets, thermography water data from bridge monitoring sites, irrigation ditch maps, and improved groundwater data (focusing on the interactions between ground and surface water). Also of interest was understanding how land-use practices (e.g., road building, subdivision development, irrigation changes, etc.) affect water supply and availability. Others requested forest water yield data and information about Montana’s involvement in the management of Libby Dam.

## Understanding tools, program guidance, and the legal and regulatory framework for water management

Water users would benefit from more understanding of available conservation opportunities and techniques. Requests varied from specific technical questions to broader questions about Montana's water rights permitting process (e.g., how can a user protect late season in-stream flow, obtain water in a closed basin, or quantify a water right they might have? Can you explain different water storage techniques, and possible funding to build new water storage?).

Many participants voiced the need for more knowledge of Montana water law and regulations, and knowledge of how

to work within the regulatory water management structure in Montana to accomplish goals such as increased water storage.

## Notice of changes and opportunities

Many suggested the need for improved notice of relevant meetings, water court decisions, new water research, and pending changes that could affect existing water users, which highlights water users' concerns to stay "on top" of the ever-changing world of water management. Water users often feel they are reacting to events due to lack of knowledge and understanding. Finding new and effective methods to notify users of impending changes is an on-going challenge.



*Citizens, Task Force members, and DNRC staff at the Hamilton Public Scoping Meeting*

### III. Public Scoping Survey

In October and November of 2013, the Clark Fork Task Force and DNRC used an online survey tool to supplement the public scoping meeting process. The survey was available at [http://www.dnrc.mt.gov/wrd/water\\_mgmt/state\\_water\\_plan/](http://www.dnrc.mt.gov/wrd/water_mgmt/state_water_plan/). Paper copies were available at public scoping meetings and DNRC regional offices. Clark Fork Task Force members and DNRC staff collaborated to create the following survey questions:

1. What is the single most compelling water management issue (challenge or opportunity) in the Clark Fork and/or Kootenai River Basin?
2. What solutions may address the issue you identified in Question 1?
3. What are the most likely barriers to implementing the solutions you propose in Question 2?
4. Please rate the following water management issues, in terms of how you prioritize them (see figure 4 for a list of choices).
5. In terms of knowledge and information needed to prepare a new water management plan for the Clark Fork and Kootenai River Basins, what types of information do you think are critical to consider in the planning effort?
6. In your opinion, what is the best way to obtain this information?
7. Is there anything else you would like for the Clark Fork Task Force to know?

Survey respondents offered many thoughtful answers. Responses to selected questions are synthesized on the following pages. Demographic information about survey respondents is also included. Complete survey data is available in [Appendix E](#).

## PUBLIC SCOPING SURVEY

### BY THE NUMBERS

**57**  
SURVEY RESPONSES

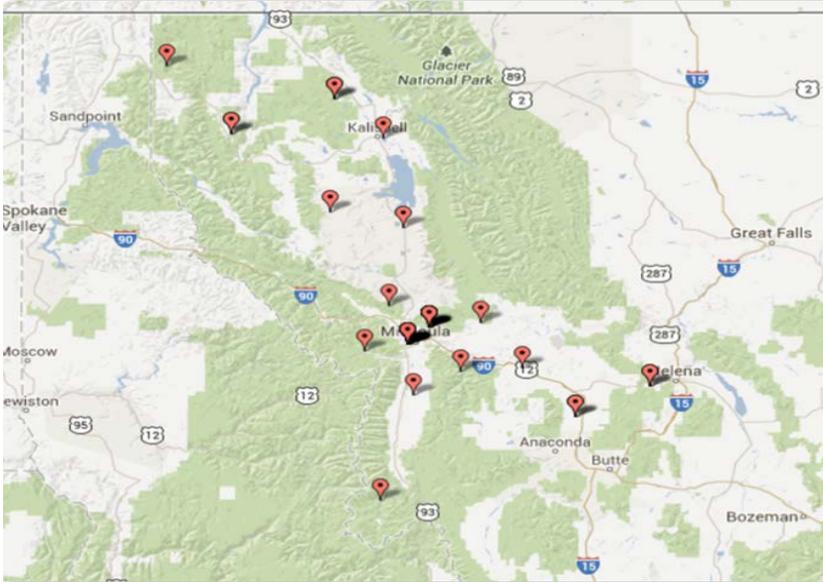
Survey  
Open From  
**OCTOBER 15TH TO  
NOVEMBER 15TH  
2013**

Responses from  
**17**  
Different  
Zip Codes

## a. Public Scoping Survey: Results

### Who responded?

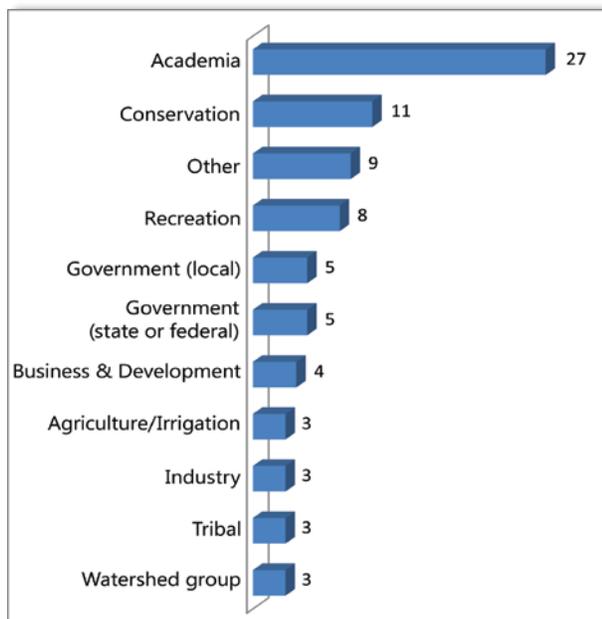
The Clark Fork Task Force received input from 57 individuals. *Figure 1* illustrates the geographic distribution of survey respondents, based on zip code. *Figure 2* breaks down the different affiliations of respondents, based on self-identification. Respondents were



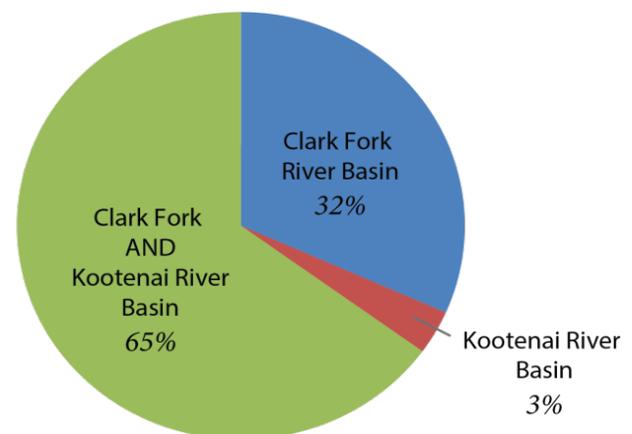
*Figure 1: Geographic Distribution of Survey Respondents*

also asked to choose if they were submitting input for the Clark Fork River Basin, Kootenai River Basin, or both.

*Figure 3* illustrates the basin focus of survey respondents. Most respondents chose to submit input for *both* the Clark Fork and Kootenai River Basins.



*Figure 2: Respondent Affiliation*



*Figure 3: Basin Focus of Respondents*

## What did respondents have to say?

Responses to survey Questions 1 through 7 are organized in categories and summarized below in alphabetical order. Questions 1, 2 and 3 are grouped together because the questions focused on issues, related solutions, and barriers to the stated solutions. Questions 5 and 6 are also grouped together, because the questions focused on knowledge and information. Complete survey data is available in [Appendix E](#).

**Question 1: What is the single most compelling water management issue (challenge or opportunity) in the Clark Fork and/or Kootenai River Basin?**



**Question 2: What solutions may address the issue you identified in Question 1?**



**Question 3: What are the most likely barriers to implementing the solutions you propose in Question 2?**

### Climatic Changes

Issues included the importance of avoiding “dependence on a water supply we have had in the past,” and recognition that “snowpack will be smaller, timing and amount of runoff will continue to change [and] impacts to aquatic systems will likely be greater than we have planned for in the past.”

Stated **solutions** to these issues included implementing water conservation measures, protecting and restoring natural water storage, planning for future water needs, and regulating

water use. **Barriers** included lack of public and governmental participation without worthwhile incentives.

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*“We need to make sure that the problems presented by a changing climate are part of every discussion involving water supply planning in the future. On a local level, the most important thing we can do is recognize that climate change will have an impact on almost all areas of water use.”*

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### Drought Readiness

Issues included adjusting agricultural practices to address low seasonal water

levels and addressing drought in the Upper Clark Fork River Basin.

Stated **solutions** included forming a collaborative drought management plan for the Upper Clark Fork Basin. **Barriers** included the influence of misinformation on public opinion and a lack of flow measurement data, which could inhibit understanding of water use in the Upper Clark Fork Basin.

### Federal Reserved Water Rights

The primary issue centered on completion of the CSKT proposed Water Rights Compact.

Stated **solutions** included approval of the compact by the Montana Legislature. **Barriers** included lack of political action by state legislators.

### Fisheries and Instream Flow

Issues included balancing water use for agricultural purposes with instream flow for recreation, aquatic species, and fluvial health, and the need to focus not only on the amount of water drawn from rivers and aquifers, but also the impact to water quality and temperature. According to respondents, instream flow must be adequate to

support aquatic life, water quality, appropriate temperatures, and benthic vitality (what happens on the river bottoms). Other issues included preventing habitat fragmentation,

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*“The most compelling water management challenge is the long-term security of a clean, available water supply that supports the social and natural systems of the Clark Fork Basin...of primary importance is the strengthening of collaborative watershed groups as a forum for dialogue. It is the framework of local dialogue that results in actionable activities...”*

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completing water rights adjudication for instream flow so that rights holders can maintain minimum flows, and improving stream quality and quantity.

