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**Tenmile-South Helena Vegetation Project
Draft EIS Comment**
Comments-northern-helena-helena@fs.fed.us

Helena Ranger District
Helena-Lewis & Clark National Forest
2880 Skyway Drive
Helena, MT 59602

March 30, 2016

Attention: Tenmile-South Helena Project

“The Tenmile-South Helena Project is an unnecessarily gigantic fire break for Helena.”
~ Helena Hunters and Anglers Association ~

“Wildlife would be disturbed by all the planned activities across the analysis area. These disturbances would occur over five to ten years and are proposed over a large landscape at one time.”
~ DEIS 382 ~

“There’s a confusion that if you do timber management you’re doing fuel management – you’re not.”

~ Mark Finney, Ph.D., U.S. Forest Service Fire Lab, Missoula ~

The following comments are submitted in response to the Helena National Forest Tenmile-South Helena (TSH) Vegetation Project. We request these comments be entered into the public record, and be fully analyzed/addressed in the Final EIS.

Helena Hunters & Anglers Association (HHAA) is a nonprofit Helena, Montana-based organization dedicated to protecting and restoring fish and wildlife to all suitable habitats and to conserving all natural resources as a public trust, vital to our general welfare. HHAA promotes the highest standards of ethical conduct and sportsmanship, and promotes outdoor recreation opportunity for all citizens to share equally. Members of HHAA depend on healthy, functional, intact public lands of the Helena National Forest because they sustain and nurture our way of life.

HHAA believes that serious management mistakes could be made over the breadth of such a large project, particularly in concert with the adjacent Telegraph project. We find the following DEIS statement of particular interest with respect to validity of models:

“...a basic truth noted by statistician G.P.E. Box, namely that “all models are wrong, but some are useful.”

Given this recognition, we are concerned that the public has been led to believe that modeling natural process possibilities across the Tenmile-South Helena landscape are akin to certainty, and

now, rational thought about the role of wild fire in the landscape, and reasonable steps to avert personal loss, has been vacated.

Landscape Context

We wish to address the TSH project at a landscape level and offer these accumulated facts:

- Together with the Telegraph project (23,669 acres) which is occurring concurrently with the TSH project (61,395 acres), the impact area extends from the eastern Forest boundary near Interstate 15 to the western Forest Boundary near Deer Lodge, covering 133 square miles, or 85,064 acres.
- The Purpose and Need of the TSH and Telegraph projects are very similar. They are occurring concurrently. They converge along a common boundary on the crest of the Continental Divide. Although HHAA has commented on the Telegraph project, together these projects constitute a single very large project whose impacts should have been evaluated collectively and cumulatively.
- More than twice the amount of land is proposed to be cut and burned from Helena to Deer Lodge within the TSH (24,308 acres Alt 2) and Telegraph (8,103 acres Alt 4) projects (a total area of 32,411 acres [50.6 square miles], or nearly 40 percent of the total area) than all of the lands harvested or burned within the project areas since the beginning of record keeping (about 14,246 acres - TSH 7,015 acres, Telegraph 7,231 acres). This impact does not include consideration of all the other cumulative activities occurring on the landscape such as cattle allotments, military operations, installation of power and telephone lines, special use permits, private land inholding activities such as timber harvest and burning, and so forth.
- In the past, according to cumulative effects data, at least 30,000 acres of the landscape have been treated from timber harvest and burning alone (TSH 16,539 and Telegraph 18,437 acres). Therefore about 35 percent of this area of the Forest has been affected since the 1960's. The majority of that activity (81%) occurred within the TSH area from 1990 to the present, and for Telegraph, 62% of the activity has occurred from 1980 to the present. The consequences of those activities are still readily apparent and still affecting the nature of the landscape and wildlife hiding cover.
- Alt 2 from TSH and Alt 4 from Telegraph would more than double all cutting and prescribed burning that has ever occurred on this landscape - the afore mentioned 32,411 acres.
- Past and pending cumulative effects of both projects from harvesting, fuel arrangement and prescribed burning stretch across the HLCNF from Interstate 15 to Deer Lodge and would affect at least 62 percent of the landscape area.
 - This is an unnecessarily gigantic fire break for Helena. Even the Forest Service Fire Sciences Lab says all that is needed to prevent a home from burning is clearing debris within 100 feet of a structure. Altering the landscape over a swath 10 miles deep and 25 miles wide is clearly over-the-top excessive.

Past Promises in Decision Notices and Records of Decision

- In the FEIS, please describe how the USFS is allowed to ignore past mitigation measures required for previous projects, in order to move forward with proposed projects.

- How is it that the Skihi/Brooklyn Bridge Road remains on the landscape and in use for commercial activity when it was promised for closure in 1986? In 2003, it was again promised to be reconfigured to a non-motorized trail, but wasn't. Under the current proposal, the same road would be used, upgraded, and even extended as a haul route for another 15 to 20 years during the TSH project to access two dozen harvest units. Under what authority can past Records of Decision or Decision Notices be disregarded? Are they not contracts with the public?
- Our members are intimately familiar with the ridgeline that the Skihi/Brooklyn Bridge road traverses. We can attest to its use by elk, deer, bears, goshawks, pileated woodpeckers, northern long-toed salamanders, boreal toads, and wolverine, to name only a few of the resident wildlife species.
- The Skihi/Brooklyn Bridge Road needs to be closed and recontoured before this project ever starts to prevent further compromise to wildlife habitats, water quality, integrity of native vegetation, and quality recreational experiences, including public land hunting opportunity.

Issues of Concern to HHAA

- We challenge the premise that this project will restore or maintain wildlife habitat (Summary *xi*).
- The 61,307 acre project is being proposed to fulfill a flawed Purpose and Need built on a spurious water quality and firefighter safety rationale.
- HHAA firmly believes that the TSH project would distinctly denigrate wildlife habitat over its 61,307 acres by cutting and burning 24,308 acres (38 sq. mi.) in Alt 2 and 18,112 acres (28.3 sq. mi.) in Alt 3, thus seriously compromising public land hunting.
- The Montana Cooperative Elk Logging recommendations would only be applied when they “do not seriously subvert the project purpose and need” (50). Thus, it seems these science-based guidelines would be applied only when convenient. How would these decisions be made? How does this **maintain wildlife habitat?**
- Forest Plan Standard Exemptions: The proposal would exempt, for 15-20 years, this project from several wildlife standards and guidelines and will reduce summer and fall hiding cover, fall security, and winter thermal cover. It would exempt the project from several landscape management area standards that address wildlife. Additionally, it would exempt the project from meeting timber clear-cut maximum size limitations of 40 acres (Forest Plan Timber Standard 4). There is little explanation of how wildlife habitats will be enhanced, or even maintained at marginal 2016 levels.
- The project is changing course between the Draft and Final EIS and is abandoning the existing (1986) Wildlife Security Standard under which the Draft was analyzed, and is then switching to a 2016 big game security amendment (signed February 29, 2016) for the FEIS.

- The 2016 big game security amendment is inadequate as noted in the Objection filed by HHAA on June 19, 2015, to the big game security Forest Plan Amendment for the Divide Travel Plan area.
- Inventoried Roadless Areas, Lazyman and Jericho, should be left alone. If needed at all, hand crews only.
- The project area does not meet the standards for Wildland Urban Interface population densities.

Purpose and Need

- HHAA contends that the TSH project and the Telegraph project should have been considered together since their objectives are similar, because they share a common boundary along seven miles of the Continental Divide, and because the projects will run concurrently over at least the next 10 years.
- HHAA contends that the stated purpose and need, given the scope of the TSH project, is invalid:
 - *“Improve conditions for public and firefighter safety across the landscape in the event of a wildfire.”*
- Fuel treatments over 130+ square miles (96 square miles for TSH and 37.5 square miles for Telegraph) are not needed to reduce fire hazards to structures adjacent to Forest Service lands.
- A 130-plus square mile “fire break” for the city of Helena is overkill and will disrupt and damage other natural resources.
- We assert that the Fire Sciences Lab research information is not being applied appropriately. Structure ignition research concludes that if clearing is conducted out to 100 feet around structures they will not burn (Jack Cohen, 2015 Helena public seminars).
- HHAA contends that firefighter safety could be enhanced by treating a much smaller area closer to the city of Helena.
- The other stated purpose and need for the TSH project is:
 - *“Maintain a consistent quantity and quality of water within the municipal watershed: Reduce the probability of high-severity wildfires and their associated detrimental watershed effects in the Tenmile Municipal Watershed and surrounding area; Reduce sources of sediment and other contaminants to water sources.”*
- The recently completed Lake Helena Watershed Restoration Plan¹ states that TMDLs for the Tenmile and Lump Gulch watersheds must reduce sediment loading by 74 and 81 percent, respectively. HHAA contends that water quality cannot be improved by treating 349 forested units ranging in size up to 755 acres over the life of this 20-year project. The Watershed Restoration Plan calls for sediment reductions in seven years. This project will exacerbate sediment problems, not solve them.

NEPA and NFMA Compliance

- The TSH project subverts NEPA: Only four weeks after the DEIS was released, the Forest Supervisor signed into effect a new amended Forest Plan standard, thus replacing the 1986 Standard under which the DEIS was prepared. Public confusion and uncertainty caused by this inappropriate procedural maneuver was unnecessary and could have been avoided. The DEIS should have been delayed until the amendment was signed so the public could fully understand the process and conditions under which they were being asked to be involved. Better yet, this project should have waited until Forest Plan revision is completed.
- An alternative that emphasizes the needs of wildlife was not developed, particularly in light of past cumulative effects. Such an alternative could have also addressed roadless values for meeting the desires of people for solitude, security for wildlife, and the minimal spread or introduction of noxious weeds. It is hard to fathom that cutting and burning is the only solution for improving water quality. Additionally, firefighter safety can be largely addressed when areas around structures are cleared of burnable materials to 100 feet. Cutting and burning in Alt 2 (38 sq mi.) or Alt 3 (28.3 sq mi.) may not be the only solution. The DEIS did not take into account the value of beetle killed trees as a chapter in the natural evolution of forests. It did not, but should have, fully evaluated scientific literature which indicates “the volume of woody debris makes little difference and that fire behavior is driven primarily by the structure and condition of the over-story and weather conditions.” (235)
- The TSH project subverts NFMA Compliance by:
 - repeatedly exempting itself from Forest Plan standards designed to meet the intent of the Act to assure sustainment of natural resources;
 - including six wildlife standard exemptions (with sub-exemptions);
 - including one timber standard exemption;
 - including six Management Area standard exemptions (perhaps more); and
 - splitting a much larger project into two separate projects even though they are contiguous, concurrent, and sharing similar goals.

