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Comments:
Please see the attached comments and appendices from the Greater Yellowstone Coalition on the Custer Gallatin National Forest Draft Forest Plan and DEIS. Thank you for the opportunity to comment, and we hope you find this input helpful!

Thank you for the opportunity to comment and contribute to the Draft Revised Forest Plan and corresponding DEIS for the Custer Gallatin National Forest (CGNF). The Greater Yellowstone Coalition (GYC) is uniquely positioned to provide relevant and existing information about land, water, wildlife and trends across the Greater Yellowstone Ecosystem (GYE) and CGNF landscape.

Background
The Greater Yellowstone Coalition is a regional conservation organization based in Bozeman, MT with offices in Idaho and Wyoming and over 90,000 supporters from across the country. Our mission is to work with people to protect the lands, waters, and wildlife of the GYE, now and for future generations. Our members include residents living in communities across southwest Montana and visitors enjoying the GYE and CGNF from across the nation. GYC works with diverse stakeholders to ensure lands are managed to function in harmony with the natural world. This includes forest planning processes within the GYE that set management direction for the next 15-20 years.

We look forward to working with the Forest Service in the revision process to help inform, craft and update the forest plan. This is a once-in-a-generation opportunity to create a plan that manages the forest long into the future. We recognize the CGNF is responsible for managing many uses in a very diverse landscape. There are numerous pieces and parts to evaluate and make decisions about but we trust the Forest Service will thoughtfully and completely incorporate public comment to create a plan that will manage for a connected landscape and healthy core habitats, protect water resources and

reduce and manage user conflict among local or visiting users of the forest[rsquo]s resources. The GYE is a place where people can experience the unparalleled wonders of one of the world[rsquo]s most vibrant ecosystems. There is no place on Earth like the GYE. The GYE is fire and ice. It is jagged mountain peaks and verdant valleys. It is acres of lush forests bathing mountainsides in vivid greens and stark sagebrush plains stretching to the horizon. It is the hissing and spewing of geysers and the serenity of meadows carpeted in wildflowers. The CGNF is an important and integral part of the GYE. The CGNF is the doorstep for connectivity to other northern Rocky ecosystems to the north and west. This area is key to connecting some of Greater Yellowstone[rsquo]s most iconic wildlife, such as the grizzly bear and wolverine,

with other large protected areas. It is our responsibility to be good stewards of one of the last intact temperate zone ecosystems in the world.

The framework of this GYC comment letter is grounded in our program work and areas of expertise[mdash]

land, water, wildlife, and people. For the purposes of GYC[rsquo]s comment letter, we provide information and resources based on the Forest Service[rsquo]s areas of interest outlined in the 2012 Planning Rule, Current Conditions, and our previous Assessment comment letter. We also consider current policy regarding land, water, and wildlife as well as system drivers and stressors. We are mindful of your time and resources in this process and trust we can help provide information to develop a balanced approach to forest management.

General Observations of Draft Plan

The Forest Service is facing several new challenges in drafting this revised forest plan, including rising recreational demand and climate change, along with the historic challenges that come with diverse stakeholder interests, varied landscapes, and limited resources. Crafting an effective forest plan will certainly require creative solutions and adaptive management. In general, we see great potential in many of the ideas represented in the DEIS, such as the approach to manage for ecosystem resilience while acknowledging and attempting to work with natural landscape-shaping forces.

The central issue with the draft plan as currently written is that many of these ideas are not substantiated with enforceable and actionable plan components. Desired conditions are often general, unmeasurable, and at times even lofty, while standards and objectives provide insufficient means to build progress toward those conditions. Management approaches contribute by providing potential strategies, but they are simply suggestions and therefore inherently unenforceable and unreliable.

We recognize the need for the new forest plan to be adaptable and flexible. However, there is a balance to be struck, and the draft plan errs too far on the side of flexibility without providing the specific management direction needed to reliably and predictably manage forest resources throughout the life of the plan. In particular, the monitoring questions provided in chapter four are extremely limited in scope and will not provide enough information to inform adaptive management strategies. Again, we acknowledge the limited resources provided to the Forest Service and the challenges that come with monitoring. However, improved and expanded monitoring components are absolutely necessary to understand and respond to changing threats on the landscape. The 2012 Planning Rule explicitly calls for adaptive management based on good information, and extensive monitoring must be at the heart of these decisions. Anything short of this will fail to reflect the true status and needs of forest resources.

Another central issue with the draft plan is a lack of connection between human impacts and forest resources. Consideration of human-wildlife conflict is almost entirely absent, as is a proactive approach to understanding and managing the potential impacts of recreation on wildlife, vegetation, connectivity, and more. These issues of human impacts have been the center of public discussion in the communities where we work, yet the draft plan provides little clarity on how the Forest Service will manage them in the coming decades. Many of the benefits provided by the forest, such as healthy wildlife populations and wild spaces, are rare and irreplaceable in the American landscape. Without substantial

improvements to the draft plan and a more proactive management approach, we can only expect these resources to continually dwindle under the mounting pressures that come with a growing population.

