



Montana Fish, Wildlife & Parks

MADISON RIVER

DRAFT RECREATION MANAGEMENT PLAN - ENVIRONMENTAL ASSESSMENT



April 19, 2018 Draft

**Montana Fish, Wildlife & Parks
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MADISON RIVER DRAFT RECREATION MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT

MONTANA FISH, WILDLIFE & PARKS (FWP) IS PROPOSING A RECREATION MANAGEMENT PLAN FOR THE MADISON RIVER AND ASSOCIATED PUBLIC ACCESS SITES THAT ARE UNDER THE JURISDICTION OF FWP. THE PLAN AIMS TO PROMOTE A FULL VARIETY OF HIGH-QUALITY RECREATION OPPORTUNITIES FOR A DIVERSE PUBLIC WHILE SIMULTANEOUSLY PROTECTING THE NATURAL RESOURCE VALUES ASSOCIATED WITH THE RIVER AND ADJACENT UPLANDS. THE FOLLOWING INFORMATION IS INTENDED TO HELP THE READER REVIEW THE MADISON RIVER DRAFT RECREATION MANAGEMENT PLAN AND PROVIDE FEEDBACK TO MONTANA FISH, WILDLIFE AND PARKS.

1.0 Purpose of and Need for Action

Montana Fish, Wildlife & Parks (FWP) is proposing a recreation management plan and administrative rules for the Madison River from the outlet of Quake Lake downstream to its confluence with the Jefferson River near the town of Three Forks, Montana. A recreation management plan and administrative rules are warranted to provide guidance for managing river recreation and FWP-managed access sites on the Madison, and to help preserve the quality of the recreation experience for all users. While not a resource management plan, this plan does recognize the vital role that resources play in the recreation experience and the potential impacts that recreation can have on those resources.

The Madison River is an iconic fishing destination for trout anglers worldwide. The popularity of this fishery can be documented through FWP estimates on angling pressure, which indicate that the Madison River is frequently one of the most heavily fished rivers in Montana. Due to the heavy use, there have been many efforts to reduce angler conflicts and crowding on the Upper Madison River over the last 59 years:

- 1959: Float fishing closure from Hebgen Dam to Varney Bridge
- 1967: Float fishing closure rotated between two reaches of river each year
- 1975 and 1976: Snoball and Pine Butte Reaches closed to angling and harvest, respectively, for mortality study.
- 1980: 1-year moratorium on new outfitters.
- 1988 to present: Fishing from a vessel only allowed from Lyon's Bridge to Ennis Bridge on the upper Madison River.
- 2006: FWP and partners met with landowners concerned with Madison River recreation conflict.
- 2007: FWP and the Bureau of Land Management (BLM) entered into agreement to implement Madison River Special Recreation Permits (SRP).
- 2008: FWP conducted survey of resident anglers concerning the Madison River.
- 2008: FWP surveyed Madison River Valley property owners about river recreation concerns.
- 2009: FWP conducted Madison River on-site visitor survey.
- 2011: FWP Began process of Madison River recreation management planning.

- 2012: FWP initiated scoping process, including four public meetings and online survey.
- 2012: Madison Citizen Advisory Committee (MCAC) formed.
- 2013: MCAC recommendations presented to FWP Commission and distributed for public comment.
- 2014: FWP halted Madison River recreation management planning process due to agency-wide funding concerns.
- 2016: FWP reinitiated public engagement in management planning process through three listening sessions and mail-in survey of resident and non-resident anglers.
- 2017: FWP initiated year-long on-site angler survey.
- 2018: FWP releases this Environmental Assessment and draft Madison River Recreation Management Plan and proposed administrative rules.

Surveys conducted by FWP in 2008, 2009, 2012, and 2016 provide insight into how satisfied people were with their Madison River experience. The results indicated several areas of concern including crowding of recreationists on the river and at access points, perceived over-use by permittees, and the increasing amount of visitor impacts to natural resources.

Notably absent from this Draft Management Plan is any proposal to manage the heavy tuber use which occurs between Warm Springs Recreation Area and Black's Ford Fishing Access Site during July and August on the lower Madison River. FWP did not address this demographic in this Draft Management Plan because warmer water temperatures during July and August create a scenario on the lower Madison River that results in minimal angling effort during peak tuber use. In addition, angling is typically restricted through hoot owl closures during these months to protect the fishery during this period of high water temperature. The 2009 on-site visitor survey of the lower Madison indicated that 94% of respondents were satisfied or very satisfied with the level of use on the lower Madison.

In addition to survey information, FWP also received informal public input regarding the Madison River. Several themes emerged, including a consistent message that the number of users and vessels on the water and at access sites has created social conflicts and led to the displacement of some Madison River users, especially among Montana residents.

It is with these data and concerns that FWP has drafted this document which serves the dual purpose of Environmental Assessment (EA) and Draft Madison River Management Plan by detailing an alternative management action developed by FWP.

1.1 Madison River Use Statistics, Trends, and Data

The collection of Madison River recreation use data has been ongoing since the Madison River management efforts of the late 1970's. Data indicates that overall recreational use on the Madison River continues to increase. This is likely due to a combination of an increasing population, a healthy fishery, and a general increase in the popularity of river recreation. The following sections provide data collected by FWP describing Madison River user demographics and numbers.

Madison River User Demographics

An onsite visitor survey was conducted by FWP in 2009 at Madison River access sites. This survey noted the proportion of different user groups in certain reaches of the river. In the upper reach from Quake Lake to Lyons Bridge FAS, use was predominately wade/bank anglers, with 79% of respondents being non-residents. The largest user group of the middle reach, from Lyons Bridge FAS to Valley Garden FAS, was float anglers, of which 75% were non-residents. Forty-two percent of the anglers surveyed were with a commercial fishing outfitter or guide. The lower reach of the Madison River, from Ennis Dam to the confluence with the Jefferson River, consisted largely of recreational floaters and float anglers, of which 75% were Montana residents.

Angling Use Estimates

Every odd-numbered year, FWP surveys anglers to obtain statewide use estimates of all waters. Beginning in 2003, significant increases in angling pressure have been observed on the Madison River. Over the last four years the upper Madison River has seen a steep increase in use, doubling from 88,000 to 179,000 angler days (Figure 1). Since 2013, angler use on the Madison has increased by a rate of 15% biennially. From 1982 to 2015, the proportion of total angler pressure from non-resident anglers has remained remarkably stable at approximately 75% (Standard Deviation - 0.05). Though there are no obvious trends in proportion of angler days, either non-resident or resident, the total number of out of state angler days has increased significantly. To date, fish populations have remained relatively stable despite the significant increase in river use. However, FWP has concerns that increased use may reach a level that negatively impacts fish populations, especially during warm summer months.

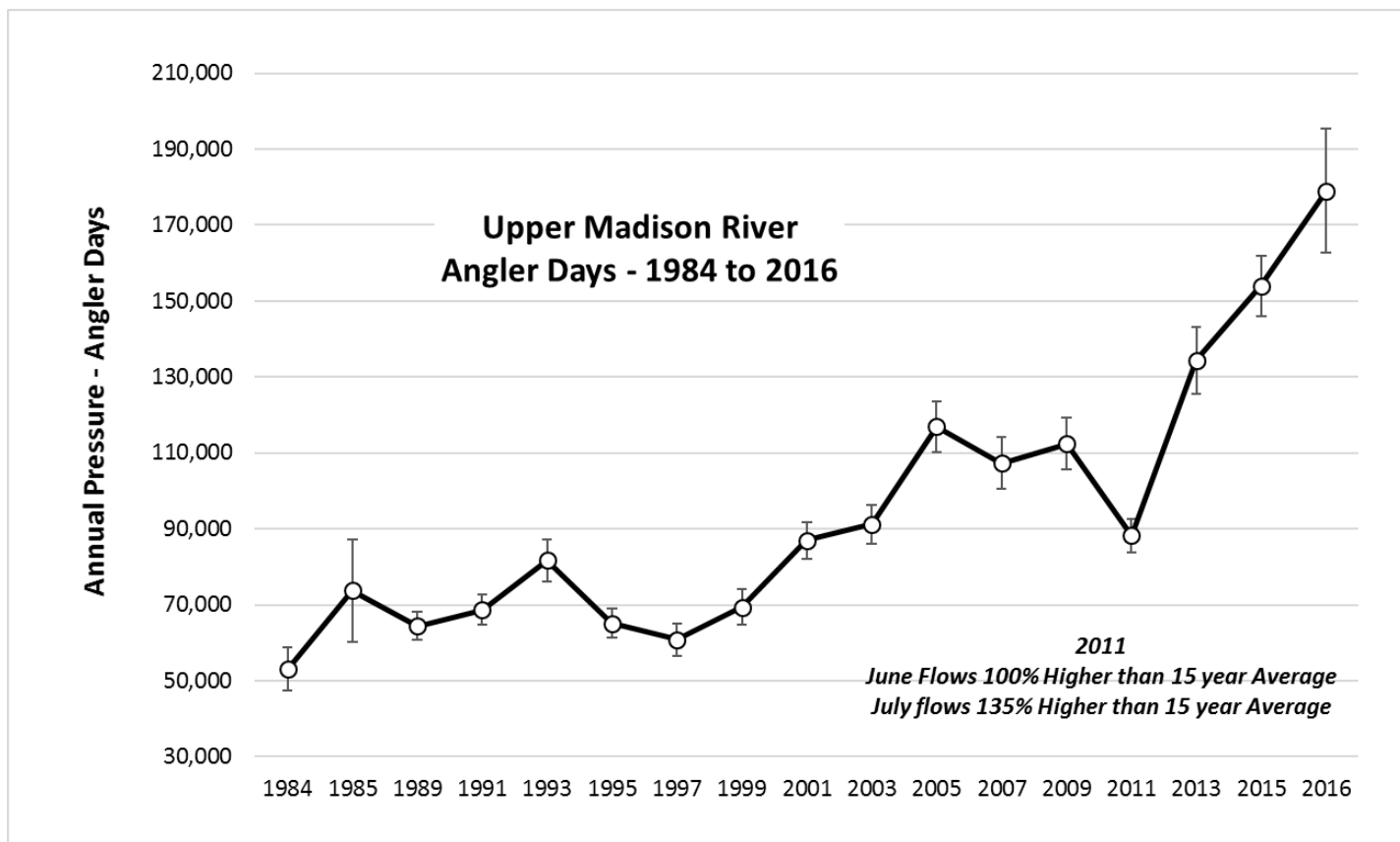


Figure 1. Angler days gleaned from mail-in surveys collected on odd years. Vertical bars represent standard error/confidence intervals. The 2016 data point was estimated using a correlation analysis between reported outfitted trips and total angling pressure.

Commercial Use

In 2007 the Bureau of Land Management (BLM) and FWP implemented a cooperative Special Recreation Permit Program (SRP) for administering commercial, competitive and organized group activities on public lands and related waters within the Madison River corridor. Since the inception of the permit program on the Madison River, FWP has issued 306 Madison Special Recreation Permits to individual commercial operations on the Madison River. Permits that have been issued to fishing outfitters is 294 with the remaining 12 being issued to shuttle services and scenic floats. Two hundred and three of these permitted fishing outfitters were active for 2017, the highest ever under the program. Inactive permits consist of those outfitters that have chosen not to renew their Madison River SRP for the current year. The Montana Board of Outfitters does not limit the number of fishing outfitter licenses it issues and any fishing guide with the required qualifications can become a licensed fishing outfitter. Moreover, under current rules, Madison River SRP permits are unlimited and any licensed fishing outfitter in good standing can apply for and receive an SRP permit, which allows them unlimited year-round commercial use of the Madison River.

A stipulation of the SRP program is that all outfitters must report annually to FWP all commercial use on the Madison River. According to these reports, the number of Madison River trips reported by commercial outfitters has increased by 72% since 2008 (Table 1). Use of the upper Madison River (Quake Lake to Ennis Lake), by outfitters occurs predominantly from June through September (Figure 2). Outfitter use on the lower Madison River (Ennis Dam to the confluence with the Jefferson River), occurs primarily in the spring and fall because of warm summer water temperatures in this reach (Figure 3). In 2016, FWP implemented season-long fishing on the entire upper Madison River in an effort to provide uncrowded opportunity for resident anglers and spread-out use during the spring. The newly liberalized regulations have lead to increases in spring outfitter use of previously closed sections of the upper Madison.

Table 1. Reported commercial trips by year and month from 2008 to 2017. Trips may have one or more clients.

Month	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Jan	0	1	1	0	0	3	4	9	4	3
Feb	1	1	1	3	0	3	2	15	21	4
Mar	3	15	21	25	27	24	26	92	63	121
Apr	86	133	100	69	118	82	159	184	296	329
May	229	151	167	173	205	276	347	523	437	622
Jun	1092	786	696	314	915	940	1368	1560	1834	2456
Jul	2536	2026	1811	2241	1927	2172	2588	2802	2883	2984
Aug	1624	1497	1326	1499	1861	1870	1869	2207	2754	2010
Sep	809	1256	996	1079	1374	1379	1497	1816	2132	1993
Oct	262	259	213	317	454	411	440	636	687	669
Nov	11	6	5	3	7	0	14	20	29	21
Dec	0	0	1	1	0	0	6	8	8	12
Total Year	6653	6131	5338	5724	6888	7160	8320	9872	11148	11224
% Change	na	-7.8%	-12.9%	7.2%	20.3%	3.9%	16.2%	18.2%	12.9%	0.7%

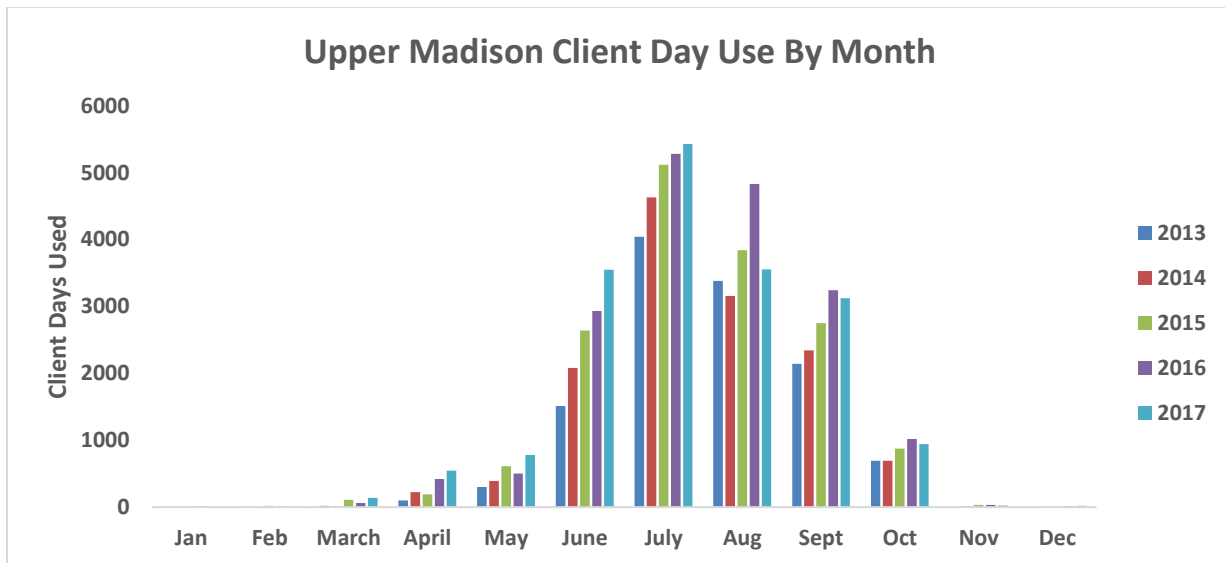


Figure 2. Commercial use of upper Madison River client days reported from 2013 to 2017.

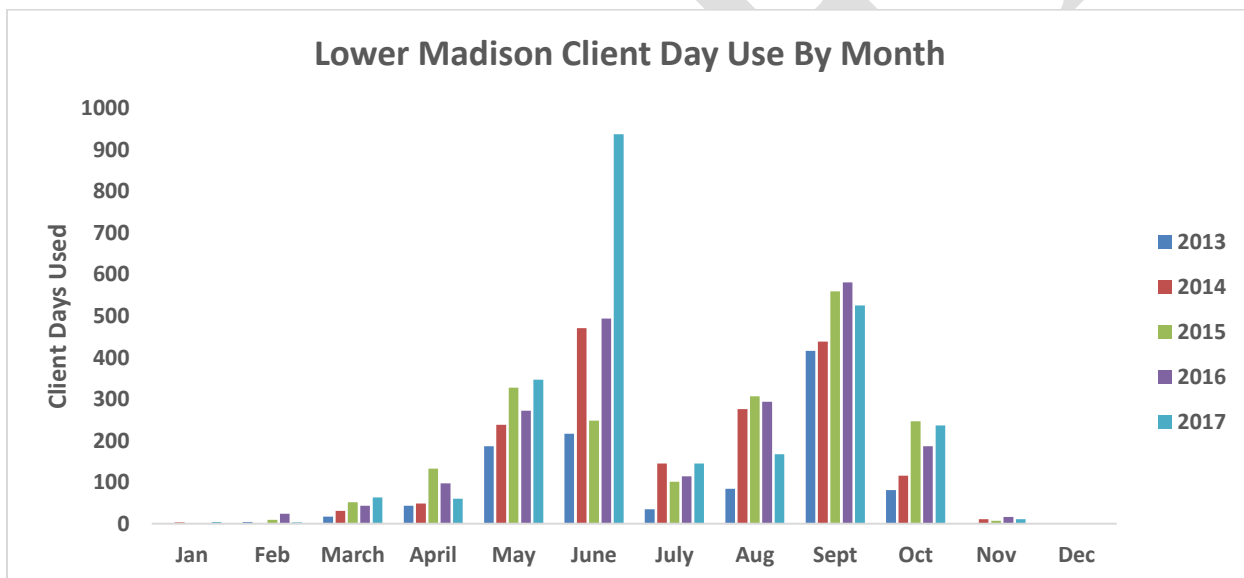


Figure 3. Commercial Use of lower Madison River client days reported from 2013 to 2017.

SRP outfitter reports show an increasing amount of outfitter use of the two wade-only reaches of the upper Madison: from Quake Lake to Lyons Bridge and from Ennis Bridge (Highway 287) to Ennis Lake (Figure 4). Fishing from a vessel or float tube is prohibited in these reaches: however, it is legal to use a vessel or float tube to gain access for fishing. The reach from Quake Lake to Lyons Bridge has nearly doubled in outfitter use since 2013 while the reach from Ennis FAS to Ennis Lake has increased by over 350%. Moreover, most commercial trips in these reaches use a vessel or float tube to gain access. Using vessels or float tubes to gain access for fishing in these reaches, not just by outfitters, is a major source of contention for wading anglers, which is evidenced both by consistent volunteered public comments and through angler satisfaction surveys. Many outfitters report trips that use a vessel in these reaches as walk/wade trips; thus, an accurate count of commercial vessel use in wade-only reaches is not possible.