Alternatives

“Alternative 3 was designed to address wildlife concerns and minimize new temporary road construction, while still being able to meet overall project objectives.” (Summary xx).

- Alternative 3 of the Tenmile-South Helena project is less impactful to the landscape and wildlife habitat than Alt 2 but it does not retain the Wilderness character that we wish to see institutionalized for the Lazyman IRA through a Forest Service recommendation. Additionally, Alt 3 would have less devastating and cover-removing consequences to the Skihi Ridge, which has been extensively harvested in the Clancy-Unionville Project. Mitigation measures in that Record of Decision called for conversion of the Skihi Peak Road to a non-motorized trail. In 1986, the Whiteman-Go Devil Decision Notice called for mitigation to close this very same road. That closure to motorized use didn’t come until nearly 20 years later. Now the same road that was to have been pulled back to a non-motorized trail in the 2003 ROD is instead being proposed for log hauling on the

TSH project for another 15 to 20 years. Given this lack of follow through, the Forest's credibility is in question.

- Alternative 3, without use of the Skihi Peak (Brooklyn Bridge) road and without mechanical treatments in the Lazyman-Black Mountain IRA, would be an improvement. However, Alt 3 would further reduce already substandard thermal cover throughout the area under the guise of fire management. (308).

Forest Vegetation

- In a letter to Congress on August 1, 2006², more than 160 scientists make the point that *“Although logging and replanting may seem like a reasonable way to clean up and restore forests after disturbances like wildland fires, such activity would actually slow the natural recovery of forests and of streams and creatures within them ... Most plants and animals in these forests are adapted to periodic fires and other natural disturbances. They have a remarkable way of recovering - literally rising from the ashes - because they have evolved with and even depend upon fire ... In testimony before the House Subcommittee on Resources (November 10, 2005), eminent forest ecologist and University of Washington Professor Jerry Franklin noted that logging dead trees often has greater negative impacts than logging of live trees. He concluded that “timber salvage is most appropriately viewed as a ‘tax’ on ecological recovery.”*
- Forest-wide objectives for timber state the following, but that coordination seems to have been abandoned throughout the plan:
“Timber management activities and projects will be coordinated with other resources through an interdisciplinary process.” (103)
- *“Beetle kill creates new habitat”* Tenmile Watershed Collaborative Committee Recommendations to the City of Helena Commission (adopted July 6, 2009 by the City Commission) recognizes this fact and recommends to the Helena National Forest that *“IDT should work to maximize synergy between fire mitigation and wildlife values for treatment areas.”*
- Dead trees are a natural part of any landscape and, as hunters who are intimately familiar with the ways of wildlife and this landscape, we know that wildlife will actually seek out areas of dead and down trees for security, especially when opened up and/or roaded areas have compromised secure habitat elsewhere. Therefore we cannot agree with the statement,
“Movement through the stands will be complicated for large animals in many areas because of stacked deadfall.”
- Such areas may be all that is left for security in some areas. At the same time, Hillis et al. (1991)³ cautions:
“Planning must not only address the quality and spatial arrangement of existing security areas, but also must provide for the regeneration of replacement security areas where a sustained timber harvest is desired.” (emphasis added)

Exemption to 40 Acre Rule:

- An exemption to the 40 acre Vegetation Standard would occur. Such an exemption would result in thousands of acres of large clear cuts affecting wildlife habitat, increasing the spread of weeds, impacting water quality, and changing the landscape for decades to come. Wildlife cover needs will be particularly devastated by an exemption to the 40 acre rule.
- It is our understanding that a “Regeneration Harvest is the new name for a clearcut. Yet this term does not occur in the Glossary. While Timber Standard 4 indicates that *“Timber stand openings created by even-aged silvicultural systems will normally be 40 acres or less”* (103), Regeneration Harvests (clear cuts) more than 40 acres would clear between 3.5 and 5.5 square miles of land. All types of treatments that are more than 100 acres range up to 523 acres in size with an average of 202 acres and total 21,510 acres for Alt 2 and 15,813 for Alt 3. The DEIS also acknowledges that several small harvest units adjoin so that units are often much larger than the acreage indicated in Appendix A.

Tree Canopy:

- This section is quite confusing and Figure 26 is almost unreadable. If the mountain pine beetle (MPB) has removed tree canopy (23,541 acres of lodgepole and ponderosa with dead or dying trees) over 39% of the project area, how can there be such high tree canopies (88.8% in moderate to high canopy cover) as depicted in Figure 24?
- “It is estimated that in the next five years the majority of existing standing dead will be on the ground” (169)
- If the purpose of the project is to remove tree canopy to prevent the spread of wildfire, it certainly appears that Mother Nature is capable of doing that herself without heavy equipment and miles of temporary road, and the resulting weed infestations.
- Now that red needles are gone from the canopy, fire danger is reduced. And with nearly all trees falling over within 12 years of onset of mountain pine beetles (initiated 2005-06), what little canopy that is left will be important to retain for wildlife.
- Every effort should be made in all treatment units to retain live trees ≥ 10 ” dbh for a host of biological reasons, including that they may be genetically capable of enduring climate change
- Thermal cover should be retained.

Old Growth:

- (92) “Old growth is identified to represent 5 percent of the third order drainage.” However, the DEIS data does not support this statement and the current harvest/burning approach prevents recruitment of old growth.
- Even though 5% of 3rd order drainages are not currently being met, there is no intent to identify Old Growth from T (timber) stands. This approach should change since in the five 3rd order drainages that exist in the project, they provide only 1, 2, 5, 1, and 0 percent old growth.
- The concept of “next-best-thing” (NBT) should only be applied if the T stands cannot produce old growth. Old growth dependent species are seriously compromised by the existing approach.

- It is important to retain as Old Growth those old trees occurring outside of 3rd order drainages, and not reallocate those stands. All old growth needs to be retained wherever it exists on the landscape.

Fire

Wildfire Risk:

- The DEIS states (235), “There is considerable discrepancy in the scientific literature as to the nature of the wildfire risk posed by accumulations of large woody debris.” Science confirms that where beetle-killed trees occur, these areas provide really important habitat, ecologically. These habitats are every bit as important as the forest before the kill-off.
- HHAA contends that the only effective way to protect homes from fires is to thin brush and small trees within 100-200 feet from individual homes, and to take simple measures to reduce flammability of the homes themselves; current fire suppression and thinning policies are ineffective and counter-productive because they focus on remote wildlands, divert scarce resources away from homes, and also put firefighters unnecessarily at risk fighting ecologically beneficial fires in remote areas.

Wildland Urban Interface (WUI):

- It appears the TSH project is retooling the definition of Wildland Urban Interface. The Tri-County Fire Working Group Plan (2015) states: “*we defined our wildland urban interface (WUI) boundary as the area within four miles from communities that possess a population density exceeding 250 people per square mile.*” This is also the WUI definition found in the Federal Register notice of January 4, 2001.
- We question whether Rimini or the upper Lump Gulch-Travis Creek areas meet the criteria of 250 people per square mile. In fact, there are fewer than 40 homes spread across 4-5 square miles in upper Lump-Travis Creek, and each would have to house at least 6 people, and all the homes would have to be clustered within one mile to meet this definition. We wish to see the analysis to determine whether these sites, as well as Unionville, Baxendale area, or Colorado Gulch actually meets the High Risk definition. If they do not, then nearly the entire TSH project area falls within the moderate to no risk category, as compared to the statement in the DEIS:

“*Approximately 97 percent of the project area is classified as WUI.*” (170)
- We strongly encourage enlightened use of literature in the final EIS that addresses the fact that scientific evidence exists showing that the ability of fuel reductions to halt fires under extreme fire events is not possible – but even so, extreme fire events are the major target of these treatments. Furthermore, the effectiveness of treatments declines over time and this raises the issue of how likely is it for a fire to encounter treated areas in the timeframe when it "MIGHT" work. All of this is being done to protect homes built in the fire plain. Research has shown over and over that fuel reductions more than 100-200 feet from homes have no added benefit.
- In a scientific paper entitled *Does wildfire likelihood increase following insect outbreaks in conifer forests?* The “findings suggest that strategic plans should recognize (1) the relative rarity of insect-fire interactions and (2) the potential ecosystem restoration benefits of native insect outbreaks, when they do occur.”⁴