In the following comments we address the main issues we see with the draft plan as it applies to the GYE. Each section contains a general observation piece followed by specific recommendations. We ask that the Forest Service meaningfully consider our suggestions, and recognize that our recommendations represent the knowledge of a variety of experts as well as a multitude of our constituents and partners.

Recommendations:

Link desired conditions to enforceable, measurable goals, objectives, and standards.

Improve monitoring questions and indicators to provide a clearer picture of the status of important species and ecological components, progress toward desired conditions, and to inform adaptive management as required by the 2012 planning rule.

Include additional plan components that will meaningfully address human impacts on forest resources and provide clarity on how these impacts will be proactively managed.

Collaboration [ndash] Gallatin Forest Partnership
From the Gallatin Community Collaborative (GCC) to the Gallatin Forest Partnership (GFP), the Greater Yellowstone Coalition has been a long-time participant in collaborative efforts to find agreement around the Gallatin and Madison ranges. The Forest Service is well aware of the conflict around these areas, especially the Hyalite Porcupine Buffalo Horn Wilderness Study Area (HPBH WSA), as well as our commitment to finding solutions. GYC and the other diverse stakeholders within the GFP found agreement around several areas including wildlife, water, recreation, land designations, invasive weeds, outfitting and guiding, and wildland-prescribed fire and timber. We thank the Forest Service for considering aspects of the agreement in Alternative C of the draft plan.

However, while Alternative C contains portions of the GFP agreement, it does not fully and accurately

represent the entirety of the GFP[rsquo]s proposal. Overall, Alternative C included the correct land designation boundaries but fell short in several areas. Most notably, plan components to balance recreation and wildlife conservation are lacking in all designated areas.

The specifics of the GFP[rsquo]s agreement are crucial for it to protect the landscape as intended. The Partnership[rsquo]s public comments on the draft plan and DEIS go into full detail on which points Alternative C accurately represented, and what needs to be corrected. GYC fully endorses these comments.

Recommendations:

Fully incorporate the Gallatin Forest Partnership Agreement into the final Forest Plan by including the

changes detailed in the Partnership[rsquo]s public comments.
Environmental Justice (General Contributions to Society)
The introduction within the DEIS does a great job describing the different aspects of how the forest benefits people. Generally, GYC agrees with this overview. Within the Draft Plan, the Forest Service defines social sustainability, economic sustainability and environmental justice. The Forest Service[rsquo]s job is to strike the balance among all three of these areas with equal consideration among them. However, based on the monitoring section we see that this balance has not quite been struck.

Desired Condition 02 states [ldquo]Sustainable levels of forest provided goods and services (such as, wilderness, fish and wildlife, livestock grazing, recreation opportunities and access, timber, energy resources, infrastructure, etc.) are available and contribute to the social, cultural, and economic sustainability of local communities. The flow of these goods and services align with existing and emerging industries, growing and vulnerable populations, and overall economic conditions of forest communities.[rdquo] This is an aspirational and lofty Desired Condition. Partnerships will be necessary which is addressed in Goal 01 [ldquo]The Forest Service engages with local agencies, partner organizations and the public in ecosystem goods and services related planning, particularly in environmental justice

communities where residents are more vulnerable to shifts in social and economic conditions.[rdquo] Unfortunately, the monitoring section only addresses Desired Condition 02, nothing exists to address or evaluate or understand environmental justice issues. Further, within the environmental justice definition, the tribal communities were identified with special emphasis. Based on the importance of tribal communities and the emphasis on environmental justice, the Forest Service should include specific environmental justice Desired Conditions and Goals that are developed with tribes to ensure true collaboration to do better in the area of environmental justice.

Recommendations:

Forest Service should include specific environmental justice Desired Conditions and Goals that are developed with tribes to ensure true collaboration to do better in the area of environmental justice.

Areas of Tribal Importance
GYC acknowledges and respects tribal communities within and around the Greater Yellowstone Ecosystem in the past, today and into the future. Native Americans are the historic stewards of the lands, including the CGNF, and their cultures are entwined at their core with the forest and surrounding lands. The CGNF, a land management agency, is responsible for many of these sacred places and

resources, the National Forest[rsquo]s role is paramount and directly affects the health of indigenous communities. Historic migration routes, wildlife populations, traditionally-utilized plants and minerals, and sacred sites are just a few examples of resources managed by the Forest Service that affect tribes. This adds a layer of significance to forest management beyond the ecological, economic, and recreational focuses that are often emphasized. We are glad to see many of these specific concerns discussed in the DEIS section on Areas of Tribal Importance, Methodology and Analysis Process, and support the idea that resource management is essential to supporting treaty rights to [ldquo]hunt, fish, graze, and gather on the lands ceded to the United States,[rdquo] as stated on page 539. However, we feel the draft

plan does not include adequate plan components in the Areas of Tribal Importance section to support the desired conditions and goals.

