

2013 Kootenai Forest Plan Revision Objection #1

Objectors Name: GARY W. MASON  
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Name of lead objector (if more than one): \_\_\_\_\_

Name of the plan revision being objected to and the responsible official:

Kootenai National Forest Land Management Plan 2013 Revision.

Responsible Official: Faye L. Krueger – Regional Forester, Northern Region.

Statement of issues and/or parts of the plan revision which the objection applies:

I object to the proposal to manage the northern portion of the Whitefish Divide area as MA 1B – Recommended Wilderness.

Statement explaining the objection and how the proposed plan should be altered:

The reasons for this objection are this:

1. The process of evaluating the Thompson-Seton Inventoried Roadless Area was flawed as the portion of this area proposed as Recommended Wilderness does not meet the definition of Wilderness as described in section 2c of the The Wilderness Act of 1964. This area **DOES NOT** “generally appear to have been affected primarily by the forces of nature with the imprint of man’s work substantially unnoticeable”. The Blue Sky Creek road (USFS road #7020 and spurs #7020C & #7020D), and well as numerous spur roads, (#7045, #7045A & #7045B), which were built, (and still exist), to access timber harvest units, (which also still exist), are present in throughout the very middle of this area. This area **DOES NOT** “have outstanding opportunities for solitude or a primitive and unconfined type of recreation”. This area simply does not possess the characteristics to offer the opportunities as defined. (Reference – The Wilderness Act of 1964) FS Handbook 1909.12 Land Management Handbook Chapter 70.

2. The process of evaluating and designating the Thompson-Seton area as an “Inventoried Roadless Area” was flawed. When you evaluate historic aerial photographs you can clearly see both roads and past management activities (including numerous timber harvest units) throughout this area. USFS Roads #7020, #7020C, #7020D #7045, #7045A, #7045B are located in the very heart of this area. FSH 1909.12 – 71.1 Inventory Criteria, clearly states: “Areas qualify for placement on the potential wilderness inventory if they meet the statutory definition of wilderness. Include areas that meet either criteria 1 and 3, or criteria 2 and 3 below.” Item #3. as referred to in the above paragraph states: “Areas do not contain forest roads (36 CFR 212.1) or other permanently authorized roads, except as permitted in areas east of the 100th meridian (sec. 71.12).” (FSH 1909.12 Chapter 70)

3. The “Area Capability Assessment” performed by the KNF on the Thomson-Seton IRA #483 was incorrect. If you possess a thorough understanding of the on the ground

features and characteristics of the area, and objectively evaluate and rate the criteria provided in the Capability Assessment, the following items should be corrected:

- #9 Terrain – should be Med not High.
- #10 Ability/Knowledge/Skill – should be Med not High.
- #11 Non-hunting Outfitting – should be Med not High
- #13 Surrounding Area – should be Med not High
- #14 Location – should be Med not High
- #16 Value Uniqueness – should be LOW not High.
- #17 Terrain Features – should be Med not High
- #18 Water Features – should be Med not High
- #31 Big Game Populations – should be Low not Med.
- #36 Area Access – should be Low, not Med.
- #37 Terrain should be Med not Low.
- #38 Use Restrictions should be Med not Low.
- #41 Area Access – should be Low, not Med.
- #43 Natural Process – should be Med not High.

Proof that these evaluating criteria should be altered can be provided with a through examination of the on the ground features and characteristics of the area. Once the Area Capability Assessment for this area is revised, the area would have a LOW capability for Wilderness Recommendation. A correct revision of the Capability Assessment criteria rating, would significantly reduce the capable of this area for Wilderness designation.

4. The Need Rating with resulted from the Area Needs Assessment for KNF Wilderness Evaluations for the Thompson-Seton IRA #483 has incorrect conclusions. The overall need rating was Moderate, despite the fact that the Thompson Seton IRA had 4 Low ratings, 1 Moderate Rating, and 1 High Rating, in the assessment. Part of this rating assessed the population center in which the Whitefish Divide Recommended Wilderness Area is contained as, according to the USFS Northern Region Wilderness Needs Assessment having a LOW NEED for more wildness acres. The Whitefish Divide Recommended Wilderness is within the area which has Kalispell Montana as it's population center. Within 100 air miles of that population center there are currently 1,704,141 acres of Congressionally designated wilderness (Bob Marshall – 1 million acres, Great Bear – 286,700 acres, Scapegoat – 239,936 acres, Mission Mountains – 73,877, Cabinet Mountains – 94,272 acres). According to the Wilderness Needs Assessment as defined by Region 1 of the Forest Service any population center with 1 million or more acres of Congressionally designated wilderness has a LOW NEED for more wilderness. In addition, the dominant vegetation cover type which is represented in the Whitefish Divide area, is also currently OVER REPRESENTED in Congressionally designated wilderness areas within this population center.

Table 58. Area	Thompson	Trout Creek	Tuchuck #482	West Fork Elk
Needs	Seton #483	#664		#692

**Assessment  
for the KNF  
Wilderness  
Evaluation –  
Need**

1. Areas having the presence of Westslope cutthroat, Yellowstone cutthroat, or bull trout	Low	Mod	Low	Low
2. Presence of sensitive plant species.	Low	Low	Low	Mod / High
3a. Areas adjacent to existing wilderness.	-	-	-	-
3b. IRAs could be combined to form large habitat patches.	High	Low	High	High – East Fork
4. Ecological Sections represented in Wilderness.	Mod	Mod	Mod	Mod
5. Number of wilderness acres within 100 miles of Kalispell.	Low	Low	Low	Low
6. Under-represented plant communities.	Low (riparian)	M (pine, cedar, hemlock, riparian)	Low	H (pine, cedar, hemlock, riparian)
<b>Need Rating</b>	<b>Mod</b>	<b>Mod</b>	<b>Mod</b>	<b>High</b>
# of Highs	1	0	1	2
# of Moderates	1	3	1	2
# of Lows	4	3	4	2

**Note:** Area Needs Assessment for the Thompson Seton IRA was altered in the FINAL EIS appendices. The alternation in this assessment was that the rating for the Presence of sensitive plant species was changed from Low to High. This rating was changed based on "updated 2012 Natural Heritage Program list of plant species that are rare at the global or state level".