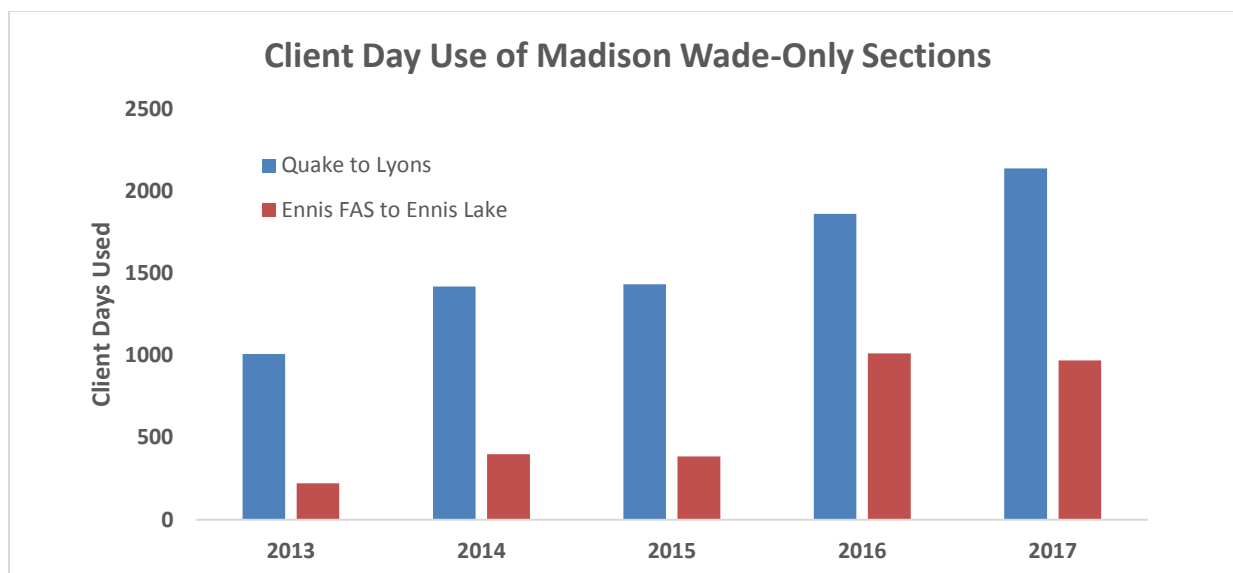


Figure 4. Commercial use client days used in wade-only reaches of the upper Madison River.

Public Scoping of Madison River Recreation Concerns

In 2008, FWP conducted a mail-in survey of property owners along the Madison River to gauge their perception about conditions on the river. In general, landowners indicated that conditions on the river were acceptable regarding recreational use, with the notable exceptions of the high incidence of trespassing and the large number of float fishermen from Lyons Bridge to Ennis Lake during the summer. Landowners also expressed concern regarding negative effects to the fishery due to higher levels of recreational use.

In 2008, FWP also surveyed Montana resident anglers about their use of the Madison River and their perception of conditions. The results suggested that social conflicts were affecting river use by some resident anglers. Of the respondents who considered themselves avid Madison River anglers and first fished the river more than three years prior to the survey, 68% indicated they no longer fished the River. Forty-three percent of those who no longer fished the Madison River indicated they no longer fished there because of river congestion, crowding or other user conflicts.

An onsite visitor survey was conducted by FWP in the summer of 2009 to better understand who was using the Madison River, how it was being used, and the perceptions of those users about recreational conditions. The survey was divided into three reaches of river: 1. Quake Lake to Lyons Bridge FAS, 2. Lyons Bridge FAS to Valley Garden FAS, and 3. Ennis Dam to the Missouri Headwaters. In the upper reach from Quake Lake to Lyons Bridge FAS most individuals reported that river conditions in this reach were acceptable, but there was concern with the number of people and vehicles in access sites and the number of people recreating along this reach of the river. From Lyons Bridge FAS to Valley Garden FAS the river conditions were again considered by most respondents to be acceptable. However, some of those surveyed indicated they were concerned with the number of encounters with other recreationists on the river, the number of people and vehicles at access sites, and the amount of visitor impact to the natural resources. In the reach from Ennis Dam to the Missouri Headwaters, conditions

were again considered acceptable by most respondents, but some of those surveyed indicated that they were concerned with the amount of litter, visitor impact to the resources, and the number of people and vehicles at access sites.

In 2011, FWP gained approval from the Fish and Wildlife Commission to begin the formal process of developing a management plan.

In February and March of 2012, FWP held four scoping meetings to gather public input on the development of a recreation plan for the Madison River. These meetings took place in Ennis, West Yellowstone, Bozeman and Whitehall, with an average of 61 people in attendance at each meeting. Issues that were raised at the public meeting included:

- Crowding
- Too many tubers/recreation floaters
- Too much commercial use
- Limit non-resident use
- Initiate Citizens Day
- Limit Number of Outfitters
- Wade only reaches
- Spring Fishing Closures
- Respondent noting recreational conflicts
- Trash
- Need for river etiquette education
- Parking issues
- General access
- More float opportunity
- Boats on wade only reaches
- Ban floating in Beartrap Canyon
- Alcohol and drunk driving
- Camping
- Pavement at BLM site
- Better signs
- Limit tubers
- Provide tuber shuttle
- Close fishing between Warm Springs and Blacks Ford during summer
- Create tuber and angler times for lower river
- Charge tubers fee or require permit
- More enforcement
- Less guide checks by enforcement
- Lower enforcement profile
- Manage recreation like Beaverhead River and Big Hole River
- Limit launches
- Permit for non-resident boats
- Limit number of people

In spring 2012, FWP initiated an online survey that allowed the public to comment on recreation conditions and management strategies on the Madison River. Open-ended questions allowed participants to respond freely to what they liked most about recreation on the Madison River, what they liked least, and what issues FWP should address on the Madison River. FWP received approximately 915 surveys, of which 71% were submitted by Montana residents. Crowding on the Madison River was specifically addressed by 306 survey participants, 88% of which felt it was a problem. Similarly, crowding at access sites was specifically addressed by 143 participants, 96% of which felt it was a problem. Ninety-two respondents specifically addressed commercial use of the Madison River, 86% of which felt there was too much commercial use and 74% said commercial use should be limited.

In April of 2012, FWP appointed the Madison Citizen Advisory Committee (MCAC) to develop recommendations for a Madison River Recreation Plan pursuant to Administrative Rule of Montana 12.11.425. The MCAC was purposefully selected to be a diverse group of individuals intended to represent the various river recreation management interests as well as those affected by management actions. Individuals selected for the committee represented float and wade anglers, tubers, boaters, private land owners, business owners, commercial users, and conservationists. Representatives of FWP and BLM served MCAC in an advisory capacity.

The MCAC held ten meetings from May 2012 through March 2013 with the goal of developing recommendations for managing recreation on the Madison River (see Appendix A). The recommendations were presented to the FWP Commission on April 9, 2013, after which the Commission instructed FWP to solicit public comments. FWP received a total of 40 comments from individuals and various organizations. Only 15% of respondents approved of the MCAC recommendations as a whole. Most (78%) wanted to see modifications to the recommendations.

Approximately 40% of public comments received on the MCAC recommendations regarding fishing-related issues requested that restrictive management actions designed to address crowding and social conflicts be implemented immediately. Many of these comments also recommended rules like those used to manage recreation on the Beaverhead and Big Hole Rivers (BH2) since 1999. The individuals expressing these comments indicated that existing social conflict data for the Madison River is sufficient to justify immediate implementation of restrictive management actions. Implementation of BH2 rules on the Madison River were requested by approximately 20% of fishing-related respondents, while individual rules and components, including a cap on outfitter use, implementing resident days, and limiting the number of launches at individual sites, were requested by higher percentages of respondents.

In 2015, FWP began a camera monitoring program on the Madison River between Lyons Bridge and Windy Point. The goal of this program was to estimate the percentage of vessels floating that reach of river that were commercial. Concerns voiced by the public that commercial use was too high conflicted with the Madison River SRP commercial use reports that suggested commercial use was a small component of the Madison River angling estimates. The camera was positioned to capture the entire width of the river in the frame and programmed to take a picture every 3 seconds from first light to last light every day. The 3 second interval usually allowed several pictures of each vessel passing through, allowing a daily count of total boat traffic. Cameras were operated from May through October each year. The number of

commercial vessels reported daily (not corrected for outfitter non-reporting) in this reach in mandatory Madison SRP use reports was then subtracted from the total number of vessels observed that day. These data yielded an estimate of the percentage of vessels that were commercial on each day. Data from 2015 were not analyzed, but the 2016-17 data suggests that over 60% of vessel traffic in this reach is commercial (Table 2). Additional analysis of data collected from an angler satisfaction survey in 2017 supports camera data. Individual interviews were categorized as either being commercial or non-commercial. Data were collected from approximately 9:00 AM to 10:00 PM at randomly selected sites and times.

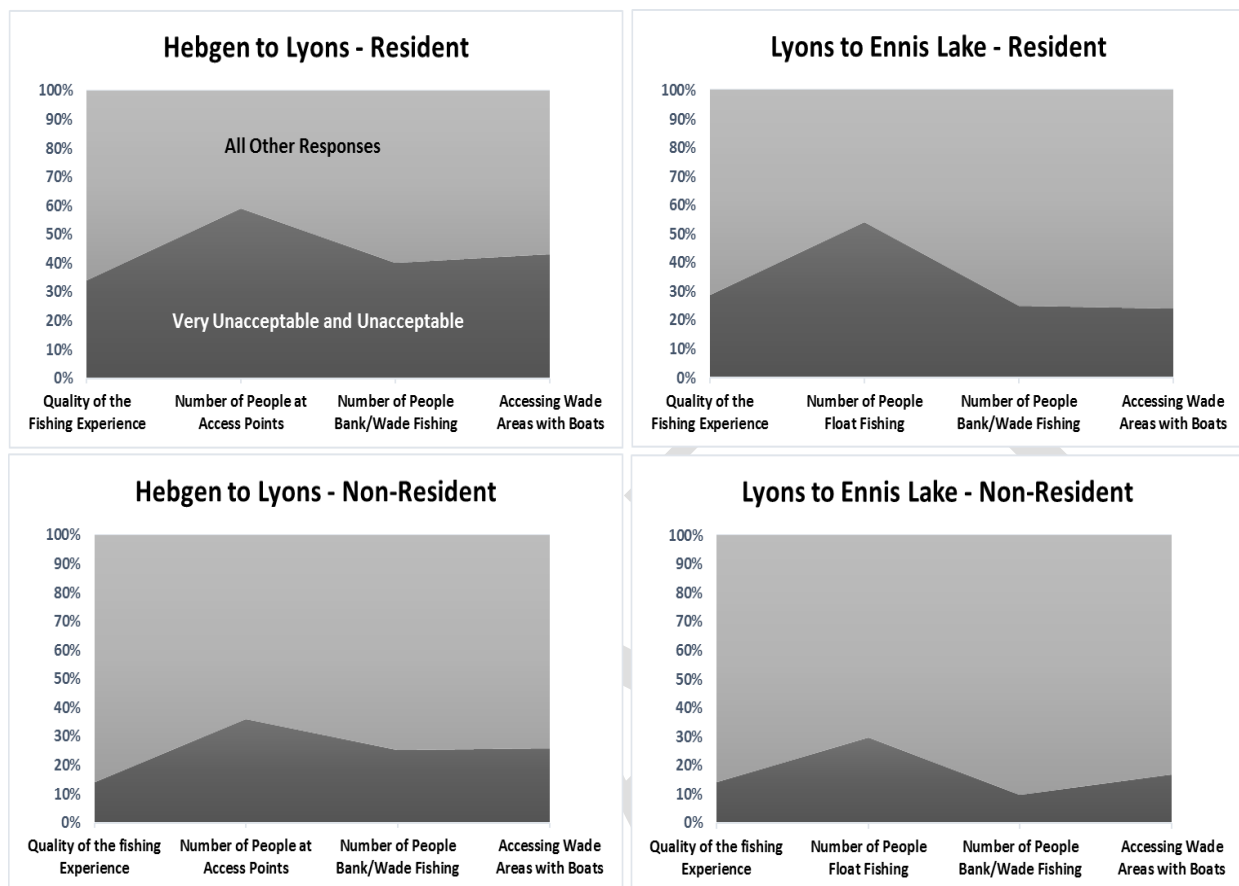
Table 2. Estimate of percentage of commercial use of the Lyons Bridge to Windy Point reach taken from correlating camera data to Madison River SRP Use Reports. Cameras were operated from May through October in each year. Days in which only partial data or poor viewing conditions existed were not included in the analysis.

Year	Number of Days Observed	Number of Vessels Observed	Number of Commercial Trips Reported	Percent Commercial Use
2016	113	3049	2063	67.7%
2017	98	3798	2304	60.7%

After a break in the planning process due to budget constraints in 2016, FWP conducted three listening sessions regarding Madison River recreation (one each in Ennis, West Yellowstone, Bozeman). Anonymous comment cards were distributed requesting input on the one thing most needed to alleviate problems on the reaches of the Upper Madison River from Hebgen Dam to Lyons Bridge, and from Lyons Bridge to Ennis Reservoir. Comments varied, but the most mentioned issues were related to crowding, with two-thirds of respondents considering it the primary concern between Lyons and Ennis Lake. Similarly, two-thirds were concerned with conflicts between float and wade anglers in the Hebgen to Lyons reach.

In 2016, FWP conducted a mail in survey focusing on angler satisfaction. Data were collected from 1,335 residents of Montana and 1,545 non-residents. To be as comprehensive and non-biased as possible, the survey was sent to a sample of anglers that reported fishing the Madison River drainage from 2001 to 2015 through the Statewide Angler Surveys. The survey questioned both residents and non-residents on several factors related to their overall angling experience in two reaches of the upper Madison River – Hebgen Dam to Lyons Bridge and Lyons Bridge to Ennis Reservoir. The most striking data indicates that 54% of residents and 30% of non-residents feel that the number of float users from Lyons Bridge to Ennis Lake is either “Very Unacceptable” or “Unacceptable” (Figure 5).

Figure 5. Resident and non-resident responses to mail in survey. Dark gray area represents respondents who felt issues on horizontal axis were “Unacceptable” or “Very Unacceptable”. The remainder of responses include Very Acceptable, Acceptable, and Neutral.



Angler satisfaction, in part, is dependent on the number and/or size of fish caught. Declining catch rates, especially during summer months, are of concern to Montana Fish, Wildlife & Parks. Catch rates are either 1) a representation of the number and sizes of trout present in Madison River or 2) changes in feeding behaviors of trout (Figure 6). Recent electrofishing estimates indicate populations of trout in the Madison River are at all-time highs; therefore, reduced catch rates are not related to number of fish. Intense fishing pressure has likely decreased catch rates, particularly during summer months. Changes in fish behavior/feeding is of important, especially when water temperatures can be stressful to fish. Analysis of this EA and the proposed action must include a discussion of negative environmental impacts from increasing use on the Madison Rivers The relationship between water-based recreation and the health of aquatic ecosystems is relevant to this EA and the proposed action.

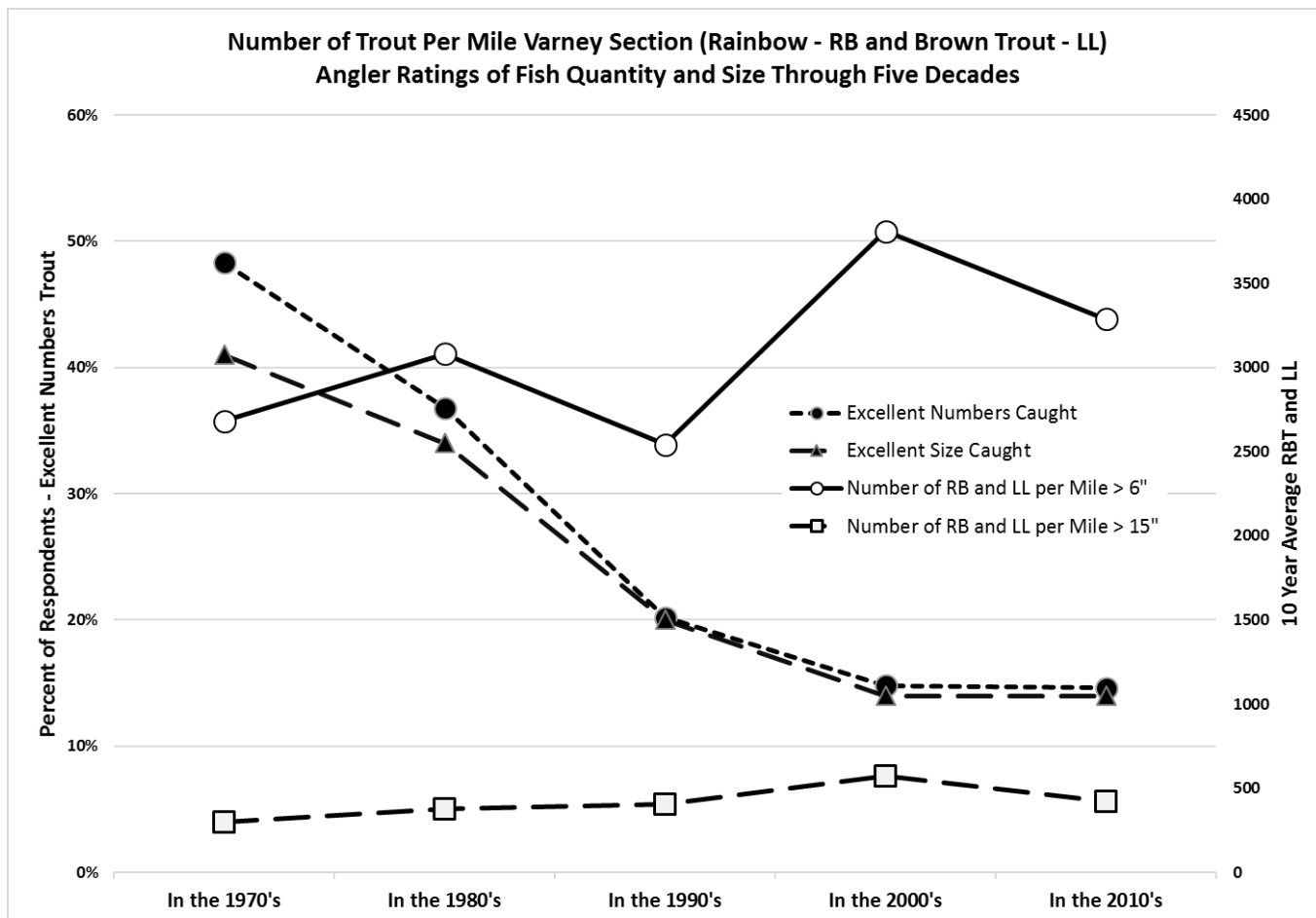


Figure 6. The dotted line with black markers represents all respondents from the mail survey that indicated excellent numbers of trout through 5 decades – very similar responses were received for numbers of large trout caught (triangle markers). The solid black line with white markers represents the average numbers of fish (both rainbow and brown trout) estimated per decade in the Varney sampling reach – the dip in numbers in the 1990's is the result of whirling disease impacts to rainbow trout populations. The dashed line with white square markers represents sampled catch of both rainbow and brown trout greater than 15 inches. The predictability and severity of declines in average satisfaction prior to the 1990's is concerning.