- In a popularized article explaining the study, the researchers indicate that “an analysis of wildfire extent in Oregon and Washington over the past 30 years shows very little difference in the likelihood of fires in forests with and without insect damage. Indeed, other factors – drought, storms, and fuel accumulation from years of fire suppression – may be more important than insects in determining if fire is more or less likely from year to year. Researchers discovered that the chances of fire in forests with extensive swaths of dead timber are neither higher nor lower than in forests without damage from mountain pine beetles.
- HHAA believe it is a disservice to publicly instill pyro-panic by not providing accurate information about factors that most likely contribute to fire, while offering “solutions” that may not be needed at all. These solutions have the potential to increase the speed of any fire that might occur by drying out the landscape and severely changing other resource values through these draconian measures, whether or NOT a fire occurs.
- More confounding than the proposed activity itself is the false pretenses that are perpetrated in an apparent effort to coerce the public into believing that diseased trees are unnatural and will certainly burst into flame. In fact, the above mentioned researchers postulated that “it is possible that insects are doing some ‘fuel reduction’ work that managers may not need to replicate.”
- We wish to note that spruce bud worm hits the smaller trees and thus thins the forest. We have noticed that fir is resilient to the bud worm, and it has already passed through much of the TSH area without serious consequence.
- We wish to commend the Helena National Forest for bringing fire experts Mark Finney and Jack Cohen to Helena to discuss this most important issue. Many of our members attended this excellent forum, but we note that the Purpose of the Tenmile-South Helena project runs counter to what was explained in their presentation as recorded in the June 17, 2015 *Independent Record*.
- Mark Finney, Ph.D., a research forester for the Missoula Fire Sciences Laboratory presented his research on fire behavior in landscapes of varying levels of logging and prescribed burning at the “Fire on the Landscape” lecture series in Helena, June 10, 2015. While logging or thinning is often touted as a means to mitigate fire, he has found it does little to stop a wildfire. Only prescribed fire, set under more moderate conditions, has been proven to impact large fires burning under extreme conditions. “There’s a confusion that if you do timber management you’re doing fuel management -- you’re not,” Finney said. “We’re not going to cut our way out of the problem, but there are ways to do this strategically, get the benefits and have a sustainable fire management approach.” Finney found that fire “ripped through logged areas,” and only units where prescribed fire was introduced showed effectiveness in stopping or mitigating wildfire spread. “This isn’t saying that timber harvesting is bad or good, it’s just that it doesn’t substitute for the change in fuel structure under prescribed burning,” he said.

- Jack Cohen, a research physical scientist for the Missoula Fire Sciences Laboratory, focused his talk on fire behavior in the wildland-urban interface and how homes burn. Wildfire is inevitable, but houses burning down are not. The important knowledge for homeowners is how those embers ignite structures and how those structures can survive, Cohen said. “I’d like to suggest that the home ignition problem isn’t a wildfire control problem, so let’s start focusing on where we can be effective,” he said.
- HHAA appreciates this common sense approach to wildfire. Yes, fire is scary, but we need not create hysteria when facts can help people understand the problem and take appropriate action. The Tenmile-South Helena DEIS unfortunately plays to these instilled fears. It could have been a vehicle for education and objective analysis of what a landscape looks like when functioning to provide ecosystems services.

Wildlife

Big Game – General:

- *“The action alternatives would result in the immediate removal of hiding and thermal cover.”*
- *“Where Forest Plan direction may not be met, a site-specific Forest Plan amendment would be proposed.”* (DEIS Vol I, pg 13)
- With respect to meeting Forest Plan standards, this project falls miles short. Exemptions to standards, called site-specific amendments, would occur in the TSH project for:
 - Big Game Security Standard 1 for winter range
 - Big Game Security Standard 3 for winter range
 - Big Game Security Standard 4a
 - Big Game Security Standard 4c
 - Big Game Security Standard 6 components
 - And, Big Game Security Standard 1 and 3 for summer range are on the verge of falling out of compliance
- Helena Hunters and Anglers Association objected to the proposed Helena Forest Plan amendment to the Big Game Security Standard for Divide. We reference, in its entirety, that Objection document here⁵ to explain our concern with application of this amendment because it would not provide cover as an important component of big game security in the TSH Project. Together with past cover removal activities, this TSH project severely reduces essential security cover.
- The Objection Resolution sought by HHAA involved the following steps:
 - Implement Travel Plan Alternative 5 for the Divide Landscape
 - Retain Forest Plan standard 4a for big game security until the following is accomplished to create a new standard under the pending HNF Plan:
 - Evaluate each Forest’s landscapes’ ability to meet its biological potential to produce vegetation capable of providing hiding cover;

- Then, establish a minimum percentage of each area’s biological potential to produce adequate security hiding cover;
 - Such hiding cover would be recruited over a reasonable time, and applied in conjunction with a prudently monitored and responsively managed transportation system.
- Ultimately a beneficial and realistic standard for big game could be achieved.

Assumptions, Information, Methodologies:

- “Where possible, the peer-reviewed professional society literature is emphasized in that it is the accepted standard in science.”(233) How was this criterion applied to the collaboratively developed document that guides implementation of the 2016 security amendment since that amendment forsakes Best Available Science?
- Table 74 in the DEIS (239) describes the “Assumptions, information used, and methodologies used to determine effects to wildlife” and references an in-house report that is being used to replace the Forest Plan Standard 4a. However, Table 74 cautions that this report is “NOT standards but methodologies used to describe effects to elk.” The language is inappropriate and confusing. It doesn’t even reference Forest Plan Standard 4a, but relies entirely on language that occurs in the “big game security forest plan amendment” that was signed on February 29, 2016 but was not listed under “Statutory and Regulatory Framework” for the DEIS. Terms that do not occur in the 4a standard are used: “security area,” “intermittent refuge area,” “1,000 acres,” “administrative boundary,” “250 acres”, and caveats from the amendment involving providing cover “if available” inside the security areas, and providing cover “if available” between security areas. The 1986 Forest Plan Standard 4a was to have been used in preparation of the TSH DEIS that was released on February 1, 2016.
- Quite telling is that under existing conditions, existing Standard 4a describes acres of Forest Plan hiding cover for each elk herd unit (EHU - Black Mountain-Brooklyn Bridge, Jericho, Quartz Cr) and demonstrates that all three areas have substantial hiding cover and that the first two EHUs meet standard 4a for security because of lower road densities. It is not clear whether the Quartz Creek EHU might also meet the Forest Plan Standard had it not lost 564 acres to clear cuts in the past. (303) When using the 2016 amendment methodology, acres in “security areas” drop dramatically and hiding cover is no longer required.

Comparison of existing Standard 4a for Big Game Security vs. 2016 Amendment for EHUs			
	BM-BB EHU	JERICHO	QUARTZ
Existing Standard 4a (acres of Hiding Cover)/ <i>Meets Forest Plan Standard</i>	30,608 acres <i>Yes</i>	25,810 <i>Yes</i>	20,849 <i>No (high road densities)</i>
2016 Amendment (acres of Hiding Cover/“security” acres	None required/ 5,781	None req./ 3,435	None required/ 0 acres

- By using the 2016 Amendment methodology, two points become clear from the table above:

- No hiding cover for big game is required
- Timber harvest or other cover treatments will not be constrained by big game hiding cover.
- And the following astonishing statement clarifies the intent of the 2016 security amendment:
 - “The Forest Plan programmatic amendment for big game is anticipated to improve the Forest’s ability to effectively manage elk habitat during the hunting season. Alternatives 2 and 3 are designed and analyzed to complement this effort.” In reality, the opposite is true.

Management Areas Exempting Wildlife Requirements:

- Given the above information, it is easy to see why Management Area criteria that determine what is allowed to occur on the landscape and still meet natural resource needs would be exempted from their usual standards. It simply would not be possible to meet the standards and implement this project.
- The following statement is incorrect: “There are twelve management areas within the project area and five that have direction relevant to elk habitat” (311)
- In fact there are eight management areas that address wildlife and at least seven MAs that are relevant to elk habitat. Six of those would be exempted through site-specific amendments. We question whether W2 standards can be met since it is unclear whether the following assumption is accurate: “low intensity prescribed fire is assumed to not reduce thermal cover...”. Thus, this standard might also require an exemption.
- Wildlife and their seasonal needs are recognized across 32,652 acres, or more than 53 percent, of the project area within these eight management areas. Yet the standards that ensure functional wildlife habitat within those MAs would be exempted through site-specific amendments.
- Wildlife utilize all available habitats across the national forest, but these eight Management Areas are particularly important within the project area. Therefore, it is hard to understand why any of these MAs would be exempted from criteria that assure their functionality for wildlife.
- Lyon⁶ et al (1985) explains:
 - “Data from several study areas (Marcum 1975, 1976; Lonner 1976a; Lyon 1979b) confirm Scott’s (1978:53) observation that all available habitats are used at one time or another, but that elk “...become much more selective during periods of stress.” Further, some habitat components “... which receive little regular use may be critically important...during brief periods” (Marcum 1975:129).
- In addition to the six exemptions over-ruling wildlife criteria for Management Areas, another damaging exemption would be applied to the Timber Standard that requires clear cut size to be 40 acres or less. As a result of this exemption, 3,486 acres (5.5 sq. mi.) of clear cut units larger than 40 acres in Alt 2, and 2,250 acres (3.5 sq. mi.) in Alt 3 will directly remove wildlife cover for decades. Several regeneration units 40 acres or smaller adjoin, creating openings larger than 40 acres [clear cut = regeneration harvest]
- Please provide maps and acreage information to display how the following statement will be met for MA T3: “Openings created by timber harvest will be reforested to the extent necessary to meet the hiding cover requirements of big game before harvesting adjacent

areas. Timber harvest is propose in T-3; however, past timber harvest within T-3 is currently providing hiding cover.”