- A. We would like an explanation of exactly which plant species was found to exist in this area that is on the updated 2012 Natural Heritage Program list?
- B. An explanation of exactly how the identification of a single plant species can change a wilderness Need rating from Low to High.

This appears to be nothing more than the KNF again manipulating the wilderness evaluation process in order to come to a pre-determined conclusion.

5. Catastrophic wildfires in the Whitefish Divide area would negatively impact municipal water supplies. A local expert (USFS Fire Ecologist Steve Barrett), has stated that the portion of the Whitefish Range contained within the Whitefish Divide area is "overdue for a large scale and high intensity fire event". Considering that the Whitefish Divide Recommended Wilderness Area is within the town of Eureka Montana's and Glen Lake Irrigation District's municipal watershed, management of this watershed with the "let it burn" fire management policy that is applied to Wilderness Areas is un-acceptable in this watershed which is classified as a B-1 watershed by the State of Montana. Recommended Wilderness management policies for this area would not only decrease the available options to fight wildfire, but also eliminate options to manage vegetation in a way that could mitigate the potential impacts of wildfire on water resources. (Reference – Steve Barrett, USFS Fire Ecologist, Presentation on the Whitefish Range Fire History)

6. Catastrophic wildfires within the Whitefish Divide area would negatively impact Bull Trout, which are currently listed as threatened under the Endangered Species Act. The portion of Grave Creek, which forms the western boundary of the proposed Recommended Wilderness Area, classified as core Bull Trout habitat, and is considered critical spawning habitat for Bull Trout. Runoff of ash, sediment, and other contaminants that would likely occur after a catastrophic fire event in the area has a high potential to have negative impacts on the overall habitat conditions, and spawning habitat success of Bull Trout in Grave Creek, Blue Sky Creek, and Williams Creek. When this fire event occurs, (See Steve Barrett reference), the Kootenai National Forest would be in violation of the Endangered Species Act, as well as numerous policies related to the conservation of threatened and endangered species.

7. The Draft Record of Decision for the 2013 Kootenai Forest Plan Revision stated that the one of the main reasons that Roderick Area was being proposal for Recommended Wilderness management was that this management strategy had the support of a local stakeholder group. The Galton Stakeholder Collaborative is a diverse local stakeholder group which has been collaborating on travel management strategies for the Galton Area on the Fortine Ranger District of the Kootenai National Forest. The Whitefish

Divide Recommended Wilderness is contained within the Galton Area. The Galton Stakeholders Collaborative has 100% consensus on opposition to Recommended Wilderness management for this area, for many of the reasons previously discussed in this objection.

8. Recommended Wilderness management for the Whitefish Divide Area would be detrimental to local economies. The rural economies of this area benefit from the diversity of both summer and winter recreational opportunities currently offered in the Whitefish Divide Area. Managing this area under Recommended Wilderness management policies would significantly decrease the diversity of both summer and winter recreational opportunities available in this area, thereby negatively impacting local economies.

9. The Area Availability Assessment for the Thompson Seton IRA #483 was inadequate and incorrect. Many of the issues described in other reasons listed in this objection were not adequately considered in this assessment. The inadequacy of this assessment has led to an Availability Assessment rating for this area which does not coincide with the conditions that actually exist on the ground.

10. Page 445 of the FEIS States "Changes in recommended wilderness for the Whitefish Divide area were made in response to public comment. These changes included removing areas above the town of Eureka and Williams Creek from recommended wilderness from DEIS to FEIS in Alternative B Modified due to concerns with management needs in the WUI and public water supply areas."

The "changes" in recommended wilderness for the Whitefish Divide area stated above refer to the fact that the southern portion of the Whitefish Divide area was removed from proposed Recommended Wilderness management. We agree that these changes were needed, and that they were made in response to public comment, and concerns of public water supply areas. However, that portion of the Whitefish Divide area that has remained as recommended wilderness management in the Final Plan is still located within the town of Eureka's municipal watershed. Therefore, all of the "concerns with management needs in the WUI and public water supply areas", should still exist in the portion of the Whitefish Divide area that remains recommended wilderness. In fact, the concerns relative to this issue in the northern portion should be even greater than they were for the southern portion, considering that roughly three times as many acres contained in the northern portion of the area, (vs. the southern portion), are within the town of Eureka's municipal watershed.

11. Page 453 of the FEIS paragraphs 5 and 6 state; "Changes in recommended wilderness for Whitefish Divide were made between draft and final in response to public comment."

"In Alternative B Modified areas above the town of Rexford and Williams Creek were moved from recommended wilderness MA1b to backcountry MA5a due to concerns

from the community. These concerns included potential management needs within areas that provide public water for the town of Rexford and areas of past logging in Williams Creek."

Considering the fact that there has been an equal amount of public comment opposing the remaining portion of the Whitefish Divide recommended wilderness area, and that all of the "concerns regarding potential management needs within areas that provide water for the towns of both Rexford and Eureka" (the KNF somehow forgot to include Eureka's water supply in this statement), still exist, (and are likely more substantial in the portion of the Whitefish Divide which is still proposed for recommended wilderness management), we do not see how the KNF can possibly justify this management proposal.

12. paragraph 2 on page 454 of the FEIS states; "The revised Forest Plan Whitefish Divide recommended wilderness area on the KNF includes areas which are outside of an IRA (cherry stem of closed road systems and associated harvest in Blue Sky and Williams Creek) for manageability. Areas outside of the IRA account for approximately 13 percent of the total acres of recommended wilderness in Alternative B Modified"

This paragraph basically states that through some creative mapping around closed road systems and associated harvest units in the Blue Sky Creek and Williams Creek drainages, the KNF has "manufactured" an inventoried roadless area, which the KNF is now proposing as recommended wilderness. We believe that these "creative mapping techniques" are a violation of the regulations defined for creating inventoried roadless areas, and the regulations provided for evaluating these areas for wilderness characteristics.