Stated **solutions** included managing water to maintain colder temperatures, expanding instream flow leasing and purchasing, using fish-compatible structures in waterways, and installing screening devices on water intakes. Specific to the Kootenai Basin, one respondent suggested leasing additional water rights for instream flow, and pursuing potential instream flow reservations identified by the Montana

Department of Fish, Wildlife and Parks on Kootenai River tributaries.

**Barriers** included stream dewatering, the “use it or lose it” component of the Prior Appropriation Doctrine, political influences, and “competing demands for...a limited resource.”

### **Growth and Development**

Issues included balancing existing needs with future demands and challenges, or “managing the synergistic effect of population growth, land use change, and climate change, [which] work together to make water availability fluctuations more extreme.” Stated “compelling issues” included increasing demands for surface and groundwater, overwatering of lawns, septic system issues associated with subdivisions, and the impacts of deeper droughts, more extreme floods, and degraded water quality that may arise from the “synergistic effects” described above.

Stated **solutions** included reducing existing water demands by planting “waterwise” crops and removing marginal lands from cropping, conserving water use by industrial and

urban users, and protecting and restoring natural water storage systems. **Barriers** included opposition from business and development proponents.

### **Infrastructure and Irrigation**

Inefficient irrigation withdrawals and dams that detrimentally modify river flows were the primary issues stated by respondents. **Solutions** and **barriers** focused on forming partnerships to assist irrigators with water conservation and gaining funding for such initiatives.

### **Water Allocation and Adjudication**

Compelling issues included “antiquated water rights laws” that result in “inefficient and inappropriate” use of water resources and evaluation of the beneficial nature of a water right (including the determination of whether or not the water can be used more efficiently or purchased for instream flow). Other stated issues included the future of the Milltown Dam water right, difficulty in appropriating water as a new user, and quantification of water use in Montana to defend against downstream claims on waters in the Columbia River Basin system.

Stated **solutions** included finalizing adjudication and improving citizen knowledge of Montana water rights law. **Barriers** included disagreement and lack of cooperation from water rights holders.

### Water Availability

The primary stated issue was protection of headwater water availability. The effect of fire on availability was also mentioned. In the event of a wildfire, areas that typically hold and slowly release seasonal snowpack are denuded. Therefore, water runoff accelerates, and the accelerated run-off results in water quality impacts and the sudden release of seasonal snow deposition critical for maintaining later season flows.

Stated **solutions** to these issues included protection of headwaters areas to preserve vegetative cover, management of land to mitigate against sediment and erosion, and immediate soil and vegetation restoration efforts where fires occur. **Barriers** included funding, legal appeals, and management decisions that hinder protection of water availability.

### Water Quality

Compelling issues focused primarily on municipal water quality and water quality contamination from mining and industrial practices. For example, several respondents mentioned the need to protect the Missoula aquifer and provide clean drinking water. Others focused on groundwater contamination, stream pollution and litter, and wastewater management.

Mining-associated issues included management of mine waste tailings, prevention of water contamination from mine waste, and the need for the Environmental Protection Agency and Department of Environmental Quality to complete superfund clean-up on the upper Clark Fork River. Toxins and high nutrient loads, as well as stream temperature and sediment challenges resulting from past mining practices were mentioned concerns. One respondent also suggested the need for mitigation against pollution on the Kootenai River that stems from Canadian coal production waste.

Stated **solutions** included implementing mitigation measures, strengthening mining regulations, restricting

groundwater wells, assessing industrial, agricultural and business facility waste, testing water quality, and updating/building wastewater treatment facilities to decrease the number of septic systems. **Barriers** included funding, government “red tape,” accountability, and lack of willingness from the public to help.

### Water Storage

Restoration of wetlands to provide natural water storage was mentioned by several respondents. Stated **solutions** included wetland restoration. **Barriers** included funding and lack of incentives.

**Question 4: Please rate the following water management issues, in terms of how you prioritize them.**

Figure 4 displays priority levels of selected water issues, as ranked by respondents. The highest priority issues included groundwater wells, instream flow, water conservation, water quality, and water rights adjudication.

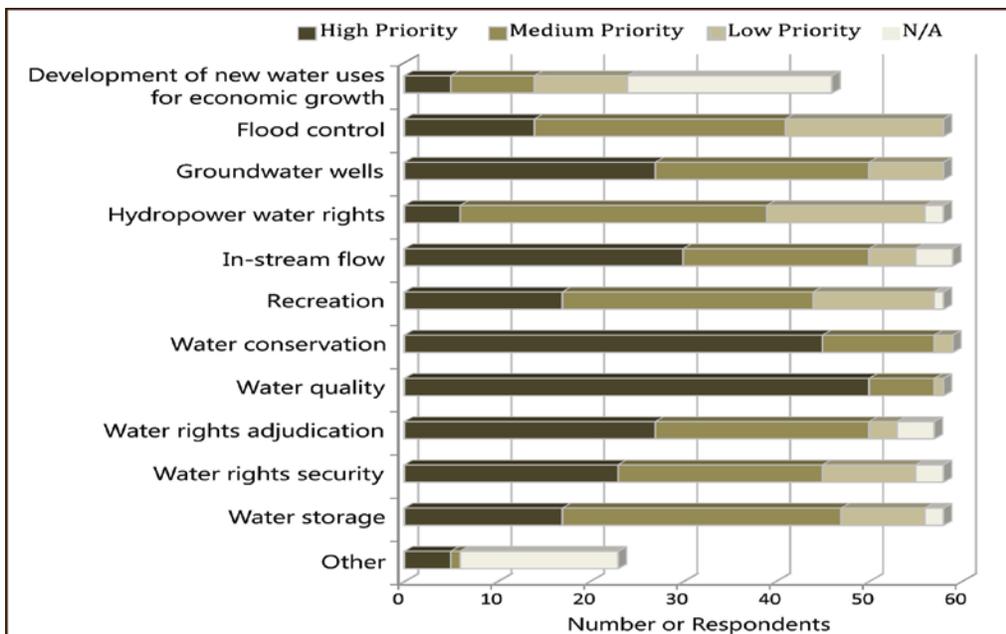


Figure 4: Response to survey question #4. Note: early versions of this survey did not include “Development of new water uses for economic growth” as a choice.

**Question 5: In terms of knowledge and information needed to prepare a new water management plan for the Clark Fork and Kootenai River Basins, what types of information do you think are critical to consider in the planning effort?**



**Question 6: In your opinion, what is the best way to obtain this information?**

Survey respondents suggested many types of information and data that should be “critical” to consider during the MWSI planning efforts, including:

- Data on water quality, flood control, climate, population growth, snowpack trends, sediment introduction and reduction, groundwater contamination sources, water use, agricultural and industrial consumption rates, fine scale water availability, and the economic impact of water-based recreation
- Data on ecological baselines, fish mortality, and endangered species
- Information on the economic impacts associated with changes in agricultural technologies over time
- Historical data to help decipher water temperature regimes, hydrograph distribution and intensity, and climate change impacts
- Mapping of natural storage areas

Survey respondents suggested that requested data, information, and knowledge could be obtained from the following sources (among others):

- Historical census data
- Flathead Irrigation Project records for water storage, water availability, and precipitation
- U.S. Geological Survey data
- Scientific, peer-reviewed studies
- Water adjudication records
- Business and public surveys
- High resolution temporal and spatial monitoring
- Research reports from universities and tribal, state and federal governments
- County planning and flood plain administration records
- Conservation district records
- Local landowners

### Question 7: Is there anything else you would like the Clark Fork Task Force to know?

Citizens asked the Task Force to consider several additional factors as they update the state water plan. These comments included recreation (which one respondent felt should be protected, but not at the cost of ecological integrity), the “oil train” traffic along waterways, and the importance of educational outreach. Citizens mentioned that although the current political system seems to disfavor planning initiatives, successful drought management planning and reasonable DNRC policies could restore trout populations *and* reduce ranchers’ fears, and that long-term funding would be critical to the success of the planning efforts. Some focused on the role of other agencies, specifically Montana Fish, Wildlife and Parks in determining instream flow needs for fisheries, and the Bureau of Reclamation in managing reservoirs, irrigation canals, and water delivery. Finally, citizens applauded the Clark Fork Task Force for updating the water plan, and wished the Task Force luck in this endeavor.



*The Clark Fork River near Galen, courtesy of the USGS Montana Water Science Center*



*The Kootenai River, courtesy of the DNRC*

## IV. Next Steps

The Issues Scoping process was part of **Phase 1** of the Montana Water Supply Initiative (MWSI), or the updating of Montana's State Water Plan. The next steps of the MWSI include:

**January 2014:** The Clark Fork River Basin Task Force, and citizen Basin Advisory Councils across the state, will begin working with DNRC staff to accomplish MWSI **Phases 2 and 3**, which includes identification of alternatives and options for water management, and development of management recommendations.

**January-May 2014:** During Phases 2 and 3, the Task Force will begin developing alternatives and options that address issues falling within the prioritized categories. Simultaneously, the DNRC will be working to inventory current consumptive and non-consumptive uses, estimate water needed to satisfy future demand, and complete other necessary technical studies for the Clark Fork and Kootenai River Basins.

**April-May 2014:** May 31<sup>st</sup> of 2014, the Task Force, working in concert with the

DNRC, will produce a set of preliminary recommendations that they believe the DNRC should present to the Montana State Legislature. The Clark Fork Task Force and DNRC will again turn to the public for input and advice on preliminary recommendations.

**July-December 2014:** The Clark Fork Task Force will finalize recommendations and present the updated water plan for the Clark Fork and Kootenai River Basins to the Director of the DNRC by August 2014. Following the DNRC's approval, the recommendations will be presented to Montana legislative committees (the Environmental Quality Council and the Water Policy Interim Committee), before ultimately being presented to the 2015 Montana Legislature.

The information collected as part of the scoping process is a useful first step toward offering recommendations to address the complex water issues Montana citizens face. The work is the beginning of what will be a dynamic guide that will be helpful to residents and water managers alike.

## Acknowledgements

The Montana Department of Natural Resources and Conservation generously provided funding and ongoing staff support for this project. Members of the Clark Fork Task Force provided essential expertise, leadership, and personal time. The University of Montana Center for Natural Resources and Environmental Policy supported this work by offering facilitation, meeting management, and logistical support, and graduate students Sally Cathey and Gabrielle Ostermayer offered invaluable assistance and energy at every turn.