Meaningful consultation is one of the key issues we see with the draft plan in regard to tribal considerations. Improved, continual consultation is essential for a diversity of goals, including but not limited to:

* Work with Tribes to identify culturally significant sites and resources including native plant and wildlife species.
* Effectively manage sites and resources already identified including the setting of closure dates.
* Preventing disturbance of cultural practices and traditions by recreationists.
* Review and update outdated ethnographic information.
* Work with Tribes to meaningful incorporate Traditional Ecological Knowledge (TEK) to help manage the landscape and adapt to the uncertainty of climate change.

While consultation is discussed in the DEIS and mentioned in Management Approaches, no plan components commit the Forest Service to improved consultation efforts. Frequent, early consultation prior to any relevant decision-making is critical for equitable inclusion of Tribal interests, and as such it merits enforceable, binding plan components. We also want to emphasize that these consultation systems be developed in collaboration with the 18 individual tribes listed in the DEIS to ensure government-government protocols address the unique priorities of each. For example, improved notification systems are an important precursor to meaningful consultation, and adequate methods can only be identified in collaboration with individual Tribal entities. Consultation with Tribal Colleges represents one possible avenue for improved outreach. Forest Service staff

involved in this process should also receive training with information on existing relationships and concerns of individual Tribes. We feel that this approach will yield the most effective management of resources as well as the most respect and acknowledgement for the Greater Yellowstone Ecosystem[rsquo]s historic custodians.

In addition, although Tribal treaties are government to government responsibilities rather than US federal laws, we feel that listing them separately from the regulatory framework could lead to confusion about their enforcement compared with that of other regulations. Treaty enforcement is especially critical given historic instances where off-reservation treaty rights have been ignored or infringed upon by US economic and cultural interests. We therefore ask that the Forest Service include relevant treaties within the regulatory framework, either by listing them there or by adding an entry that references a table elsewhere in the document or appendix. We would also like to see clarifying language in the DEIS explaining how treaties fit into the overall regulatory landscape.

Recommendations:

Include a new monitoring plan component that directly addresses environmental justice issues with tribal communities in a meaningful way.

Include an objective calling for collaboration with individual tribes to develop improved notification and consultation systems that address the priorities of each. Include a timeline and collaborate on the matters listed above, as well as others identified through conversations with tribal entities including Tribal Colleges.

Include a monitoring question for occurrences of consultations with tribes.

Include plan components calling for public education materials crafted from an indigenous lens. Education materials should work to address the disturbance of cultural practices and use of culturally significant sites by recreational users in the National Forest.

Specify what is meant in FW-STD-TRIBAL-01 by [ldquo]subject to valid existing or statutory rights and other ongoing or permitted activities[rdquo]. The existing language is vague and highly permissive, effectively rendering this standard pointless.

Include a list of relevant treaties in the Regulatory Framework for Areas of Tribal Importance or include a reference there to a treaty list elsewhere in the document.

Clarify in the DEIS how treaties fit into the overall regulatory landscape.

Recreation
GYC acknowledges that, while Congress presses the Forest Service to focus management on timber production and fuel control, recreation is perhaps the greatest driving factor for the Custer Gallatin. The Forest Service is well aware of rising recreational demand on National Forest lands. Over time, this increase in human presence on the landscape can lead to increased spread/introduction of invasive species (DEIS Effects from Recreation management p. 304), increased disturbance of wildlife (DEIS Key Stressors p. 415 (sage grouse), p. 432 (bighorn sheep), p. 448 (big game), p. 461 (bison), p. 486 (connectivity), Larson et al. (2016)), destruction of native vegetation (DEIS Effects from Recreation Management p. 238 (terrestrial veg), p. 133 (at risk plants)), and other harm to forest resources (see appendix H for a full GYC review of recreation impacts). But while Desired Condition FW-DC-REC-03 calls for recreational opportunities that are [ldquo]adaptable to changing trends... and increasing demands,[rdquo] the draft plan does not elaborate on what this will look like or how it would be accomplished. Meeting this desired condition will require 1) monitoring recreational use; 2) understanding how trends and demand are changing over time; and 3) ongoing monitoring and management to

ensure that recreation does not degrade land, water, or wildlife resources that make recreation attractive in the first place. Sustainable Recreation Management Approaches further substantiates these needs by calling for [ldquo]Management strategies to mitigate recreation use and resource conflicts[rdquo] (Draft Plan Appendices, p. 43) as well as [ldquo]determinations about how increasing human populations and associated levels and types of use are affecting the national forest[rdquo] (Draft Plan Appendices, p. 44). These approaches, while important, are vague and unenforceable. The Forest Plan itself must include adequate plan components to ensure that recreational impacts on resources are understood and managed.