1.2 Objectives of the Proposed Action

The overall objective of this EA is to manage recreation in a way that protects the outstanding natural resource values of the Madison River and improves the quality of the recreation experience for all users.

1.3 Agreements and Plans Relevant to this Planning Document

- **Cooperative Management Agreement between the Bureau of Land Management (BLM) and FWP for the Management of Recreation Use on Public Land and Water Resources within the Madison River Corridor.** A management agreement between

FWP and the BLM that establishes the terms for cooperative management of recreation on the Madison River and adjacent owned or managed lands. This agreement created the current SRP permit system on the Madison.

- **Missouri – Madison Comprehensive Recreation Plan.** A Northwestern Energy Montana recreation plan which supports public recreational opportunities throughout the Missouri and Madison River corridors by collaboration with the land and recreation resource managing agencies.
- **Lower Madison Recreation Area Management Plan.** A cooperative effort between FWP, BLM, Montana Department of Transportation (MDT), and the Montana Department of Natural Resource Conservation (DNRC) to maintain the scenic character of the lower Madison River, protect cultural and natural resources and offer a variety of recreational opportunities.
- **Madison County Growth Policy and Madison Valley Plan.** The plan provides protection to the entire Madison River corridor from encroachment by development, specifically in terms of preserving the scenic, fish and wildlife, recreational, agricultural, historic, archeological, and flood plain values.

1.4 Statutes and Rules

Authority

- Fish and Wildlife Commission has statutory authority to manage recreational use of publicly accessible waters in Montana (MCA 87-1-303).
- **FWP Statewide River Recreation Rules** (ARM 12.11.401 through ARM 12.11.455). Rules that govern the development of river recreation management plans and rules.

Rules and Regulations affecting the Madison River

- **FWP Commercial Use Rules** (ARM 12.14.101 through 12.14.170). Rules that govern commercial use that occurs on lands and restricted water bodies under the jurisdiction of FWP.
- **FWP Public Use Regulations** (ARM 12.8.201 through 12.8.213). Rules that govern the use of all lands or waters under the control, administration, and jurisdiction of Fish, Wildlife and Parks (including designated recreation areas).
- **Gallatin County and Madison County Watercraft Restrictions** (ARM 12.11.2315 and 12.11.3505). Rule that prohibits motorized watercraft over 10 horsepower on the Madison River.
- **Hebgen Dam Water Closure** (ARM 12.11.2307). Rule that prohibits all boating, sailing, floating and swimming 100 feet below the outlet works.
- **Madison Dam Water Closure** (ARM 12.11.3506). Rule that prohibits all boating, sailing, floating and swimming 700 feet below the dam.

1.5 Scope of the Environmental Assessment

The draft EA does not govern fishing regulations or decisions surrounding water usage or water rights. Although the EA applies primarily to river-related recreation, it does recognize the important role that resources play in the recreation experience and the potential impacts that recreation can have on those resources. This EA discusses and evaluates any environmental impacts of the Draft Management Plan and purposed administrative rules of the Fish and Wildlife Commission published on DATE at page XX of the 2018 Montana Administrative Register.

Location

The EA encompasses recreation that occurs on the Madison River from the Yellowstone National Park boundary to its confluence with the Jefferson River, the only exception being the Bear Trap Wilderness Area which is managed exclusively by the BLM (Figure 7).

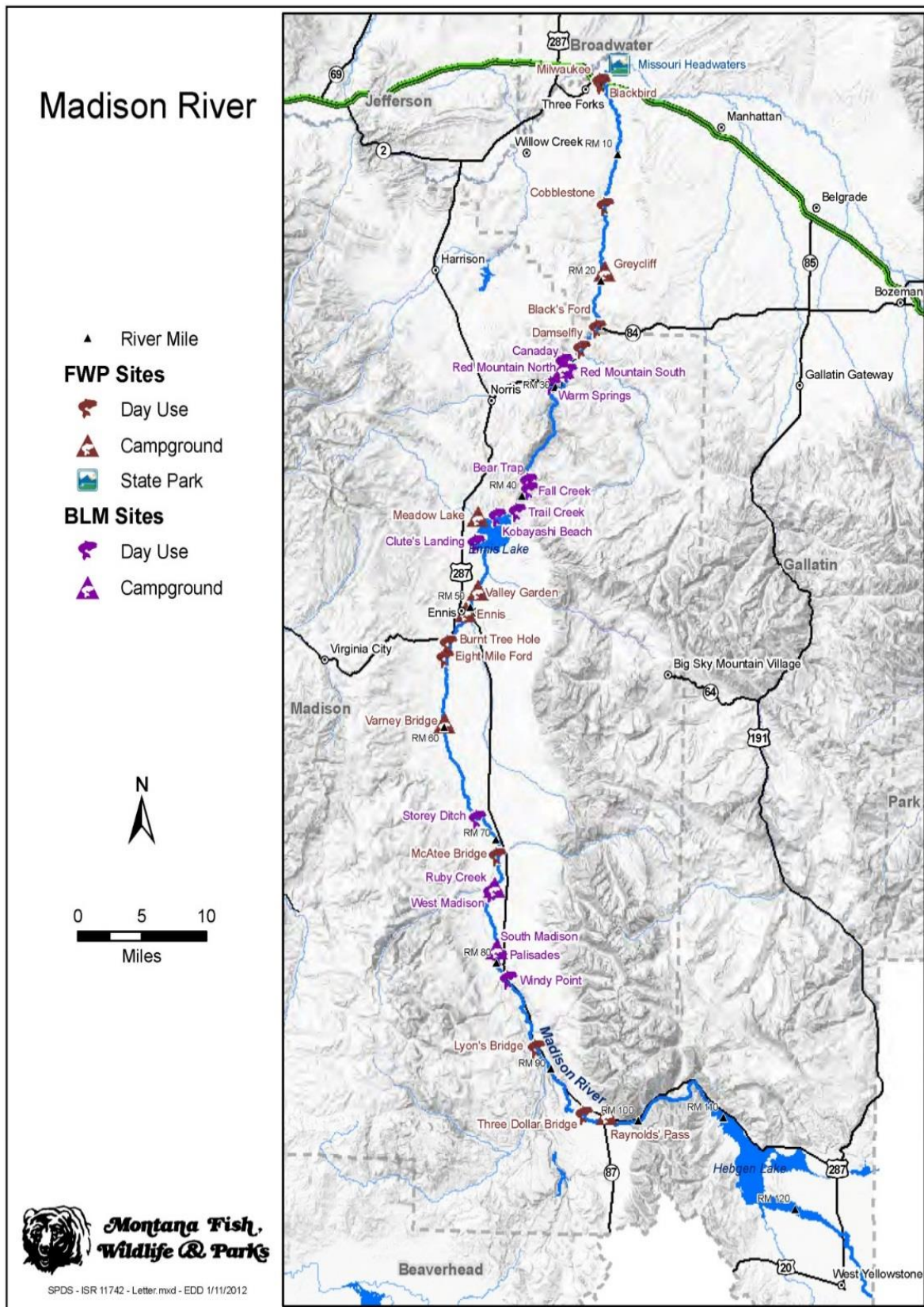


Figure 7. Map of the Madison River planning area.

1.6 Land Ownership

Lands along the Madison River are owned by a variety of public and private entities (Table 3). Although FWP is the lead agency in the development of this recreation management plan, cooperation and coordination with other agencies and private landowners is imperative because of the diverse land ownership adjacent to the river and varying authority and management responsibilities of the land.

Table 3. Madison River Riverfront Land Ownership.

Owner	% Ownership
Private	42%
Bureau of Land Management	24%
US Forest Service	21%
Montana Fish Wildlife & Parks	7%
National Park Service	3%
State of Montana (DNRC)	2%
Montana State University	1%

Private

Although the majority of land along the Madison River is publicly owned, private property comprises 42% of river frontage. Private property boundaries extend to the ordinary low-water mark, but aquatic-based recreation is permitted by the Montana Stream Access Law (Montana Code Annotated §§23-2-301 – 23-2-322) and most of the River can be accessed by public land.

Bureau of Land Management (BLM)

The BLM owns the largest percentage of public land along the Madison River and has jurisdiction over 28 public access sites. BLM manages the wilderness within the Bear Trap Wilderness Area on the lower Madison River in accordance with the BLM's Bear Trap Management Plan. FWP administers a Special Recreation Permit system on BLM access sites through a memorandum of understanding with the exception of Trail Creek and Falls Creek Recreation Areas. The Trail Creek and Falls Creek Recreation sites are exclusively managed by BLM and they are the only access on the lower Madison River prior to the Bear Trap Wilderness Area.

United States Forest Service (USFS)

The USFS owns a large percentage of Madison River frontage upstream of Quake Lake but has no land downstream of Lyons Bridge Fishing Access Site (FAS). The USFS administers its lands in accordance with the Custer-Gallatin and the Beaverhead-Deerlodge National Forest Plans, which emphasizes management of lands for multiple uses of resources.

Montana Fish, Wildlife & Parks (FWP)

FWP owns 16 parcels of land adjacent to the Madison River, 15 of which are FASs that provide public access to the river. The remaining site is the Wall Creek Wildlife Management Area, which is managed to provide multiple recreational opportunities and as secure winter range for elk and other wildlife. FWP also manages Lyons Bridge FAS under a cooperative agreement with the USFS.

National Park Service (NPS)

The Madison River runs within Yellowstone National Park boundaries in Montana for approximately 4.5 miles. The NPS preserves natural and cultural resources and values for the enjoyment, education and inspiration of this and future generations in accordance with the Yellowstone National Park Strategic Plan.

Montana Department of Natural Resources & Conservation (DNRC)

The DNRC owns a small percentage of the land adjacent to the Madison River that is managed to provide income for the State Education Trust. In addition, the Madison River is listed as navigable water, and the streambed is owned by the State of Montana; therefore, the streambed below the ordinary low-water mark is also managed by DNRC, pursuant to Montana Code Annotated §77-1-102.

Montana State University (MSU) – Red Bluff Research Ranch

Red Bluff Ranch is located near Norris, MT along the west side of the Madison River. The operation comprises 13,750 acres of land, 10,000 of which are deeded and 3,750 leased. Most of this land is rangeland, interspersed with limited hay meadows along the valley bottoms. There are currently about 170 cattle and 900 sheep maintained year-round at the ranch. These livestock, along with the range areas, are used for both education and research.

County Government

The Madison River flows through Gallatin County and Madison County. Under state law (Montana Code Annotated Title 76, Chapter 3), these counties are responsible for reviewing the planning, road maintenance, and zoning for subdivisions as well as other use and development restrictions within their respective jurisdictions. In addition, each county has a conservation district which establishes rules and administers the Montana Natural Streambed and Land Preservation Act, more commonly referred to as the 310-permitting process. FWP acts as a technical advisory body to the conservation districts. This permit is required by any private individual or non-governmental entity proposing any activity that physically alters or modifies the bed or banks of a stream.

2.0 Alternatives

After consideration of public feedback provided by surveys, public meetings, and working groups, Montana Fish, Wildlife and Parks identified three potential management alternatives for consideration in this EA. FWP will finalize a river recreation management plan based on the aforementioned outreach, FWP's expertise, and comments received. The Fish and Wildlife Commission proposed administrative rules published on **DATE** at page **XX** of the 2018 Montana Administrative Register in accordance with the Montana Administrative Procedures Act. All comments received on this rule making and EA will be incorporated and considered when making a final decision by The Commission. Chapter 3 examines the predicted effects of these management alternatives.

2.1 Alternative A: No Action Alternative

The current memorandum of Understanding with BLM regarding the SRP governing the recreational use on the Madison River would be retained.

2.2 Alternative B: Preferred Alternative

Montana Fish, Wildlife and Parks developed the following preferred alternative and its management strategies based on years of data collection, surveys, public meetings, working groups, field observation, commercial use reports and Madison CAC recommendations. The Fish & Wildlife Commission proposed administrative rules published on **DATE** at page **XX** of the 2018 Montana Administrative Register in accordance with the Montana Administrative Procedures Act to reflect this alternative.

The number of permits available will be maintained at the number of permits issued in 2016 & 2017 showing historical use as provided by the special use permit report logs submitted for that year.

From 2007 to 2017, FWP has issued 306 Madison River Special Recreation Permits to individual permittees on the Madison River. Of these permittees, 213 were active in 2017, the highest ever under the program. The Montana Board of Outfitters does not limit the number of fishing outfitter licenses it issues and any fishing guide with the required qualifications can become a licensed fishing outfitter. Currently, Madison River SRP permits are unlimited and any outfitter in good standing can apply for and receive an SRP permit, which allows them unlimited year-round commercial use of the Madison River. Based on current permit numbers, The Commission proposed instituting a cap on the number of permits issued for the Madison River. Specific rules proposed for the cap include:

- Placing a cap on permits issued for commercial purposes on the Madison River at the number of active permits, with logged use, that were issued for the 2016 and 2017 seasons.
- A permittee would be eligible for a permit if they have historically received a permit and recorded use on the Madison River during the 2016 or 2017 seasons as designated by FWP.

- A permit would be forfeited and returned to FWP jurisdiction if an outfitter records zero commercial Madison River use for two consecutive years.
- All permittees must submit an annual report of all commercial activity in a format as specified by FWP.
- Any permit returned to FWP may be reissued to an eligible outfitter through a random lottery process if social conflicts improve and the health of the Madison River fishery is maintained. If social conflicts do not improve and/or the health of the fishery declines, a lower number of permits may become necessary and some permits may not be reissued.
- An outfitter could not hold more than one Madison River permit.
- In accordance with Administrative Rule of Montana 12.14.120, a commercial use permit is not transferable and void when a business is sold or transferred. However, if a business is sold or transferred in its entirety, FWP is required to issue a new permit to the new owner of a business upon application and payment of all fees due.

Non-Commercial Reaches

Non-commercial reaches are designed to provide less-crowded conditions for non-commercial users, both resident and non-resident, while still providing adequate opportunity each day for permittees. Reaches would proceed consecutively downriver beginning on Saturday to help avoid confusion. These restrictions would apply year-round to mitigate the potential of an increase in traffic during shoulder-seasons. The Commission proposes dividing the Madison River from the Quake Lake outlet to Greycliff FAS into seven reaches and designating one of these as a non-commercial reach each day of week. The Commission also proposes prohibiting commercial use in the reach from Greycliff FAS to the confluence with the Jefferson. Commercial use will only be limited as described below. Outside of these restrictions and the 18.9 miles reach from Greycliff FAS to the confluence with the Jefferson River, the remainder of the river is open for commercial use (Figure 8). Shuttle services and livery services will be exempted from the non-commercial reach restrictions.

Saturday (Quake Lake Outlet to Lyons Bridge FAS)

Each Saturday the reach of river from the Quake Lake outlet to Lyons Bridge FAS would be designated as a non-commercial reach in which no commercial use would be allowed. The purpose of this closure is to reduce both crowding and social conflicts while maintaining adequate opportunity for commercial outfitting elsewhere on the river. This 12.6-mile reach of river is currently closed to fishing from vessels or float tubes. This draft EA proposes that this reach be changed to walk/wade only (no access obtained by any type of vessel or float tube for angling); see pg. 27 for more detail.

Sunday (Lyons Bridge FAS to Palisades Recreation Area)

Each Sunday the reach of river from Lyons Bridge FAS to Palisades Recreation Area would be designated as a non-commercial reach in which no commercial use would be allowed. This 8.2-mile reach of river is the most heavily outfitted reach of the Madison River. The purpose of this closure is to reduce both crowding and social conflicts while maintaining adequate opportunity for commercial use elsewhere on the river.

Monday (Palisades Recreation Area to McAtee Bridge FAS)

Each Monday the 8.5-mile reach of river from Palisades Recreation Area to McAtee Bridge FAS would be designated as a non-commercial reach in which no commercial use would be allowed. The purpose of this closure is to reduce both crowding and social conflicts while maintaining adequate opportunity for commercial use elsewhere on the river.

Tuesday (McAtee Bridge FAS to Varney Bridge FAS)

Each Tuesday the 11.7-mile reach of river from McAtee Bridge FAS to Varney Bridge FAS would be designated as a non-commercial reach in which no commercial use would be allowed. The purpose of this closure is to reduce both crowding and social conflicts while maintaining adequate opportunity for commercial use elsewhere on the river.

Wednesday (Varney Bridge FAS to Ennis FAS)

Each Wednesday the 9.2-mile reach of river from Varney Bridge FAS to the Ennis FAS would be designated as a non-commercial reach in which no commercial use would be allowed. The purpose of this closure is to reduce both crowding and social conflicts while maintaining adequate opportunity for commercial use elsewhere on the river.

Thursday (Ennis FAS to Ennis Lake)

Each Thursday the reach of river from the Ennis (Highway 287) to Ennis Lake would be designated as a non-commercial reach in which no commercial use would be allowed. This approximately 4-mile reach of river is currently closed to fishing from vessels or float tubes and is proposed in this EA as walk/wade only (no access obtained by any type of vessel or float tube for the purpose of angling). The purpose of this closure is to reduce both crowding and social conflicts while maintaining adequate opportunity for commercial use elsewhere on the river.

Friday (Warm Springs Recreation Area to Greycliff FAS)

Each Friday the 12-mile reach of river from Warm Springs Recreation Area to the Greycliff FAS would be designated as a non-commercial reach in which no commercial use would be allowed. The purpose of this closure is to reduce both crowding and social conflicts while maintaining adequate opportunity for commercial use elsewhere on the river.

Maximum Daily Commercial Use Restrictions

The Commission is proposing to restrict the daily maximum number of commercial trips per permittee allowed within each of the following four reaches of river: 1. outlet of Quake Lake to Lyons Bridge FAS, 2. Lyons Bridge FAS to Ennis FAS, 3. Ennis FAS to Ennis Reservoir and 4. Warm Springs Recreation Area to Greycliff FAS (Figure 8). The proposed maximum number of commercial trips per reach and time frame were established by analyzing complete Madison

River SRP use logs provided to FWP by all permittees from 2011-2017. Proposed maximum daily use restrictions were set so that daily use would be capped at normal levels of commercial use in each reach based on 2016-2017 use, the years with the most permitted outfitters, most total commercial use, and the most use by an individual outfitter on record (Table 4). For this proposal, a commercial trip is defined as (a) one launch of one vessel by the permittee or an agent of the permittee and associated clients; or (b) walk/wade use by the permittee or an agent of the permittee and associated clients.