## Appendix A: Clark Fork River Basin Task Force Membership

Last Name	First	Primary Affiliation	Organization
Bradshaw	Stan	Conservation	Trout Unlimited
Burnett	Gary	Conservation	Blackfoot Challenge
Connor	Maureen	Upper Clark Fork Steering Committee	Granite Conservation District
Doney	Kerry	Agriculture	Jocko Irrigation Dist
Franz	Holly	Energy	PPL Montana
Hackett	Harvey	Agriculture	Bitterroot Irrigation Dist
Hall	Barbara	Conservation	Clark Fork Coalition
Hall	Nate	Energy	Avista
Iman	JR	Agriculture	Ravalli Irrigation District
Irvine	Lloyd	Tribes	Confederated Salish & Kootenai Tribes
Jackson	Verdell	Government / Agriculture	MT Senate District 5
Lammers	Paul	Mining	Revett Minerals
Miller	Ross	Municipal	Mountain Water
Patton	J. Gail	Agriculture	Sanders / Mineral Counties
Skorpik	Molly	Agriculture	Mt Assoc. Dams & Canals Systems
Spratt	Marc	Agriculture	Flathead Conservation District
Sugden	Brian	Timber	Plum Creek Timber
Turner	Susie	Municipal	City of Kalispell
Watson	Vicki	Public Interest	Academia
Williams	Ted	Conservation / Recreation	Flathead Lakers
<b>Ex Officio Members:</b>			
Edge	Derek	Consulting	ARCADIS, u.s., Inc.
Evans	Elena	Government	Department of Environmental Quality
Hoffman	Gregory	Libby Dam & Lake Koocanusa	U.S. Army Corps of Engineers
Magruder	Ian	Consulting	Kirk Engineering
McLane	Mike	Government	MT FWP
Miske	Caryn	Flathead Basin Commission	DNRC
Philmon	Dennis	Government	Bureau of Reclamation
Price	Mary	Tribes	Confederated Salish & Kootenai Tribes
Sweet	Michael	Academia	Montana Climate Office
<b>Proxy Members:</b>			
Matt	Clayton	Tribes	Proxy for Lloyd Irvine
Schoonen	Jennifer	Conservation	Proxy for Gary Burnett
Silberman	Sharon	Tribes	Proxy for Lloyd Irvine
Sirucek	Dean	Agriculture	Proxy for Marc Spratt

## Appendix B: DNRC Staff Who Presented at Public Meeting

October 15th, 2013

University of Montana

Missoula

- **Michael Downey**, *Montana Water Supply Initiative*; mdowney2@mt.gov, 406-444-9748
- **Aaron Fiaschetti**, *Clark Fork and Kootenai Basin Water Resources and Water Use*; afiaschetti@mt.gov, 406-444-0504
- **Jim Nave**, *Water Rights Basics*, jnave@mt.gov; 406-542-5889

October 17th, 2013

Hamilton City Hall

Hamilton

- **Michael Downey**, *Montana Water Supply Initiative*; mdowney2@mt.gov, 406-444-9748
- **Aaron Fiaschetti**, *Clark Fork and Kootenai Basin Water Resources and Water Use*; afiaschetti@mt.gov, 406-444-0504
- **Amy Groen**, *Water Rights Basics and Tools to Accommodate Change*, agroen@mt.gov, 406-542-5888

October 24th, 2013

Fairmont Hot Springs

Anaconda

- **Jesse Aber**, *Montana Water Supply Initiative*; jaber@mt.gov, 406-444-6628
- **Chuck Dalby**, *Clark Fork and Kootenai Basin Water Resources and Water Use*; cdalby@mt.gov, 406-444-6644
- **Bryan Gartland**, *Water Rights Basics and Tools to Accommodate Change*, bgartland@mt.gov, 406-444-5783

October 29th, 2013

Best Western Plus

Kalispell

- **Jesse Aber**, *Montana Water Supply Initiative*; jaber@mt.gov, 406-444-6628
- **Aaron Fiaschetti**, *Clark Fork and Kootenai Basin Water Resources and Water Use*; afiaschetti@mt.gov, 406-444-6644
- **Marc Pitman**, *Water Rights Basics and Tools to Accommodate Change*, mpitman@mt.gov, 406-752-2713

October 30th, 2013

Libby Dam

Visitor's Center

- **Jesse Aber**, *Montana Water Supply Initiative*; jaber@mt.gov, 406-444-6628
- **Aaron Fiaschetti**, *Clark Fork and Kootenai Basin Water Resources and Water Use*; afiaschetti@mt.gov, 406-444-6644
- **Kathy Olsen**, *Water Rights Basics and Tools to Accommodate Change*, kolsen@mt.gov, 406-752-2706

November 13th, 2013

Powell County Community  
Center

Deer Lodge

- **Michael Downey**, *Montana Water Supply Initiative*; mdowney2@mt.gov, 406-444-9748
- **Aaron Fiaschetti**, *Clark Fork and Kootenai Basin Water Resources and Water Use*; afiaschetti@mt.gov, 406-444-0504
- **Russell Gates**, *Water Rights Basics and Tools to Accommodate Change*, rgates@mt.gov, 406-444-6602

## Appendix C: Prioritized Issues at Public Scoping Meetings

The priorities listed in the following pages emerged after participants at each public scoping meeting prioritized issues in small groups. The priorities are organized in alphabetical order by issue category.

### Top citizen priorities heard in Anaconda:

- **Drought Readiness:**
  - Facilitate better process for drought planning (especially associated with climate change; look ahead 5 to 10 years)
- **Federal Reserved Water Rights:**
  - Concern: the sharing of Montana’s water with the federal government or tribal entities
- **Fisheries and Instream Flow:**
  - Maintain and protect instream flow (main stem and tributary streams) for fish in light of reduced availability
  - Maintain connectivity
  - Improve fish habitat and riparian habitat
  - Maintain ecological function and recognize it as a priority that is a beneficial, non-consumptive use
  - Build irrigation dams and maintain/encourage beaver dams to help fisheries
  - Concern: instream flow should be junior to other decreed water rights
- **Gages and Monitoring:**
  - Institute requirements to measure water availability and usage for all uses
- **Groundwater Wells and “Exempt” Wells:**
  - Remove loopholes to irresponsible water usage (i.e. exempt wells)
  - Implications of exempt wells on management of water supply and demand
- **Growth and Development:**
  - Concern: availability of water for industrial growth
- **Water Allocation and Adjudication:**
  - Complete statewide adjudication (to provide more certainty)
  - Concern: allocation of Milltown Dam water rights, and the impact of that allocation on water users
  - Concern: the effects of over-allocated water rights on future growth
- **Water Availability:**
  - Ability to forecast water yield

- **Water Conservation and Efficiency:**
  - Increase water use efficiency (and increase/promote programs to meet this end)
  - Increase conversion of efficiency towards instream flows
  - Implications of increased energy costs on choice of irrigation methods
  - Improve awareness of opportunities for water conservation
- **Water Planning:**
  - Concern: Influence of state process on water management decisions
- **Water Quality:**
  - Improve and protect water quality
  - Concern: metals contamination
- **Water Rights Change Process:**
  - Improve specific management options for the water rights change process, regarding instream flows
- **Water Rights Enforcement:**
  - Enhance DNRC authority in water rights enforcement
  - Concern: the high cost of defending a water right and economic impacts on the agricultural users
  - Concern: Montana should defend rights on behalf of those they are decreed to
- **Water Storage:**
  - Consider the impact of storage on spring flows (and how it is a detriment to ecological function)

## Top citizen priorities heard in Deer Lodge:

- **Federal Reserved Water Rights**
  - Understanding and mitigating the effects of the CSKT Compact
- **Federal Regulation of Water**
  - When changes are proposed as a result of Endangered Species Act, Clean Water Act, or other federal regulations, and citizens' water rights or irrigated lands may be affected, there should be more clarity as to the authority for the proposed changes. The process used to notify affected citizens must also be improved so that there is increased clarity.
- **Fisheries and Instream Flow**
  - Providing for instream flow
  - Concern: Instream flow is a threat to the priority of historical use in the water rights process
- **Growth and Development**

- Keeping agriculture in business
- Concern: increasing residential and industrial development; more storage and infrastructure will be needed to balance and meet the needs of this growth. The impacts associated with growth must be clarified, especially groundwater use.
- **Infrastructure and Irrigation**
  - Use of flood irrigation and the beneficial effect of the associated return flows
- **Water Allocation and Adjudication**
  - Protection of existing water rights
  - Preservation of historic (senior) water rights (discussion of federal reserved water rights, local sharing of water, and other topics)
- **Water Quality**
  - Improving nutrient conditions in Silver Bow Creek
- **Water Storage**
  - Additional water storage (all forms – wetland, natural, reservoir, groundwater), new methods of water storage, and ways to use stored water

## Top citizen priorities heard in Hamilton:

- **Climatic Changes:**
  - Concern: timing of water supply and late-season flows
  - Loss of agricultural storage due to changes in climate and land area that bring water faster in spring (early runoff) and decrease availability in fall
- **Federal Reserved Water Rights:**
  - Concern: time immemorial Tribal water rights
  - Resolution of Confederated Salish and Kootenai Tribal Water Rights, and off-reservation impacts
  - Concern: filing of reserved water rights by U.S. Forest Service
- **Fisheries and Instream Flow:**
  - Protection of instream flow rights
  - Keeping tributary streams healthy, maintaining connectivity, and preventing dewatering
  - Balancing agricultural use with the needs of fisheries
  - Preserving water rights for fisheries and ecological purposes
  - Maintaining habitat of Bitterroot River to prevent the collapse of the aquatic system
- **Groundwater Wells and “Exempt” Wells:**