The paragraph also states that 13 percent of the total acres of recommended wilderness are contained outside of the IRA. So, not only is the Whitefish Divide recommended wilderness contained within an IRA which has been manufactured with creative mapping techniques, but 13% of the area proposed as recommended wilderness are not even present in the IRA, and therefore likely do not meet any semblance of the definition of wilderness.

13. Paragraph 5 on page 449 of the FEIS states; "For example, Northwest Peaks IRA rated high in all suitability categories, but was determined not to be suitable based on comments from the public and elected officials."

The same can be said for the Whitefish Divide area. The KNF appears to be using a double standard here. Was there some political horse trading done relative to the Northwest Peaks IRA that the public was not made aware of?

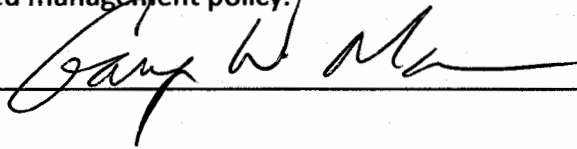
#### **Proposed Solution**

The plan should be altered to manage the portion of the Whitefish Divide Area currently proposed for Recommended Wilderness, in such a manner that would allow a maximum of both summer and winter recreation opportunities within the area, and allow for a wide range of options for both fire suppression, and vegetation management strategies that would prevent and/or mitigate the impacts of wildfire on municipal watersheds, and critical spawning habitat for endangered species.

**Statement demonstrating the link between the objection and prior formal comments:**

My comments #110, on the Draft Kootenai National Forest Plan specifically addressed this proposed management policy.

Signature: \_\_\_\_\_

A handwritten signature in black ink, appearing to read "Gary W. Ma", is written over a horizontal line.

2013 Kootenai Forest Plan Revision Objection #2

Objectors Name: GARY W. MASON  
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Name of lead objector (if more than one): \_\_\_\_\_

**Name of the plan revision being objected to and the responsible official:**

Kootenai National Forest Land Management Plan 2013 Revision.

Responsible Official: Faye L. Krueger – Regional Forester, Northern Region.

**Statement of issues and/or parts of the plan revision which the objection applies:**

I object to the KNF's proposal to manage portions of the town of Eureka's municipal watershed as MA1b – Recommended Wilderness. I also believe that this proposed management policy is a violation of the Clean Water Act.

**Statement explaining the objection and how the proposed plan should be altered:**

The Whitefish Divide recommended wilderness management proposal in the current KNF forest plan lies within the town of Eureka's municipal watershed. When considering the potential impacts on the water quality within that watershed in the event of a catastrophic fire event, this proposed management policy is simply unacceptable for this area. As documentation of those potential impacts, we have attached to this objection excerpts from numerous scientific studies which discuss in detail the effects of fire on water quality. Please note that many of these studies were conducted by experts employed by the USDA Forest Service. Considering that a local fire ecology expert employed by the Forest Service has publicly stated that "this portion of the Whitefish Range is overdue for a large scale and severe fire event", the KNF needs to realize that a catastrophic fire event in this areas is not just a possibility, but a probability, and manage those lands which supply drinking water to the citizens who live near the KNF in a manner which best protects the long-term quality and quantity of that water.

In addition:

Page 15 paragraph 4 of the Draft ROD states; "Forest Service Handbook direction includes the requirement to protect water quality and abate or mitigate adverse water quality impacts while meeting other resource goals and objectives (FSH 2509.22)."

Considering the significant risk that a large scale and severe fire event poses to the water quality within the Whitefish Divide area, we do not believe that the forest management proposals for the town of Eureka's municipal watershed adhere to the "requirement" stated above.



Page 24, paragraph 1 of the Draft ROD under Environmentally Preferable Alternative states; "National Environmental Policy Act (NEPA) regulations require agencies to specify the alternative or alternatives which were considered to be environmentally preferable (40 CFR 1505.2(b)). Forest Service policy (FSH 1909.15) defines environmentally preferable as: "An alternative that best meets the goals of Section 101 of NEPA. ... Ordinarily this is the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources."

It is common knowledge that, generally speaking, the USDA Forest Service has a "let it burn" policy for wildfire in congressionally designated wilderness areas. It is stated in the FEIS that the northern region of the Forest Service management policies for recommended wilderness areas, are the same as they are for congressionally designated wilderness. Given these management policies, we do not believe that managing any municipal watersheds on the KNF with a "let it burn" fire management policy is the management alternative which "causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources."

Page 29 of the Draft ROD under Clean Water Act states;

"The intent of the Act is to restore and maintain the chemical, physical, and biological integrity of the nation's waters."

and

"Implementation of the revised Plan is expected to contribute to protecting or restoring the physical, chemical, and biological integrity of waters of the United States in accordance with the Clean Water Act. Therefore, the revised Plan is fully compliant with this act."

Considering the above statements relative to the Clean Water Act, we do not understand how the KNF's proposal to manage portions of the town of Eureka's municipal watershed with a "let it burn" fire management policy, is the best way to "protect or restore the physical, chemical, and biological integrity of these waters". Therefore we do not believe that the revised Plan is fully compliant with this act.

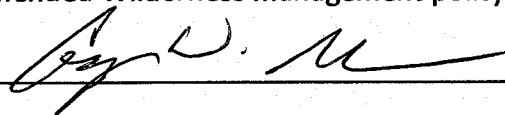
#### **Proposed Solution**

The Whitefish Divide area, and all other drainages on the KNF which supply drinking water to the citizens of Lincoln and Sanders counties, need to be managed in such a way that the KNF retains a maximum number of options for managing those lands in such a way that can mitigate the impacts of large scale and severe fire events on both the water quality and quantity in those drainages.

#### **Statement demonstrating the link between the objection and prior formal comments:**

The town of Eureka's municipal watershed was not discussed in either the Draft Land Management Plan, or Draft EIS. However, my comments #110, specifically addressed the Recommended Wilderness management policy being proposed for this area.