Ultimately, very few permittees would be impacted by these trip restrictions and those that are impacted would see only a very small percentage of impact to their overall Madison use (Table 5). Conversely, if FWP were to allocate client days to outfitters based on historic use then all outfitters would be significantly impacted because no growth in their business could occur unless they acquired more days through business transfers from other permittees. Additionally, limiting permittees to maximum use per reach rather than at individual sites would allow permittees flexibility in planning trips. These restrictions would apply year-round. Shuttle services are exempt from permittee reach caps.

Table 4. Total trips reported by active river-based permittees and categorical counts of the number of trips per permittee. An active river-based permittee is defined as a permittee with an active permit that reports commercial Madison River use in that calendar year. Shuttles, liveries, and river-based permittees that reported zero use are excluded from the counts.

Year	Total Active River-Based Permittees	Most Trips	>1000 Trips	999-500 Trips	499-250 Trips	250-100 Trips	99-50 Trips	49-25 Trips	24-1 Trips
2017	175	1012	1	3	10	12	21	22	106
2016	168	846	0	4	9	11	20	36	88
2015	163	796	0	2	9	14	18	37	83
2014	162	686	0	1	7	12	16	31	95
2013	156	604	0	1	2	16	19	26	92
2012	162	553	0	1	4	14	17	29	97
2011	150	451	0	0	3	14	16	28	89

Table 5. Percent impact of proposed reach use restrictions from 2016-17. Total trips over reach maximum is a combined total by all permittees from all four defined reaches.

Year	Total Number of Permittees Impacted by Max Use Restrictions	Total Number of Trips Over Reach Max Use	Total Number of Trips Reported by Permittees Exceeding Max Use	Total % of Trips Impacted by Max Use Restrictions	Max % Impact to an Individual Permittee
2016	17	146	4868	3.00%	6.67%
2017	13	145	5474	2.65%	3.80%

Upper Walk/Wade Reach (Quake Lake Outlet to Lyons Bridge FAS)

From 2013 to 2017, the maximum number of commercial trips reported between the outlet of Quake Lake and Lyons Bridge FAS in a single day by an individual permittee was 7. Although 7 trips was the maximum number reported in a single day by a permittee in this reach, it is not representative of normal commercial use. In fact, it is exceptionally uncommon for a permittee to exceed 3 trips per day in the upper walk/wade reach (Table 6). The Commission is therefore proposing that the maximum daily number of commercial trips per permittee between the outlet of Quake Lake and Lyons Bridge FAS be 3 (Figure 8). Under this proposed rule, every trip that occurs in this reach would count towards the daily maximum of 3.

Table 6. Total use by permittees in the Quake Lake to Lyons Bridge walk/wade reach in 2016-17. A permittee day is defined as one permittee with at least one reported trip in this reach on any day.

Year	Total Permittee Days	Total Permittee Trips	Average Trips per Permittee Day	Total Permittee Days Exceeding 3 Trips	Percentage of Permittee Days Exceeding 3 Trips
2016	727	977	1.3	14	1.9%
2017	801	1123	1.4	28	3.5%

Upper Float Reach (Lyons Bridge FAS to Ennis FAS)

The Lyons Bridge FAS to Ennis FAS reach of the Madison receives the most commercial float angling use of any reach of the river. The overwhelming majority of commercial use occurs between June 16th and October 1st (Figure 2). For this reason, the Commission proposes defining two distinct time periods for this reach with different maximum commercial use restrictions.

June 16th through September 30

From 2013 to 2017, the maximum number of commercial use reported between Lyons Bridge FAS and Ennis FAS in a single day by an individual permittee was 19. Although 19 trips was the maximum number reported by a permittee in a single day in this reach, it is not representative of normal commercial use. In fact, it is exceptionally uncommon for any permittee to exceed 10 trips per day in the upper float reach (Table 7). The Commission is therefore proposing that the maximum daily number of commercial trips per permittee between Lyons Bridge FAS and Ennis FAS be 10 from June 16th through September 30th (Figure 8). Under this proposed rule, every trip that occurs in this reach would count towards the daily maximum of 10.

Table 7. Total use by permittees in the Lyons Bridge to Ennis Bridge reach between June 16th and September 30th, 2016-17. A permittee day is defined as one permittee with at least one reported trip in this reach on any day.

Year	Total Permittee Days	Total Permittee Trips	Average Trips per Permittee Day	Total Permittee Days Exceeding 10 Trips	Percentage of Permittee Days Exceeding 10 Trips
2016	3736	7750	2.1	20	0.5%
2017	3499	7419	2.1	29	0.8%

October 1st through June 15th

Prior to 2016, only the McAtee Bridge to Ennis (Highway 287) Bridge reach of the Madison's upper float reach was open to year-round angling. New regulations allowing year-round angling from the Quake Lake outlet to McAtee Bridge went into effect March 1, 2016. Previously, this reach was closed to all fishing from the end of February through the third Saturday in May. Because of the new regulations, only 2016 and 2017 data were considered in setting the maximum daily use prior to June 16th and after September 30th in the Lyons Bridge FAS to Ennis FAS reach.

In 2016-17, the years with the most commercial use on record, the maximum number of commercial trips reported between Lyons Bridge FAS and Ennis FAS in a single day prior to June 16th and after September 30th by an individual permittee was 11. Although 11 is the maximum number of trips reported by permittee in a single day in this reach and time frame, it is not representative of normal commercial use. In fact, it was exceptionally uncommon for any permittee to exceed 5 trips per day during these periods in the upper float reach in 2016 and 2017 (Table 8). The Commission is therefore proposing that the maximum daily number of commercial trips per outfitter on any day from January 1st through June 15th and October 1st through December 31st between Lyons Bridge FAS and Ennis FAS be 5 (Figure 8). Under this proposed rule, every trip that occurs in this reach would count towards the daily maximum of 5.

Table 8. Total use by permittees in the Lyons Bridge to Ennis Bridge reach between October 1st and June 15th, 2016-17. A permittee day is defined as one permittee with at least one reported trip in this reach on any day.

Year	Total Permittee Days	Total Permittee Trips	Average Trips per Permittee Day	Total Permittee Days Exceeding 5 Trips	Percentage of Permittee Days Exceeding 5 Trips
2016	804	1231	1.5	13	1.6%
2017	816	1243	1.5	12	1.5%

Lower Walk/Wade Reach (Ennis FAS to Ennis Lake)

From 2013 to 2017, the maximum number of commercial trips reported between Ennis FAS and Ennis Lake in a single day by an individual permittee was 5. Although 5 trips was the maximum number of reported trips in a single day by a permittee in this reach, it is not representative of normal commercial use. In fact, it is exceptionally uncommon for any permittee to exceed 3 trips per day in the upper walk/wade reach (Table 9). The Commission is therefore proposing that the maximum daily number of commercial trips per permittee from

Ennis FAS to Ennis Lake be 3 (Figure 8). Under this proposed rule, every trip that occurs in this reach would count towards the daily maximum of 3.

Table 9. Total use by permittees in the Ennis Bridge to Ennis Lake walk/wade reach in 2016-17. A permittee day is defined as one permittee with at least one reported trip in this reach on any day.

Year	Total Permittee Days	Total Permittee Trips	Average Trips per Permittee Day	Total Permittee Days Exceeding 3 Trips	Percentage of Permittee Days Exceeding 3 Trips
2016	426	574	1.3	10	2.3%
2017	428	542	1.3	2	< 0.1%

Lower Madison River (Warm Springs Recreation Area to Greycliff FAS)

From 2013 to 2017, the maximum number of commercial trips reported between Warm Springs Recreation Area and Greycliff FAS in a single day by an individual permittee was 10. Although 10 trips was the maximum number of reported trips in a single day by a permittee in this reach, it is not representative of normal commercial use. In fact, it is exceptionally uncommon for any permittee to exceed 5 trips per day on the lower Madison River (Table 10). The Commission is therefore proposing that the maximum daily number of commercial trips per permittee from Warm Springs Recreation Area to Greycliff FAS be 5 (Figure 8). Under this proposed rule, every trip that occurs in this reach would count towards the daily maximum of 5.

Table 10. Total use by permittees in the Warm Springs Recreation Area to Greycliff FAS reach in 2016-17. A permittee day is defined as one permittee with at least one reported trip in this reach on any day.

Year	Total Permittee Days	Total Permittee Trips	Average Trips per Permittee Day	Total Permittee Days Exceeding 5 Trips	Percentage of Permittee Days Exceeding 5 Trips
2016	664	1079	1.6	10	1.5%
2017	744	1291	1.7	11	1.5%

Prohibit commercial use on the reach between Greycliff FAS and the Madison River's confluence with the Jefferson River

The Commission has adopted a Policy Statement Concerning River Recreation as Administrative Rule of Montana (ARM) 12.11.405. ARM 12.11.405(4) states, "The quality of the river resources should be protected as the first and foremost priority." The Commission recognizes that "the public prefers to recreate on rivers without controls on their recreational experience" however in order to "maintain the quality of the river resources and the quality of the recreational experience" the Commission is proposing prohibiting commercial use on the Madison River between Greycliff Fishing Access Site and the confluence with the Jefferson River (Figure 8). This reach of river is unique in its resource values for scenery and recreational solitude and currently has less than 1% of the commercial use on the Madison River (Table 11). During the summer months, the thermal properties of this reach of river creates warmer water temperatures causing fishing closures which are not conducive to commercial use but are

coveted by recreationists who value a primitive floating experience with unique scenery and plentiful wildlife.

Table 11. Percent impact of proposed Greycliff FAS to Jefferson River confluence non-commercial designation from 2016-17.

Year	Total Number of Permittees Impacted by Commercial Closure	Total Number of Trips Occurring in Reach	Total Number of Trips Reported River Wide by Permittees Using Reach	Total % of Trips Impacted by Commercial Closure	Max % Impact to an Individual Permittee
2016	17	63	2464	2.6%	73.7%
2017	22	71	2804	2.5%	66.7%

Prohibit the Use of a Vessel or Float Tube to Gain Access to Fishing in the Wade-Only Reaches of the Madison River.

The Madison River has a long history of wade fishing and current regulations prohibit fishing from a vessel or float tube in two reaches of the Madison River; from the outlet of Quake Lake to Lyons Bridge and from the Ennis (Highway 287) Bridge to Ennis Lake (Figure 8). The increasing number of anglers, both commercial and non-commercial, using a vessel or float tube to access fishing in these reaches is negatively affecting wade angler's experiences. Wading anglers frequently express concerns that when they do try to access more remote reaches of these reaches they frequently encounter anglers who use vessels or float tubes to gain access. Prohibiting the use of a vessel or a float tube to gain access for fishing in these reaches could diversify fishing opportunities by providing less-crowded conditions for anglers without vessels or float tubes. For these reasons, the Commission proposes prohibiting anglers from using any type of vessel or float tube to gain access to fishing in these two reaches of the Madison River. Under this proposal, both reaches would remain open to all recreational vessels or float tubes for floating.

Primitive Designation of the reach from Greycliff FAS to the Confluence with the Jefferson River

The 18.9-mile reach of the lower Madison River between Greycliff FAS and the confluence with the Jefferson River is one of the most scenic and least developed reaches of the river. Ramps suitable for trailered vessels exist at Greycliff FAS and Milwaukee FAS, but no public boat ramps exist between them or downstream of Milwaukee FAS. Consequently, this reach is popular for recreationists seeking a longer, more solitary floating experience. FWP does have one additional FAS in this reach, Cobblestone, but construction of a developed ramp there is prohibited due to its primitive access site designation. The Commission proposes FWP develops a policy that any future land acquisition maintains the primitive nature of this reach by limiting vessel or float tube access to carry-in only.

Prohibit the use of glass containers on the Madison River from the Quake Lake outlet to the confluence with the Jefferson

Reduction of litter in the Madison River was identified as a priority by river users in the surveys and scoping meetings conducted by FWP. The Madison River CAC recommended prohibiting glass containers on the lower Madison River as a strategy to decrease the amount of litter along this reach. Eliminating the use of glass containers from the Quake Lake outlet to the confluence with the Jefferson River would also create a safer environment for river users by decreasing the occurrence of broken glass.

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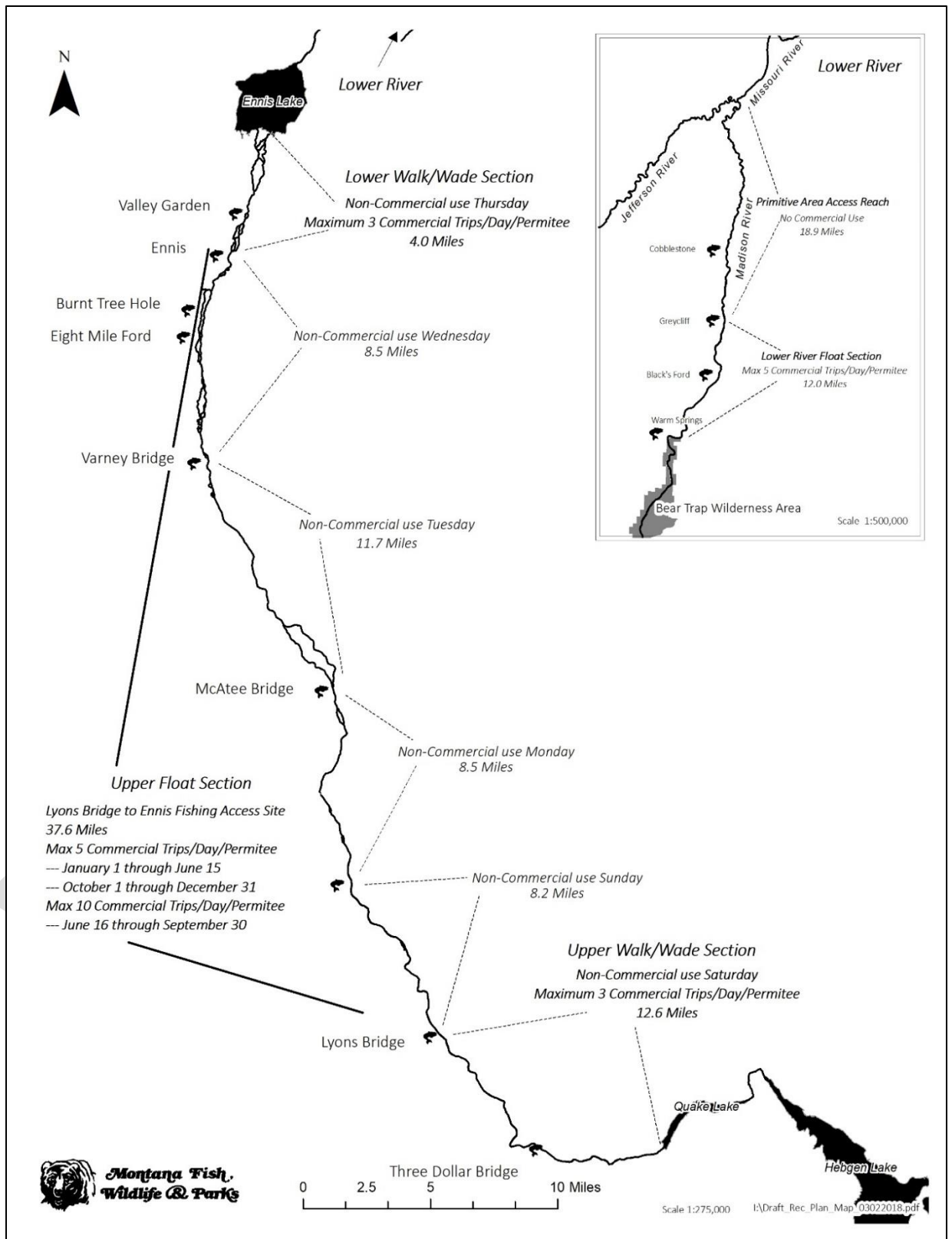


Figure 8. Map showing proposed rules described in Alternative B(preferred). Inset map of lower river rules is presented at 1:500.000. Map does not depict all Madison River Access.

Review of Madison River Recreation Rules every five years

The Commission will review the rules governing recreational use on the Madison River every five years. The Commission may make adjustments to the Madison River Rules to reflect future changes in Madison River use, satisfaction of users and conditions of the fishery utilizing the best available data and public comment.

2.3 Alternative C: MCAC Recommended Alternative

The following alternative represents the recommendations made by the Madison Citizen Advisory Council (MCAC). MCAC's recommendations are not the preferred alternative because the recommendations are outside the authority of FWP and The Commission, not affordable, not reasonable to administer, and not enforceable as required by Administrative Rule of Montana 12.11.410.

The MCAC recommendations are divided into three sub-categories: general river-wide recommendations to be implemented immediately; river-wide thresholds (standards) and triggered management actions; and recommendations for specific river reaches including access sites. The entirety of the MCAC recommendations can be found in Appendix A.

MCAC general river-wide recommendations – Management actions to be implemented immediately or as soon as practicable river-wide.

Collect accurate recreation data for each reach of the Madison River.

The MCAC deemed it important for FWP to continue to collect river reach-specific user data including user type, use level, and user satisfaction. "Iron Rangers" similar to camp fee deposit boxes were proposed for all FWP, BLM, and other public access points. All recreationists using these sites would be required to complete sign-in/survey forms. The MCAC stipulated that the first three years of data would establish thresholds for use numbers and user satisfaction upon which future management actions would be based (see Element 6). Also, the first three years of data would be used to refine data collection needs in future years.

Conduct an annual survey of SRP permittees.

This would require all SRP holders, which consist of commercial outfitters, shuttle companies, liveries, and whitewater guides, to complete an annual survey gauging overall social conditions/satisfaction levels.

Develop and implement effective education outreach efforts.

The MCAC also recommended that FWP develop and implement a campaign designed to address user etiquette both at access sites and on the river, address trash issues, educate why user surveys are important, and educate why users should readjust their expectations during peak-use periods from June through September.

Evaluate effectiveness of management actions.

If and when new management actions are applied, the MCAC recommended that they should be tried for two years and evaluated before implementing other or additional actions. Any changes in actions should be done in a transparent and open public process.

MCAC thresholds (standards) and “triggered” management actions – management actions that may be implemented when thresholds are met or exceeded.

The MCAC recommended that a baseline for the acceptable number of users could be determined from the initial three years of user surveys. If that number of users is exceeded by 10% for two successive years, management actions may be triggered. Similarly, if user satisfaction falls to below 80% for two successive years, management actions may also be triggered. To be clear, under these guidelines FWP would be required to continue to collect data for a minimum of 5 years before initiating any of the MCAC’s management actions.

The MCAC recommended that FWP use the least restrictive management option if a threshold is met or exceeded before proceeding to more restrictive actions. Furthermore, the MCAC recommends that when data indicates a threshold has been met, FWP implement the following “least to most restrictive” management actions:

1. Identify/evaluate additional access sites and site design.
2. Require all users to obtain annual permits for using the river.
3. Add a mild cost impact to the permit.
4. Add “place and time” restrictions (included in preferred alternative pg. 21).
5. Cap numbers of users (included in preferred alternative pg. 20).