- Exempt well quantity policy and municipal development
- DNRC should not meter exempt wells
- **Growth and Development:**
  - Concern: new water demands in the Bitterroot Valley
  - Concern: reclassification of irrigation rights during subdivision process
  - Concern: how will future water needs be supported if existing users do not have enough water during certain parts of the year?
  - Water for future needs (i.e., subdivisions) should be pursued and preserved
  - Concern: loss of farm land and water to subdivisions
  - Balancing residential and industrial development with agricultural use
- **Infrastructure and Irrigation:**
  - Concern: aging agricultural infrastructure
  - Access to agricultural water delivery
  - Additional private dams are needed in tributaries
  - Loss of flood irrigation
  - What are the legal means for water rights holders to transport water to their property?
- **Recreation:**
  - Effects of private and commercial recreational activities
  - Support of recreational use
  - Concern: recreation (floating and fly fishing) getting higher priority over other beneficial uses
- **Riparian Areas:**
  - Protection of riparian areas
  - Effects of armoring of river banks
- **Water Allocation and Adjudication:**
  - Concern: future water rights in closed basins, including groundwater in municipalities and future growth
  - Concern: over-appropriation of water rights
  - Concern: loss of water and property rights
  - Legality of Avista water rights filings
  - Concern: water transfer from the Bitterroot to other areas
  - Concern: J.E. Bell water right from Flathead Lake
- **Water Availability**
  - Concern: ground and surface water depletion
  - Maintenance of water supply from the wilderness
- **Water Marketing:**
  - Improved efficiency of water marketing and leasing
- **Water Planning:**

- Concern: need for honesty during public meetings
- **Water Quality:**
  - Protection of water quality
  - Pollution to groundwater by septic systems and other uses
  - Maintenance of water quality and temperature (for habitat, agricultural, and municipal purposes)
  - Aquifer protection
- **Water Rights Enforcement:**
  - Protection of existing uses
  - Concern: water court losing jurisdiction
  - Lack of enforcement among existing water users – on ditches and between wells
- **Water Storage:**
  - Funding for water storage improvements
  - Look at increased water storage and the benefits to users
  - More storage is needed due to breached dams and lost storage
  - Opportunities to store excess water during spring runoff

## Top citizen priorities heard at Libby Dam:

- **Aquatic Invasive Species:**
  - Focus on prevention and management of aquatic invasive species
- **Federal Regulation of Water:**
  - Concern of federal involvement with Montana water policy, and concerns that Endangered Species Act-related regulations could impact existing right; local collaboration should be emphasized to address these concerns
- **Fisheries and Instream Flow:**
  - Recognize the interconnections between instream water rights and other/existing water rights
- **Growth and Development:**
  - Be mindful of future water availability for industrial uses in the Kootenai region, and recognize the need to accommodate potential growing industries, especially with regard to localizing the economy
  - Concern: Economic growth and development could be stopped or slowed in the future due to water policy
- **Water Allocation and Adjudication:**
  - Look beyond physical availability of water and quantify legal availability (square away adjudication)
  - Need to quantify and understand allocated versus actual use

- Concern: how will the Kootenai region meet competing demands for limited water use?
- Impact of over-appropriated water on municipal water supplies
- Need to understand how much water is consumed
- **Water Planning:**
  - Concern: the historic state water planning process essentially failed the Tobacco Valley; will the new planning process really be useful and use local input?
  - There is no “one-size-fits-all” solution for Montana; can a state-wide management scheme be replaced with a basin-wide management and regulatory system?

## Top citizen priorities heard in Kalispell:

- **Aquatic Invasive Species:**
  - See Water Quality
- **Climatic Changes:**
  - Climate change, and the need to mitigate for changing flows
  - Planning for lack of high mountain water storage & snowmelt
  - Looking at potential changes in the agriculture base
- **Federal Reserved Water Rights:**
  - Resolution of Confederated Salish & Kootenai Tribal Compact
  - Concern of balance between federal and state powers (stated as “federal ruling over state sovereignty)
- **Fisheries and Instream Flow:**
  - Maintaining flow and appropriate cold temperatures for fish and wildlife
- **Water Allocation and Adjudication:**
  - Over-allocation of water rights in the Flathead Basin in comparison to water use
  - Need to finish adjudication
- **Water Availability:**
  - Take a full inventory of existing water and get accurate measurements of stream flows
  - Concern: effect of aging forests on stream yield
- **Water Planning:**
  - Take adjudication, flows, and other information for all different streams and provide output in a user-friendly format the public can use
- **Water Quality:**

- Water quality, specifically invasive species, Total Maximum Daily Loads (TMDLs), and non-point source pollutants
- **Water Storage:**
  - Need to address storage issues around spring flow, flood control, and carry-over from wet to dry years
  - Concern for future management of Kerr Dam

## Top citizen priorities heard in Missoula:

- **Aquatic Invasive Species:**
  - Managing aquatic invasive species
- **Climatic Changes:**
  - Drought, flooding, snowpack, and other issues associated with climate change
  - Managing the impact of climate change on water resources
  - See Growth and Development
- **Fisheries and Instream Flow:**
  - Protecting instream flow and managing instream flow during drought
- **Gages and Monitoring:**
  - Properly measuring water systems to address issues associated with “leaking” systems
  - Measurement and monitoring of water rights, specifically surface water
- **Groundwater Wells and “Exempt” Wells:**
  - See Growth and Development
- **Growth and Development:**
  - Managing demands from increased development, especially housing, residential water use, and exempt wells
  - More extreme water issues (“higher highs and lower lows”) due to growing population, land use changes, and climate change
- **Infrastructure and Irrigation:**
  - Impact and economic feasibility of agricultural infrastructure and water use
- **Water Allocation and Adjudication:**
  - Protection of private property/water rights
- **Water Availability**
  - Identify new sources of water supply
- **Water Marketing:**
  - Flexibility in water rights marketing (encourage legal and regulatory changes to streamline this process)

- **Water Planning:**
  - Collection of water management data, including snowpack, surface, and groundwater data
  - Make recommendations actionable so that parties can deliver
- **Water Quality:**
  - Protection of water quality for people and wildlife
  - Detrimental impact of growing population, land use changes, and climate change on water quality
  - Increasing pollution
- **Water Rights Change Process:**
  - Finding an efficient, economic, and fair process for water rights changes
- **Water Storage:**
  - Addressing new water storage needs
  - New water storage dams
  - Concern: protection of natural/wetland storage

## Appendix D: All Issues Recorded at Public Scoping Meetings

*All issues below are listed as they were recorded at each public meeting. The list is not separated into categories, but instead organized in alphabetical order.*

- 1 Ability to forecast water yield
- 2 Aboriginal treaty/water rights need to be resolved
- 3 Access to agricultural water delivery
- 4 Accurate accounting of ground and surface water interactions
- 5 Additional water storage, of all forms, including groundwater, natural, wetland, etc.
- 6 Adjudication
- 7 Aging agricultural infrastructure
- 8 Agriculture
- 9 Allocation to beneficial uses (it is a balancing act with instream habitat)
- 10 Already not enough water for existing use during certain parts of the year and yet we have more growth and need for water in the future
- 11 Application process for a water right is too expensive and complicated
- 12 Aquatic invasive species
- 13 Aquifer maintenance and protection
- 14 Armoring of river banks and the effects
- 15 Availability of instream flow for fish in light of reduced availability
- 16 Avoid water rights becoming a political issue
- 17 Balance between developing residential and industrial use with agriculture use
- 18 Balance of consumptive and non-consumptive uses
- 19 Balancing agricultural water use with instream habitat
- 20 Balancing human demands with wildlife needs
- 21 Balancing residential and industrial use in the future
- 22 Basin closures due to hydro power rights
- 23 Better data on water supply
- 24 Better water information and data
- 25 Big money buying water rights
- 26 By the constitution, how can there be two sovereign nations in Montana?
- 27 Bypassing water right permitting process by using groundwater certificates
- 28 Can state take water from the Bitterroot and transport to another area?
- 29 Care of the aquifer
- 30 Certainty in DNRC's change process
- 31 Changing agricultural base
- 32 Changing land ownership patterns
- 33 Clean water
- 34 Clearer authority for water changes and improved notification when any changes may affect a water rights holder/landowner
- 35 Clearer information regarding water rights
- 36 Climate change mitigation

- 37 Climatic extremes – drought and flood (seasonal changes in melting and snowpack)
- 38 Combined appropriations
- 39 Community/human well-being and quality of life
- 40 Competing interests for limited surface water supplies
- 41 Complete statewide adjudication (to provide more certainty)
- 42 Concern about losing water rights and property rights
- 43 Concern about septic systems on water quality
- 44 Concern for junior users not getting water
- 45 Concern of recreation (floating/fly fishing) getting higher priority over other beneficial uses (results in lost property rights)
- 46 Concern upon impacts of Canada placing a call on downstream water
- 47 Concern: irrigated land viewed as dry land pasture and taxed as such
- 48 Concern: statistics associated with percentage of water used that goes to agriculture
- 49 Concerned about continuing agricultural and fisheries use
- 50 Concerned about loss of farm land to subdivisions
- 51 Concerns with instream flow rights and validity of quantifications
- 52 Conflicts between uses
- 53 Conservation strategies, such as irrigation technology
- 54 Consider impact of storage on spring flows (detriment to ecological function)
- 55 Consumption by sprinkler irrigation
- 56 Consumptive water rights should be treated differently than non-consumptive
- 57 Conversation from flood to sprinkler irrigation increases consumptive use
- 58 Cooperatively managing allocations in times of drought
- 59 Corps of Engineers hatchery – what availability is there for hatchery expansion?
- 60 Confederated Salish and Kootenai Tribes compact (off-reservation water rights)
- 61 Confederated Salish and Kootenai Tribal rights – what does this mean for other water users?
- 62 Decrease in seasonal instream flow resulting from land use and irrigation changes
- 63 Development pressures
- 64 Development: adverse effects to senior water uses from exempt wells, lower streamflow, and the emergence of new house and “mini ranches”
- 65 Distribution of high water and spreading it out in the upland
- 66 DNRC should not meter exempt wells
- 67 Do not know much water is being consumed – allocated versus actual use
- 68 Domestic supply
- 69 Domestic wells (exempt wells) – protection of domestic rights and concern about new wells taking water from users
- 70 Downstream demands effecting upstream users
- 71 Downstream pressures – Montana’s water should be used for Montana
- 72 Drought
- 73 Drought and climate change
- 74 Drought planning and adaptive management
- 75 Dust concern when Lake Koocanusa is low