Signature: \_\_\_\_\_

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The influence of wildfire extent and severity on  
streamwater chemistry, sediment and temperature  
following the Hayman Fire, ColoradoA  
(International Journal of Wildland Fire 2011, 20, 430-442)

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**Abstract.** The 2002 Hayman Fire was the largest fire in recent Colorado history (558 km<sup>2</sup>). The extent of high severity combustion and possible effects on Denver's water supply focused public attention on the effects of wildfire on water quality. We monitored stream chemistry, temperature and sediment before the fire and at monthly intervals for 5 years after the fire. The proportional extent of a basin that was burned or that burned at high severity was closely related to post-fire streamwater nitrate and turbidity. **Basins that burned at high severity on >45% of their area had twice the streamwater nitrate and four times the turbidity as basins burned to a lower extent;** these analytes remained elevated through 5 years post-fire. In those basins, the highest post-fire streamwater nitrate concentrations (23% of USA drinking water standards) were measured during spring, the peak discharge period. **Summer streamwater was 4.0°C higher in burned streams on average compared with unburned streams; these persistent post-fire stream temperature increases are probably sufficient to alter aquatic habitat suitability.** Owing to the slow pace of tree colonization and forest regrowth, recovery of the watersheds burned by the Hayman Fire will continue for decades.

### **Introduction**

The effects of wildfire on aquatic conditions span from hours to centuries (Minshall *et al.* 1989). Temperatures reached during active burning can kill aquatic vertebrates and invertebrates (Dunham *et al.* 2003; Minshall 2003). Smoke and ash deposited into streams during combustion immediately change stream chemistry (Earl and Blinn 2003; Cerda' and Doerr 2008); the effects typically subside within months as precipitation transports ash from upland areas into surface or subsurface water. Sustained effects of wildfire on watershed conditions result from the loss of aboveground structure and subsequent alterations in soil and hydrological processes. **Return of stream conditions (i.e. discharge, temperature, chemical composition, sediment concentration) to within their pre-fire range follows overstory vegetation recovery, typically occurring within a few years or decades (Benavides-Solorio and MacDonald 2001; Moody and Martin 2001; Prepas *et al.* 2003; Lane *et al.* 2008),**

though relatively few studies have compared post-fire changes to pre-fire stream water conditions (Minshall *et al.* 2004; Burke *et al.* 2005). The extent and severity of combustion determines the magnitude of wildfire effects on watershed processes. In North American forests, high-severity burning kills most overstory and understory plants, roots and rhizomes and consumes most of the surface organic matter (Keeley 2009). This type of combustion generally results in widespread change in forest structure and soil conditions that dramatically alter the watershed processes that control streamflow, peak discharge, soil erosion, channel stability and streamwater nutrient export (Spencer and Hauer 1991; Prepas *et al.* 2003; Robichaud *et al.* 2003; Lane *et al.* 2008; Blake *et al.* 2010). In contrast, low severity fire kills few overstorey trees and has minimal effect on below ground plant structures, litter layers and watershed conditions. The vegetation and O horizon (Pannkuk and Robichaud 2003; Cerda' and Doerr 2008) remaining after moderate- and low-intensity fire both buffer against post-fire changes and facilitate watershed recovery (Wagenbrenner *et al.* 2006). The influences of fire severity on vegetation combine with the spatial variability of soil and geomorphic features to determine basin scale consequences of wildfire (Ice *et al.* 2004; Rodri'guez *et al.*)

Public awareness, raised both by the Hayman Fire and other large North American wildfires of 2002 and recent years, has prompted widespread implementation of hazardous fuels reduction projects on national forest lands (USDA/USDOI 2005). These efforts include timber harvesting, prescribed burning and fuels reduction treatments conducted in the wildland-urban interface.

**(Note: The type of active, preventative management strategies discussed here is what we would like to see implemented in the Municipal Watershed. KNF personnel may refer to the Bozeman Municipal Watershed Project as an example of this.)**

During the past two decades, the incidence of large, severe forest fires in the western USA (Westerling *et al.* 2006) and elsewhere globally has increased in response to warmer spring temperatures and longer fire seasons (Williams *et al.* 2001; Scholze *et al.* 2006; Intergovernmental Panel on Climate Change 2007; Flannigan *et al.* 2009) and fuel accumulation.

### **Water quality implications**

For example, in basins burned extensively by the Hayman Fire peak nitrate concentrations remained more than 100-fold above nitrate concentrations typically found in minimally disturbed Western Forested Mountain streams throughout the study and they were occasionally more than 10-fold higher than proposed total N criteria (e.g. 0.12mgNL<sub>-1</sub>; US EPA 2000). Temperature increases associated with climate change projections (i.e. 1-3C increase in air temperature) are predicted to reduce fish habitat by 15-40% in the Rocky Mountain region (Intergovernmental Panel on Climate Change 2007). Based on findings from a study of the temperature sensitivity of salmonid populations in southern Wyoming (Rahel *et al.* 1996), the 4C increase in summer

streamwater temperature measured after the Hayman fire could be expected to reduce fish habitat by 45–63%.

The highest measured post-fire nitrate concentration was 23% of the USA EPA's drinking water standard, though rainstorms occurring between monthly sample dates may have increased discharge and nitrate above drinking water thresholds in extensively burned basins. Summer convective storms generate high-intensity rainfall (i.e. 410 mm h<sup>-1</sup>) capable of producing runoff in burned Rocky Mountain watersheds (Moody and Martin 2001; Wagenbrenner *et al.* 2006; Moody *et al.* 2008).

For example, based on the relationship between seasonal maximum discharge and nitrate concentration in extensively burned basins (Fig. 7b), stream discharge above 100 L s<sup>-1</sup> km<sup>-2</sup> (e.g. 0.1 m<sup>3</sup> s<sup>-1</sup> km<sup>-2</sup>) would exceed 10 mg NO<sub>3</sub>-N L<sup>-1</sup>. In the 5 years following the Hayman Fire 29 summer storms occurred in the burn area; 13 produced more than 25.4 mm of rain over a 24-h period and six produced more than 40 mm of rain (Western Regional Climate Center 2006); these storms created rainfall intensities sufficient to generate surface runoff and sediment movement (Fig. 8), and likely resulted in stream nitrate peaks between our monthly sample collections.