This question of recreation impacts, especially on wildlife movement, has been at the center of public debate in the Bozeman community, as well as other surrounding areas. However, the Forest Service does not address the impacts of recreation on wildlife, except in MON-WL-03, which only assesses the number of conflicts resulting from food attractants. The lack of acknowledgement regarding recreational use and increasing pressure within the Draft Forest Plan and monitoring section is a significant issue in the National Forest. If trends are to continue, this will be the challenge for the CGNF to address and is only going to become more so over time. Further, GYC is including comments on winter recreation impacts in wolverine habitat, big game winter range closures, as well as user impacts to waters and

potential spread of invasive species. We ask the Forest Service to add language around mitigating recreation impacts and add an additional desired condition to this effect.

Managing recreation impacts will require more monitoring than is currently proposed. While we acknowledge the challenges and significant resource demand that come with monitoring, we support the Forest Service and urge them to explore partnerships, collaboration, and other strategies to adequately monitor, understand, and manage recreation. These efforts are only going to become more important as recreational demand increase, and this collaborative approach should be represented by additional Goals in General Recreation.

Managing recreation as demand changes will also require identifying and managing emerging recreation technologies. While the draft plan section on Emerging Recreational Technologies (RECTECH) acknowledges the likelihood of new recreation technology and the need to incorporate these technologies into the recreational spectrum, it does not provide guidance on how to do this. The draft plan must include standards that require timely assessment of any new technology and its compatibility with the Recreational Opportunity Spectrum. It must also explain how these technologies will be identified. Regarding electronically powered technologies like e-bikes and drones, these forms of recreation should be explicitly categorized as motorized uses in both the RECTECH and ROS sections.

Recommendations:

Include an additional monitoring question to track amounts and types of recreation by area as well as levels of nonconforming use incursions to understand recreational demand beyond the forest-wide National Visitor Use Monitoring (NVUM).

Include an additional Desired Condition that the Forest Service understands recreational demand across the landscape and tracks its changes over time.

Include additional monitoring questions to assess how recreation and rising demand are affecting wildlife, land, water, and other natural resources by tracking which recreational uses are creating conflicts, whether these conflicts are fragmenting habitat, and what types of conflicts are occurring. This connects to FW-DC-REC-03 and 05.

Include a Desired Condition that rising recreation levels and demand are managed to avoid impacting wildlife, natural resources, or visitor experience (see appendix H for GYC[rsquo]s literature review on recreation impacts).

Include guidelines or goals for [ldquo]leave no trace[rdquo] and bear safety education for organizational camps.

Develop guidelines around mitigating human/wildlife conflict or human impacts on sensitive wildlife habitats for any new recreational opportunities.

Include a goal or objective for education around minimal impact practices for dispersed recreation and safety in bear country.

Include a goal for collaboration and partnerships with various federal, state, and private entities to monitor and understand recreation demand so that it is managed effectively.

Include a standard in Emerging Recreational Technologies (RECTECH) that new recreation technology is evaluated for its compatibility with the setting defined in the Recreation Opportunity Spectrum.

Include a goal in Emerging Recreational Technologies (RECTECH) to collaborate with community interests to identify emerging technologies so that they can be evaluated.

Explicitly categorize drones and e-bikes as motorized recreation in both the RECTECH and ROS sections.

Include a Goal to collaborate with user groups to identify non-system trails suitable for system inclusion during travel planning, and non-system trails to be restored/removed.

Expand FW STD ROSP 1 to prevent the construction of new temporary or permanent motorized or mechanized routes in primitive settings. This connects to FW-SUIT-ROSP-01.

Expand FW-SUIT-ROSP-03 to prevent mechanized trails and travel in winter primitive settings. This connects to FW-SUIT-ROSP-01.

Remove the suggestion in Opportunities [ndash] Recreational Special Uses Management Approaches to create an open season to resolve capacity to facilitate permits.

Recreation Emphasis Areas

The Recreation Specialist report (Oswald, 2017) discusses increased visitation on the Forest and indicates existing and anticipated changes in activity participation on public lands in Montana. The Custer Gallatin experiences high visitation, the vast majority of which is in the Montane Ecosystem and a large percentage within some type of designated area. A wide range of available opportunities, settings, and development levels are both desired and used by the recreating public. National Recreation, Historic and Scenic Trails, and the Beartooth Scenic Byway are a few examples of areas in addition to wilderness that highlight the unique role of recreation on the Forest. Emphasizing these areas and others for the purpose of sustainable recreation is critical toward long-term persistence of forest resources and high- quality recreation opportunities, especially in the face of rising recreational demand.