- Specific language pertinent to wildlife for each of these eight MAs is displayed here. (223, 312)
 - H1 - 14,292 acres Exemption required -
 - Provide cover and forage for big game animals and necessary habitat components for nongame animals. This is the largest MA in the project area, covering nearly 23 percent of it. Maintain adequate thermal and hiding cover adjacent to forage areas. Generally this means providing at least 25 percent thermal cover, where available, on winter range. The existing thermal cover condition is 19 percent; Alternatives 2 and 3 would reduce it to 17 percent and 16 percent respectively. A site-specific amendment would be needed to implement either action alternative.
 - H2 - 4,145 acres Exemption required -
 - Provide cover and forage for big game animals and necessary habitat components for nongame animals. This MA occupies nearly 7 percent of the project area within the Tenmile drainage.
 -
 - M1 - 7,486 acres These units in the Lazyman IRA should be dropped -
 - Protect the basic soil, water, and wildlife resources. These are lands where most active resource management is uneconomical or environmentally unfeasible. Management practices to maintain or improve wildlife habitat will be permitted where necessary to meet the objectives of adjacent management areas. This accounts for roughly 12 percent of the area.
 - R1 - 4,217 acres
 - Provide for maintenance and/or enhancement of fishery, big game, and nongame habitat, suitable as wildlife habitat for a variety of species but in particular, for wildland species wary of human presence. MA R-1 lands cover 7 percent of the project area.
 - L2 - 739 acres Exemption required -
 - These are predominantly non-forested big game winter range areas within grazing allotments, and the management strategy is designed to balance the needs of wintering elk and deer with those of domestic livestock. Manipulation of livestock numbers, seasons of use, distribution, and rotation patterns combined with habitat improvement projects will be designed to maintain and improve vegetation condition for all grazers within the allotments. MA L-2 occupies about 1 percent of the project area.
 - Maintain adequate thermal and hiding cover adjacent to forage areas. Generally this means providing at least 25 per cent thermal cover, where available, on winter range. In the management area approximately 33 percent of the winter range is in thermal cover. Under Alternatives 2 and 3, this would change to 21 percent and 25 percent, respectively. A site-specific amendment would be needed to implement Alt 2.
 - T3 – 265 acres Two Exemptions Required - Lazyman IRA Units should be dropped
 - Maintain and/or enhance habitat characteristics favored by elk and other big game species. Timber management needs to accommodate big game spring and summer

- use and may be used as a tool for wildlife habitat improvement. MA T-3 covers less than 1 percent of the project area.
- Maintain thermal cover adjacent to forage areas. There are broad parks adjacent to thermal cover in the management area. Treatment effects would vary, from substantial cover reductions associated with improvement cuts to more cover retention in prescribed fire units. Thermal cover would not be retained adjacent to all forage areas in T-3. Therefore a site-specific amendment would be needed to implement either action alternative.
 - Maintain a minimum of 35 percent hiding cover for big game. There are 211 acres of hiding cover (80 percent) in this management area in the existing condition. Alt 2 would treat all of those acres; Alt 3 would also treat all 211 acres although 41 of those would be treated with pre-commercial thinning which is designed to retain hiding cover in Alt 3. There would be less than 1 percent and 17 percent hiding cover remaining in Alternatives 2 and 3 respectively. A site-specific amendment would be needed to implement either action alternative.
- W1 - 1,412 acres Exemption required -
 - Optimize wildlife habitat potential, including old growth, over the long term. Management goals emphasize optimizing wildlife habitat potential. In particular, adequate thermal and hiding cover should be maintained adjacent to forage areas. Generally, this means providing at least 25 percent cover, where available, on identified winter range. This MA covers about 2 percent of the project area. There are 1,312 acres of W-1 in the project area of which 1,296 are considered winter range. Of that, 311 acres are considered Forest Plan thermal cover, which is 24 percent less than Forest Plan thresholds. The two action alternatives would treat thermal cover on 52 acres in winter range in both Alternatives 2 and 3. However, Alt 3 includes more low severity prescribed fire acres than Alt 2. Remaining Forest Plan thermal cover in W-1 is 263 acres in Alt 2 and 292 in Alt 3. Remaining percentages of thermal cover are 20 and 23 percent respectively. A site-specific amendment would be needed to implement either action alternative.
 - W2 – 96 acres Exemption may be required -
 - Management goals emphasize optimizing wildlife habitat potential in riparian and wetland areas and in other productive areas with high quality forage, cover, and other key habitat components. These are highly localized sites and they account for less than 0.5 percent of the project area. Since low severity prescribed fire is assumed to not reduce thermal cover, the status quo would be maintained under implementation of Alternative 2 and consistency with this standard is retained.
 - It is not clear that low severity prescribed fire will not reduce thermal cover. Therefore the status quo might not be maintained as asserted, and this standard would also need an exemption. (I- v and 223-224) Provide the scientific justification basis for this “assumption.”

Big Game – Elk

Methodology and Scientific Accuracy:

- Under “Methodologies and Scientific Accuracy” (238) the following definition of big game security is presented, which is NOT the Forest Plan Standard 4a for big game security:

- “Elk security is analyzed according to the following: Security is defined as a proportion of an elk herd unit within the administrative boundary of the Helena Ranger District that consists of an area of at least 1,000 acres in size that is at least ½ mile from a motorized route open to the public between 9/1 and 12/1. Security blocks are adjusted for constrictions less than or equal to ½ mile in width. Security is calculated across all ownerships within the administrative boundary. Intermittent Refuge Areas are defined as those areas at least 250 acres in size and less than 1,000 acres in size that are greater than or equal to ½ mile from a motorized route open to the public between 9/1 and 12/1. Intermittent Refuge Areas are adjusted for constrictions less than or equal to ½ mile in width. Intermittent Refuge Areas are calculated across all ownerships within the administrative boundary. “
- Our cynical analysis is that while the DEIS exempts the project from Forest Plan Standard 4a for security, the Forest is “assisting” the State of Montana in its wildlife population management – by offering a treeless amendment so hunters can see the elk.

Elk Herd Units:

- Regarding the Black Mountain-Brooklyn Bridge EHU, the DEIS (256) incorrectly states:
 - “There has been relatively little timber management in the EHU, and most of it has occurred on the south and east borders of the EHU near private land.”
- But in fact, there has been substantial timber harvest in the center of this EHU including the Whiteman timber sale (1971), Quartz Creek timber sale, Strawberry timber sale (1986), Hazard Tree Removal (2010), Clancy-Unionville Vegetation Manipulation Project (2003), Clancy-Unionville Salvage Sale (2012), North Fork of Travis Creek Salvage Sale (2012), and Red Mountain and Flume-Chessman Reservoir timber sale (2014).

Population Management – Retaining elk on public lands where they can be hunted:

- The DEIS portrays that elk populations cannot be controlled by the state of Montana and therefore the Forest is helping to do that by “managing vegetation (cover and forage)” [through cutting/burning and livestock grazing] “and controlling hunter vehicle access” [even though the security amendment states that there have been “impractical constraints” on motorized travel which would be alleviated by transitioning to the 2016 amendment]. The difficulty in managing this elk population is not a lack of hunter ability but rather declining security and hiding cover on public lands leading to elk displacement to private lands and subsequent game damage that occurs when public land security is compromised.
- Displacement to private lands has become a huge issue across the state of Montana resulting in growing elk herds that can no longer be managed on public lands through public hunting. Such flagrant disdain for big game standards leads to public hunting opportunity being lost, recreational revenue declines, financial burdens to private landowners, and contributes to dwindling hunter recruitment for lack of places to hunt.

- The DEIS (284) acknowledges that:
 “Timber harvest and prescribed fire in the action alternatives would remove conifers from stands that are currently providing elk hiding cover. This would potentially increase forage but would reduce tree density that currently provides hiding cover. Maintaining hiding cover in the project area is important to maintain big game habitat capability and hunting opportunity. The action alternatives propose timber harvest and prescribed fire within existing elk security areas and intermittent refuge areas. Timber harvest or prescribed fire should not reduce the effectiveness of security areas given the distance of these areas from open roads, the irregularity of the terrain, and the value of additional fall forage within security areas. Timber harvest and prescribed fire could reduce the effectiveness of the intermittent refuge areas due to their smaller size. However, removal of conifers would increase sightlines and diminish screening cover that is useful to animals during hunting season.”
- The apparent solution, given that timber harvest and burning will have removed security cover, is to assure that there is “distance” from open roads so hunters will not be inclined to walk. But the size of these treeless security areas would be as little as 1,000 acres, which is only 1.5 square miles. Any hunter can easily cover 1,000 acres in a half day. And these “security areas” need only be ½ mile from an open road.
- “Elk numbers continue to hold up, despite the deterioration of forest cover in pine stands across both hunting districts. The loss of hiding cover over the next decade may reveal something about the importance of this component to the maintenance of robust elk populations in these districts.” (282) However, another decade will not be necessary to determine the “importance of hiding cover.” The “importance of hiding cover” has already been clearly demonstrated through the fact that elk have been displaced from public lands as hiding cover has been removed, bull numbers are at the low end of acceptability, and most certainly, the hunting experience will have been damaged.
- Traditional ranchers and farmers suffer depredation of property when elk congregate and consume forage or haystacks. These landowners justifiably seek relief from the state through game damage hunts and are awarded such if they have allowed public hunting opportunity during the regular hunting season. On the other hand, some private landowners harbor elk either because they do not mind elk on their property or they capitalize upon them through outfitting. In the case of the latter, when their commercial outfitting hunting season is over, these landowners complain to the state of Montana about elk numbers causing depredations. The state, in an effort to address elk displacement from cut over public lands and subsequent depredation to private lands, has recently implemented private land “shoulder seasons” which are valid on private lands only. These hunts can be conducted from August through March. Improperly managed public lands cannot retain public wildlife.
- The elk population conundrum is being driven to a large extent by National Forest deforestation of security cover. When security is inadequate, elk herds consisting of cows, calves, and young bulls often move to unhunted areas that they perceive as “safe” due to a lack of hunting, even if hiding cover is absent.

- At the same time, the more mature bull component of the population has a behavioral proclivity for hiding cover, and as a result, they tend to avoid private lands without hiding cover. “Profitt et al. 2013 and MFWP 2011c...found that most mature bulls tend to rely on traditional security areas on the National Forest.” (274) This behavioral trait has resulted in vulnerability of bull elk on public lands. MFWP establishes minimum bull:cow ratios for each hunting unit, but under no circumstance are these bull:cow ratios less than 10 bulls per 100 cows. When ratios approach this minimum number, it is a sign that bull elk are vulnerable and either road densities are too high or hiding cover is inadequate on public lands, or both.