#### **Disturbance extent and severity**

The post-fire water quality of these Hayman Fire study areas was well related to the extent of a basin burned at high severity (Figs 3, 4). Basins within the Hayman Fire perimeter that sustained high severity wildfire on >45% of their area had stream water nitrate and turbidity roughly 3-fold the levels measured in basins with <10% burned under such conditions (Fig. 3). High-severity fire released seven times more nitrate from two southern California chaparral watersheds at the US Forest Service San Dimas Experimental Forest compared with two basins burned at lower severity (Riggan *et al.* 1994). The high post-fire nitrate losses at San Dimas were attributed to increased soil nitrification combined with sediment movement from surface erosion and debris flows and chronically high atmospheric N deposition in southern California.

Post-fire streamwater conditions were related to both proportional extent burned and basin size in the Hayman, the 1988 Yellowstone and the 2003 Glacier National Park fires (Minshall *et al.* 1989; Mast and Clow 2008). Changes in streamwater chemistry and stream habitat increased with the extent burned (0–90%) across 21 basins burned by the Yellowstone fires (Robinson and Minshall 1996). **Similarly, the 2003 Robert and Trapper fires burned 73% and 26% respectively of two Glacier National Park drainages and increased stream nitrate concentrations 2.5-fold in the extensively burned basin but had no effect in the other (Mast and Clow 2008).** The extensively burned basin was only 15% the size of the less-responsive basin that burned to a lesser extent. Relative size also influenced the post-fire response of the Hayman study basins. For example, as basin size decreased there was an increase in the proportion of a basin that burned or that burned at high severity (extent burned:  $R^2=0.83$ ,  $P<0.004$ ; high-severity burned:

R<sup>2</sup>=0.62, P=0.036). The two smallest burned basins (Brush and Fourmile) had the highest mean streamwater nitrate concentrations and they released 4-fold more N per area than larger burned basins.

**(Please note the proximity of the fires referenced near Glacier National Park to the Whitefish Divide Area).**

Use of mechanical treatments and prescribed fire to reduce hazardous fuel loads, such as those that contributed to the Hayman Fire, are being widely implemented on US Forest Service lands under the auspices of the *Healthy Forest Restoration Act* (USDA/USDOJ 2005). **Compared with wildfire, these management activities typically create minor changes in water quality (Richter *et al.* 1982; Stephens *et al.* 2004).** In spite of current public support for hazardous fuel treatments, active management of national forestlands remains controversial (Beschta *et al.* 2004; Steelman and DuMond 2009). **The large extent of forest area designated for fuel-reduction treatments, projections for longer fire seasons, increasing frequency of large, severe fires (Westerling *et al.* 2006), and the slow pace of watershed recovery from high-severity wildfire all underscore the need for comprehensive, long-term monitoring of the watershed and aquatic conditions (Stone *et al.* 2010).**

**(Note: This is another example of how lands in the Whitefish Divide Area, and other KNF lands containing municipal watersheds, can be proactively managed to mitigate against the impacts of wildfire on water quality within the area)**

WILDLAND FIRE IN ECOSYSTEMS: EFFECTS OF FIRE ON SOIL AND WATER. USDA Forest Service, Rocky Mountain Research Station, General Technical Report RMRS-GTR-42-Volume 4. September 2005

Daniel G. Neary  
Kevin C. Ryan  
Leonard F. DeBano

## **Chapter 12: Summary and Research Needs**

### Fire and Streamflow Regimes Summary

Fires affect water cycle processes to a greater or lesser extent depending on severity. **Fires can produce some substantial effects on the streamflow regime of both small streams and rivers**, affecting annual and seasonal water yield, peakflows and floods, baseflows, and timing of flows. Adequate baseflows are necessary to support the continued existence of many wildlife populations. Water yields are important because many forest, scrubland, and grassland watersheds function as municipal water supplies. **Peakflows and floods are of great concern because of their potential impacts on human safety and property.** Next to the physical destruction of a fire itself, postfire floods are the most damaging aspect of fire in the wildland environment. It is important that resource specialists and managers become aware of the potential of fires to increase peakflows.

Following wildfires, flood peakflows can increase dramatically, severely affecting stream physical conditions, aquatic habitat, aquatic biota, cultural resources, and human health and safety. Often, increased flood peakflows of up to 100 times those previously recorded, well beyond observed ranges of variability in managed watersheds, have been measured after wildfires. Potentials exist for peak flood flows to jump to 2,300 times prewildfire levels. Managers must be aware of these potential watershed responses in order to adequately and safely manage their lands and other resources in the postwildfire environment.

#### Water Quality Summary

When a wildland fire occurs, the principal concerns for change in water quality are: (1) the introduction of sediment; (2) the potential for increasing nitrates, especially if the foliage being burned is in an area of chronic atmospheric deposition; (3) the possible introduction of heavy metals from soils and geologic sources within the burned area; and (4) the introduction of fire retardant chemicals into streams that can reach levels toxic to aquatic organisms.

The magnitude of the effects of fire on water quality is primarily driven by fire severity, and not necessarily by fire intensity. Fire severity is a qualitative term describing the amount of fuel consumed, while fire intensity is a quantitative measure of the rate of heat release (see chapter 1). In other words, the more severe the fire the greater the amount of fuel consumed and nutrients released and the more susceptible the site is to erosion of soil and nutrients into the stream where it could potentially affect water quality. **Wildfires usually are more severe than prescribed fires. As a result, they are more likely to produce significant effects on water quality.** On the other hand, prescribed fires are designed to be less severe and would be expected to produce less effect on water quality. Use of prescribed fire allows the manager the opportunity to control the severity of the fire and to avoid creating large areas burned at high severity.

The degree of fire severity is also related to the vegetation type. For example, in grasslands the differences between prescribed fire and wildfire are probably small. In forested environments, the magnitude of the effects of fire on water quality will probably be much lower after a prescribed fire than after a wildfire because of the larger amount of fuel consumed in a wildfire. **Canopy-consuming wildfires would be expected to be of the most concern to managers because of the loss of canopy coupled with the destruction of soil aggregates. These losses present the worst-case scenario in terms of water quality.** The differences between wild and prescribed fire in shrublands are probably intermediate between those seen in grass and forest environments.