If user levels and /or user satisfaction drops below the threshold level after a management action has been implemented, FWP would evaluate those management actions to determine if they should be removed or replaced.

MCAC recommendations for specific river reaches, including access sites.

A) MCAC recommendations for the reach from Quake Lake outlet to Lyons Bridge FAS.

The MCAC identified the need for specific data regarding walk/wade angler and vessel or float tube angler conflicts. This reach is closed to fishing from vessels or float tubes, but boats may be used to gain access for wading. The MCAC also recommended that implementing general river-wide recommendations immediately was warranted.

B) MCAC recommendations for the reach from Lyons Bridge FAS to Ennis (Highway 287) bridge.

The MCAC recommended several capital improvement projects at FASs in this reach including redesigning Lyons Bridge FAS to alleviate congestion; improving maintenance of the 8-Mile Ford FAS dirt road; clearly delineating parking at Varney Bridge FAS; and creating a gate on the south side fence at McAtee Bridge FAS to facilitate angler access to public land.

In addition, the MCAC recommended it was important to educate the public to expect high use on this reach during peak times. They also wanted to open the river to year-round fishing from Lyons Bridge to McAtee Bridge, a regulation change that was implemented in March 2016. The MCAC also recommended that implementing general river-wide recommendations immediately was warranted.

C) MCAC recommendations for the reach from Ennis (Highway 287) bridge to Ennis Lake.

The MCAC wanted FWP to make Ennis FAS and Valley Garden FAS a priority for maintenance early in the season because these FASs are prone to damage from ice jams. They also recommended improving the maintenance of the Valley Garden FAS dirt road during the peak season. The MCAC recommended that implementing general river-wide recommendations immediately was warranted.

D) MCAC recommendations for the reach from Warm Springs Recreation Area to Missouri Headwaters State Park.

Specific to this reach of river, the MCAC recommended to prohibit glass containers, continue the “Adopt-An-Access Site” program, and facilitate partnerships among BLM, FWP, and other entities to conduct monthly clean-up days during June, July, and August. To address conflicts at access sites the MCAC proposed allocating resources to increase and improve FWP and BLM enforcement presence and patrols during the peak season, implementing a no-tolerance towing policy on parking violations at access sites, and working with counties to develop a no-tolerance towing policy on parking violations along the roadside. General monitoring and improvements to the Canaday and Warm Springs Recreation Area and Black’s Ford FAS were also suggested. Finally, the MCAC recommended that implementing general river-wide recommendations immediately was warranted (see Elements 1-4).

Designate the lower Madison River between Greycliff FAS and Milwaukee FAS as “primitive access” where FWP will not develop boat ramps (included in preferred alternative).

The 15-mile reach of the lower Madison River between Greycliff FAS and Milwaukee FAS is one of the most scenic and least developed reaches of the river. Both FASs have ramps suitable for trailered vessels, but no public boat ramps exist between them. Because of this the reach is popular for recreationists seeking a longer, more solitary floating experience. Currently, FWP has only one access site in this reach, Cobblestone FAS, but construction of a developed ramp there is not feasible. The MCAC recommended that designating this reach as “primitive access” would preserve the uniqueness of this reach of the Madison River. Note: Montana Fish, Wildlife and Parks included a similar recommendation in its preferred alternative (pg. 27).

Prohibit glass containers

Included in the preferred alternative (pg. 28).

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

The Madison River originates in Yellowstone National Park (YNP) at the confluence of the Firehole and Gibbon rivers. From its headwaters, the river flows predominantly north for 132 miles where it joins the Jefferson and Gallatin rivers near Three Forks, Montana to form the Missouri River. Along its way, the Madison is impounded by two dams, Hebgen and Ennis, as well as Quake Lake, a 4.5-mile long natural lake formed by a landslide that resulted from a major earthquake in 1959.

From its source in YNP through Hebgen and Quake lakes, the Madison River flows through high altitude conifer-forested plateaus administered by the National Park Service and USFS. Below Quake Lake the reach commonly referred to as the upper Madison River begins. The upper five miles of this reach are characterized by steep whitewater that gradually gives way to boulder-strewn pocket water. From there the Madison levels out into a consistent riffle for the next 36 miles to Varney Bridge. This reach, which is dominated by willows and grasslands, is predominantly private land interspersed with BLM, USFS, and state-owned parcels. The lower 13-mile reach of the upper Madison from Varney Bridge to Ennis Lake becomes more braided and is lined by cottonwood forests.

Three miles north of Ennis, the Madison empties into Ennis Lake, which is the dividing line between the upper and lower Madison River. Below Ennis Dam the river cuts through Bear Trap Canyon, a deep, rugged, 9.5-mile long wilderness reach administered by the BLM. The river emerges at Warm Springs Recreation Area as a broad, low-gradient river valley lined with cottonwoods, willows, productive pastureland, and a long reach of 100-foot tall grey cliffs. Here the river flows through private, BLM, and state lands for about 30 miles before joining the Jefferson and Gallatin rivers near Three Forks, MT to form the Missouri River.

Throughout its length, the Madison River provides diverse recreational opportunities for many types of users in a relatively pristine, natural setting that is rich in historical significance. Not surprisingly, the Madison is very popular with resident and non-residents alike. The river is also very important to the local economies, providing jobs related to tourism, including a significant amount of commercial outfitting on the river itself.

This chapter provides an overview of the recreation, natural heritage and economic resources of the Madison River, as well as the administrative landscape, thereby setting the stage for discussing the efficacy of the three proposed management actions in protecting these incredible resources for future generations.

3.2 Recreation Values

Angling

The Madison River is a destination for trout anglers worldwide. Anglers flock to the river to experience its prolific insect hatches and catch wild trout in incredibly picturesque settings.

Angling occurs year-round in many reaches of the river but is less common during the winter months. Both wade and float fishing opportunities are exceptional, with two reaches of the Madison currently managed for wade-angling only.

Floating

Recreational floating is popular throughout the river corridor. Because of the varied water conditions, the Madison appeals to all skill levels of boaters. The upper reach of river immediately below Quake Lake as well as the Bear Trap Canyon Wilderness appeal to whitewater enthusiasts while much of the river's beautiful scenery can be experienced by less-experienced oarsmen.

Other Land-based Recreation

In addition to providing access to the river, numerous access sites provide opportunities for picnickers, birders, campers, hikers, bikers, sunbathers, hunters, photographers and other land-based recreationists to enjoy the Madison River.

Commercial Use

Commercial service providers are utilized by those who seek the knowledge and skill of an experienced guide or outfitter to enhance their Madison River recreation experience. All commercial river users must obtain an SRP permit issued through a cooperative agreement between FWP and the BLM. The permit requires a fee for any commercial use of the river and that permittees abide by the specific terms and conditions governing use of the permit. Since the inception of the SRP program in 2007, over 300 individuals and businesses have been issued permits to conduct angling trips, whitewater trips, scenic floats, shuttle services, hunting services, and equipment rentals.

River Access

There are currently 72 publicly owned or managed access sites along the Madison River and its reservoirs. In addition to providing access to the river, many also offer land-based recreation opportunities.

3.3 Natural Resource Values

Fish, wildlife, vegetation, topography and the water itself are some of the outstanding natural resource values that define the Madison River corridor and contribute to the exceptional recreation environment. The following reach briefly describes these resources within the context of river recreation.

Fisheries & Aquatic Resources

The Madison River is a world class trout fishery and is commonly among the most popular angling destinations Montana. The Madison is also the birthplace of wild trout

management where a study conducted between the late 1960s and the early 1970s suggested that stocking catchable-size hatchery trout were negatively impacting wild trout populations. The results of this study prompted FWP to discontinue stocking rivers and instead focus on habitat protection and enhancement.

The Madison River is home to nine native fish species including Arctic grayling, mountain whitefish, westslope cutthroat trout, longnose dace, rocky mountain sculpin, stonecat, and longnose, mountain and white suckers. There are 7 known non-native species in the Madison River including common carp, yellow perch, brook trout, rainbow trout, brown trout, Utah chub and northern pike. Although considered a very healthy aquatic ecosystem, the Madison River has faced challenges including aquatic invasive species, whirling disease, high river use, and drought.

Wildlife & Terrestrial Resources

The Madison watershed is home to a wide variety of wildlife. According to the Montana Natural Heritage Program database there are 70 mammal species, 230 bird species, 6 amphibian species, and 8 reptile species that utilize the drainage for permanent or migratory habitat. Pronghorn antelope, white-tailed deer, mule deer, moose, and elk are a common sight along the corridor, with occasional sightings of grizzly bears, black bears, mountain lions and gray wolves. Over half of all Montana bird species have been observed in the Madison River drainage including raptors, upland game birds, waterfowl and a wide variety of songbirds.

Water Resources

Two dams and a natural lake interrupt the flow of the Madison River outside of the Yellowstone National Park boundary. Hebgen Dam backs up the Madison to within two miles of Yellowstone Park forming Hebgen Reservoir. Quake Lake, a 4.5-mile long natural lake formed by a major earthquake and subsequent landslide in 1959, begins about two miles below Hebgen Dam. Ennis Reservoir is formed above Ennis Dam, which is about five miles north of Ennis, Montana.

While many small tributaries contribute to the Madison's volume, it is primarily operations at Hebgen Dam that dictate flows at any point in the season. The quantity of water released is influenced by the amount of precipitation that occurs in the region, the amount of water diverted from the river for irrigation, and the water temperature of the river. Peak runoff typically occurs between late May and early July. Annual mean flow is 1,325 cubic feet per second (cfs) downstream from Quake Lake and 1,930 cfs below Ennis Lake. The peak streamflow measured on the upper Madison was 5,030 cfs in 1993 while the lower Madison peaked at 9,550 cfs in 1970. Water temperatures, which are moderated by releases from Hebgen Reservoir, are typically lowest in January at approximately 34 °F. and are highest in July, occasionally exceeding 80 °F near Black's Ford FAS.

Except during spring runoff, water quality on the Madison River is typically high with minimal suspended sediment in the river, creating clear water with good visibility. The Montana Department of Environmental Quality classifies the Madison River as a B-1 stream that should be maintained for activities such as drinking and municipal uses; swimming and recreation;

growth and propagation of trout and associated aquatic life; and as an agricultural and industrial water supply.

Vegetation Resources

Grasslands and shrublands are the dominant vegetation communities along the Madison River. The dry grasslands are dominated by Idaho fescue and bunchgrass. Common forbs include yarrow, Indian blanket flower and boreal bedstraw. Shrublands are dominated by a variety of sagebrush species including big mountain sagebrush and silver sagebrush. Willow and cottonwood stands are sporadic along the river while conifers are found predominately in the surrounding uplands and along the river corridor above Quake Lake. Other shrubs may be present but are usually at low cover values (5-10%). Species include rubber and green rabbitbrush, wax currant, woods rose, deerbrush and snowberry.

Geology and Soils

Volcanic activity formed layers of igneous rock and volcanic ash in the area. Regional faulting and glacial activity followed, creating the basin and mountain range characteristic of the Madison Valley. Numerous alluvial fans and terraces within the valley are indicative of repeated glaciations and tectonic activity. Sediments on the valley floor were deposited as outwash of glacial melt water. These deposits created the wide valley floor through which much of the Madison River flows.

Open Space, Land Use & Aesthetics

The aesthetic character of the Madison River valley and the quality of the recreational experience on the river is defined by the open space, land use, and small communities. The aesthetic value of the river includes steep canyons, towering cliffs, beautiful forests, panoramic mountain views, and the qualities of the river itself. The two major land uses within the Madison watershed are ranching and residential development. Communities located near the Madison River include West Yellowstone (pop. 1,271), Ennis (pop. 838), Three Forks (pop. 1,869), and Bozeman (pop. 37,280).

3.4 Heritage Resource Values

Historic Use of the Madison River

The Madison River Valley has long been used by humans for travel, food production and procurement, recreation, and economic growth. Archaeological surveys indicate that humans have been present in the Madison Valley for approximately 10,000 years. The Blackfeet, Flathead, Nez Perce, and Shoshone-Bannock native peoples utilized this area as a travel route and hunting ground. The Madison River corridor provided the tribes a direct route to the Yellowstone country to procure sharp-edged obsidian stone used to make weapons and tools. Local lore says the tribes mutually declared the Madison Valley as an area of peace, ensuring all would be able to hunt and travel through the corridor.

Lewis and Clark crossed the Madison Valley in July, 1805 and named it in honor of U.S. Secretary of State James Madison, who would eventually succeed Thomas Jefferson as President in 1809.

In 1863, gold was discovered at Alder Gulch which began a local mining rush. Two months after the discovery, William Ennis homesteaded the site along the Madison River that would eventually become the town of Ennis. William Ennis developed a wagon road from present day Ennis to the upper Madison Valley, providing a lifeline for the ranches to get their livestock, grains, vegetables, and dairy products to the bustling mining camps.

Historic Sites, Structures & Landscapes

On the evening of August 17th, 1959, the area just west of Yellowstone National Park experienced an earthquake measuring 7.5 on the Richter scale. At the time, it was the strongest earthquake recorded in the United States. A massive rock slide caused by the earthquake killed 28 campers and created Quake Lake. In 1960 the United States Department of Agriculture developed the surrounding 38,000 acres into Madison River Canyon Earthquake Area, which includes a Visitor Center across from the slide and a two-story tall boulder as a memorial to the lost campers.

Hutchins Bridge, which spans the river near the mouth of the West Fork of the Madison River, was included in the National Register of Historic Places on July 10, 1999. The designation was bestowed upon the bridge because of its vital link on the route to Yellowstone National Park.

The Thextondale Homestead, located near Ennis, was originally built in the early 1900's. This unique stone ranch traces its beginnings to George Thexton, a native of England who immigrated to the United States in 1855 and first settled in Wisconsin. In 1872, Thexton, who was lured to Montana by the discovery of gold, purchased a 160-acre land patent on the banks of the Madison River. This property became the nucleus of his family ranching operation during the open-range era when horses and cattle could simply be turned out to graze on vast stretches of open rangeland nearby. Over the years, as the open range gave way to homesteads and federal land management, the Thexton Ranch grew to several thousand acres that supported three succeeding family generations.

Three Forks of the Missouri, a National Historic Landmark, is a part of the Missouri Headwaters State Park, located four miles northeast of the town of Three Forks. Three Forks had previously served as a campground for the Shoshone tribe and was where Sacagawea, Lewis and Clark's Native American guide, was captured as a child and carried away to live with the Mandan tribe of North Dakota. Lewis and Clark encountered Sacagawea and enlisted her aid in hopes of acquiring much-needed assistance and information about the regions that lay ahead of them on their westward path.

Archeological Resources

Native Americans used the Madison River valley as a direct route to Yellowstone country and as spring hunting grounds. Hundreds of locations throughout the valley have revealed stone tools, bison kills, cairns, ceremonial sites, tipi rings, pictographs, and petroglyphs.

Madison Buffalo Jump is a high limestone cliff situated on the edge of the broad valley carved by the lower Madison River. It was used by Native Americans for 2,000 years to hunt bison by stampeding herds off the cliff, providing critical food, clothing, shelter and other provisions. Bison bones still lie buried at the cliff's base and archaeologists have located the tipi rings of an extensive village nearby. While the Madison Buffalo Jump was once the key to existence for many native peoples, the introduction of horses led to its abandonment sometime after 1700.

3.5 Economic Resource Values

Rivers and river recreation are an important part of Montana's tourism and travel industry, ranking 5th in the top ten attractions for vacationers to Montana (Economic Review of the Travel Industry, 2014). River recreation contributes to the local, regional and state economies through recreation, tourism, and other travel expenditures including purchases of equipment, food, lodging and other amenities; job creation; and generation of tax revenue.

Although FWP is not aware of any studies that focus specifically on the economic values tied to Madison River recreation, the Institute for Tourism and Recreation Research (ITRR) at the University of Montana has compiled information pertaining to the economic values associated with travel and tourism on a statewide basis (Economic Review of the Travel Industry, 2014). These findings include:

- In 2013, nonresident visitor spending directly supported over 33,000 travel jobs in Montana, and contributed to a total of over 48,800 jobs, leading to over \$1.5 billion in total personal income.
- Preliminary 2014 estimates show an increase in travel supported employment to 55,000 jobs.
- The nonresident travel industry in Montana supports 8.7 percent of the state's total employment and 3.8 percent of total personal income in Montana.
- The outfitting industry contributed over \$200 million to Montana's economy (2014).
- Ninety-four percent of non-resident travel and spending is tied to visitors whose primary destination was related to natural resources in the state (2014).

3.6 Administrative Resources

FWP currently employs two full-time river recreation employees in Region 3 to administer the Madison SRP and Big Hole, and Beaverhead RUP programs and to monitor use on other rivers. Other FWP staff involved in the Madison River SRP program include the Region

3 Fisheries Manager, FWP Wardens, and seasonal FAS Caretakers. The following is a brief synopsis of these positions and their contribution to Madison River management:

Region 3 Fisheries Manager: Provides program direction, oversight, and supervises the River Recreation Manager.

Region 3 River Recreation Manager: Administers the Madison River SRP program; processes SRP permits and reports; patrols the river for compliance with permits and rules; provides oversight for FAS maintenance; performs FAS maintenance; supervises River Ranger and FAS Caretakers; acts as a liaison to permittees.

Region 3 River Ranger: Patrols Madison River for compliance with permits and rules; Processes SRP permits and reports; performs FAS maintenance; enters and analyzes recreation and compliance data; collects camp fees; acts as an on-the-water liaison for all river users.

FAS Caretakers: Maintain FAS sites; clean latrines; mow lawns; remove litter.

FWP Wardens: Patrol rivers to enforce all laws within FWP's legislative authority.

4.0 PREDICTED EFFECTS AND EFFICACY OF POTENTIAL MANAGEMENT ELEMENTS

The Madison River Recreation Management Plan (EA) identifies three management alternatives: A No Action Alternative, a Preferred Alternative, and an alternative proposed by the MCAC (referred to as the MCAC Recommended Alternative). Chapter 4 addresses potential effects of each management action on recreation, natural resources, heritage, and economics of the Madison River (Chapter 3). Furthermore, it describes the predicted efficacy of the management plan to address social conflicts among river user groups.

4.1 Predicted Effects on Recreation Values

Degradation of the Madison River's recreational values is the catalyst for the development of an EA. Madison River user comments indicate that crowding at access sites and on the Madison River have led to unacceptable levels of social conflict and have greatly diminished the quality of recreation on the Madison River. Management actions identified by the MCAC, public comment, and surveys are aimed at reducing crowding and social conflict while conserving and enhancing (chapter 2) recreational values and opportunity for all users.

A) No Action Alternative

If the No Action Alternative was selected, recreational use levels would likely continue to increase. This could lead to a further erosion of the public's satisfaction with the recreation experience. Dissatisfied users might be replaced by anglers/recreationists with lower expectations. Thus, it is possible for use levels to continue increasing while satisfaction levels of individuals are stable. In another potential scenario, returning users decrease, but demand

increases from one-time recreationists. In a growing global economy, this scenario is even more possible.