Vulnerability and Security:

- How is the discussion for Elk Vulnerability and Security translating to the ground when the 2016 security amendment requires absolutely no hiding cover? The following are excerpts from this section that clearly demonstrate that removing hiding cover is not the answer, yet the DEIS (273) says:
 - “The precise role of hiding cover is more elusive.”
- This bald obfuscation of the “role of hiding cover” is trying to justify removing hiding cover from elk security for administrative convenience. The DEIS (274) explains that
 - “Managing for key blocks of cover that field observation demonstrates are important to hunted elk is probably a more effective strategy than attempting to maintain a specified minimum acreage of hiding cover within a herd unit without examining how it is distributed and used by elk.”
- Elk need hiding cover, and not in simple, convenient blocks that any predator or hunter could key in on. The double-speak throughout this EIS is simply mind-boggling. As an example:
 - “Timber harvest or prescribed fire should not reduce effectiveness of security areas given the distance of these areas from open roads. Timber harvest and prescribed fire could reduce the effectiveness of the intermittent refuge areas due to their smaller size. Removal of conifers would increase sightlines and diminish screening cover that is useful to animals during hunting season.”
 Then it goes on to say:
 - “Maintaining hiding cover in the project area is important to maintain big game habitat capability and hunting opportunity.”
- Table 87 (290) explains how hiding cover in security areas is allowed to be harvested, but miraculously the percentage of “security areas” remains the same no matter what silvicultural prescriptions occur within them. How does application of the 2016 security amendment more accurately reflect management of elk habitat on the ground when hiding cover is targeted for removal? The 2016 amendment is conveniently designed so that elk security never changes on the ground no matter what treatments occur, because the amendment only recognizes the number of “security areas”, not the acreage remaining.
- This new concept of Intermittent Refuge Areas is allowed to decline in terms of acres (Table 88) but the number of Intermittent Refuge Areas on the landscape doesn’t change

so the percentage of Intermittent Refuge Areas on the landscape remains the same. How is that considered to be responsive to elk needs?

- The DEIS (278) tries to explain its methodology to undercut elk security but acknowledges:
 - “Currently, elk security measured in this way is not a Forest Plan standard. It is merely a supplementary measure that helps to gauge elk security vulnerability in these herd units.”
- Rather than drawing artificial security polygons on maps, the Forest should have evaluated the potential of the landscape to naturally provide cover and then defined measures to allow that to happen. This approach is reasonable, it is what the literature says is required (Lyon et al. 1985, Hillis et al. 1993) and what HHAA has been asking for over the past several years.
- Appended to these comments is the formal Objection that Helena Hunters and Anglers filed on June 19, 2015, objecting to the amendment that deletes cover as a crucial element of big game security and replaces it with a scientifically unsupported amendment to Helena Forest Plan Standard 4a for big game security for the Helena Ranger District. Hiding cover is a measurable component of the existing Forest Plan Standard 4a. This Objection details our concerns, is still valid, and is submitted as part of these DEIS comments on the Tenmile-South Helena Project. All 12 objection points are applicable to the TSH project.

Big game Standard 6 – Montana Elk-Logging Study Recommendations:

- Given the thousands of acres of treatments across the landscape there is no assurance that Guideline 2 would be upheld: “Redistribution of elk would not be exacerbated.”
- The Elk-Logging Guidelines will be turned into a mockery if the 2016 security standard is implemented because even within the small “security areas,” administrative use (timber harvest and other treatments) would be allowed, thus the following guidelines will be or will likely be violated:
 - Guideline 2: Prevention of redistribution is not assured.
 - Guideline 3: Administrative activity in security areas allowed during the hunting season would diminish home range use by elk and denigrate the elk hunting experience.
 - Guideline 4: Integrity of elk movement will not be assured because temporary roads would be open for administrative use during the hunting season.
 - Guideline 5: Elk security through road management cannot be assured because past mitigation measures to close roads have not been fulfilled and the amendment is designed to not create “impractical constraints” upon motorized recreation.
 - Guideline 6: Security areas as defined in the 2016 amendment would not be closed to administrative use during the hunting season.
 - Guideline 7: Clear cut sizes would be more than 40 acres across 2,250-3,486 acres of the area, so this guideline is violated and an exemption has been prepared to allow the violation.

- Guideline 8: Cover types important to elk have not been embraced since at least six exemptions in elk habitat are proposed, along with six Forest Plan standards for big game.
- Guideline 9: Moist site integrity has not been maintained as recently as the Chessman timber sale, and they will not be honored in the TSH project because 24-36 moist sites will be encompassed by treatments — allowing retention of only 1½ tree-lengths around moist sites.
- Guideline 10: It is not at all clear from the verbiage which simply says, “The action alternatives are consistent with this recommendation since cattle and elk currently co-mingle where they overlap” and yet language from Guideline 10 reads: “Allocation of area may be more practical and ecologically sound than allocation of forage.”
- Guideline 11: Since both action alternatives include treatments during the winter in winter range, this guidelines is violated; so an exemption has been prepared to allow the violation.

Summer Range:

The Helena Forest biologist has assured HHAA in the past that summer hiding cover would be available if standard 4a for security were replaced with a programmatic amendment, but the following from the DEIS (308) further diminishes Forest Service credibility:

“Both action alternatives would result in the reduction of hiding cover [in summer range] but not to the extent that the affected herd units would fall out of compliance.”

The DEIS (291) states:

“All herd units would meet Forest Plan standard 3 upon implementation of either action alternative”

However, the DEIS goes on to cite Table 84 and, in fact, Standard 3 would not be met in the Black Mountain-Brooklyn Bridge EHU and it would also approach critical levels in Jericho and Quartz EHUs.

Habitat Effectiveness:

True effectiveness of habitat would not be maintained from the elk’s point of view because 24-43 miles of temporary roads and 30-56 miles of closed roads would be used for hauling and harvest during the 15-20 year life of the project. These roads are allowed to be constructed in hiding cover and used during the summer season. The DEIS (294) states:

“This use would undoubtedly displace any elk that would normally be making use of local habitat during the life of the project, but it would not influence open road habitat effectiveness because the roads remain categorized as closed.”

Calving Areas:

Clearly, no effort has been made to locate or map calving or nursery areas. One of the most obvious nursery areas on the Helena National Forest was the lush habitat that used to exist at the east end of Chessman Reservoir. This nursery area was destroyed with clear cut logging three years ago. The DEIS excuses itself from knowing where these crucial areas are by claiming they are “difficult to pinpoint” (269), but there are several

logical place to look. How is it that every stand of dead or commercially viable stand of trees can be located but nursery areas cannot?

Winter Range:

- Winter range should under no circumstances be further depleted through regeneration or improvement harvest. What is the landscape capable of producing for winter range, including thermal cover? Is there any intent to ever restore it?
- DEIS (270) :
“Timber harvest or other over story modification in thermal cover will inevitably lead to a loss of over story density and thermal function. On the other hand, carefully planned selective harvest in mature stands as described by Thompson et al. (2005) that creates the mix of forest structure may improve the suitability of such stands as winter cover for elk.”
Where is this happening? Please list areas by EHU, unit numbers and prescriptions that are scientifically known to “improve the suitability of such stands”.
- Thompson et al stated:
“Lets get over this notion that forage and cover are two distinct types of habitat on elk winter range. The forest IS forage. In cases we have observed in the Blackfoot-Clearwater WMA, the removal of forest cover did not result in more forage. Instead, it removed the arboreally produced forages that originally attracted elk and deer to these sites, and we no longer find elk in these places during our helicopter surveys.”
Thompson et al goes on to say:
“Consider that bulls older than two years old live in the forest every winter – over 80% of the bulls in most winters. If we manage forests on elk winter range for no other reason, we manage them for bulls.”
- The DEIS does not address the June 17, 2009 Tenmile Watershed Collaborative Committee recommendations to the City of Helena Commission (adopted July 6, 2009 by the City Commission) which lists the loss of thermal cover as a major wildlife issue. Instead, this DEIS states: “*The action alternatives would result in the immediate removal of hiding and thermal cover.*”
- With respect to wildlife concerns, does the Forest see no obligation to honor the collaborative recommendations that the City of Helena has presented relative to the TSH project? All efforts should be made to retain thermal cover.

Big Game – Deer

- White-tailed deer are common yearlong on National Forest lands within the project area in contrast to the following statement, and should be addressed as a regular inhabitant of the project area:
“White-tailed deer focus much of their activity on riparian bottomlands, lowland forest, and agricultural lands in the valleys—most of it off the Forest.”
- With respect to mule deer concerns, recognition of the hiding cover needs of mule deer as different from elk, is provided (314):

“...they often rely on local hiding cover to avoid hunters. Thus, local blocks of hiding cover outside of unroaded security areas are often more important to deer than to elk. Small patches of cover (considerably less than the 50 acres recommended for elk) can provide effective escape enclaves for mule deer.”