Within the Draft Revised Forest Plan, twelve Recreation Emphasis Areas are listed in Table 30 on page

133. In addition to the areas called for in Alternative C, there are several other areas GYC suggests including, which are listed below.

* The West Fork of Rock Creek on the Eastern side of the Absaroka Beartooth Geographic Area, as called for in Alternative E. This area sees intense recreational demand from Billings and Red Lodge.
* Mill Creek on the Western side of the Absaroka Beartooth Geographic Area, up to the designated wilderness boundary. This area sees year-round recreational demand from Livingston, Bozeman and Gardiner and is likely to see an increase in visitor use as the recreational demand continues to grow.

Regarding regulations within Recreational Emphasis Areas, there are several points that should be added both for the health of resources and the experience of users. First, the Forest Service did not include any language

around defining standards or thresholds for recreational use beyond which management action would be taken to ensure resources aren[rsquo]t degraded or compromised in recreation

emphasis areas. GYC considers this an important point based on the information described in the Recreation and Designation Specialist reports for the Assessment. In both reports, the specialists clearly state that use is only going to increase. Second, the Recreational Emphasis Areas should disallow the extraction of saleable minerals, as called for in Alternative C for Hyalite Recreational Emphasis Area.

Recommendations:

Designate West Fork of Rock Creek Red Lodge Mountain Recreational Emphasis Area, as called for in Alternative E.

Designate Mill Creek (Main Fork, East Fork & West Fork) as a Recreational Emphasis Area up to the existing boundary with designated wilderness.

Include plan components that define standards or thresholds for recreational use beyond which management action for mitigating resource degradation or adverse impacts on wildlife would be taken in these areas.

Disallow the extraction of saleable minerals in Recreational Emphasis Areas, as called for in Alternative C for Hyalite Recreational Emphasis Area.

Use the Recreation Emphasis areas to monitor, collect data and make informed decisions about recreation use, intensity of use, conflicts and effectiveness of education.

Vegetation / Ecosystem Integrity
GYC takes an ecosystem/landscape level approach to protect terrestrial and riparian habitat, climate refugia and corridors, and iconic species. Because this is a new approach for federal land managers and GYC has been thinking about this for many years, we have suggestions for the Forest Service to consider.

The specificity of ecosystem components listed in the monitoring table (MON-VEGF-01) is encouraging, and we would like to see pollinators added to this list, given their global decline as mentioned in the DEIS, page 167. We are also pleased to see an emphasis in the DEIS on ecosystem integrity and resilience. One method the Forest Service proposes to create and maintain ecosystem integrity and

resilience is [ldquo]managing for landscape patterns that would be resilient to uncharacteristically large disturbance events[rdquo] (DEIS p. 234). This would involve using vegetation management and natural processes to restore a patchwork landscape with a diversity of tree species and age classes contributing to habitat heterogeneity and, ultimately, resiliency. GYC supports this habitat-based approach. However, we have concerns about the Forest Service[rsquo]s emphasize on Silvicultural treatments in mature lodgepole pine stands, as explained on DEIS pages 233 and 234. By excluding lodgepoles from old growth retention standards (FVEG-GDL-01) and increasing clear-cut size limits, there may be unanticipated consequences for other forest resources. The Forest Service should therefore conduct a rigorous analysis on this tactic and its potential to impact wildlife habitat/connectivity, sensitive plant species, pollinators, and other organisms and ecological processes.

The Forest Service notes that challenges have increased in recent decades as a result of factors such as increased public use, climate warming, invasive species, insects, disease, and past management decisions related to fire suppression, grazing, and other land uses. We appreciate this acknowledgement of the shifting management landscape and support the Forest Service in their efforts to rise to these new threats. The

challenges posed by climate change are particularly daunting due to the inherent uncertainty. Climate change has the potential to exacerbate the spread of invasive species, magnify the negative impacts of native pests like pine bark beetles, increase fire severity, etc. (Climate Change Consideration and Assumptions p. 147 of DEIS and p. 41 Guidelines (FW-GDL-VEGF) 01 Draft Plan).

The Forest Service draws from Miller et al. (2007) to answer this threat, stating that their approach must

be [ldquo]flexible, emphasize ecological processes; and have the capacity to change, and to adapt, to new information as it becomes available (Millar et al. 2007)[rdquo] (DEIS p. 151). Hansen et al. (2018) further

emphasizes this strategy, and emphasizes that [ldquo]Well-designed monitoring of climate, vegetation, and

ecological conditions[rdquo] (DEIS p. 152). This underscores the need for effective monitoring and adaptive management to respond to climate change, as required by the 2012 Planning Rule (219.12(a)(5)(vi)). We understand and acknowledge the substantial resources required to implement effective large-scale monitoring efforts. However, we also believe that innovative monitoring is paramount to effective, long- term forest management, particularly given the uncertainties of climate change. The DEIS states that the Draft Revised Forest Plan [ldquo]incorporates strategies to address the uncertainties associated with climate change and its potential impacts to vegetation[rdquo] (p. 150), but we do not see this substantiated by specific, enforceable plan components.