B) Preferred Alternative

A large component of respondents to FWP surveys and participants in public forums believe that current conditions on the Madison River warrant restrictive management actions. Many of these respondents indicated commercial use on the Madison River has exceeded thresholds and that implementation of restrictions like the Big Hole and Beaverhead rules are needed to minimize conflicts between user groups and protect recreational values. Increasing use necessarily puts increased stress on natural resources, including fisheries. Potential degradation of environmental quality along with increased stress from vessels, anglers, diseases, and climate change is of concern to FWP.

Instituting a cap on the number of permittees on the Madison River was suggested by some respondents. Limiting the number of permittees as a standalone management action would likely not improve recreational values on the Madison River, unless the number of vessels launched by permittees was meaningfully restricted in conjunction with the commercial outfitter cap. However, a cap on permittees may effectively prevent further deterioration of recreational values by curtailing increases in crowding.

Implementation of non-commercial reaches could improve the recreation experience on the Madison River by reducing social conflicts between users and may also result in the reduction in the number of vessels on the river. Also, non-commercial reaches could provide less crowded reaches for individuals that do not wish to hire an outfitter. Resident days on designated reaches of the Big Hole and Beaverhead rivers have resulted in reduced river crowding and alleviated social conflicts between user groups. Some negative impact to the recreational values of Madison River permittees could occur with implementation of this proposed management action because these users would not have access to one reach of river each day. Permittees would still, however, have access to the majority of the Madison River every day.

A ceiling set on the maximum daily use per reach per outfitter on the Madison River could maintain or improve the current recreation experience of the Madison River users who feel commercial use on the river is too high. Failure to adopt trip restrictions could lead to an erosion of the recreation experience if commercial use continues to increase at its current pace. An effective, meaningful cap on trips per reach of the Madison River would need to be implemented concurrently with a cap on permittees allowed to operate.

Prohibiting the use of any watercraft to gain access to fishing the Madison's wade-only reaches would increase the river's recreational value for walk/wade users by eliminating potential conflict with those anglers that use a vessel or float tube in these reaches. Conversely, for anglers who currently use a vessel or float tube to gain access to fishing in these reaches recreational values would decrease. Some displacement of those that use a vessel or float tube to gain access to fishing in these reaches should be expected, although effects on overall crowding would likely be minimal, especially if the rule was implemented in conjunction with a cap on outfitters, non-commercial reaches and commercial maximum daily use restrictions.

The Commission is proposing prohibiting commercial use on the Madison River between Greycliff Fishing Access Site and the confluence with the Jefferson River. This reach of river is unique in its resource values for scenery, wildlife and recreational solitude. Prohibiting commercial use in the reach between Greycliff FAS and the confluence with the Jefferson River will retain or improve the resource value for users who desire a more primitive recreational experience. It may also act to decrease the resource value for the 8 % of permittees who conduct commercial fishing in this reach. In 2016 there were 63 commercial trips reported in the reach between Greycliff FAS and the confluence with the Jefferson River which is less than 1% of the commercial use reported on the Madison River. The commercial use in this reach is influenced by high seasonal water temperatures, annual angling closures and the length of the reach. Therefore, it is not a reach of river that attracts permittees in large numbers and the decrease in resource value to this user group would likely be minimal.

Designation of the 18.9-mile reach of the lower Madison River between Greycliff FAS and the Madison's confluence with the Jefferson River as primitive with future development limited to carry-in vessel access only would maintain current recreation values in this reach of river.

Prohibiting glass containers on the Madison River will likely increase current recreation values by decreasing both the amount of litter and the risk broken glass presents to river users.

C) MCAC Recommended Alternative

At the forefront of the MCAC recommendations is collecting accurate recreation data for each reach of the Madison River. FWP concurs that such information is vital to detecting trends, determining the efficacy of management actions, and directing future management actions. Data collection alone will not improve resource values. Overall, very little impact to recreational values is expected from conducting more user surveys, but boat launch delays may occur if on-site surveys are conducted at peak use periods. Also, some users may feel that their recreational experience has been negatively impacted through the presence of on-site surveyors. Similarly, the MCAC recommends an annual survey of SRP commercial permit holders for the same purpose, of which no direct impact to recreational values is expected.

The MCAC also recommended that FWP develop and implement effective education outreach efforts aimed at reducing congestion and conflicts at Fishing Access Sites and on the water. The effectiveness of such programs is difficult to measure, but FWP has successfully brought several other issues to the public's attention, such as aquatic invasive species prevention through similar campaigns. If effective, a statewide ad campaign designed to address river recreationist ethics could improve recreational values on the Madison and other rivers. FWP recognizes an ethics ad campaign could be a component of the management plan but mitigating current and future conflicts will require additional management actions.

If any management actions are implemented on the Madison River, the MCAC suggested actions be in place for two years and subsequently evaluated before implementing other or additional actions. Evaluating the effectiveness of management actions would allow FWP to

determine if these actions are having the desired impact. If actions are determined to be effective they could be maintained and conversely could be modified if proven ineffective. Either way, the effect on recreational value would be positive. FWP has a comparable rule review process in place on the Big Hole and Beaverhead system which takes place every five years. The process is designed to gather public and internal comment on the efficacy of the rules and make appropriate adjustments.

The MCAC strategy for establishing thresholds for user numbers and satisfaction that trigger management actions might result in a decrease in recreational values because of the minimum five-year lag time mandated by the strategy. Three years of baseline data collection would be required followed by two years of monitoring before any management actions could be implemented. If use continues to increase at current rates recreation values would almost certainly suffer. In addition, many of the suggested management actions are untested and might not be effective in addressing user conflicts. Finally, requiring all users to obtain an annual permit would be cost-prohibitive for FWP to implement. FWP has concluded that considering immediate restrictive management actions is warranted because thresholds have already exceeded those proposed by the MCAC, the quality of existing data, and amount of public demand for further action.

The MCAC recommendations for specific reaches and access sites were divided into four reaches of river (Appendix B). For the uppermost reach from the Quake Lake outlet to Lyons Bridge FAS, the MCAC suggested collecting data regarding walk/wade angler and boat angler conflicts, which would likely not impact recreational values unless management actions were implemented.

FAS capital improvement projects were recommended by the MCAC for the reach from Lyons Bridge FAS to the Ennis (Highway 287) Bridge. These projects could increase or decrease the recreational values of the Madison River depending on an individual user's perspective. Some users might feel that recreational values were increased by improving access at sites while other users could feel recreational values were diminished if the number of users increased because of the improvements. Informing the public to expect high use in the Lyons Bridge to Ennis Bridge reach during peak times would not affect recreational values on the Madison River.

In the third reach from the Ennis (Highway 287) Bridge to Ennis Lake, the MCAC recommendations of maintenance prioritization and capital improvements at Ennis FAS and Valley Garden FAS would have little impact on Madison River recreational values, primarily because FWP already follows the MCAC recommendations for those sites.

Specific to the reach of river from Warm Springs RA to Missouri Headwaters State Park, the MCAC recommended a prohibition on glass containers, continuing the "Adopt-An-Access Site" program, and facilitating partnerships among BLM, FWP, and other entities to conduct monthly clean-up days during June, July, and August. Overall, these would have little impact on the recreational values of the Madison because they do not specifically address any recreational issues with the exception of aesthetic values. MCAC recommendations to address conflicts and parking issues could improve recreational values if effective. General monitoring and

improvements to the Canaday and Warm Springs RAs and Black's Ford FAS would have little impact on recreational values at these sites.

In addition to the reach-specific recommendations previously detailed, the MCAC recommended that general river-wide recommendations be implemented immediately in all four reaches. This would have the same impact to recreational values as described for the collection of user satisfaction data, an annual survey of SRP holders, developing outreach programs, and evaluating the effectiveness of management actions.

The final recommendation of the MCAC is the designation of the 18.9-mile reach of the lower Madison River between Greycliff FAS and Milwaukee FAS as primitive access. Such a designation would maintain the current recreational values of this unique reach of river for those who enjoy the solitude it affords. A similar recommendation has also been incorporated into FWP's preferred management alternative.

4.2 Predicted Effects on the Physical Environment and Natural Resources

Restrictive management actions have the potential to impact the physical environment and natural resources if they result in changes in user density and/or distribution. However, to not consider management actions could adversely impact the resources currently enjoyed on the Madison River.

It is difficult to ascertain the carrying capacity for use on the Madison before resources are affected but, given unchecked growth, the resources that make the Madison River a popular destination may eventually decline or disappear altogether.

A) No Action Alternative

Under the No Action Alternative, increased use may result in physical impacts to streambanks, erosion, trail making, littering, and trespassing. Increasing use levels and associated stress, including cumulative hooking, habitat alteration (by boat anchors, chines, boots, etc.), behavioral disturbance, increased risk of Aquatic Invasive Species (AIS) establishment may have a severe negative impact on natural resource values. Increased use may also affect wildlife populations, movements, and have unknown cumulative effects.

B) Preferred Alternative

Overall, the preferred alternative would help maintain current natural resource values by placing use restrictions on commercial river users. Unfortunately, natural resource values would still be at risk because of the rapidly increasing number of angler days on the Madison River. To meaningfully address the increase in angler days would require restrictive management actions not supported by most respondents to FWP surveys or those providing feedback at listening sessions.

Instituting a cap on permittees on the Madison River would help maintain the current natural resource conditions of the Madison River. Failure to restrict the number of commercial use permits could cause the deterioration in natural resource conditions through greater exposure of the fishery and riparian habitat to an increased number of river users. However, if angler days

of any kind, commercial or non-commercial, continue to grow it is likely the natural resource values would eventually suffer.

Behavioral changes, catch rates included, may or may not be a sign that fish populations are in jeopardy. Planning for impacts to populations that are influenced by numerous environmental variables is difficult. Balancing the public's needs while acknowledging impacts and reducing stress during summer months may prevent population level impacts in future years. Should any of the preferred alternative be implemented, monitoring of angler satisfaction, fish population trends, fish health and catch rates should be utilized to weigh efficacy of recreation management and adaptively manage social as well as biological resources.

Implementation of non-commercial reaches would likely not impact natural resource values unless they increased or decreased total use at specific sites.

Similar to a cap on commercial outfitter permits, restricting the amount of commercial use in specific reaches would help maintain natural resource values on the Madison River. Failure to set maximum commercial daily use limits could cause the deterioration in natural resource conditions through greater exposure of the fishery and riparian habitat to an increased number of users. However, if angler days of any kind, commercial or non-commercial, continue to grow it is likely the natural resource values would eventually suffer.

Prohibiting the use of a vessel or float tube to gain access to fishing in wade-only reaches would likely not have a significant impact on natural resource values unless it resulted in an increase in wade angling. If wade angling increased overall or in specific locations, increased disturbance and erosion could occur.

Prohibiting commercial use between Greycliff FAS and the confluence with the Jefferson River will retain the current natural resource values in this reach of the Madison River.

Developing a policy for the 18.9-mile reach of the lower Madison River between Greycliff FAS and the Madison's confluence with the Jefferson River as primitive access would maintain current natural resource values in this reach of river. FWP would develop a policy that any future land acquisition maintains the primitive nature of this reach by limiting vessel access to carry-in only.

Prohibiting glass containers on the Madison River from the Quake Lake outlet to the confluence with the Jefferson River would likely increase natural resource values by potentially decreasing the amount of litter and the risk to river users.

C) MCAC Recommended Alternative

Overall, few direct or significant impacts to natural resource values are expected to occur as a result of the MCAC recommendations. An outreach effort might result in the maintenance or an improvement in natural resource values if it is successful in reducing littering, bank damage, or riparian vegetation.

If the MCAC strategy for establishing thresholds for user numbers and satisfaction and triggering of management actions is employed, a decrease in natural resource values might occur because the MCAC recommendation would result in a 5-year lag before any action could occur. If use continues to increase at current rates, natural resource values might suffer if riparian habitats are negatively impacted by increasing numbers of users before any management actions are triggered.

The FAS capital improvement projects recommended by the MCAC might decrease natural resource values at these sites if they cause an increase in use or if they disturb riparian habitat. The MCAC recommendations to prohibit glass containers, continue the “Adopt-An-Access Site” program, and facilitate partnerships among BLM, FWP, and other entities to conduct monthly clean-up days during June, July, and August could improve natural resource values. Also, MCAC recommendations to address conflicts and parking issues could improve natural resource values if they minimized impacts to riparian habitat. Improvements to the Canaday and Warm Springs RAs and Black’s Ford FAS could improve or decrease natural resource values depending on the type and effect of the improvements on riparian habitat.

The designation of the 18.9-mile reach of the lower Madison River between Greycliff FAS and Milwaukee FAS as primitive access where FWP would limit new development to carry-in vessel access would protect and maintain the current natural resource values of this unique reach of river. This reach of river is renowned for its scenic beauty, wildlife, and the solitude it affords floaters.

4.3 Predicted Effects on Heritage Resources

Very few impacts to heritage resources are expected from any potential management actions. Prior to any ground-breaking activities FWP would conduct all required heritage surveys and obtain clearance from the State Historic Preservation Office (SHPO).

A) No Action Alternative

There is no predicted impact to heritage resources from the No Action Alternative.

B) Preferred Alternative

There are no predicted impacts to heritage resources from the Preferred Alternative because no ground-breaking activities are being proposed. Furthermore, the proposed management actions are designed to maintain current use levels, which should help mitigate against future impacts to heritage resources. For example, designating the reach of river between Greycliff FAS and the Madison’s confluence with the Jefferson River as primitive access will help protect the heritage resource values of that reach.

B) MCAC Recommended Alternative

Very few impacts to heritage resource values are expected from the MCAC alternative. Any ground-breaking activities associated with construction projects have the potential to affect

heritage resource values. FWP would conduct all required heritage surveys and obtain clearance from the SHPO prior to any such activities. Also, any management actions that cause an increase in use at sites could negatively affect heritage resource values at those sites whereas actions that maintain or decrease use at a site will help protect heritage values. Developing policy for maintaining the reach of river between Greycliff FAS and Milwaukee FAS to maintain as primitive access will help protect the heritage resource values of that reach.

4.4 Predicted Effects on Economic Resource Values

Important consideration should be given to the impact of potential management elements on the economic resource values of the Madison River. Tourism is clearly a primary component of Montana's economy as well as that of communities on the Madison River. Fishing, both commercial and non-commercial, is a major draw for local and non-resident anglers. FWP maintains that while economic value is extremely important in relation to the Madison River, it is not the only variable of importance. The quality of the user experience and protection of the resource for future generations are also of importance. FWP's intent is to develop a viable, long-term management plan for this resource so that the Madison continues to be both a destination for visiting and local anglers.

A) No Action Alternative

FWP does not predict any short-term effects on the economy if the No Action Alternative is chosen. This alternative does not limit any type of recreational use on the Madison River; growth (and associated economic benefits) would be influenced by public demand for commercial services and other influences on consumer spending. Over a longer period of time, there is potential for unchecked increases in use to have a negative effect on the local tourism economy if undesirable recreational conditions or resource damage result in fewer people choosing to recreate (and spend money) on the Madison River.

B) Preferred Alternative

Overall, the preferred alternative would likely not have a significant impact on State or local economic resource values. Specific restrictive actions (i.e., a cap on outfitters and trip limits) could impede an individual outfitter's business growth on the Madison River if client demand for trips exceeds the proposed limit on trips.

Instituting a cap on the number of outfitters authorized to operate commercially on the Madison River alone would likely not affect state or local economic resource values because the total number of commercial trips, and therefore potential revenue, would be maintained at current levels. Not allocating a specific number of trips or client days to individual outfitters, as was done on the Big Hole and Beaverhead Rivers, would allow businesses to naturally grow and retract, possibly keeping trips in a relative equilibrium. If, however, commercial use continues to grow, a reduction of client day caps in various reaches might be warranted.

Implementation of non-commercial reaches would likely have very little impact on the economic resource values of the Madison River. Outfitters could still operate on the majority of

the river every day. The total number of commercial trips would not be affected by this restriction. If, however, any new or displaced Madison River user come to take advantage of less-crowded conditions, the economic resource values would increase.

It is FWP's goal to use commercial outfitter trip restrictions in lieu of a client day allocation system to set maximum daily use at a sustainable, socially tolerable level. Although trip restrictions for permittees have the potential to negatively affect the Madison's economic resource values, FWP predicts impacts would not be significant with regard to the requirements of 2-4-111, MCA. While permittees are limited in the total number of vessels they can launch on any given day by these restrictions, the maximum use is proposed at levels that are currently far higher than what the overwhelming majority of commercial use on any given day. There could be a minor economic impact to the largest outfitters, but FWP's expectation is that setting meaningful limits on use is critical to developing a sustainable river recreation plan. Furthermore, the use of trip restrictions instead of a client day allocation system allows business to naturally grow and contract, hopefully within a relative equilibrium over time.

FWP predicts minimal impact to economic resource values from the prohibition of vessels or float tubes to gain access to fishing in the current wade-only reaches from the outlet of Quake Lake outlet to Lyons FAS, and Ennis (Highway 287) Bridge to Ennis Lake. Those wishing to float through these reaches recreationally could still do so and those wishing to float fish could still use the majority of the Madison River. In fact, increased numbers of wading anglers might come to take advantage of the new regulations, thereby increasing the economic resource values of the Madison River.

Designating the 18.9-mile reach between Greycliff FAS and the confluence with the Jefferson River as non-commercial with maintaining primitive access conditions by FWP would likely not affect economic resource values. Any commercial use that has been conducted on this reach of the lower river could be redirected to the reach of the river between Warm Springs RA and Greycliff FAS. If growth in the reach of the lower Madison River between Greycliff FAS and the confluence of the Jefferson River is unchecked, there is potential for the degradation of the unique resource opportunity found in this reach of the lower Madison River.

C) MCAC Recommended Alternative

Because the majority of the MCAC alternative does not limit any Madison River activities, they have little to no potential to impact economic resource values at the onset.

Over time, the MCAC's proposal to progressively restrict users through annual permits, fees, location and time of use, and ultimately user number caps, could have some impact to economic resource values. It is unlikely that any significant impacts on the economic resource values of the Madison River would occur, particularly in the short term. Because the recommendation stipulates years of data collection and analysis to progress through the management actions, it would be approximately 11-13 years at a minimum before any actions that could conceivably lead to a significant decrease in use that might have a corresponding impact on the economy.

4.5 Predicted Effects on Administrative Environment.

According to the Statewide River Recreation Rules, management plans and rules must be technically and socially feasible; legal; affordable; measurable; enforceable; and reasonable to administer.

A) No Action Alternative

Under the No Action Alternative, increases in commercial use would increase SRP revenues for FWP. However, increasing use levels also increase administrative costs, including Madison River SRP administration, latrine pumping, road repair, general maintenance, and enforcement.