- As well as their reliance on mature and over mature forested stands:

“As a rule, the quality of summer range (not winter range) is the primary factor regulating deer numbers (Mackie et al. 1998, p. 131; Pac et al. 1991, p. 279). In mountain and foothill environments, summer habitat should provide high forage quality (of leafy forbs) and security for fawn rearing. Management should emphasize habitat diversity (Mackie et al. 1998, p. 136). Mature and over-mature conifer stands with multiple layers, numerous openings, abundant edge, and inclusions of other diverse micro-communities are ideal (Mackie et al. 1998, p. 49, 55; Paqck et al. 1991, p. 279). A balance of high-quality forage, summer thermal cover, and screening/hiding cover are important for raising fawns and building energy reserves for winter survival and future fawn production.”
- And an essential reliance on winter thermal cover – even more so than for elk:

“While summer nutrition may be the key factor that provides deer the wherewithal to survive the winter, effective winter habitat is also important, allowing animals to hold onto as much of their accumulated body weight as possible. Pac and others (1991, p. 276) emphasize the need to manage mule deer winter ranges as maintenance habitat where animals can conserve energy. Their studies in the Bridger Range of southwest Montana suggest that forage characteristics are often of secondary importance and that local topography and the abundance of conifer stands that can ameliorate snow depth and temperature are the key factors. The conclusion that thermal cover (equal to or greater than 70 percent canopy closure) is seldom a key habitat component for elk on winter range does not necessarily apply to deer. Research indicates that mule deer are more dependent on thermal characteristics of forest cover than are elk. At least on some winter ranges, deer appear to require dense stands of mature timber with canopy closure in excess of 60 percent to withstand prolonged bouts of severe winter weather. While typically deficient in forage, these stands can provide a favorable thermal environment and minimize snow depth (Mackie et al. 1998, p. 52, 136; Pac et al. 1991, p. 77, 276, 279).
- Although mule deer are more commonly seen along roads than elk, they do avoid them:

“...most deer do in fact avoid roads as much as possible (Rost and Bailey 1979). As a result, regular vehicle traffic will lower habitat effectiveness, reducing the amount of habitat that deer find suitable for foraging, resting, raising young, and escaping from perceived danger. The impact of roads on deer summer habitat in general can be estimated via the ‘habitat effectiveness’ indices calculated for elk summer range. But, as with elk, the specific roads that limit the ability of deer to use key habitat sites are the primary disruptive influence.”
- Mule deer “try to avoid humans in winter” and that to “minimize all response by mule deer to snowmobiles or hikers, they would have to be more than 350 meters away (Freddy et al 1968).”

- It is certainly not clear that adequate thermal cover and fawn rearing areas will remain. The statement that “Over 60 percent of the project area would not be treated” (318) is misleading in that more than 7,000 acres within the project area has already been cut or burned, with most of that in the past 10 years. Therefore nearly 62 percent of the project area will have been treated, leaving only 38 percent.
- Three Management Area standards would be exempted from needs of mule deer.
- The No Action Alternative would allow for regeneration in 7,000 acres of previously treated landscape while existing stands of dead trees retain hiding cover capability and create natural mosaics of habitat types across the landscape. Where past cutting and burning has occurred, any future manipulation should be postponed for at least 10 years.
- Mule deer deserve more attention regarding land management than they receive, particularly since their populations are declining throughout the west.

Big Game – Moose

- 34 and 24 wetland habitats will be affected by cutting/burning in Alternatives 2 and 3 respectively.
- HHAA believes these wetland areas should not be cut at all, but if they are, more than only 1-2 tree lengths (51) should buffer them from cutting/burning and a distance of at least 100 meters should be buffered in order to not dry out the site, retain native vegetation, and provide some level of security to these critically important habitats.
- Moose deserve more attention regarding land management than they receive, particularly since their populations are struggling.

Ensuring Viability of Management Indicator Species (MIS)

- “Long-term population viability for these species will be determined by their ability to adapt to the new habitat configurations and to maintain a persistent, if somewhat modest presence in Helena NF landscapes until forest recover their former structure.” While the DEIS indicates that mountain pine beetles are driving MIS declines, harvest treatments will exacerbate the situation, and certainly will not allow forests to “recover their former structure.”
- Pileated woodpeckers are at only two times the minimum habitat acreage before they meet a critical threshold (Table 265, Appx D). They are classified as having the lowest “Estimated Probability of Population Persistence” on the Helena Forest of the MIS and sensitive species occurring here. It would appear that recruitment of old growth must be emphasized. Yet the DEIS (Appx D) indicates that “pileated woodpeckers are not analyzed in detail for this project.” Why not? Neither were flammulated owls which are known to occur in the area.
- Under NFMA, the implementing regulations, and the Helena Forest Plan, the Forest Service is required to manage wildlife habitat on the Helena National Forest to ensure

viable populations of existing native species are maintained. To do so, the Forest Service identified management indicator species (MIS) for various species groups within the Helena National Forest whose habitat is most likely to be changed by forest management activities.

- MIS represent a proxy or surrogate for the health and viability of many other species. While the Forest Service retains some flexibility with respect to the appropriate methodology used to monitor population numbers (actual and trend) of MIS, i.e., using population data on MIS and/or habitat data as a proxy for MIS population data (commonly referred to as the “proxy-on-proxy” approach) the mandate to maintain viable populations of MIS like elk, mule deer, marten, grizzlies and woodpeckers cannot be ignored. Additionally, the methodology employed must be reasonably reliable and accurate (*Native Ecosystems Council v. Tidwell*, 599 F. 3d 926, 933 (9th Cir. 2010)).
- If, for example, the Forest Service decides to use habitat as a proxy for population numbers for MIS, then the proxy results must mirror reality. Maintaining the acreage of habitat necessary to maintain viable populations of big game species (elk, deer, and moose) on the Helena National Forest must in fact ensure viable populations are maintained. At the very least, the Forest Service must describe the quantity and quality of habitat that is necessary to sustain the viability of big game species and explain its methodology for measuring this habitat (*Native Ecosystems Council v. Weldon*, 848 F. Supp.2d 1207, 1213 (D. Mont. 2012)).
- For projects on the Helena National Forest, the Forest Service uses the big game standards, including Standard 4a, as a means of ensuring compliance with NFMA’s viability requirement. Compliance with Standard 4a’s hiding cover and road-density standard, for instance, is used as a proxy for population numbers and composition of elk and, as such, other big game species.
- The DEIS is eliminating Standard 4a and replacing it with an untested standard based solely on size and distance from an open route during the hunting season. Hiding cover for big game and other forest dependent species was eliminated from the big game standard under the Divide Travel Plan. Because it is untested and eliminates the standard for hiding cover and road-density, there are no assurances that the new standard will work. Indeed, under the proposed amendment, a 1,000 clear cut would qualify as “big game security” so long as it is a half mile from motorized routes open during the hunting season.
- Subtle use of an untested standard amendment as a proxy for monitoring populations (actual and trend) of MIS like deer, therefore, is a violation of NFMA, the implementing regulations, and the Forest Plan.

Threatened and Endangered Species

Lynx:

- Lynx determination by the USFWS states the project “may affect, is likely to adversely affect” (220) due to loss of habitat and connectivity.

- “The Tenmile-South Helena project area is not designated as critical habitat.” (334). We contend that habitat that is used by lynx, especially when consistently used, is critical. Lynx have consistently been located south of Highway 12, including trails, feeding, and bedding sites.

Grizzly Bear:

Grizzly bear determination by the USFWS states the project “may affect, but not likely to adversely affect.”

- Although numerous reports of grizzly bears (MFWP, Jamie Jonkel) and local testimonials regarding the presence of grizzly bears have been made (Divide Travel Plan Objection meeting August 19, 2015, Fred Bailey, Elliston resident), the DEIS states that there is no need to consider T&E species Standards 2, 3, and 4 for grizzly bears. However, we believe that every effort should be made to enhance and encourage usage and linkage between the NCDE and the Yellowstone Ecosystem through this tattered portion of the Continental Divide that needs careful wildlife management.
- The following from the DEIS (453) supports keeping the Continental Divide linkage zone and the Inventoried Roadless Areas within it intact:
 - “The Tenmile-South Helena project area encompasses only one potential grizzly bear core area in its entirety – the Lazyman Gulch Roadless Area (10,260 acres); but it also takes in most of the Jericho Mountain roadless Area (6,993 acres). In addition to these larger non-motorized areas, the project area includes a number of productive riparian and wetland habitats – often around the heads of drainages – that provide excellent cover and forage within unroaded blocks ranging from a few hundred to more than 2,000 acres. Many of the roads that approach these sites are little used most of the year and allow bears to range through the area with little chance of directly encountering a human.”
- The effect of weed spread on the supposed improvement of grizzly bear forage as a result of timber stand treatments is not addressed.

Wolverine:

- Wolverines are listed as a Sensitive Species in Region 1 USFS.
- The U.S. Fish and Wildlife Service proposed listing the distinct population segment of the wolverine in the contiguous United States as “threatened” in February 2013, but then withdrew its proposal in August 2014. U.S. District Court is currently reconsidering the status of wolverines.
- Critical linkage, as well as relatively undisturbed country, that contribute to the persistence of wolverine in Montana “may be attributed to the presence of designated wilderness and remote inaccessible habitat (Hornocker and Has 1981)” (463) like that provided in the Jericho and Lazyman IRAs. Designations of these areas as non-motorized backcountry with a wildlife emphasis and Wilderness, respectively, would be beneficial to wolverines.
- “The Divide landscape lies within the ‘Central Linkage Region’—a zone amidst the three large core areas that contains numerous small patches of primary habitat capable of supporting

reproductive females. This region, while dominated by ‘dispersal habitat’, provides key connectivity that allows wolverine populations in the complex of core areas to function as a ‘metapopulation.’ Habitat quality...needs to be sufficient to provide for regular wolverine movement throughout the metapopulation.” (468)

- HHAA members have taken a keen interest in the wolverine, volunteering on tracking surveys, reporting observations, locating a dead animal in the heart of the project area, and successfully challenging the state’s wolverine trapping regulations. Within the TSH project area there are locations of particular interest that should be evaluated at least for wolverine day use or rendezvous sites.
- “Management aimed at improving connectivity of wildland habitat for a variety of species—by reducing roading and other forms of human intrusion—aids the ability of wolverines to move throughout the Divide and improves prospects for survival.” (467)
- What percentage of the Divide landscape is within the TSH project, and how many acres of non- motorized sanctuary are available to wolverine in this project area? Both action alternatives include treatments in primary habitat, yet the DEIS (478) concludes that “the action alternatives are not expected to result in barriers to dispersing individuals”. It also acknowledges that with respect to habitat modifications, “How much is too much is not known.”