This effort is especially critical given the likelihood of climate change altering landscape-shaping forces like fire and pests. Management Approaches for Terrestrial Vegetation emphasizes the potential of natural fire, insects, and disease to do the work of direct management (Draft Plan Appendix A p. 9), demonstrating their potential to impact vegetation. We see the benefits of this approach and acknowledge the inevitable impact of these forces, but we also understand their destructive potential. Desired Conditions FW-DC-VEGF-06 and 09 assert the importance of natural ranges for these forces, underscoring the risks should these ranges be exceeded. Because climate change has the potential to do exactly that, an additional monitoring question is essential to understand the true effects of shifting fire, insect, disease, and water regimes, and to ultimately avoid harming human and forest resources.

We therefore encourage the Forest Service to commit to collaboration, monitoring, and experimentation to address the uncertainties associated with climate change and its potential impacts to vegetation and ecosystem integrity. While natural range of variation can be a useful management guide, the uncertainty of climate change necessitates large-scale monitoring of diverse environmental metrics to ensure that historic and desired ranges are indeed effective in supporting ecosystem integrity. If the Forest Service cannot address these types of research questions, we encourage them to partner with researchers and institutions that can play this role. Rather than simply creating [ldquo]more work[rdquo], we ask that these collaborative efforts be planned in partnership with the participating agencies in order to accurately identify the most effective role for Forest Service employees to play. This kind of rigorous monitoring, experimentation, research, and collaboration is strongly supported by findings within the DEIS (first bullet p. 153) as well as the conclusions of Hansen et al. (2018). Simply monitoring tree regeneration (DEIS p 152) is inadequate for understanding and adapting to this complex, multifaceted challenge.

Objectives for Forested Vegetation and At-Risk Plant Species also include management projects to benefit the given resource and various other ecosystem components. GYC is entirely supportive of these ecosystem resistance objectives as they are called for in Alternative D, and we would like to see how the Forest Service will prioritize projects. We also see potential for these management projects to inform adaptive management efforts. For this reason, we propose that all management projects for Forested Vegetation and At-Risk Plant Species are followed by monitoring to determine their effectiveness toward achieving their stated goals. The Outcome Objectives for Invasive Species monitoring question MON-INV-02 provide example language that we would like to see replicated in these other sections. We would also like to see a protocol detailing how the results of this monitoring will inform following projects and other forest management decisions through adaptive management.

Carbon sequestration was highlighted as an important ecosystem service provided by the forest. The

balance and importance of the forest[rsquo]s ability to act as a sink and store carbon is a key service for the communities beyond the forest boundaries. Because forest carbon loss contributes to increasing climate risk

and climate change may impede regeneration following disturbance, avoiding deforestation, and promoting regeneration after disturbance should receive high priority (McKinley et al. 2011). Depending on how timber is managed, it could contribute to the long-term capacity of forests to sequester carbon. For example, the DEIS points out that thinning in young forests is a beneficial treatment to achieve forest conditions that improve resistance and resilience and to achieve climate change mitigation though carbon sequestration. There are other management strategies discussed in the DEIS that look at short-term and long-term impacts. However, the CGNF doesn[rsquo]t include plan direction beyond one desired condition and no monitoring to determine if the strategies mentioned in the DEIS will be used as a mitigation measure for climate change and carbon sequestration. GYC would like to see management direction in the Draft Forest Plan beyond one desired condition and monitoring question(s) included within the vegetation section or soils. An example of a monitoring question based on the DEIS could be: Are short-term loss of carbon stores with prescribed burning or other fuel treatments providing long- term benefits in the event of a future wildfire, with lower fire severity in the treated stands? This will not be a heavy lift because the DEIS on page 281 outlines specific management strategies that would contribute to carbon sequestration (Harmon and Marks 2002, Kobziar et al. 2006, Krankina and Harmon 2006, Millar et al. 2007):

* managing forests to favor rapid growth
* increasing abundance and distribution of large diameter trees of fire-resistant species
* lowering forest densities and forest fuel conditions
* rapid reforestation after disturbances
* maintaining healthy, vigorous trees

[bull]keeping sites fully occupied with trees

[bull]sequestering carbon after harvest in wood products

[bull]providing wood and biomass for fuel

These strategies seem to be absent from the vegetation, soil and carbon sequestration sections. There also needs to be monitoring attached to these management directions once they are incorporated into the Forest Plan. The theme of managing to maintain and increase forest resilience and resistance is

great and the planning components and monitoring need to lead to an adaptative management strategy that gets the Forest Service to that goal. On page 281 in the DEIS the CGNF states [ldquo]The desired conditions are designed to sustain and create forests with the composition and structure that are able to accommodate gradual changes related to climate and with the capacity to return toward a prior

condition after disturbances.[rdquo] Again, this sounds great but GYC would like to see plan components that specifically acknowledge carbon sequestration as part of the equation when monitoring soil and vegetation.