- 76 Early melt-offs, less water during peak use (climate change issues)
- 77 Economic growth and development might prevent ranching, fisheries, and recreation
- 78 Effects of CSKT Compact
- 79 Effects of over-allocation on future growth
- 80 Effects on water recreation, both private and commercial
- 81 Endangered species
- 82 Endangered Species Act may impact water rights holders
- 83 Enforcement of water rights
- 84 Enhance DNRC authority in water rights enforcement
- 85 Environmental remediation on the upper Clark Fork
- 86 Examine the federal water rights
- 87 Except well quantity policy and municipal development
- 88 Exempt wells
- 89 Expanding domestic use from development
- 90 Facilitate better process for drought planning (especially associated with climate change – look ahead 5 to 10 years)
- 91 Federal and state control of water
- 92 Federal ruling over state sovereignty
- 93 Finding an efficient, economical, and fair process for water rights changes
- 94 Finding new water supplies
- 95 Finding water for new uses in closed basin
- 96 Finish adjudication
- 97 Fisheries
- 98 Flexibility in water right marketing
- 99 Flow & cold temps for fish and wildlife
- 100 Forest cover and the effect on water yield
- 101 Funding for water storage improvements
- 102 Future availability for industrial uses (for example, mineral development)
- 103 Fish, Wildlife and Parks rights on Tobacco are excessive
- 104 Get accurate measures of water flows from streams
- 105 Governance of water rights on the CSKT reservation
- 106 Ground and surface water depletion
- 107 Ground water depletion and pollution
- 108 Habitat preservation
- 109 Historical rights not being use & limited ability to help ecosystem
- 110 History of water planning is needed
- 111 How can the recommendations be made without looking at both physical and legal availability?
- 112 How changes of use (to sprinkler and pivot irrigation specifically) are affecting agricultural uses and water rights
- 113 How much do we charge the CSKT tribe for the water we send them?
- 114 How much water (especially groundwater) is available for growth?
- 115 How to balance Fish, Wildlife & Parks Murphy Rights for recreation and water rights

	for irrigation?
116	How to preserve a water right for fisheries and ecology?
117	How will the state planning process include future water uses for industry and economic growth?
118	Hydropower
119	Identification of new sources of water supply
120	Impact of climate change on water resources, and managing it
121	Impact of exempt wells on senior water rights
122	Impact of Natural Resource Damage Program flow restoration program
123	Impact of over-appropriation on municipal water supply
124	Impact of septic systems on water quality
125	Implication of Milltown Dam rights
126	Implications of exempt wells impact on management of supply and demand
127	Implications of increased energy costs on choice of irrigation methods
128	Improve fish habitat and riparian habitat
129	Improve fisheries by increasing water storage
130	Improve water quality
131	Improve water rights change process, regarding instream flows
132	In the Tobacco Valley, 80% developable land is in an over-appropriated basin. How do you plan for that?
133	Increase conversion of efficiency towards instream flows
134	Increase water use efficiency (programs for this) and promote those programs
135	Increased water storage (opportunity)
136	Industrial use
137	Influence of “more efficient” systems on water availability
138	Influence of state process on what management decisions
139	Infrastructure – irrigation
140	Instream flow
141	Instream flow - “give attention to the Sawm, Kootenai, and Lower CF”
142	Instream flow (main stem and tributary streams)
143	Instream flow rights
144	Instream flow should be junior to other decreed water rights
145	Instream flow threatening the priority of historical use in water rights process
146	Instream flows and ecological issues
147	Insure water quality for all users
148	International water quality – transboundary issues
149	Inventory different areas along streams
150	Irrigation rights getting reclassified during subdivision
151	JE Bell water right from Flathead Lake
152	Keeping agriculture in business
153	Keeping tributary streams healthy, maintaining connectivity, and preventing dewatering
154	Kerr dam

- 155 Lack of enforcement among existing water users – on ditches, between wells
- 156 Lack of enforcement to prevent practices that contribute to the mentioned problems.
- 157 Lack of funding and resources for water rights holders
- 158 Lack of public awareness of all of the above issues
- 159 Lack of speedy resolution in surface water disputes (adjudication)
- 160 Landowner fear/anxiety over inquiry and upgrades
- 161 Leaky systems, unmeasured use, and waste in irrigation systems
- 162 Legal availability
- 163 Legal versus physical availability
- 164 Legality of Avista water filings
- 165 Libby Dam water rights
- 166 Limiting effect of exempt wells on existing uses
- 167 Local collaboration on water policy is needed (no federal control)
- 168 Look for opportunities for collaboration (like the Blackfoot River drought plan)
- 169 Loss of flood irrigation
- 170 Loss of water storage (breached dams) – need more storage
- 171 Loss of water to instream flow rights
- 172 Maintain connectivity (for fisheries)
- 173 Maintain ecological function and recognize it as a priority that is a beneficial, non-consumptive use
- 174 Maintain Flathead Lake levels for recreation
- 175 Maintaining habitat of Bitterroot River to prevent the collapse of the aquatic system
- 176 Maintaining water quality and temperature (habitat, agricultural, and municipal)
- 177 Maintenance of water quality
- 178 Maintenance of water supply from the Wilderness
- 179 Make it easier to convert a consumptive use to a non-consumptive use
- 180 Make sure Montana is controlling and managing Montana water
- 181 Manage reservoirs to minimize adverse impacts (temp, flow, water quality)
- 182 Measurement/monitoring of water rights
- 183 Meeting competing demands for limited amounts of water
- 184 Metals contamination
- 185 Mining and industry
- 186 Mitigation rights of current water rights holders
- 187 More sustainable crop managing; use of low water crops and reuse of wastewater
- 188 Name changed to “Flathead and Kootenai River Basin”
- 189 Native Americans claiming water rights because they were here first
- 190 Natural wetlands should be used for storage, and as micro-reservoirs for aquifer recharge
- 191 Need honesty during public meetings
- 192 Need more private dams in tributaries
- 193 Need more water storage
- 194 Need to understand groundwater-surface water interactions
- 195 New demands

196	New storage for new uses
197	New storage options
198	Non-measured irrigation use
199	Non-native fish and bird species in the Clark Fork (i.e., blue herons, pelicans, etc.)
200	Non-point-source pollution
201	Nutrient conditions in Silver Bow Creek
202	Objection to enforceable water right at Milltown Dam
203	Off-reservation compact implications
204	Once size does not fit the whole state; regional appropriation should happen, or by watershed
205	Opportunities to store excess water during spring runoff
206	Over-allocation exacerbated by changing climate
207	Over-allocation of water right in flathead basin in comparison to water use
208	Over-appropriation of water rights
209	Paper water versus actual water use from big water rights holders such as Avista
210	Pesticide/chemical use and how it may impact water quality
211	Planning for less snowpack, higher runoff, less recharge (climate change issues)
212	Planning timeframe is too short
213	Politicization of water rights priorities (we do NOT want hierarchy of uses established)
214	Pollution to groundwater by septic systems and other uses
215	Preserve historic property/water rights; specific concerns were associated with the CSKT Compact, and local water sharing and collaboration could be solutions
216	Preserving water that we have pursued will planning for future needs such as subdivisions
217	Priority of water rights in sub-basins versus power companies and dams
218	Proper use of water for community stability and community interest (conflict with water law)
219	Protect against large scale out-of-state diversions
220	Protecting existing water rights
221	Protection of domestic uses water rights with population growth
222	Protection of existing rights
223	Protection of existing uses
224	Protection of existing water rights
225	Protection of private property water rights
226	Protection of riparian areas
227	Protection of senior rights holder instead of fish
228	Protection of water quality
229	Providing for increased water storage
230	Providing for instream flow
231	Providing water for current and future uses
232	Provisions for tourism, quality of life, instream flows (currently no default)
233	Public education about the hydrologic cycle

- 234 Put dams in to help fisheries- irrigation and beaver dams
- 235 Putting funding from Asarco to the best, most organized use
- 236 Quality is at risk due to decreasing water supply and increasing pollution
- 237 Quantify groundwater/aquifer-development to protect users
- 238 Quantify water claims in Montana for protection against downstream claims
- 239 Quantify water rights
- 240 Quantifying water so we know how much there is when negotiating with the tribes
- 241 Reasonable recreation impacts
- 242 Recreational use
- 243 Reduced flows
- 244 Remove loopholes to irresponsible/illegal water usage (i.e. exempt wells)
- 245 Requirements for water measurement/levels/usage/gauges regarding all uses
- 246 Reserve water for future consumptive uses
- 247 Residential and industrial development: more storage is needed for economic growth
- 248 Residential well exceptions
- 249 Residential/urban water use
- 250 Resolution of aboriginal rights
- 251 Resolution of water rights via the CSKT Compact
- 252 Return flows
- 253 Reuse of “wastewater” – Population, land use, and climate change are deriving flow extremes
- 254 Role of feds in applying for water rights
- 255 Shared giving of mitigation water for future development
- 256 Simplify water permit process
- 257 Source water protection
- 258 State and Federal control of lands impact water use
- 259 State of Montana should not share water rights with the feds or tribes
- 260 State participation in Libby Dam flow management
- 261 State planning process needs to consider the compact with tribes and the Columbia River Treaty
- 262 State should continue to be in control of water (not federal control)
- 263 State water planning process to date has failed in the Tobacco valley
- 264 Storage (look at increase to benefit all)
- 265 Storage (spring flow, flood control, carry-over from wet to dry years)
- 266 Storage dams
- 267 Superfund remedies related to water availability
- 268 Surface water rights for irrigation
- 269 Sustaining existing use with a shrinking water supply
- 270 Take full inventory of available water
- 271 Technology and finding new strategies for managing or increasing supply
- 272 The challenge of dealing with large population growth and the demand for municipal water supplies
- 273 The cost of defending a water right and economic impacts on the agricultural users