Fragmentation

- The Continental Divide in this portion of Montana constitutes the most fractured, fragmented link in the Divide Linkage Zone, providing wildlife connectivity between the Northern Continental Divide Ecosystem and the Yellowstone Ecosystem. Yet this project would remove vast areas of vegetation within this linkage zone in the form of timber manipulation (24,208 acres in Alt 2, or 18,112 acres in Alt 3) in cut and burn units that will range in size up to 543 acres. For Alt 2 and Alt 3 respectively, 65.9% and 75.5% of the treatments will exceed 40 acres in size.
- In addition to timber sales, fragmentation of the critically important Lazyman and Jericho Inventoried Roadless Areas is a concern. IRAs constitute extremely important big game security areas, and yearlong habitat for elk, mule deer, moose, bear, lion, and marten, among others. The Hazard Tree project cleared miles of road within the Jericho Mountain IRA, even though HHAA submitted comments⁷ and filed an Objection⁸ requesting that this action not proceed until HNF Forest Travel Planning for Blackfoot and Divide was completed. The HHAA Objection was denied.
- The mountain pine beetle has naturally fragmented the continuous forest canopy, which is what fire specialists have advocated. Fortunately beetles do not require roads and heavy machinery that leads to the spread of invasive weeds, damage soil, contribute to soil compaction or erosion, and provide conduits into otherwise secure wildlife habitats. None of the negative consequences of opening up the forest canopy that go along with human silvicultural treatments occur with the natural agents that create forest mosaics.

- Table 74 (242) is incomplete in that it does not reference “information used” in its limited analysis.
- In the cumulative effects discussion for fragmentation, the adjacent Telegraph timber sale is not mentioned or analyzed. (427)

Linkage Zones

- The Tenmile-South Helena project area lies within what has been characterized as the ‘Continental Divide linkage zone’...connecting the Northern Continental Divide Ecosystem to the north and the Greater Yellowstone Ecosystem to the south for a number of uncommon wildland species (grizzly bears, wolverines, lynx, and wolves, among them). (431)
- Table 126 (432) notes: the Continental Divide Ridge provides a wildlife travel route, an elk calving area, and a refuge from human activity for several species. But it goes on to note (436):

“Treatments would increase sight distances and allow animals moving through the area to be seen from further away.”
- The DEIS is supposed to evaluate “*whether the ecosystem can accommodate additional effects*” but that question is not answered. It does indicate that 3,066 acres of very open areas have been created in the recent past, and another 3,685 acres is likely to exist as young sapling sized trees, while another 4,344 acres of open stands with pole sized trees are also on the landscape. In addition, “other ongoing projects that could disrupt wildlife movement include the Red Mountain Flume/Chessman Reservoir project and the Clancy-Unionville project... the Montana Tunnels mine expansion, continued mining operations, mine waste clean-up, development of private land in-holdings, improvement of the Tenmile Road, Telegraph vegetation project, and continued ATV and other motorized activity. (440)
- The DEIS (441) notes “Habitat connectivity can contribute to long-term species survival.” While the DEIS states that Alternative 3 probably has the least effect to existing movement corridors,” the question of whether the ecosystem can accommodate additional effects of timber harvest, removal of dead trees, weed infestations, and still function as a Linkage Zone, is not answered.
- The DEIS does not address the June 17, 2009 Tenmile Watershed Collaborative Committee Recommendations to the City of Helena Commission (adopted July 6, 2009 by the City Commission) which acknowledge that the area constitutes a “Significant wildlife corridor zone,” and recommends: “*Identify linkage zones and develop habitat conservation strategies. If conflicts between fire mitigation and habitat conservation strategies develop, use interdisciplinary approach to resolve.*”
- The DEIS does not address habitat conservation strategies to enhance or even sustain the “significant wildlife corridor zone.” Rather it acknowledges that “*Treatments would*

increase sight distances and allow animals moving through the area to be seen from further away.” How is this “a conservation strategy”?

- The TSH project emphasizes retention of more dense forest whenever possible and removes all possible roads.
- Table 74 (242): Words are missing in the text.

Fisheries

- How does the following conform to the stated goal of “reducing sources of sediment and other contaminants to water sources”: *Sediment impacts to fisheries under the action alternatives analyzed for this project would be up to 5 years and would be partly offset through mitigations.* (Vol III pg 16)

Weeds

- How will weed control be funded since Standard 3 for Noxious Weeds “does not apply to the TSH project” – *Funding for weed control on disturbed sites will be provided by the resource which causes the disturbance* (16)?
- The following from the DEIS (578) is extremely worrisome from the perspective of certain wildlife habitat degradation that would be associated with this project:
“Any soil disturbing activity has the potential to increase noxious weed invasion or spread. Additional increase in acres of potential noxious weed infestation is anticipated... with the annual rate of spread of 8 to 12 percent...and the rate of spread could increase in areas affected by ground disturbing activities. Disturbance is widely recognized as a primary influence on plant community composition and is frequently implicated in the spread of invasive exotic plants.” (578)
- Weeds are sure to explode across the landscape: “When trees are removed from a site, tree cover and shade are reduced while ground cover plants may become more abundant. In much of the project area, this effect would last up to about 30 years until trees become dense enough to shade out the early successional understory plants. On drier sites containing ponderosa pine trees, however, more open understory conditions would be maintained over the long term.” (455)
Concerns about introduction of weeds through logging and burning occur throughout these comments.

Hydrology

- The Lewis and Clark County Water Quality Protection District’s recently completed watershed restoration plan for the Lake Helena Watershed states that a cumulative 38% reduction in sediment loading must be achieved to attain and maintain state water quality standards and meet TMDL cleanup goals. Disturbing up to 24,308 acres through cutting and manipulating and then burning fuels will contribute further to the sediment problems. That reality is not acknowledged or discussed in the DEIS.

- The Lake Helena Watershed Restoration Plan⁹ states that sediment loading to the Tenmile and Lump Gulch watersheds need to be reduced by 74 and 81 percent, respectively. HHAA contends that water quality cannot be improved by treating 349 forested units ranging in size up to 755 acres over the life of this 20 year project. The Watershed Restoration Plan calls for sediment reductions within seven years. In the next 7 years, this project will clearly exacerbate sediment problems, not solve them.
- How do the following conform to the Watershed Restoration Plan?
 - “Sediment impacts to fisheries under the action alternatives would be up to 5 years and would be partly offset through mitigations.” (Appx B pg 16)
 - “An undetermined number of wetlands and/or riparian zone acres are included in proposed treatment areas.” (368)
 - In Alt 2 there are 70 identified wetland sites that overlap harvest units, or about 13 percent of those that have been mapped in the project area. (369)
 - In Alt 3 there are 51 identified wetlands in harvest units, or about 0 percent of the mapped wetlands.
 - In Alt 2, prescribed fire would treat 17,303 acres that would intersect 53 wetlands.
 - In Alt 3, about 13,836 acres would be treated with prescribed fire that would intersect with 29 wetlands.
 - “Grazing in riparian areas and cattle trailing along streams within grazing allotments would likely continue to contribute elevated sediment levels to streams in the project area. In the absence of other reductions to sediment delivery, streams in several of the watersheds where treatment is planned would continue to receive elevated levels of sediment due to impacts from cattle grazing. Alternative 2 could affect livestock management activities and related impacts in the project area by opening up currently timbered areas to enhanced forage production and easier movement by cattle. The impact of this potential effect is difficult to predict. Impacts to streams could increase as cattle are able to use previously inaccessible areas.” (694)
 - “Temporary road segments would cross roughly 5 wetlands or stream riparian areas in alternative 3. In addition to the risk of sedimentation, roads crossing wetlands reduce the area of wetland habitat and impair wetland function.” (674)

Recreation

- No discussion is offered about what the project will do to various recreational experiences. Gutting of the drainages in Helena's backyard on such an unprecedented scale is likely to result in a huge backlash against the U.S. Forest Service from the public, especially from those who have moved to Montana because of the large amount of public land for hunting, fishing, hiking, wildlife watching and other recreation. No one is going to recreate, for many years, in a clearcut.
- HHAA’s primary concern involves the dramatic negative changes that will result from either action alternative, but particularly Alternative 2, and these impacts would endure for decades while clear cuts grow back. Mature forest will not return in the lifetime of any adult who is alive today. Many of these proposed clear cut (regeneration harvest) areas currently provide excellent habitat for wildlife and recreationists.

- Ethical hunting experiences would clearly be sacrificed on a broad scale.

Roadless Areas

The Tenmile Watershed Collaborative Committee recommendations to the City of Helena Commission (adopted July 6, 2009 by the City Commission) state:

Roadless/Roaded Areas of Ten Mile:

a) Prescribed fire treatments will be used in both roadless and roaded areas of the watershed.

b) These distinct zones of the watershed need different “sideboards” defining acceptable approaches to treatment. No new roads, temporary or otherwise, will be constructed in the Inventoried Roadless Area of Ten Mile. However, non-road firebreaks may be constructed if needed.

- There are several temporary roads proposed in the IRAs in Alternative 3 that, by the above Recommendation, should not be occurring. Labels on maps are too small and blurry, even on the expanded digital maps in Vol III of the DEIS, to list. However, some of them occur in the Blackhall Meadows area, at the southern end of the Jericho IRA, and in the northwest corner of the Black Mountain IRA.
- We urge you to avoid treatments within Inventoried Roadless Areas whenever possible.
- The Lazyman Inventoried Roadless Area is a recommended candidate for Wilderness in the pending Forest Plan. As such, all mechanical treatment except for private land buffers should be dropped. Treatment with hand crews would be acceptable.
- The Jericho IRA should be recommended for classification as non-motorized back-country with a wildlife emphasis. Retaining wildland character is essential and therefore minimal mechanical treatment should occur.
- The value of roadless country to wildlife is described in various sections above.