Recommendations:

Include a Goal that federal, state, and private agencies in the Greater Yellowstone Ecosystem coordinate monitoring efforts to better understand climate, vegetation, and ecological conditions in the context of environmental change. This is supported by the findings of Hansen et al. (2018) (second bullet, p. 152).

Include the Greater Yellowstone Coordinating Committee[rsquo]s subcommittee on climate change.

Include a Goal to partner with researchers and research institutions to address the uncertainties of climate change and to verify which desired conditions will actually lead to ecosystem resilience in a climate change scenario.

Include an Objective calling for monitoring and experimentation to address the uncertainties associated with climate change and its potential impacts to vegetation and ecosystem integrity. Pair this with an additional monitoring question to assess how climate change is affecting vegetation and ecosystem integrity through factors like fire, insects, disease, precipitation, temperature and more. This relates to the findings of Hansen et al. 2018.

Include a plan component that the results of climate change monitoring inform adaptive management of forest resources.

Identify carbon sequestration areas to use as mitigation measures for GHG emissions.

Conduct a programmatic review to assess the agencies efforts to adopt broad-scale sustainable practices for energy efficiency, GHG emissions avoidance and emissions reduction measures, petroleum product use reduction, and renewable energy use, as well as other sustainability practices.

Complete management projects for forested vegetation and at-risk plant species at the rates and amounts called for in Alternative D. Relates to FW-OBJ-VEGF-01, FW-OBJ-VEGF-02, and FW-OBJ-PRISK- 01.

Monitor outcome indicators for forested vegetation management projects to assess their benefits to wildlife, whitebark pine and other at-risk species habitat, pollinator habitat, non-commercial vegetation, and general terrestrial ecosystem conditions. Relates to FW-OBJ-VEGF-01 and 02.

Monitor outcome indicators for at-risk plant species conservation projects to assess their benefits to species[rsquo] habitat and/or populations. Relates to FW-OBJ-PRISK-01.

Provide the methodology used to prioritize management projects on the landscape.

Assess how pollinators are contributing to ecological integrity by including an additional outcome indicator within MON-VEGF-01 for pollinator species/assemblages associated with forested vegetation.

Connect monitoring MON-VEGF-01 so that the vegetation conditions are tied to the habitat needs for connectivity and wildlife movement.

Include an additional standard requiring surveys for populations of or suitable habitat for at-risk plant species prior to any ground disturbing activities.

Include an additional monitoring question to track status and long-term viability of known populations of at-risk plants. Prioritize monitoring for populations most threatened by invasive encroachment, habitat loss, proximity to high-use areas/trails, etc.

Add additional language to FW-OBJ-PRISK-01 explicitly necessitating the use of the mitigation or protection measures provided to maintain the populations or sustain habitats of at-risk plants when potentially impacted by management activities.

Include an additional desired condition and supporting plan components and/or monitoring questions to keep native pests and diseases as well as their ecological impacts within historic ranges.

In order to adequately protect old-growth forest, replace FW-GDL-VEGF-01 and GW-GDL-VEGF-02 with the standard used in the Flathead National Forest Plan:

[ldquo]In old-growth forest, vegetation management activities must not modify the characteristics of the stand to the extent that stand density (basal area) and trees per acre above a specific size and age class are reduced to below the minimum criteria in Green et al. Vegetation management within old-growth forest (see glossary) shall be limited to actions that:

* Maintain or promote old-growth forest characteristics and ecosystem processes
* Increase resistance and resilience of old-growth forest to disturbances or stressors that may have negative impacts on old-growth characteristics (such as severe drought, high- severity fire, epidemic bark beetle infestations);
* Reduce fuel hazards in the wildland-urban interface; or
* Address human safety.[rdquo]

Prioritize invasive species monitoring and mitigation actions for areas affected by burns and other ground-disturbing activities via an additional goal, standard, or guideline.

Develop additional plan components specific to each Potential Vegetation Type for both forested and non-forested vegetation that support their Desired Conditions. Relates to FW-DC-VEGF-03 through 10 and tables 6 through 13 (forested) as well as FW-DC-VEGNF-04 and table 14.