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- 274 The impact of drought and drier climates on our ability to manage water
  - 275 The state should defend rights on behalf of those they are decreed to
  - 276 Threats from other state's water claims to Montana's water rights and supplies
  - 277 Time and resources spent on adjudication
  - 278 Timing of precipitation (address early runoff)
  - 279 Timing, lowered low flows
  - 280 Tobacco is over-appropriated valley
  - 281 Tobacco River
  - 282 Tools to reallocate water conserved by efficiency measures
  - 283 Tourism and recreation
  - 284 U.S. Forest Service filing for water rights for non-existent water in close basin
  - 285 Understanding consumptive use for existing water rights; how can agriculture ever be considered a "consumptive" use?
  - 286 Use of flood irrigation water and return flow (increasing availability)
  - 287 User-friendly inventory
  - 288 Users taking more water than they need
  - 289 Water consumption use in relation to forest canopy
  - 290 Water court losing jurisdiction
  - 291 Water demands outside of Montana; if water is sold it could hurt water users in Montana
  - 292 Water marketing and leasing efficiency
  - 293 Water measurement data (surface water, ground water, snow)
  - 294 Water quality – concerning emergency response related to rail transport
  - 295 Water quality, invasive species, Total Daily Maximum Loads (TMDLs)
  - 296 Water quantity related to water quality and the ability to meet water quality standards
  - 297 Water rights in closed basins, including groundwater in municipalities and growth
  - 298 Water supply decreasing as a result of increasing development
  - 299 Water supply decreasing due to climate change
  - 300 Water transport during short water years
  - 301 Wetland restoration
  - 302 What are the legal means to get water to your property when you have a water right
  - 303 What are the opportunities for water conservation?
  - 304 What is the goal of the water planning process?
  - 305 Whether there will be water for industrial growth
  - 306 Will input tonight be heard?
  - 307 With changes in climate and land area, bringing water faster in spring and then less available in fall (losing agricultural storage)
  - 308 1855 treaty was not a water right
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## Appendix E: **Public Survey Data**

**(next page)**

1. What is the single most compelling water management issue (challenge or opportunity) in the Clark Fork and/or Kootenai River Basin?	2. What solutions may address the issue you identified in Question 1?	3. What are the most likely barriers to implementing the solution(s) you propose in Question 2?	5. In terms of the knowledge and information needed to prepare a new water management plan for the Clark Fork and Kootenai River Basins, what types of information do you think are critical to consider in the planning effort?	6. In your opinion, what is the best way to obtain this information?	7. Is there anything else you would like for the Clark Fork Task Force to know?
aquatic species (screens).	rights for minimum flows and include stipulations on water quality and temperature.				
benthic vitality	restoring natural flows	cost, political will	basins--natural state; baseline; projected use	control sites; historical data	no
clean drinking; recreation water	unsure	money and public support	populations in the area and current water conditions	census and scientific studies as well as other government documents	no
Clean-up and prevention of future contamination including mine waste, litter, and even invasive species	More stringent regulations concerning the construction and cleanup of mines, as well as careful inspection of watercraft and equipment.	Mine interests interrupting regulations of mines, lack of public participation	Credible scientific studies, expert input, governmental documents/findings, and landowner input	Research and solicit input from public	Is pharmaceutical pollution a factor being considered? This could be important for future planning?
Completing the superfund clean-up on the upper reaches of the Clark Fork River.	Convincing the EPA and The State DEQ that no more studies are needed & they need to get on with the clean-up work	The EPA and the State DEQ	The amount of water currently being used by Agriculture and Industry in the Basin and ways to make it available into the future  Future needs of water by business so as not to impair economic expansion in the Basin. Do not propose management changes that would inhibit economic growth.	Water adjudication records Chambers of Commerce RC&D Business surveys	no

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Completion of the state-federal-tribal water compact negotiations	Approval of a compact that state-federal-and tribal water experts have agreed to	Lack of political action by state legislators who are supported by those stakeholders who wish to strip tribal water claims.	There needs to be local long range strategic plans at the state, county, and reservation level so we understand future water demands and allocations.	Complete water adjudication and approve the tribal compact	Planning in a region that is expressing so much negativity to local planning, zoning, and regulation should prove interesting.
Conservation and access rights issues of clean water. "Clean-up" and wetland/riparian area restoration work/efforts are both an opportunity and a challenge.	The task force conducting public surveys is the first step [information gathering] in learning what the public feels are important water issues. Planning for the future with conservation efforts, clean water preservation and implementing alternative and sustainable water storage systems might address some of the issues.	Not enough input or public interest during the planning stages, as well as continued questions/court battles regarding access rights....unresolved issues.	Current and future supply and demand, practical conservation measures, alternative storage mechanisms, groundwater and aquifer protection means.	Through local and social media.	Not at this time.
contamination of groundwater	restrictions on population and development density	economic growth	sources and quantities of contamination	high resolution temporal and spatial monitoring	no

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Controlling water contamination from toxins/high nutrient loads	<ul style="list-style-type: none"> <li>- mass cleanup efforts</li> <li>- assessment of industrial facilities, businesses, and agriculture</li> <li>- run-off on the river</li> </ul>	Funding & time	<ul style="list-style-type: none"> <li>-Public opinion</li> <li>-Who will be affected - who lives by these basins?</li> <li>- What sorts of toxins need to be extracted from the water, or are located close to the basins?</li> </ul>	<ul style="list-style-type: none"> <li>- Public talks</li> <li>- Online articles that are easily accessible &amp; easy to read (bullet points, not too long)</li> <li>- Emails</li> </ul>	no
Damming	Don't really know	Money, funding	Problems with environmental degradation	Not really sure	no
Difficulty getting a new water appropriation.	Better organized and defined water markets, as well as laws and regulations to support this.	Slow speed of legislation or government action. Waiting until it is a real emergency to get something done.	Better information on the current state of the water right system. Number of applications to DNRC for new appropriation and water right changes vs the number that have made it through the process. Average and range of time these application take in the process and an estimate of the cost to the applicant.	From DNRC.	no
drought in the Upper Clark Fork River Basin	A collaborative drought management plan as has been done for the Blackfoot River	<p>misinformation such as what occurred with the proposed reserved water compact with the Confederated and Salish and Kootenai tribes</p> <p>having a water use law this is archaic for current times (e.g. who has knowledge of pre-1973 consumptive uses/irrigation practices)</p> <p>lack of flow</p>	<p>groundwater/surface water connections</p> <p>actual water use (e.g. need for flow measuring devices on headgates, etc.)</p>	funding the needed investigations and requiring measuring devices at all headgates	FWP should be the lead agency in determining instream flow needs for fisheries and be funded to fill in the data gaps and get needed updated data related to previous work to develop instream flow targets

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		measuring devices on diversions and at other places such that we don't have a good understanding of actual water uses			
Flows	Insuring instream water flows consistent with supporting aquatic life, water quality and temperatures.	Dewatering streams for irrigaiton, agricultural nutrients	Variations in annual water flows carefully studied and taken into account, and timing. We need to insure adequate flows year round in both the main stems and the tributaries. Insure connectivity as well. Water temperature regimes are important as well, to insure healthy aquatic environs.	Use data from the last 10 years, which better represent the future. Use this data to develop a plan that will provide a buffer for future events like low flows, high temperatures.	I wish them good luck! They must know how important good quality water is to all aspects of life and recreation in Mt.
general: water availability and quality	n/a				no
habitat fragmentation	hybridation of species--index scores	weires	population and statistics, too much road access		no
habitat fragmentation; water management	hybradation index scores, weires- fish wall 4 biologists, watch change in values for recreational use	public interests, funding	population statistics; road access--there is too much	communicate locally research attend public meetings to be involved use locals for field research that will be shared at local meetings	no
historical se	Don't fix it if it isn't broken	Federal govt. FWP - instream flow			no

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I am concerned about the high river temperatures in the summer that cause fish kills.	Finding a way to lower h2o temps in the summer.	Scientific solutions.	fish kill numbers	monitoring	no
I think it's the watering of lawns. The people don't know when or how to water.	Watering should only take ace at dawn or dusk. Not in the hottest part of the day.	Nieghborhood organizations inforcince the proper way to water. Citations for those who have the information, but refuse to comply.	We need to concider the effects on the surrounding communities of the species that already reside there. We need to do what is best for them and then we humans will benifit from our labors in the long run.	The best way is to talk to a conservationist and/or environmentalist who has been at it for some time to point you to the proper material to read. Otherwise just do what would be natural to the land.	no
I think the high water temperatures in the summer that put stress on the trout is a big issue.	A solution would be to manage water in a way that lowers river water temperature in the summer.	A huge barrier is climate change and the trend of increasing summer temperatures.	The number of fish killed in the summer by warm temperatures would be good information.	The best way to get more of this information is to monitor more areas for fish kills.	no
In my opinion, the biggest water management issue will be maintaining the current water supply due to over-consumption and population growth in the area.	You can't maintain the water supply without water conservation efforts and educational outreach to try and limit consumption.	People don' often conserve unless the water stops flowing out of THEIR tap, so no matter the water education, there is a likelihood that the outreach efforts won't work.	It is critical to realize how much water is appropriated now to see how much more will be used in the future. Perhaps current and past data will show population growth/water consumption, so planning efforts must include projected use levels.	If there is a state data bank of water appropriations and past data, that would likely be the most helpful.	EDUCATIONA L OUTREACH IS VERY IMPORTANT. DON'T GIVE UP ON IT OR UNDERESTIMATE IT'S REACH TO CERTAIN PEOPLE.