Another important determinant of the magnitude of the effects of fire on water quality is slope. Steepness of the slope has a significant influence on movement of soil and nutrients into stream channels where it can affect water quality. Wright and others (1976) found that as slope increased in a prescribed fire, erosion from slopes is accelerated. If at all possible, the vegetative canopy on steep, erodible slopes needs to be maintained, particularly if adequate streamside

buffer strips do not exist to trap the large amounts of sediment and nutrients that can be transported quickly into the stream channel. It is important to maintain streamside buffer strips whenever possible, especially when developing prescribed fire plans. These buffer strips will capture much of the sediment and nutrients from burned upslope areas.

**Nitrogen is of concern to water quality.** If soils on a particular site are close to N saturation, it is possible to exceed maximum contamination levels of NO<sub>3</sub>-N (10 ppm or 10 mg/L) after a severe fire. Such areas should not have N-containing fertilizer applied after the fire. Chapter 3 contains more discussion of N. Fire retardants typically contain large amounts of N, and they can cause water quality problems where drops are made close to streams.

The propensity for a site to develop water repellency after fire must be considered (see chapter 2). Water-repellent soils do not allow precipitation to penetrate down into the soil and therefore are conducive to erosion. Severe fires on such sites can put large amounts of sediment and nutrients into surface water.

**Finally, heavy rain on recently burned land can seriously degrade water quality.** Severe erosion and runoff are not limited to wildfire sites alone. But if postfire storms deliver large amounts of precipitation or short-duration, high-intensity rainfalls, accelerated erosion and runoff can occur even after a carefully planned prescribed fire. Conversely, if below-average precipitation occurs after a wildfire, there may not be a substantial increase in erosion and runoff and no effect on water quality.

Fire managers can influence the effects of fire on water quality by careful planning before prescribed burning. Limiting fire severity, avoiding burning on steep slopes, and limiting burning on potentially water-repellent soils will reduce the magnitude of the effects of fire on water quality.



2013 Kootenai Forest Plan Revision Objection #3

Objectors Name: GARY W. MASON  
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Phone # or E-mail address: gary.mason@CaldwellBankers.com  
Name of lead objector (if more than one): \_\_\_\_\_

**Name of the plan revision being objected to and the responsible official:**

Kootenai National Forest Land Management Plan 2013 Revision.

Responsible Official: Faye L. Krueger – Regional Forester, Northern Region.

**Statement of issues and/or parts of the plan revision which the objection applies:**

I object to the fact that Kootenai National Forest, under direction from Region 1 of the USDA Forest Service, has adopted a policy for the management of Recommended Wilderness management areas that has not been properly assessed through the National Environmental Policy Act.

**Statement explaining the objection and how the proposed plan should be altered:**

The reasons for this objection are this:

Page 371 of the Appendices for the KNF FEIS, for the Revised Land Management Plan states: **"A white paper provides consistency for management of Recommended Wilderness and Wilderness Study Areas across the Region 1".**

In direct contrast to this, we are in possession of a letter addressed to Citizens for Balanced Use president Kerry White, from Region 1 Regional Forester Abigail Kimbell, dated January 24, 2006, which clarifies points discussed in a previous meeting:

The first point requesting clarification states: "1. Restrictions on motorized and mechanized use in Recommended Wilderness Areas are applied at the discretion of individual Forest Supervisors."

Mrs Kimbell states: **"This statement is true. We have no Regional policy or direction that requires Forest or Grassland Supervisors to prohibit or allow motorized use in areas they recommend for wilderness designation in Forest Plans. Supervisors may use their discretion when determining the management direction for Recommended Wilderness Areas in their Forest Plans. However, they must weigh these decisions very carefully to protect the values that qualify these areas for wilderness consideration"**

**Reason #1:**

I object to the changing and implementation of forest management policies based a "white paper" that was never properly evaluated according to the National Environmental Protection Act (NEPA). I believe that the adoption of these management policies without performing a NEPA analysis on the implications of the new policy and

allowing the public to comment on the proposed change in management policy is a clear violation of NEPA.

**Reason #2:**

In addition to not being subject to the required NEPA analysis, the "white paper" referenced above was neither referenced or not supplied in the KNF Draft Land Management Plan, Draft EIS, or Appendices. The fact that the document, which provides the basis for land management policies for certain management areas proposed in the KNF Plan, was neither referenced and supplied in any of the draft documents, is a clear violation of Forest Service policy.

**Reason #3**

Paragraph 4 on page 462 of the FEIS states; "The KNF manages areas recommended as additions to the national wilderness preservation system. Once the decision is made to recommend an area as wilderness, management actions and decisions affecting these areas should be consistent in protecting and preserving the wilderness character (R1 Consistency Paper)."

This is the first reference to this "Consistency Paper" that we are aware of. In addition, we could not find a copy of this paper in the FEIS, FEIS appendices, or any of the draft documents. If the Region is basing management policies for recommended wilderness areas on an "R1 Consistency Paper", then that paper needs to have been evaluated according to NEPA, providing the public the opportunity to comment on the management policies outlined in the paper.

**Proposed Solution**

Region 1 of the USDA Forest Service needs to suspend the management policies for Recommended Wilderness Management Areas and Wilderness Study Areas, which are based on the management policy recommendations stated in the "white paper" referenced in the response, until such time as the above referenced white paper directive goes through NEPA as a significant action, and the public has had sufficient opportunity to comment on the management policies outlined in the white paper. In addition, a "programmatic impact analysis" should be completed on this white paper before non-motorized designations and actions are done by guidance of this new policy, which has not been properly analyzed through NEPA.

As part of this objection, I would like to formally request at this time, under the Freedom of Information Act, a copy of the "white paper" which is referenced in the response on page 371 of the FEIS Appendices quoted above." I would also like to request a copy of the USDA or Forest Service directive which authorizes the implementation of the management policies outlined in the aforementioned "white paper".

**Statement demonstrating the link between the objection and prior formal comments:**

This is a new issue that has emerged between the release of the KNF DLMP and KNF

Final Plan revision. Therefore, no previous comments on this issue should be necessary. However, my comments #110, specifically addressed Recommended Wilderness management proposals.