B) Preferred Alternative

Under the Preferred Alternative, FWP's administrative costs would not exceed current levels. Because FWP already administers an SRP program on the Madison River, it does not anticipate any new effects on the administrative environment under this alternative. Current River Recreation staff could continue to administer the SRP program at current use-levels. Other FWP staff, including caretakers, FAS maintenance workers, and enforcement staff could also be maintained at current levels provided non-commercial river use does not dramatically increase.

C) MCAC Recommended Alternative

Much of the MCAC plan is not fiscally affordable with current funding and staff structure. Collecting recreation data as described would cost more than \$250,000 per year, requiring two full time technicians, two data entry positions and one technician to analyze and interpret data. One-time infrastructure costs for iron rangers would likely be between \$300,000 and \$500,000. FWP does recognize that user data is imperative to develop fair and effective management actions and solutions; thus, FWP will continue to collect these data and develop more cost-effective methods of obtaining it.

Developing an effective outreach plan specific to the Madison River could also prove financially overwhelming. A more holistic solution could be to develop a statewide river ethics campaign to address concerns that are of issue throughout the state.

MCAC recommendations for suggested triggered actions would require additional funding to implement. Capital improvements to FASs and obtaining new access sites would obviously be a financial constraint and would not address "on river" crowding – the original impetus for a management plan. Similarly, FWP does not have adequate staffing resources to permit every Madison River user, even if a fee was associated with the permit.

4.6 Public Controversy

Most aquatic resource users are passionate about their recreation and many individuals rely on Madison River recreation for their livelihood. Because of this, any potential recreation plan has the potential to generate substantial debate and controversy. Additionally, different demographic groups often view subjective conditions differently, which adds to controversy and disagreement. For example, a non-resident angler's concept of crowding may be very different from that of a Montana resident. For these reasons, no river recreation plan will satisfy all user groups and demographics completely. Drivers for development of this EA have come from strong and unrelenting comment from the public asking FWP to address concerns about social conditions on the water and at access sites. FWP's goal is to achieve a compromise between user groups that will allow fair and effective management of the Madison River for all users while maintaining the integrity of the resource.

A) No Action Alternative

The No Action Alternative could lead to continued increase in use on the river, and further erosion of public satisfaction with conditions. Those in favor of maintaining the status quo (without any restrictions on commercial use) would be satisfied, at least in the short-term by this alternative. Under this alternative, unchecked river use could potentially have an impact on fish populations, especially during summer months.

B) Preferred Alternative

FWP predicts that the Preferred Alternative would generate some amount of public controversy. Depending on a user's perspective, this alternative might not go far enough, be either completely warranted or unwarranted, or be anywhere in between. FWP's goal for this process and plan is to hear all voices and develop a plan that addresses all of these concerns fairly and equitably. The numerous opportunities for the public to provide input during the planning process is evidence of FWP's commitment to this goal. Moreover, FWP manages for the viability and sustainability in the long term for the river and all users. FWP predicts this plan is one in which actions are imposed fairly and equitably across demographics. This alternative is based on current Madison River conditions which have continued to deteriorate since this process was initiated by concerns from the public 7 years ago.

Instituting a cap on the number of permittees may prevent or delay new business opportunities to new outfitters, but the current unlimited system is considered by many people to be unsustainable socially and potentially biologically. The proposed lottery system to reissue surrendered permits would be an opportunity for new outfitters to enter the system and launch new business on the Madison River. Given the number of permits issued, and that permits are equal in commercial opportunity, FWP anticipates the individual transfer value of the permits should not be cost prohibitive to a new outfitter entering the system. The cap also provides for additional management actions in the future if reductions in the number of outfitters is warranted.

Trip restrictions may be of concern to some permittees if they anticipate the future client demand for trips will exceed the proposed trip limit. FWP has proposed the trip restrictions in a

way that allows growth for most businesses and does not limit use by smaller or growing operations as would a client day allocation system.

Implementation of non-commercial reaches has been supported by many non-commercial river users through public comment gathered by FWP. Permittees may object to their inability to use a particular reach on the Madison River, but the revolving nature of the non-commercial reaches would mean there is only one day per week a reach is off limits to permittees with the exception being the reach between Greycliff FAS and the Madison River's confluence with the Jefferson River. Furthermore, the reaches have been developed in a way that provides adequate reach length for permittees to operate. This management action is one of the most important concessions that non-commercial users request in terms of a management plan; they deem that the perceived monopolization of the float reach from Lyons FAS to Ennis FAS is unfair. Future evaluations of satisfaction under the new management plan will determine the success of the proposed restrictions. If restrictions are not effective in addressing social conflict, other approaches may be employed at later dates, such as limiting use in non-commercial reaches for non-commercial users.

Prohibiting the use of a vessel or float tube to gain access to fishing in either of the Madison's walk/wade reaches would be controversial for some users. This management action has been requested and is of concern to a large number of anglers that prefer to wade. Typically, wade anglers already are constrained from using the float reach from Lyons FAS to Ennis FAS. Conversely, the upper and lower wade-only reaches offer great access and opportunity for wading anglers. The perception of unethical access detracts substantially from their opportunity and angling experience. Again, sacrifice and compromise are required in any recreation plan and FWP is committed for providing quality opportunities for all users.

Finally, the public controversy and impacts of the Preferred Alternative are not limited to the Madison River or its users and the businesses it supports. FWP must consider what limiting new outfitters and trip restrictions will do to recreationalists and businesses on other area rivers, such the Yellowstone, Jefferson, or Missouri. Through these actions FWP might force any new outfitter growth to occur on these rivers, either creating or exacerbating social conflict problems and/or creating new economic opportunities in these communities. Montana Fish, Wildlife and Parks anticipates that these rules will not cause any measurable changes to the use of other rivers because it is not attempting to reduce current Madison River use, only maintain use at current levels. Any increase in use on these other rivers, therefore, is a natural outcome of the unrestricted growth in angling days and commercial fishing outfitter numbers.

The planning process for an individual river is complicated and takes considerable time, which does not lend itself to a one-size-fits-all "regional" management plan. All of these rivers, their users, and the economies that rely on them deserve a long-term, sustainable river recreation plan that is specific to it as well as its users and communities. Looking into the future, Region 3 plans on exploring other area rivers that are experiencing similar conflicts, but FWP must be able to make data-driven recommendations, as has been done on the Madison River. These processes take time to achieve, but FWP has concluded that waiting to take action on the Madison is unfair and irresponsible to the river and its users.

C) MCAC Recommended Alternative

Controversy surrounding the MCAC's recommendations is evident in that only 15% of those commenting on the recommendations when they were originally proposed felt they were satisfactory as a whole. Many users expressed concern that the recommendations did not go far enough in addressing the crowding and social conflict issues that are occurring on the Madison River. Others may feel that this long ranging and costly alternative would be preferable to the change recommended by Montana Fish, Wildlife & Parks in the Preferred Alternative. Selection of the MCAC Recommended Alternative could be controversial to those members of the public expecting fiscally responsible government.

4.7 Cumulative Impacts and Potential Risks or Hazardous Adverse Effects

The primary cumulative impact of the proposed alternatives would be changes to economic resource values and the occurrence of social conflicts. In the future, beyond the potential for cumulative impacts of a social nature, not effectively addressing use issues may have an impact on the health of the Madison's fishery. Sub-lethal stressors are difficult to quantify until it is too late. If non-outfitted angling, outfitted angling, or other non-angling use of the Madison River continues to increase, cumulative effects could cause adverse impacts to not only the social environment, but also to the resource, particularly in a time when temperature, disease vectors, and water-level induced stressors are occurring more frequently. It is FWP's mission to address these issues with a comprehensive management plan not only to mitigate social conflicts on the Madison River, but to also conserve the resource for future generations of recreationists. FWP retains the ability to consider additional restrictions on non-commercial users in the event the public continues to express dissatisfaction with social conditions on the river or at fishing access sites.

Appendix A: MCAC Final Recommendations

Montana Fish, Wildlife & Parks

Madison River Citizen Advisory Committee

FINAL RECOMMENDATIONS

May 13, 2013

Madison River Citizen Advisory Committee

Robin Cunningham, Gallatin Gateway

Joe Dilschneider, Ennis

Bob Gibson, Bozeman

John Juracek, West Yellowstone

Lee McKenna, Helena/Ennis

Philip Naro, Bozeman

John Way, Ennis

Agency Representatives

Pat Flowers, Montana Fish, Wildlife & Parks

Chris McGrath, Bureau of Land Management

Madison River

- ▲ River Mile
- FWP Sites**
 - Day Use
 - Campground
 - State Park
- BLM Sites**
 - Day Use
 - Campground

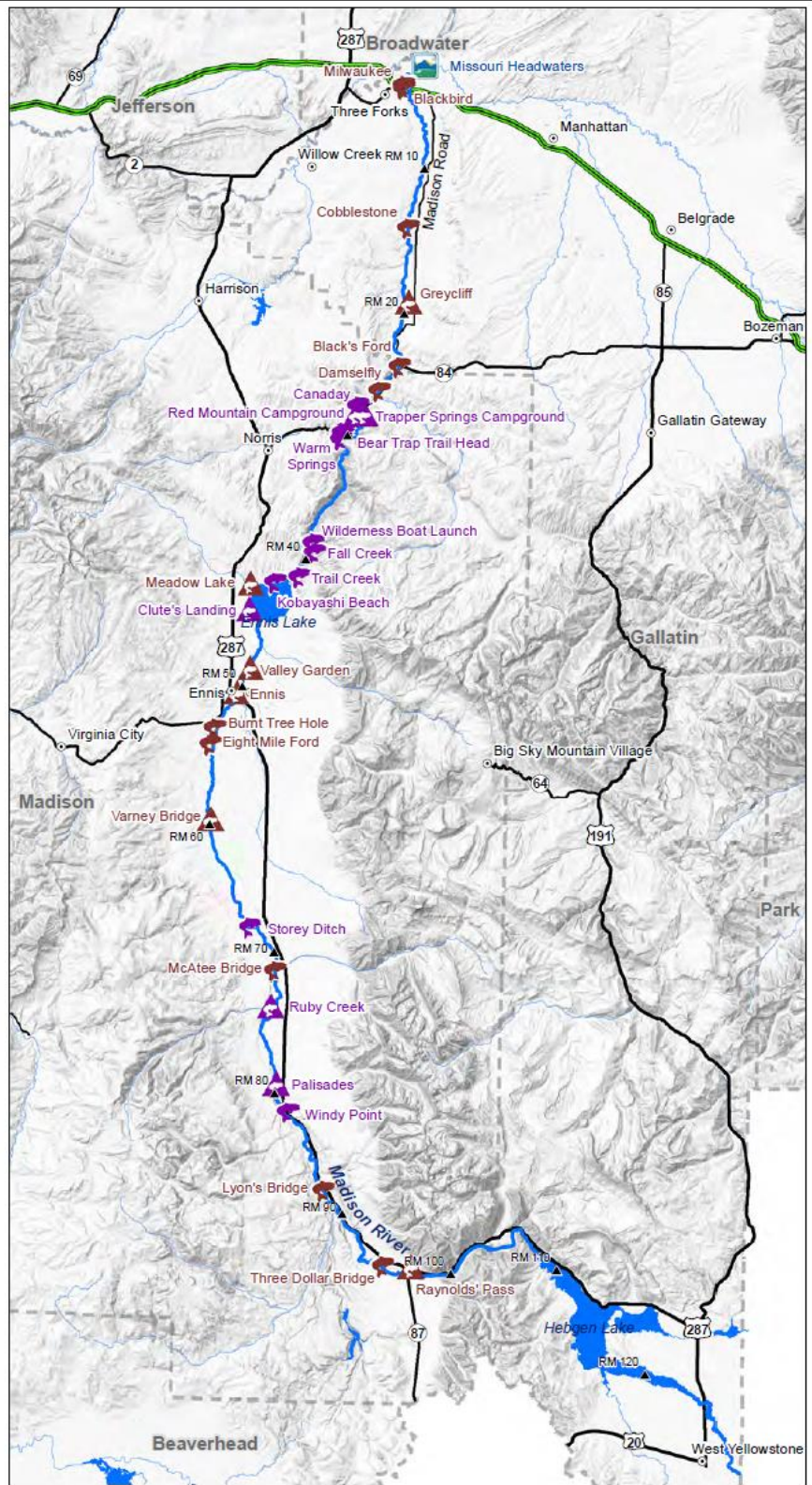
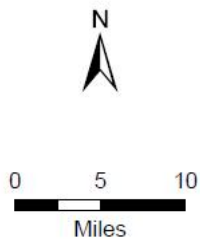


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Madison River Citizen Advisory Committee Recommendations

INTRODUCTION

This document contains recommendations based on terms of the convening Charter (see Appendix) and tasks assigned by Montana Fish, Wildlife & Parks (FWP) to the Madison River Citizen Advisory Committee (MCAC). The 7-person committee met 10 times from May 2012 to March 2013 and completed recommendations for the entire river and for specific river sections. The recommendations are a product of FWP's River Recreation Management Guiding Principles, the member's representative "interests," and their deliberations based on the following assigned tasks:

- Assess river recreation information and existing conditions on the Madison River.
- Identify desirable or acceptable recreation conditions for the Madison River.
- Develop a list of management actions (less restrictive to more restrictive).
- Identify conditions that would warrant implementation of management actions.

INTEREST-BASED PROBLEM SOLVING PROCESS

The MCAC used a facilitated, "interest-based" process as described in the River Recreation Management Planning Manual. In this process, issues are discussed on the basis of merit rather than on personal position, bias, emotion, or opinion. Using this process, the committee reached consensus on nearly all recommendations. The process applies the following principles, and those principles establish the process steps:

1. *Separate the person from the defined problem.* Identify the specific, substantive questions that have to be effectively answered in the process.
2. *Address interests, not positions.* Identify interests of those at the table, those missing, and any broader community interests.
3. *Create solutions for mutual gain* – with the group making sure the proposed solution addresses the identified "interests" of the involved parties.
4. *Use fair standards/objective criteria.* Evaluate proposals and come to agreement based on what the group agrees are guiding principles and fair standards/objective criteria - rather than opinions, personal values, or bias.

The goals of an interest-based process are: (1) Identification and clear understanding of the involved "*interests*"; (2) *Options* to achieve *mutual gain*; (3) *Legitimacy* based upon guiding principles, fair standards/objective criteria; (4) Productive, collaborative *communication* within agreed-upon ground rules; (5) *Relationships* developed from collaborative discussion; (6) *Durability* of outcome; (7) Demonstrated *commitment*.

GUIDING PRINCIPLES

The MCAC affirmed the guiding principles in the FWP River Recreation Management Planning Manual and added the following:

- Use levels should be the consideration that drives management action decisions, not types of use/user (who it is).

INTERESTS

At the beginning of the process, the MCAC identified and mutually clarified the following “Interests.” They are:

Overarching Recreation Interests

- Preservation of the beauty of the Madison River and quality of the recreation experience.
- Proper stewardship of the Madison River by users and Managing Agencies in order to protect the resource, while still maintaining and accommodating a full spectrum of recreation activities.
- World-class fishing and floating experiences and enjoyment for all.
- Good management actions, defined as: technically and socially feasible, legal, affordable, measurable, and enforceable so they can be effectively implemented.
- A river that is free of litter.
- A public that understands and values river recreation etiquette.

General Angling Interests

- Continue the mystique and lore of “the Madison” – even in modern times - as a “world class fishing experience”. There was no consensus as to an exact definition of “world class fishing experience.” However, the MCAC identified the following as elements that many people would describe as part of a quality experience: a healthy resource that allows anglers the opportunity to catch a sufficient number of decent-size fish per trip; little congestion at the boat ramp and on the water; convenient boat ramp access with reasonable wait times; good etiquette (as noted in the desired conditions) demonstrated by all river users at the boat launch and on the river; adequate parking; tranquility, majestic scenery, and a clean, cold-water river.
- River access is available for wade and float anglers.
- Keep the upper Madison garbage-free. Reduce garbage on the lower Madison, particularly the reach between Warm Springs Recreation Area and Black’s Ford FAS.
- Educate the public to value and demonstrate river recreation etiquette.
- Encourage all users to make thoughtful choices to reduce congestion and pressure during the peak of the season (June through September), e.g. fishing at less popular fishing access sites, or fishing at times other than 9 a.m. to 5 p.m.

Commercial/Economic/Local Communities’ interests

- A healthy resource; no dollars or fun can be had if the Madison becomes degraded.
- Measurable standards for recreational use impacts on water quality and fish populations because a healthy resource is essential to the commercial fishing businesses and to the economy of local communities.

Managing Agencies' Interests

- Promotion of public safety.
- Protection and preservation of the resource for present and future use and enjoyment.
Reduction of user conflicts.
- Management of the river which allows a variety of quality recreational and educational opportunities.
- Development and maintenance of safe, convenient recreation facilities that balance public demand, protection of resources, and fiscal responsibility.

OVERALL DESIRED CONDITIONS FOR THE MADISON RIVER

MCAC members described the overall desired conditions for the Madison River as follows:

- A healthy and productive fishery.
- An accepted frequency/range of encounters among users; adequate space defined as “*not feeling unreasonably encroached upon by another user.*”
- No garbage - 100% packed in and packed out.
- Maintain reputation as a “world class” fishing experience for anglers.
- Adequate access and parking.
- Ongoing education about safety, emergency measures, and water conditions, etc., resulting in educated users.
- Problems/issues identified quickly and correctly by Management Agencies, and addressed successfully.
- The implementation of the least amount of regulation/management actions necessary to protect the resource while allowing all users to enjoy the river. The MCAC recognized that some regulations/management actions could affect certain user groups more than others and stressed that, when possible, any such regulations should be tailored narrowly to address specific problems so that everyone could continue to use the river.
- All user groups understand and are considerate of the needs and interests of others and use appropriate ethics and etiquette (e.g., picking up litter is the norm, not the exception; people maintain appropriate distances from other users for each activity).
- The Madison River fishery and recreation experience is maintained based on current conditions.

GENERAL RIVER-WIDE RECOMMENDATIONS TO BE IMPLEMENTED IMMEDIATELY

The following actions apply to the entire river and should be implemented immediately or as soon as practically possible. These management actions are justified by current conditions; the need to establish a baseline number of users, use type, and user satisfaction; and the need to determine whether current conditions contradict any of the River Recreation Management Guiding Principles.