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increase in demand and depletion of both surface and ground water	water rights, water conservation, strict monitoring and enforcement of the above	political opposition, particularly from rural or economic development groups	projections of future demand and projecting effects of climate change; long term strategies to adapt appropriately	data extrapolation ? collaboration with economic development groups?	no
increase in water demand	protect existing beneficial uses limit water use	big business power cultural sense of right to water	ecological impacts of increased water use	unbiased scientific studies look at parts of the the country with water issues	no
Instream flow	More leasing of water rights for beneficial use of instream flow and fisheries management	Privatized water rights; perception of losing water right if it's not used/applied	Future development plans and influence of climate changes on water flows/temperatures	Adaptive management techniques with reference to humans on the landscape	no
Instream Flow	Instream Flow studies were completed by MDFWP on numerous tributaries to the Kootenai River in the 1980's. This information should have formed the basis of an instream flow reservation for the Kootenai. The USFS has used some of these data for Federal Appropriations, but most of the	POLITICS!!!	See 2. above regarding Instream Flow.	The information is available and resides with MDFWP.	no

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	information has apparently never seen the light of day. Encourage MDFWP to pursue the remainder of the instream flow reservations.				
in-stream flow	buy water rights and allocate to in-stream flow	values!	flow; ecological integrity	studies, surveys	Protect recreation but not at the cost of ecological integrity.
Instream flows and managing for all beneficial uses with increasing demand on the resource.	1. Hydro power management such as integrated rule curves etc. 2. Purchasing rites no longer in use and/or over-appropriated and leasing rites for instream flows/aquatic life support	Politics and competing demands for what has become a limited resource	Short and long-term effects of climate change on water supply/hydrologic effects	Research and monitoring	no

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Kootenai - Waste from Canadian coal production/operations that introduce pollution into the Kootenai.	Implement mitigation solutions that actually work.	<p>The Truth, Science, and Government Red Tape.</p> <p>In order for there to be a solution, there needs to be time in order to determine the long-term effects and that doesn't fit well within any business model. The Canadian companies should not be directing this conversation and solution. Correct information, best available science, and the truth of the situation should guide the way forward.</p>	Point source pollutions. Sediment introductions/reductions. Endangered Species - bull trout/sturgeon habitat conservation. Tribal involvement a must.	Science. Federal Agencies. Tribal Agencies.	no
Manage for multiple interests (challenge)	-		Most important ecological info		no
Management of waste tailings and CF headwaters.	A plan for prepared flooding.	The cost of implementation.	Stream health, including pollution levels and chemical levels/such as pH and DO	Stream monitoring	no

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Managing the synergistic effect of Population growth, land use change and climate change -- these all work together to make water availability fluctuations more extreme (deeper droughts and more extreme floods). They also tend to work together to degrade water quality (pollution goes up as dilution goes down during the most stressful time of the year).	Water Conservation (reducing water demands with waterwise crops, removing marginal lands from cropping; urban & industrial water conservation) AND Protecting and restoring Natural Storage (in wetlands, aquifers and other natural storage systems)	Water conservation requires changes in behavior and investments of time and money. Unless required or incentivized, there will likely be little participation.  Storage proponents will likely focus on traditional infrastructure storage which causes many problems. Natural storage protection/restoration requires protection of wetlands, aquifers, groundwater recharge areas . This requires regulations and/or incentives.	1) water availability & use on a finer scale than 4th code HUCs  2)Stream reaches that are impaired for flow related reasons -- such as chronic dewatering  3) mapping of natural storage areas	Fund DNRC to do 1) Fund professional hydrologists (such as Jencso the state climatologist) to do 3) get 2 from DEQ & DFWP	no
mining toxins + contaminates nutrients	increased mining regulations; water treatment facilities	funding, accountability	who has rights to the water, what is is used for, the quality of the water	water quality testing	no
Modified river flows due to irrigation withdrawals, dams and climate change.	Balance water withdrawal/consumption with ecological needs by developing a plan for current and future water use.	Private water rights and private land ownership along the river(s).	1) Inventory and understanding of current uses. 2) Population and development growth projections. 3) Understanding of how climate change could influence the basin. 4) Understanding of how aquatic and terrestrial ecosystems have been and will be influenced by changing river	Acquire social, technical and financial resources, whether it is through federal grants, state legislative funding, or private funding.	Montana's water resources are its greatest assets. I think developing a plan is the step in the right direction for improving Montana's future.

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			characteristics. 4) Development of goals, objectives and timeframe for results. 5)Strategy for acquiring social, technical and financial resources to carry out the plan.		
Poor water quality due to the mining contamination, however, DEQ has the resources to address that problem, so I would have to say that low flow/warm water temperatures and the effects on the trout population.	The solution is to obtain irrigation water rights and converting them to insteam flow. Also, reconnecting the Clark Fork to colder water tributaries can allow for isolated fish popultion to gain refugia and help with the problem.	The DNRC change authorization process seems to be a significant barrier to trying to obtain addition instream flow. DNRC have recently changed policies that inhibit the change process.	The current water use and how water can be more efficiently used	Since the Upper basin, say above Garrison seems to be separate socially from say Flint Creek area, working with local groups on these issue would make sense.	The fear of the compact seems to dominant the ranchers of the area, though I think it is irrational. A drought management plan along with reasonable policies from DNRC will increase flow inte river at crucial times and restor the river trout populations. If this was successful, ranchers fears could be at least reduced.
Potential for industrial growth the milltown water app.and what will happen to it The water users in the basin for ag purposes	Leg to safeguard our water rights from becoming leased or sold to downstream users	Leg action-or even an amendment to the Constitution of Mt.to protect our individual rights	What the real plan is	Informational meetings in accessible locations	no
protecting the missoula county aquifer	ways of testing water in the aquifer	cost and time required	education, public support	research and outreach	no

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Quantification of Mont. water use and adjudication of our water rights because downstream states are also laying claim the river waters for their states uses.	money united state action to get it done	knowledge of water law, water right history and court decisions	Better understanding of the Clark Fork Compact compromises and why they were made. There has been a huge amount of exaggerated fears of the Flathead Indian Irrigation Project water rights.	The various US Supreme Court decisions that affect our water rights need to be in the up dated in the 2004 Clark Fork water plan when we publish it. The 1855 CSKT and U.S.Treaty and Winters decisions that affect the water rights of the entire Clark Fork and Kootenai Rivers Basins.	There should be some discussion about the Bureau Of Reclamation in why and how their projects were built, how they operate and are managed with per acre equal quotas. Water delivery from water stored in reservoirs and irrigation canal delivery. Water, Land & Law in the West by Donald J. Pisani is one reference. Also a number of lawyers who have been in this recent mess.
Quantity and quality of water in the streams.	Enforcement of illegal water taking. Partnerships to assist irrigators to take less water. Updated wastewater treatment facilities and creation of newer treatment facilities to decrease the number of	Funding and enforcement.	Historic uses, current pollutant sources and potential inefficiency of current infrastructure.	Research and field studies.	no

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	septic systems in the basin.				
Sediment, erosion, and watershed quality after a fire.	Headwater land management prior to a fire and soil restoration asap after a fire. (Contour tree falling, waddles, re-planting, ect...)	Funding, appeals, lack of management.	Fire and sediment issues.	Get out there and see what is going on.	no
Septic challenge - subdivisions	Restrict the number of wells; limit effluent into river	Poor governmental controls	Impacts of subdivision and loss of farmland	NA	no
that the water management needs to be taken seriously by all people in order to make a real difference	by engaging the community into the project and let them gain from it	cost, planning, cooperation between everyone	the type of ecosystem and the uniqueness of each stream and tributary	field studies and test sites	no

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<p>The most compelling water management challenge is the long-term security of a clean, available water supply that supports the social and natural systems of the Clark Fork Basin. Of primary concern is a balance between societal needs and the hydrologic framework needed to sustain the functional characteristics of a healthy Clark Fork Basin ecosystem. This balance between the needs of societal and natural systems must result in a sustained and predictable water supply in light of climate variability and seasonal demands.</p>	<p>Two approaches come to mind to address the issue of long-term water security. Of primary importance is the strengthening of collaborative watershed groups as a forum for dialog. It is the framework of local dialog that results in actionable activities whether they be on-the-ground, in shared-use, or in the development of policy. While a forum for dialog is a first step, that dialog must be grounded in education and ease of access to credible information. This must include information about the limits of a sustained environment as a guide for rural and urban</p>	<p>The most likely barrier at the local level is an unwillingness of stakeholders to participate in dialog. Probably equal to that is the unwillingness of agencies and government to be responsive to the information needs of watershed groups and facilitate the dialog to a successful conclusion that reflects both societal and natural system needs. Through a proper policy and funding structure these barriers can be overcome. For example, an architecture that rewards collaborative solutions for mutual benefit.</p>	<p>A clear articulation of water availability, the demands on existing water through use or right, and what opportunities Montana has to affect the existing condition over the next 20 years. Montana must have more than one tool in its toolbox and should not consider expanded water storage of unallocated water as its only option.</p>	<p>Obtaining a viable assessment of water availability simply requires good science. Montana needs to fund and leverage agency, university, and community experts in continually refining the collective understanding of available water. This has to be a continuous pursuit and cannot simply be only done during Water Plan revisions. The State of Montana needs to take full responsibility for accounting for water use and water right sooner than later. I would argue that all water use needs to</p>	<p>This is a large and important under-taking for the citizens of Montana. I'm concerned that the effort might not be properly funded for the long-run and thus will lack the leadership required. Without this support the end result of this plan is that it will simply be an administrative exercise.</p>

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	planning, and respect the cultural identity of locales that are sustained by these watersheds.			be metered. Montana also needs to fund and leverage agency, university, and community experts in collaboration with watershed stakeholder groups to identify viable solutions both on-the-ground and in policy.	
Waste water management	Waste re-use	Population and efficiency	<ul style="list-style-type: none"> <li>- How much H2O in cycle</li> <li>- Population</li> <li>- Current management</li> <li>- Projected needs</li> </ul>	<ul style="list-style-type: none"> <li>- Thorough assessment</li> <li>- Observation</li> </ul>	no
water availability	record water supply and demand, estimate increase in demand, find water sources	finding new sources of water to meet increasing demand	careful measurement of water availability and quality; effects on ecosystem and ecosystem services	careful data monitoring	no
Water availability for new development.	expand water rights use	existing water use			no
water compact	unsure	law/bills	all issues. the watershed is huge	peer review journals	no
water conservation	restricted diversions and educational programs on conscious water consumption	available resources to get information out	amount of use at any given point on the river and how the new plan will effect both humans and native species	through questionnaires like this and volunteering for canvassing	maybe more monitoring during "floating" season for safety of