Signature: Gary W. Man.

2013 Kootenai Forest Plan Revision Objection #4

Objectors Name: GARY W. MASON  
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Name of lead objector (if more than one): \_\_\_\_\_

**Name of the plan revision being objected to and the responsible official:**

Kootenai National Forest Land Management Plan 2013 Revision.

Responsible Official: Faye L. Krueger – Regional Forester, Northern Region.

**Statement of issues and/or parts of the plan revision which the objection applies:**

I object to the process and protocol which were utilized to designate Inventory Roadless Areas (IRA's) in Region 1 of the Forest Service, and on the KNF. I also object to the evaluation process for wilderness characteristics applied to the IRA's currently designated on the KNF.

**Statement explaining the objection and how the proposed plan should be altered:**

The reasons for this objection are this:

Reason #1

**Page 443 of the FEIS States: 36 CFR 219.27(b):** Special Designations - (b) Wilderness Area Reviews states: 'Unless federal statute directs otherwise, **all undeveloped areas** that are of sufficient size as to make practicable their preservation and use **in an unimpaired condition** must be evaluated for recommended wilderness designation during the Plan revision process.

Examination of historic aerial photographs for many of the Inventoried Roadless Areas currently present on the KNF will clearly show the existence of forest roads, and in many cases, timber harvest units. Forest roads and timber harvest units should be considered both development and impairment for these areas.

Reason #2

**2001 Roadless Area Conservation Rule (36 CFR 294 Subpart B):** The 2001 Roadless Rule establishes prohibitions on road construction, **road reconstruction**, and timber harvesting on inventoried roadless areas on NFS lands.

It should be physically impossible to have considerations made for road reconstruction in a true roadless area.

Reason #3

**Inventory of Roadless Areas for Forest Plan Revision**

When revising forest plans, national forests are required to evaluate **roadless** areas, consider their wilderness characteristics, and to make recommendations to Congress regarding areas suitable for inclusion into the National Wilderness Preservation System. Note the emphasis shown on the word "roadless". Many of the areas currently designated as Inventoried Roadless Areas on the KNF are not "roadless". (See explanation provided in reason #1).

#### Reason #4

The first step in the evaluation of potential wilderness is to identify and inventory all **roadless** areas within NFS lands that satisfy the definition of wilderness found in section 2(c) of the 1964 Wilderness Act.

Criteria for determining whether an area of NFS land qualifies as an IRA are provided in Forest Service Handbook 1909.12 (71.1), which states: "Areas qualify for placement on the potential wilderness inventory if they meet the statutory definition of wilderness. Include areas that meet either criteria 1 and 3, or criteria 2 and 3 below.

Evaluation Criteria #3 states:

3. Areas **do not contain forest roads** (36 CFR 212.1) or other permanently authorized roads, except as permitted in areas east of the 100th meridian."

Note the emphasis shown on the word "roadless" in the first paragraph, and the "do not contain forest roads" requirement for evaluation criteria #3. Areas which contain forest roads, and timber harvest units clearly do not meet the definition of wilderness found in section 2(c) of the 1964 Wilderness Act.

#### Reason #5

Paragraph 1 on page 447 of the FEIS states; "The 1987 Plan identified 32 IRAs with a total of 403,300 acres. A review of the 32 IRAs and other unroaded areas was updated as part of the initial Forest Plan revision efforts in 1999. The purpose of the 1999 update was to review unroaded areas for updated criteria, correct mapping errors through application of GIS mapping and adjust the inventory for areas where harvest had occurred, or where planned and did not occur. The criteria for delineation of roadless and other unroaded areas were based on the Regional Roadless Area Inventory protocol (Regional Office, 1996). The updated inventory identified 11 additional areas and 235,870 additional acres for a total of 43 IRAs and 639,100 acres of NFS land (see figure 36). This inventory was included in the 2001 Roadless Area Conservation Rule."

We are having a hard time understanding how the 32 IRAs totaling 403,300 acres, magically turned into 43 IRAs totaling 639,100 acres with a simple "review of unroaded areas with updated criteria" and "correction of mapping errors through application of GIS mapping", in only 12 short years. We believe that the Regional Roadless Area Inventory protocol utilized to perform this update violates the regulations for evaluating "roadless" areas as they are defined above. Again, an examination of historic aerial photographs show the existence of forest roads and/or timber harvest units, in many of

the "Inventoried Roadless Areas" identified by the KNF. The fact that the KNF may have removed the roads present in these areas from the KNF's official travel map and/or road data base does not erase the physical existence of these roads on the ground.

#### Reason #6

Paragraph 2 on page 447 of the FEIS states; "For the purposes of this evaluation, the IRAs shown in figure 36 have been determined to qualify as the potential wilderness inventory. They are all areas within NFS lands and satisfy the definition of wilderness found in section 2(c) of the 1964 Wilderness Act, and subsequent policy or direction."

This is simply not true. Many of the acres contained within several of the areas currently classified as "Inventoried Roadless" by the KNF clearly do not meet the definition of wilderness as found in section 2© of the 1964 Wilderness Act. **These areas DO NOT "generally appear to have been affected primarily by the forces of nature with the imprint of man's work substantially unnoticeable"**. Again, just because the KNF may have removed the roads present in these areas from the KNF's official travel map and/or road data base does not erase the physical existence of these roads on the ground.

#### Reason #7

Paragraph 2 on page 454 of the FEIS states; "The revised Forest Plan Whitefish Divide recommended wilderness area on the KNF includes areas which are outside of an IRA (cherry stem of closed road systems and associated harvest in Blue Sky and Williams Creek) for manageability. Areas outside of the IRA account for approximately 13 percent of the total acres of recommended wilderness in Alternative B Modified"

This paragraph basically states that through some creative mapping around closed road systems and associated harvest units in the Blue Sky Creek and Williams Creek drainages, the KNF has "manufactured" an inventoried roadless area, which the KNF is now proposing as recommended wilderness. We believe that these "creative mapping techniques" are a violation of the regulations defined for creating inventoried roadless areas, and the regulations provided for evaluating these areas for wilderness characteristics.