Transportation

- The Tenmile Watershed Collaborative Committee was created by the city of Helena as per Resolution #19605. The Collaborative committee held their first meeting November 20, 2008. The Collaborative, facilitated by Brian Kahn, submitted their consensus recommendations to the city of Helena on June 17, 2009. An important recommendation addresses Temporary Roads and states:
 Temporary roads can only be used in implementing the Finney matrix when an equal distance of existing system and non-system road needs to have been decommissioned in follow up to the Travel Planning process or by other means, in advance of the construction of the temporary road, and a legally binding mechanism is used to assure timely removal.

- The Tenmile Watershed Collaborative Committee recommendations to the City of Helena Commission, summarized the effort, noting: *“The recommendations that follow are an interrelated “package” that the Committee recommends the City support.”*
- The Helena City Commission minutes reveal the following:
 - “Motion: Commissioner Cartwright moved to accept the recommendations from the TWCC as outlined in Exhibit A. Commissioner Shropshire seconded the motion. All voted aye, motion carried.
 - Motion: Commissioner Cartwright moved to submit a letter to the Forest Supervisor of the Helena National Forest and the Northern Region, Regional Forester, encouraging the United States Forest Service to begin an environmental analysis for project development and implementation in the Ten Mile Watershed and to incorporate the recommendations of the TWCC as they proceed with management of the watershed. Commissioner Shropshire seconded the motion. All voted aye, motion carried.
- This citizen effort is not acknowledged in the DEIS. HHAA was a member of that Collaborative Committee and we would like to see in the DEIS the tables showing by drainage:
 - miles of road that would be decommissioned in advance of temporary roads;
 - miles of temporary road with subsequent decommissioning, and schedule to do so

Economics

- Where is the money coming from to pay for such a massive project? The DEIS indicates that between \$6,129.40 and \$14,678 would be lost per acre of treatment.
- Subsidizing the denigration of public lands and their natural resources, from a tax-payer’s point of view, is not logical.
- Where is the economic analysis associated with reducing hunting opportunities South of Helena from Interstate 15 to Deerlodge?
- Where is the economic analysis of the long-term ecological damage associated with this project? See concerns above under Vegetation.

Cumulative Forest Service Actions Impacting the TSH Landscape

- The amount of timber harvest and fuel manipulation involved in this single project would exceed (Alt 2 – 24,308 acres, Alt 3 – 18,112 acres) the cumulative amount of timber harvest (7,015 acres) ever conducted on this area since records have been kept (1960s). Is it any wonder that wildlife hiding cover is suffering?
- Cumulative impacts are “the impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.” 40 C.F.R. § 1508.7. Cumulative impacts can result from “individually minor but collectively significant actions taking place over a period of time.”
- Helena Forest Plan IV/2 states:

- “Within this guidance, projects are developed to most efficiently and effectively accomplish the management goals and objectives. All NEPA requirements will be complied with in all projects. This includes appropriate public participation in the development and the results of the analysis done on the projects.” (emphasis added)
- Failure to address HNF actions, through honest cumulative effects analysis, has led to expanding erosion of wildlife habitat and consequent inability to meet Forest Plan Standards. Now numerous exemptions to those standards are being pushed in order to move ahead with the TSH Project (and concurrently the Telegraph Project). Vegetative cover and road proliferation has systematically depleted the landscape, largely through repeated “Finding of No Significant Impact” (FONSI), RODs, DNAs and other decisions on Forest lands. Cover-loss impacts have accumulated over the 30-year life of the Helena National Forest Plan. A blind eye has been turned to wildlife needs, and in particular those of big game, by the HNF for a long time. This project does not change that approach.
- The Hazard Tree Project allowed treatment (removal of dead and live timber and possible surface improvement) of more than 491 miles of road and created 9,415 acres of disturbance (Hazard Tree EA pg 23) across the HNF – substantially impacting big game summer range hiding cover, fall security, winter thermal cover, and other wildlife requirements. This project further denigrates habitat by exempting the project from several standards.
- Compliance with Forest Plan Standards for summer hiding cover and big game security were exempted from the Hazard Tree project. Now, several wildlife standards are being exempted from this project as well, further compromising wildlife habitats.
- The percentage of the analysis area capable of producing forested cover is not disclosed in the DEIS but should be. The percentage of that area that is not currently providing cover should be displayed.
- In the context of exempting the project from various big game security standards, the DEIS lists but does not fully evaluate the *cumulative* loss of summer hiding cover, thermal cover, and security cover. It is important that the FEIS be based on relevant analytical factors that affect big game, and fully disclose cumulative impacts that have occurred on the ground.
- Historically, the HNF has violated its own Forest Plan Standards. The big game security amendment does not instill confidence that the Forest will not continue to do so. Only non-discretionary Forest Plan Standards and mitigation measures designed to restore wildlife habitats, coupled with scrupulous monitoring and enforcement, will assure the public that wildlife habitats will be conscientiously sustained.

Enforcement

- In the DEIS, the only acknowledgement of travel regulations enforcement states that it will be shared with MFWP, who has no authority or capability to enforce travel management outside of the hunting season. But we do note that we have observed an increased Forest Service law enforcement presence across the Forest recently and this is appreciated.
- Because it is difficult to patrol the entire forest we conclude that all temporary roads should be re-contoured and preempted from use by placing abundant large woody debris on the re-contoured road prism. We request that funds be provided through this project to assure all mitigation and compensation features are implemented.

Monitoring

- Please provide a schedule of when, where, and how monitoring will be done so the public can track the progress and implementation of this project. Funding for monitoring and enforcement should not be dependent on some future appropriation.

Summary

- HHAA supports:
 - maintaining IRAs in their existing, non-treated state;
 - suspending timber suitability classifications within IRA boundaries;
 - treatment of private property boundary buffers of 200 feet within the HLCNF boundary; hand tools allowed when buffer treatment would occur within IRAs;
 - prescribed burning in IRAs if mechanical treatments do not occur;
 - decommissioning of 15 miles of existing road as described in Alts 2 and 3;
 - weed treatments in all units for at least seven years (average viability of weed seeds);
 - removal of all project-associated roads;
 - bringing watersheds into compliance with TMDLs and state water quality standards within 7 years; and
 - maintaining existing big game security and hiding cover (for deer, moose and elk)
- HHAA does not support Exemption of Big Game Standards or Management Area Standards.
 - HHAA has consistently supported Wildlife Standards defined in the 1986 Helena Forest Plan that are based on Best Available Science.
 - HHAA is on record as opposing the Divide Big Game security amendment to standard 4a (Objection filed June 19, 2015).
 - We object to how this standard amendment has been developed without adhering to Best Available Science and then how it is being applied to the TSH project.
 - HHAA opposes the site-specific exemptions required to conduct the TSH project, including:
 - Big Game Security Standard 1 for winter range
 - Big Game Security Standard 3 for winter range

- Big Game Security Standard 1 and 3 for summer range are on the verge of falling out of compliance
 - Big Game Security Standard 4a
 - Big Game Standard 4c
 - Big Game Security Standard 6
 - Management Area H1
 - Management Area H2
 - Management Area L2
 - Management Area T3 – 2 exemptions
 - Management Area W1
 - Management Area W2 (Exemption is likely necessary)
- See “issues of Concern to HHAA” on page 3, and detail throughout this comment.

We appreciate this opportunity to comment on the Tenmile-South Helena Project DEIS, and stress that we passionately value National Forest public lands, and their conscientious management.

Sincerely,



Stan Frasier, President

¹ **Lake Helena Watershed Restoration Plan 2016-2023**, December 2015, Lewis & Clark County Water Quality Protection District, Lake Helena Watershed Group. 131 pp.

² Post Disturbance Logging – what Scientists Say. August 1, 2006. Letter to Congress from 169 scientists.

³ **Hillis, J.M., M.J. Thompson, J.E. Canfield, L.J. Lyon, C.L. Marcum, P.M. Dolan, D.W. Cleery.** 1991. Defining elk security: The Hillis Paradigm. *in* Elk Vulnerability - A Symposium. Montana State Univ., Bozeman, April 10-12, 1991.

³ Canfield, J.E. 1991. Applying radio telemetry data to timber sale effects analysis in the Harvey Eightmile drainages in west-central Montana. Pages 44-54 *in* A.G. Christensen, L.J. Lyon, and T.N. Lonner, comps., Proceedings of Elk Vulnerability – A Symposium, Montana State University, Bozeman. 330 pp.

⁴ **Garrett W. Meigs, John L. Campbell, Harold S. J. Zald, John D. Bailey, David C. Shaw, and Robert E. Kennedy 2015.** Does wildfire likelihood increase following insect outbreaks in conifer forests? *Ecosphere* 6:art118. <http://dx.doi.org/10.1890/ES15-00037.1>

⁵ **Helena Hunters and Anglers Association.** June 19, 2015. Objection to Programmatic Plan Amendment for Big Game Security Forest Plan Standard 4a, Divide Travel Plan, Helena Ranger District, Helena National Forest.

⁶ **Lyon, L. J., T. N. Lonner, J. P. Weigand, C. L. Marcum, W. D. Edge, J. D. Jones, D. W. McCleery, and L. L. Hicks.** 1985. Coordinating elk and timber management: Final report of the Montana cooperative elk-logging study, 1970-1985. Montana Fish, Wildlife, and Parks. Bozeman, MT. 53 pp.

⁷ **Helena Hunters and Anglers Association.** September 24, 2010. Hazardous Tree Project Summary of Roads to be Treated.

⁸ **Helena Hunters and Anglers Association.** April 23, 2010. Objection to Forest-Wide Hazardous Tree Removal and Fuels Reduction Project on the Helena National Forest (Includes Helena Forest Plan Amendment to Forest Plan Standards 3 and 4a)

⁹ **Lake Helena Watershed Restoration Plan 2016-2023**, December 2015, Lewis & Clark County Water Quality Protection District, Lake Helena Watershed Group. 131 pp.

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