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				efforts	humans and non species
water conservation/water availability	identify sources of water to meet demand identify drainages, high spring flow available for appropriation	not being able to use those sources, or they are not adequate to meet demand or opposition	population growth estimated increase in water demand estimated economic growth sources of water to meet demand	studies, surveys, professional opinions	no
water quality and health for humans and other species	continued clean-up efforts	financial resources	affordability, public education and involvement, maintaining and improving water quality; impacts on all species within the river basin	research collected about known effects, methods of water quality improvement, public opinion surveys and field work	I don't know - leaflets about this issue would be helpful to raise awareness.
Water Quality as it relates increased population pressures, ie subdivisions and recreation	education and laws protecting streams and streambanks, especially at the local levels.	economic pressure on county and city governments from developers and other parties. They have to see what is in it for them, ie making it a win / win proposition.	human development impacts on the water ways primarily homes and subdivisions and industrial. Need a handle on what exists.	In Lincoln County I think the Planning and Flood Plain administrators would be key for this	no
water storage	restoration of wetlands	n/a	ecosystem dynamics	engage wetland specialist and/or involve university students	no
Water treatment plan contributing to surface water	Algeolve algae water treatment	Money and perfecting the technology	Ecosystem services already in place	Studies of the ecosystem	no
We need to make sure that the problems presented by a	On a local level, the most important thing we can do is	We can have very little impact on the direct cause of the climate change	We need to develop long-term databases that reflect flows as well as changes in the quality,	Support for current data collection efforts by	Please consider the problem of increasing traffic by oil

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<p>changing climate are a part of every discussion involving water supply planning for the future.</p>	<p>recognize that climate change will have an impact on almost all areas of water use. As we plan for using our water in the future, we must recognize that the ways in which our watersheds have acted and reacted to management in the past may not be the way they will react in a warming environment. We particularly need to make sure that we don't plan for dependence on the water supply we have had in the past. Recognize that our snowpacks will be smaller, timing and amount of runoff will continue to change. Impacts to aquatic systems will likely be greater than we have planned for in the past.</p>	<p>problem, but we need to educate both planners and water users on the likely effects. We need to make sure that our watersheds are sufficiently buffered to withstand unanticipated impacts.</p>	<p>temperatures and biota of our streams and lakes to show changes both from a changing environment and from the effects of how we use the water. Without good basic data, we cannot make rational decisions on how we use what we have.</p>	<p>both state and federal agencies. It seems that basic data collection is always the first thing to be cut when budgets tighten. Any breaks in the data chain can mean that we miss vital changes that may affect our understanding of how our watersheds are reacting to our water use.</p>	<p>trains along our vital waterways. We are seeing, and will continue to see, increasing oil-train traffic. Once across the Continental Divide, these trains mostly follow waterways all the way to the coast. There has been very little planning done on what needs to happen when, not if, an accident occurs. Any accident involving trains carrying 100, 30,000 gallon oil tankers could have disastrous impact on all downstream aquatic ecosystems and our use of those waters.</p>

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With metals and nutrients already being addressed by standards and TMDLs, temperature and sediment issues would be next	Riparian restoration on public and private lands; maintaining instream flows in both the mainstems but more importantly the tributaries.	funding and landowner involvement	Better coordination and data sharing between state and local governments and coordination with Conservation Districts and other local watershed groups. Getting their groups to sit down and share this information.	Besides contacting the various agencies, the MWCC could help with some of the coordination. Also, holding a conference where various presentations from professionals can better inform the public. Follow that with town hall meetings for those who can't travel to a conference.	no
			general info	news; newspaper	no

## Appendix F: Public Comment Letters

Two letters of public comment were submitted to the DNRC for the Task Force's consideration during the planning process. Each letter is identified and summarized below. Copies of each letter are available from the DNRC upon request.

**Public Comment Letter Submitted by:** Ted Williams and Greg McCormick, on behalf of the Flathead Lakers

**Date:** December 3, 2013

**Summary:** The Flathead Lakers, a nonprofit organization protecting "clean water, healthy ecosystems and lasting quality of life in the Flathead Watershed," requested that the Task Force and DNRC consider the following issues:

- (1) *Maintenance of Flathead Lake levels for recreation:* Flathead Lake levels should be maintained, and a forthcoming drought management plan to manage Kerr Dam operations during droughts should be considered during the MWSI process.
- (2) *Consideration of opportunities to improve calculation of hydropower water needs:* The Task Force should clarify how actual water uses upstream from Kerr Dam may or may not affect flows at Noxon Dam, and should review Avista's water right.
- (3) *Precedence of local water needs for water stored in Hungry Horse Reservoir:* With regard to Hungry Horse Dam management, the Task Force should give Flathead Lake precedence over any contracts for purchase of water stored in Hungry Horse Reservoir for new downstream consumptive uses.
- (4) *Additional information and research needs:* Credible, professional, and comprehensive research is needed to clarify knowledge gaps related to groundwater and its interconnection with surface water.
- (5) *Protection and restoration of wetlands and riparian areas:* The Task Force should include planning provisions to protect natural water storage, flood mitigation, erosion control, groundwater recharge, and water quality protection features.
- (6) *Promotion of water quality protection, improvement, and monitoring:* The updated state water plan should address toxic substance and pathogen contamination, increasing nutrient loads, river bank and lake shore erosion, and aquatic invasive species introductions.

**Public Comment Letter Submitted by:** Rusby Seabaugh, on behalf of The Flathead River Commission

**Date:** December 17, 2013

**Summary:** The Flathead River Commission (FRC) was formed primarily to address “special challenges related to the lower 22 miles of the Flathead River that lie within the pool elevation of Flathead Lake at full pool and are subject to annual fluctuations.” Therefore, the FRC provided comments relevant to the lower 22 miles of the Flathead River and the impact of Kerr Dam Operations on water levels, riparian areas, and stream banks. Based on impacts to the lower 22 miles of the Flathead River and conversations the FRC has had with Todd Tilinger at the U.S. Army Corps of Engineers, the FRC proposed the following recommendations and goals:

- (1) Establish a Special Management and Planning Area for the lower 22 miles of the Flathead River.
- (2) The development of a Regional General Permit for this portion of the Lower Flathead River.

The FRC would like the Task Force to take action on the first recommendation, to establish a Special Management and Planning Area, during the MWSI planning process.

## Appendix G: Electronic References

Helpful information about the 2015 Montana Water Supply Initiative and water management in Montana:

- Montana State Water Plan – Montana Water Supply Initiative 2015:  
[http://www.dnrc.mt.gov/wrd/water\\_mgmt/state\\_water\\_plan/](http://www.dnrc.mt.gov/wrd/water_mgmt/state_water_plan/)
- Clark Fork and Kootenai River Basins – Montana Water Supply Initiative 2015:  
[http://www.dnrc.mt.gov/wrd/water\\_mgmt/state\\_water\\_plan/clarkfork/default.asp](http://www.dnrc.mt.gov/wrd/water_mgmt/state_water_plan/clarkfork/default.asp)
- Guide to Montana Water Management – Who Does What With Water Resources? Available at:  
[http://www.mtwatercourse.org/media/downloads/Montana%20Watercourse%20Water%20Resources%20Bro\\_WEB.pdf](http://www.mtwatercourse.org/media/downloads/Montana%20Watercourse%20Water%20Resources%20Bro_WEB.pdf)
- Water Rights in Montana (2012). Available at:  
<http://leg.mt.gov/content/Publications/Environmental/2012-water-rights-handbook.pdf>

The following links were referenced throughout the Issues Scoping Report, and provide additional resources, explanation and information.

- State Water Plan Development: a revised approach (1987). Available at:  
[http://dnrc.mt.gov/wrd/water\\_mgmt/montana\\_state\\_waterplan/pdfs/state\\_water\\_plan\\_development.pdf](http://dnrc.mt.gov/wrd/water_mgmt/montana_state_waterplan/pdfs/state_water_plan_development.pdf)
- Clark Fork River Basin Water Management Plan (2004). Available at:  
[http://dnrc.mt.gov/wrd/water\\_mgmt/clarkforkbasin\\_taskforce/water\\_mgmt\\_plan.asp](http://dnrc.mt.gov/wrd/water_mgmt/clarkforkbasin_taskforce/water_mgmt_plan.asp)
- Aquatic Invasive Species (2012). Available at:  
<http://fwp.mt.gov/fishing/guide/AIS/>
- Executive Order 13112, Invasive Species (1999). Available at:  
<http://www.invasivespeciesinfo.gov/laws>
- The Exemption: To Change or not to Change (2012). Available at:  
<http://leg.mt.gov/content/Publications/Environmental/2013-exempt-wells.pdf>
- TMDL Frequently Asked Questions, available at:  
<http://deq.mt.gov/wqinfo/TMDL/FAQ.mcp>
- Montana's Basin Closures and Controlled Groundwater Areas, available at:  
[http://www.dnrc.mt.gov/wrd/water\\_rts/appro\\_info/basinclose-cgw\\_areas.pdf](http://www.dnrc.mt.gov/wrd/water_rts/appro_info/basinclose-cgw_areas.pdf)

- Water Marketing 101 (2005). Available at:  
[http://leg.mt.gov/content/Committees/Interim/2007\\_2008/water\\_policy/staffmemos/watermarketing101.pdf](http://leg.mt.gov/content/Committees/Interim/2007_2008/water_policy/staffmemos/watermarketing101.pdf)
- Managing Montana's Water. Available at:  
<http://water.montana.edu/pdfs/headwaters/headwaters6.pdf>
- Montana Reserved Water Rights Compact Commission:  
<http://www.dnrc.mt.gov/rwrcc/>
- Quantifying and Protecting Montanan's Water Rights. Available at:  
[http://dnrc.mt.gov/wrd/water\\_rts/adjudication/HB22/pdfs/protectingmtswaterrights.pdf](http://dnrc.mt.gov/wrd/water_rts/adjudication/HB22/pdfs/protectingmtswaterrights.pdf)