- **Collect accurate recreation data for each section of the river.**

- Collect accurate data for each river section by installing “iron rangers” at all FWP, BLM and other public access points on the entire river (an iron ranger is a hollow steel tube that is placed in the ground and contains a slot for depositing forms, survey instruments, fee envelopes, etc.). FWP will design a survey specifically aimed at querying users about river-stretch specific information including: user-type, use-level, and user-satisfaction.
 - These data will be collected year-round. All users will be required to complete the ‘survey’ document and deposit it in an iron ranger. Wade anglers would complete and deposit the survey in the iron ranger nearest to the area they are fishing. Float anglers would obtain the survey at the launch site and deposit the completed survey at the take-out site.
 - Data collection instruments should be designed to obtain specific user demographics and use levels according to place and time of year on particular river stretches. These data will allow for monitoring and evaluation of changes to the desired condition in that section in a timely manner and will aid future advisory committees in identifying problems and recommending management actions.
 - The first three years of data will be used to establish a baseline for use numbers and user satisfaction. The data will also be used to refine data collection needs in future years.
- **Conduct annual survey of Special Recreation Permit Commercial Users.**
 - Require all SRP holders to complete an annual survey gauging overall social conditions/satisfaction levels. This survey is to be returned with existing permit report forms.
- **Develop and implement effective education and outreach efforts.**
 - Education should be ongoing and address:
 - Why river-stretch specific data are needed and why the iron ranger surveys are mandatory.
 - User etiquette at FAS and on the river.
 - How to keep river and its banks free from trash.
 - Why and how the fishing/recreating public/commercial community should readjust their expectations and actions during peak fishing periods (June - September) to protect the resource and increase opportunities for a quality recreation experience, (e.g., expect high use levels during summer season, adjust fishing times accordingly).
- **Monitor impacts from glass bottles river-wide.**
- **Evaluate effectiveness of management actions.**
 - If new management actions are applied, they should be tried for 2 years and evaluated for desired effect before progressing to another action/set of actions. (Evaluation should consider exceptions such as acts of nature; emergency situations; weather events, etc.)
 - Change in actions should be done in a transparent and open public process.

- **Promote timely completion of work on Hebgen Dam.**
 - FWP should work to influence a more timely completion of work to repair the bottom release of water on Hebgen Dam so river conditions can return to “normal” (i.e. bottom of dam water releases) and any management actions will be considered/applied within that “normal” context.

GENERAL RIVER-WIDE THRESHOLDS (STANDARDS)

The MCAC identified general conditions that may warrant the implementation of management actions. This can also be referred to as “Thresholds” (Standards) that could “trigger” a management action.

- Threshold for number of users: The established baseline for number of users (to be derived from the data collected by the mandatory surveys at the iron rangers) is exceeded by 10% for two (2) successive years.
- Threshold for user satisfaction: The user satisfaction levels (to be derived from the data collected at the iron rangers) fall below 80% satisfaction for two (2) successive years.
- After a management action(s) has been implemented, if the number of users drops and remains 10% *below* the threshold/standard over a 4-year period (number of users no longer exceeds the threshold), FWP will evaluate those management actions in place and determine whether they are still warranted and/or whether other actions should replace them. Similarly, after a management action(s) has been implemented, if user satisfaction improves and remains 80% or greater over a 4-year period, FWP will evaluate those management actions in place and determine whether they are still warranted and/or whether other actions should replace them.

RECREATION MANAGEMENT ACTIONS: LEAST TO MOST RESTRICTIVE

- FWP should analyze data collected from iron rangers and other sources (e.g. angling pressure survey and annual SRP commercial use survey) to identify appropriate management actions for achieving desired conditions using the least restrictive management actions before proceeding to more restrictive management actions.
- MCAC discussed various "least to most restrictive" management actions including:
 - Redistribution and/or suppression of the number of users;
 - Displacement/reversing displacement of users;
 - Restricting users on when/how/where they might use the river.
- The MCAC recommends that when social crowding data indicates that an established threshold on a particular section of river has been exceeded, FWP should consider the following "least to most restrictive" management actions:
 1. Identify/evaluate additional access sites and site design.

2. Require all users to obtain annual permits for using stretches of the river or the entire river. Permits would be unlimited. Require all floating users to carry the permit on their craft. Commercial users would get their permit as part of their SRP registration. (Note: the MCAC did not agree on whether a permit should initially be free or have a minimal cost, i.e., \$ 2.00 – \$5.00, - with the basic intent of the permit being a tool for mild suppression of use to decrease crowding).
3. Add mild impact to permits (e.g., if initially free, add a nominal annual fee (i.e., \$5.00); if not initially free, mildly increase the fee. While numbers of permits remain unlimited, set deadlines for getting the permit.
4. Add “place and time” restrictions such as seasonal openings/closures, time of day; specific days, etc.
5. Cap numbers of users and define how use will be allocated.

RECOMMENDATIONS FOR SPECIFIC RIVER SECTIONS, INCLUDING FISHING ACCESS SITES

River upstream from Hebgen reservoir (Yellowstone National Park to Hebgen Lake)

This stretch of the Madison River flows approximately 2 miles from the Yellowstone National Park boundary northwest to Hebgen Lake through the north flats of the Hebgen basin. This is primarily a wade fishing section with some “float to fish.” Access is limited. There is moderate local fishing use in the spring and fall, and low use the rest of the year.

Desired Condition for this Segment of the River

The Madison River fishery and recreation experience is maintained based on current conditions and use types.

Actions to do now

The MCAC believes that this section of the river generally functions well. The MCAC recommends that the General River-Wide Recommendations be implemented here immediately.

Hebgen Dam to Quake Lake

This short stretch of river (approximately 2 miles) between Hebgen Reservoir and Quake Lake is primarily a wade section with some use of kick-boats (i.e. or similar craft) to access fishing opportunity. Access is good from the road. Angling use is high during the spring, summer and fall.

Desired Condition for this Segment of the River

- The Madison River fishery and recreation experience is maintained based on current conditions and use types.
- Education of anglers to protect the resource and obey fishing regulations, including those which restrict the number of fish that can be harvested.
- Number of users does not reach a point that negatively impacts the river.

Actions to do now

The MCAC recommends that the General River-Wide Recommendations be implemented here immediately. Several members of the MCAC and the public were concerned about reports that over-harvesting of fish occurs in this section of the river during the fall and spring spawning seasons. The MCAC deemed this to be a law enforcement issue and recommended that resources be deployed during the spring and fall to enforce existing fishing regulations.

Quake Lake (Raynold's Pass) to Lyons FAS

This 12.6 mile section of river begins at the Quake Lake outlet and ends at the Lyons FAS. Directly downstream from Quake Lake, the Madison River turns into a whitewater river for 1 mile. The gradient of the river is very steep, with large boulders and drops scattered all along this reach of the river. The fast pocket water continues for about 1 mile after Reynolds Pass FAS. At this point the gradient of the river decreases and the current slows. The river here is characterized by large riffles with numerous islands, large rocks and side channels. This is a wade-fishing only section with multiple access sites. Regulations prohibit fishing from boats or vessels; float-to-fish is allowed. A low amount of non-angling boating occurs in this section (the primary use is angling). This section has high fishing use in the summer, particularly around Raynold's FAS and Three Dollar Bridge FAS. There is moderate to low use during the remainder of the fishing season.

Desired Condition for this Segment of the River

- The Madison River fishery and recreation experience is maintained based on current conditions and use types.
- Recreationists using this stretch of the river are satisfied with the number of encounters with-other users and do not feel unreasonably encroached upon.

Actions to do now

This section of the river was the subject of intense debate among the MCAC. Some members believed that there were conflicts between wade anglers and boats that warranted immediate action; other members believed that this area functioned well and that continuation of the status quo was desirable. In the end, the MCAC agreed that more specific data was needed and that the General River-Wide Recommendations should be implemented here immediately.

Lyons FAS to Ennis FAS

This is a 30 mile stretch of the Madison River that is characterized by large riffles with numerous islands, large rocks and side channels. The flow tends to be swift and fairly uniform in depth. There are numerous fishing access sites. Wade and float-fishing are the primary uses in this section, with scenic floats and bird-watching occurring less frequently. This section experiences high fishing use during the summer and moderate use during the remainder of the year. This section has the heaviest concentration of float anglers, both commercial and non-commercial, on the river. Lyons FAS is the most popular FAS for boat launches. During peak season, users have complained about long waits to launch at Lyons FAS and congestion at the boat ramp and in the parking lot. The river is open to fishing year-round from McAtee Bridge to Ennis Bridge.

Desired Condition for this Segment of the River

- The Madison River fishery and recreation experience is maintained at current use levels and use types.
- Recreationists using this stretch of the river are satisfied with the number of encounters with other users and do not feel unreasonably encroached upon.
- Those launching crafts are satisfied with their wait time and experience.
- All users demonstrate appropriate etiquette at the boat launch and on the river.
- River aesthetics are valued and protected with no trash in/around the river.
- Access sites in this stretch of the river are garbage-free, have adequate parking, clean bathroom facilities, non-hazardous boat ramps, and useful signage, etc., that helps educate all users.

Actions to do now

The MCAC identified this river stretch and several fishing access sites within this stretch as areas that needed specific, immediate action. The MCAC recommended that the General River-Wide Recommendations be implemented here immediately. The MCAC also made the following specific recommendations for this stretch, to be implemented immediately or as soon as practical:

- Redesign the Lyons Bridge FAS to alleviate congestion.
- Improve maintenance of the 8 Mile Ford FAS dirt road through the peak season (May through September).
- Refurbish, realign the boat ramp at the Varney FAS and clearly delineate parking.
- At the McAtee FAS, create a gate in the jack fence on the south side of the parking lot to allow wade anglers access to public land.
- Educate the public to expect high use on this stretch during peak times and to adjust accordingly.
- Open the river to year-round fishing from Lyons FAS to McAtee FAS.

The MCAC also identified “Least to Most Restrictive Management Actions” that could be implemented from Lyons FAS to McAtee FAS if conditions exceed the threshold/standard:

- Identify/evaluate additional access sites and site design.
- Require all users to obtain an annual permit for using this stretch of the river. Permits at this point would be unlimited. Require all floating users to display the permit on their craft for this stretch. Commercial users would get their permit as part of their SRP registration. (Note: the MCAC could not agree on whether the permit should initially be free or have a minimal cost associated with it (i.e., \$ 2.00 - \$5.00) - with the basic intent of the permit being a tool for mild suppression of use.)
- Changing river conditions could result in lesser or more restrictions on the permit.
- After a management action(s) has been implemented, if user numbers drop and remain 10% *below* the threshold/standard over a 4 year period (user numbers are no longer exceeding the threshold), FWP will evaluate those management actions in place and determine whether they are still warranted and/or whether other actions should replace them. Similarly, after a management action(s) has been implemented, if user satisfaction improves and remains 80% or greater over a 4 year period, FWP will evaluate those management actions in place and determine whether they are still warranted and/or whether other actions should replace them.

Ennis FAS to Ennis Lake (Dam)

The river is slower and shallower in this stretch and branches into numerous braided channels. Ennis FAS is the last take-out on the upper river for float fishing. Boats are allowed to float down to Ennis Lake but no fishing is allowed from boats (this is a wade fishing and “float to fish” only section). There is some limited use of boats to gain access to fishing locations. Public access to this section of river is limited; Valley Garden FAS is the only other FAS in this stretch. Use is moderate in the summer and low the remainder of the fishing season. There is some wildlife/bird watching that occurs in this section.

Desired Condition for this Segment of the River

- The Madison River fishery and recreation experience is maintained based on current conditions and use types. Recreationists using this stretch of the river are satisfied with the number of encounters with other users and do not feel unreasonably encroached upon.
- River aesthetics are valued and protected with no trash in/around the river.
- Fishing access sites in this stretch of the river are garbage free, have adequate parking, clean bathroom facilities, non-hazardous boat ramps, and useful signage, etc., that helps educate all users.

Actions to do now

- The MCAC recommended that the General River-Wide Recommendations be implemented here immediately.
- Make the Ennis FAS and Valley Garden FAS a priority for maintenance early in the season (typically April).
- Improve maintenance of the Valley Garden FAS dirt road through the peak season (May through September).

Ennis Lake to Warm Springs Recreation Area

This 9.8 mile section of river flows through Bear Trap Canyon and features Class III to Class V whitewater, which makes it popular for rafting and kayaking. BLM is the primary management agency for this section of the river. Regulations allow fishing from boats and wade-fishing. Access is limited; most access is gained by hiking along the banks. Fishing use is moderate in the spring and fall and low during the summer.

Desired Condition for this Segment of the River

- The Madison River fishery and recreation experience is maintained based on current conditions and use types.
- Recreationists using this stretch of the river are satisfied with the number of encounters with other users and do not feel unreasonably encroached upon.
- River aesthetics are valued and protected with no trash in/around the river.
- Users recognize that 9 miles of this stretch of river are within the Lee Metcalf Wilderness Area and that the Wilderness has its own management regulations.

Actions to do now

The MCAC recommended that the General River-Wide Recommendations be implemented here immediately.

Warm Springs Recreation Area to Black's Ford FAS

This 6.5 mile stretch on the lower Madison River contains some deep runs in the upper reach but turns into broad shallow riffle sections in the lower reach. It is very popular for recreational floating during the summer (innertubes, rafts, etc.). The high volume of non-angling use presents management challenges unique to this section of river, including littering, parking along the highway, high alcohol consumption and driving under the influence, undesirable behavior, and other public safety concerns. This stretch is open to wade fishing and fishing from boats. There are numerous access points and fishing use can be high during the spring and fall, and lower in the summer.

Desired Condition for this Segment of the River

- The Madison River fishery and recreation experience is maintained based on current conditions and use types.
- This river stretch is managed and patrolled to increase safety related to high volume, short duration, recreational floating use.
- Reduction or elimination of driving while drinking/intoxicated; excessive alcohol consumption on the river; improve general public safety; and issues associated with parking on the roadside.
- Reduction of garbage. (The MCAC recognized that during peak season, it would be virtually impossible to completely eliminate garbage in this section.)
- Adequate parking at the access sites, clean bathroom facilities, non-hazardous boat ramps, and useful signage, etc., that helps educate all users to achieve and maintain desired conditions.

Actions to do now

- The MCAC recommended that the General River-Wide Recommendations be implemented here immediately. In addition, the MCAC recommended that the following specific recommendations be implemented immediately: Allocate FWP and BLM resources to develop and implement strategies that:
 - Educate the fishing/recreating public/commercial community about the mandatory data collection and why this information is important.
 - Educate users about specifics related to garbage/littering; recycling; and free mesh re-usable garbage bags available at the site.
- Prohibit glass bottles on this stretch of the river.
- Add recycling bins at Blacks Ford FAS.
- Continue the "Adopt-A- Access Site program.
- Facilitate partnerships among BLM, FWP and other entities (i.e., Trout Unlimited; Madison River Foundation; REI; college groups; service clubs, etc.) in conducting monthly clean-up days during June, July and August.
- Allocate resources to increase/improve FWP/BLM law enforcement presence/patrols during peak user seasons.

- Implement a “no tolerance” response to parking violations on site – resulting in towing as the first consequence.
- Work with the counties to develop/put in place a “no tolerance” response to parking on the roadside – resulting in towing as the first consequence.
- Monitor and improve the Canaday and Warm Springs Recreation Areas and Black’s Ford FAS.

Black’s Ford FAS to Headwaters State Park/Three Forks

This stretch of the river is 24.4 miles in length. The upper part of this reach is generally a single main-channel, with larger islands and deeper pools in the lower part of this section. Regulations allow wade-fishing and fishing from boats. A limited amount of recreational (non-angling) floating occurs here. This is a fairly remote section of the Madison River with limited access. Fishing use is low to moderate throughout the year.

Desired Condition for this Segment of the River

- The status quo is preserved - with no increased access - as this area is highly regarded for its solitude and wildlife viewing.
- The Madison River fishery and recreation experience is maintained based on current conditions and use types.
- Recreationists using this stretch of the river are satisfied with the number of encounters with other users and do not feel unreasonably encroached upon.
- River aesthetics are valued and protected with no trash in/around the river.
- Fishing access sites in this stretch of the river are garbage free, have adequate parking, clean bathroom facilities, non-hazardous boat ramps, and useful signage, etc., that helps educate all users

Actions to do now

- The MCAC recommended that the General River-Wide Recommendations be implemented here immediately. Monitor any potential plans by Gallatin County to pave the county dirt road that provides access to the area.
- Monitor Black’s Ford FAS for needed improvements.

APPENDIX B: MCAC RECOMMENDATIONS SUMMARY BY STRETCH

Quake Lake outlet to Lyons Bridge FAS

Current regulations prohibit fishing from a boat; however, access to waters by boat is permitted in this section. This section is a popular walk/wade section, because of access availability. Comments compiled by FWP through public meetings, surveys, and public requests suggest that conflicts between walk/wade users and anglers accessing waters via boat are increasing. The prohibition of access to fishing by boats in the section is warranted to preserve the recreational values of the section for the walk/wade user group. The Madison Citizens Advisory Council recommended data collection to evaluate the degree of social conflict between user groups. Collection of data regarding walk/wade angler and boat angler conflicts would not significantly impact recreational values or experience. However, timelines laid out by the MCAC (three years of data collection followed by two years of monitoring before management action implementation could lead to further deterioration of river user recreational experience on this stretch of river. Montana Fish, Wildlife and Parks deems that considering immediate restrictive management actions is warranted because of the quality of available data and amount of public support.

Lyons Bridge FAS to Ennis Highway 287

FAS capital improvement projects were recommended by the MCAC for the stretch from Lyons Bridge FAS to the Ennis (Highway 287) Bridge. Capital improvement projects at State owned FAS is not feasible due to budget constraints of FWP. Madison Citizens Advisory Council suggested public outreach to inform users of potential congestion from Lyons Bridge FAS to Ennis Bridge during peak season (June-August). Montana Fish, Wildlife and Parks, deems informational activities would not affect recreational values on the Madison River and would incur unnecessary costs.

Ennis Bridge (Highway 287) to Ennis Lake

Ennis (Highway 287) Bridge to Ennis Lake, the MCAC recommendations of maintenance prioritization and capital improvements at Ennis FAS and Valley Garden FAS would have little impact on Madison River recreational values. Montana Fish, Wildlife and Parks already follows the MCAC recommendations for those sites.

MCAC recommendations for the stretch from Quake Lake outlet to Lyons Bridge FAS.

The MCAC identified the need for specific data regarding walk/wade angler and boat angler conflicts. This section is closed to fishing from boats. However, boats may be used to gain access for wading. One comment that has become increasingly prevalent (phone calls, angler satisfaction surveys, listening sessions, online comments) relates to anglers gaining access to wade sections with boats. Has the intent of wade only sections on the river been lost over time? If so, does the public wish to change rules governing these sections to more closely meet the original purpose and need of wade sections?

References

MONTANA DEPARTMENT OF FISH AND GAME FISHERIES DIVISION JOB PROGRESS REPORT

STATE: Montana

TITLE: Southwest Montana Fisheries Investigation

PROJECT NO : F-9-R-30

JOB NO: II-c

TITLE: Madison River Trout Harvest and Study

PERIOD COVERED: July 1, 1981 through June 30, 1982

MONTANA DEPARTMENT OF FISH AND GAME FISHERIES DIVISION JOB PROGRESS REPORT

STATE: Montana

TITLE: Southwest Montana Fisheries Investigation

PROJECT NO.: F-9-R-26

JOB NO: II-b

TITLE: Madison River Trout Harvest and Study

PERIOD COVERED: April 1, 1977 to March 31 1978