The paragraph also states that 13 percent of the total acres of recommended wilderness are contained outside of the IRA. So, not only is the Whitefish Divide recommended wilderness contained within an IRA which has been manufactured with creative mapping techniques, but 13% of the area proposed as recommended wilderness are not even present in the IRA, and therefore likely do not meet any semblance of the definition of wilderness.

#### Proposed Solution

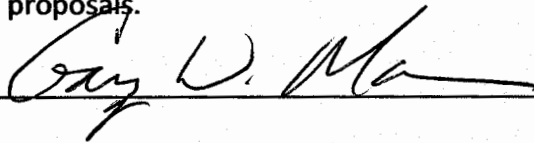
The KNF and Region 1 of the USFS need re-evaluate all areas on the KNF currently classified as Inventoried Roadless, and remove all acres within these areas which have forest roads in them. Once this process has been completed, new boundaries and

acreage figures need to be defined for all the true "roadless" areas which have been identified. A Wilderness suitability assessment can then be completed on those re-defined Inventoried Roadless areas, which are truly roadless.

**Statement demonstrating the link between the objection and prior formal comments:**

My comments, #110, on the DLMP specifically addressed the areas being proposed as recommended wilderness. The process of designating IRAs is directly related to those management proposals.

Signature: \_\_\_\_\_

A handwritten signature in cursive script, appearing to read "Gary D. Ma", is written over a horizontal line.

2013 Kootenai Forest Plan Revision Objection #5

Objectors Name: GARY W. MASON  
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Name of lead objector (if more than one): \_\_\_\_\_

Name of the plan revision being objected to and the responsible official:

Kootenai National Forest Land Management Plan 2013 Revision.

Responsible Official: Faye L. Krueger – Regional Forester, Northern Region.

Statement of issues and/or parts of the plan revision which the objection applies:

I object to the proposal to manage the area within the Whitefish Divide area from Williams Creek south to the KNF forest boundary and east to the KNF forest boundary as MA 5a - Backcountry non-motorized year round.

Statement explaining the objection and how the proposed plan should be altered:

The reasons for this objection are this:

1. Management of this area under the management policies defined for Management Area 5a, would essentially manage this area as a defacto wilderness. These policies do not allow for sufficient vegetation management strategies to be employed to mitigate the potential effects of large scale wildfires. Catastrophic wildfires in this area would negatively impact municipal water supplies. A local expert (USFS Fire Ecologist Steve Barrett), in fire ecology has stated that the portion of the Whitefish Range contained within this area is "overdue for a large scale and high intensity fire event". Considering that this area is within the town of Eureka Montana's, the town of Fortine Montana's, and Glen Lake Irrigation District's municipal watershed, management of this watershed with the "let it burn" fire management policy that is applied to Wilderness Areas is unacceptable in this watershed which is classified as a B-1 watershed by the State of Montana. 5a management policies for this area would not only decrease the available options to fight wildfire, but also eliminate options to manage vegetation in a way that could mitigate the potential impacts of wildfire on water resources. (Reference – Steve Barrett, USFS Fire Ecologist, Presentation on the Whitefish Range Fire History) (Reference – USDA Forest Service GTR-42-Volume 4, September 2005)
2. Catastrophic wildfires within this area would negatively impact Bull Trout, which are currently listed as threatened under the Endangered Species Act. The portion of Williams Creek, which forms the northern boundary of this area is classified as core Bull Trout habitat. Deep Creek, which runs through the middle of this area, is also has the potential to provide critical Bull Trout rearing habitat. Runoff of ash, sediment, and other contaminants that would likely occur after a catastrophic fire event in the area has a high potential to have negative impacts on the overall habitat conditions, and spawning habitat success of Bull Trout in Williams Creek, Deep Creek, and Grave Creek



below the mouth of Williams Creek. When this fire event occurs, (See Steve Barrett reference), the Kootenai National Forest would be in violation of the Endangered Species Act, as well as numerous policies related to the conservation of threatened and endangered species.

3. The Record of Decision for the 2013 Kootenai Forest Plan Revision stated that the one of the main reasons that the Roderick area of the KNF was being proposed for Recommended Wilderness management was that this management strategy had the support of a local stakeholder group. The Galton Stakeholder Collaborative is a diverse local stakeholder group which has been collaborating on travel management strategies for the Galton Area on the Fortine Ranger District of the Kootenai National Forest. The area under discussion is contained within the Galton Area. The Galton Stakeholders Collaborative has 100% consensus on opposition to 5a management for this area, for many of the reasons previously discussed in this objection.

4. 5a management for this area would be detrimental to local economies. The rural economies of this area benefit from the diversity of both summer and winter recreational opportunities currently offered in this area. Managing this area under 5a management policies would significantly decrease the diversity of both summer and winter recreational opportunities available in this area, thereby negatively impacting local economies.

5. There is currently no credible science which documents that the management policies currently in place for this area, which allow for winter motorized use, are in any way detrimental to any of the resources contained within this area, including but not limited to any threatened or endangered species. In the absence of this science, there is absolutely no reason that the current recreational uses for this area, should not be allowed to continue.

#### **Proposed Solution**

The plan should be altered to manage this area in such a manner that would allow a maximum of both summer and winter recreation opportunities within the area, and allow for a wide range of options for both fire suppression, and vegetation management strategies that would prevent and/or mitigate the impacts of wildfire on municipal watersheds, and critical habitat for endangered species. The KNF needs to re-classify this area as either MA5c – Backcountry winter motorized, and/or MA6 - General Forest, in order to accomplish these goals.

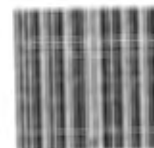
#### **Statement demonstrating the link between the objection and prior formal comments:**

The MA classification for this area has been changed from MA1b – Recommended Wilderness, to MA5a, in the time period between the Draft and Final Plans. There fore this is a new issue that we were not capable of commenting on in the Draft stage of the plan. However, my comments #110 on the Draft Plan specifically addressed the proposals for more restrictive forest management policies.

Signature:

Ray W. Miller

Mr. G  
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