Conduct a rigorous analysis of possible impacts from excluding lodgepole pine from old growth retention standards and increasing clear cut sizes. Assess unintended consequences for ecosystems, wildlife, vegetation, invasive species encroachment, at-risk plant species, recreation quality, and more with consideration of compounding impacts from climate change.

Include the following mitigation measures to reduce greenhouse gases: maintain healthy, vigorous trees; manipulate vegetation to favor rapid growth; keep sites fully occupied with trees with minimal spatial or temporal gaps in non-forest conditions; promote reforestation; minimize severe disturbance by fire, insects and disease; and sequester carbon after harvest in wood products (Harmon and Marks 2002, Kobziar et al. 2006, Krankina and Harmon 2006).

Through monitoring efforts implement adaptive management practices for carbon sequestration.

Connect the Carbon Sequestration Desired Condition to vegetation, soil and riparian area in monitoring outcome indicators in MON-VEGF-01, MON-SOIL-01 outcome indictors within the Detrimental Soil Disturbance and MON-WTR-01 outcome indicators under Stream and habitat conditions.

Provide a map identifying carbon stores, baseline carbon pool estimates and carbon sequestration area/opportunities based on management actions and natural disturbances.

Management of Current Wilderness Areas

The Custer Gallatin National Forest[rsquo]s two existing Wilderness areas[mdash]the Lee Metcalf and Absaroka Beartooth Wilderness[mdash]provide important core habitat for Greater Yellowstone[rsquo]s wildlife as well as high quality wilderness experiences for backcountry enthusiasts seeking remote adventure and solitude. But while the Draft Plan mentions five general qualities (natural, solitude, undeveloped, untrampled,

primitive recreation) to guide wilderness stewardship, it does not mention the [ldquo]2020 Vision[rdquo] (2020

Vision: Interagency Stewardship Priorities for America[rsquo]s National Wilderness Preservation System. 2014) or existing wilderness management plans to guide these efforts and achieve stated Desired Conditions. GYC acknowledges that the existing wilderness management plans are old (developed in the mid-1980s) and wilderness management direction has been embedded in several different Custer Gallatin level plans (eg: Gallatin Travel Plan, Fire Plan and Weeds). However, while we recognize the need for the new Forest Plan to be adaptive and flexible for the future, the management of existing wilderness requires more specific and prescriptive management in order to ensure the long-term persistence of these special and irreplaceable resources.

The 2020 Vision has this level of specificity, and plan components should link to it explicitly in a clear, measurable way. Overarching wilderness management plans are also still necessary to provide the clear, measurable standards needed to track changes in wilderness character, and the Draft Plan should commit the Forest Service to revising them within the next two years. Regarding the various wilderness zones, the Draft Plan should include Objectives, Standards, and/or Guidelines specific to each zone to support stated Desired Conditions. In particular, Zone 1 (Pristine) should have an additional plan component that disallows any system trails as well as language that restricts management actions that may impact its untrampled nature.

As we consider impacts to existing wilderness, it is clear that these areas face mounting threats from increasing recreational demand. The DEIS lists examples of these effects, including crowding in high use areas, soil compaction or erosion, and threats to native plant species from the spread of noxious weeds from sources outside the wilderness (p. 735). However, the DEIS also states that "the effects of urbanization and population growth on wilderness use and resource conditions are likely to be gradual[rdquo] (p. 736), yet table 148 shows

a doubling in wilderness visitation over five years. This is conflicting information. The Forest Service needs to provide clarity as to how they will manage changing recreational conditions in wilderness areas.

Recommendations:

Use the 2020 Vision to build measurable and achievable Objectives and Goals for management in wilderness. Specifically, [ldquo]conduct climate vulnerability and adaptation assessments across the National Wilderness Preservation System to improve ecological resiliency across broad landscapes (2020 Vision, Introduction).[rdquo]

Include an additional Goal or Objective with a timeline for revising overarching wilderness management plans.

Provide additional language that emphasizes the need to manage increased recreational demand and elaborate on how this will be accomplished.

Incorporate Objectives, Standards, and/or Guidelines to support the Desired Conditions for each zone and opportunity class in each wilderness. This will help the public understand what to expect in terms of management for these valued wilderness areas.

Include an additional plan component that states that there shall be no system trails within wilderness Zone 1.

Provide additional language to ensure that any management actions within Zone 1 preserves the wild, untrampled nature of the area, and that indirect management methods predominate.

Recommended Wilderness Areas

GYC asks that you do not allow non-conforming uses such as motorized and mechanized activities in Recommended Wilderness Areas (RWA), as called for in Alternative C. Recommended Wilderness Areas (RWA) and Wilderness Study Areas (WSA) are intended to manage the existing and recommended wilderness resource to maintain its wilderness character and to provide for its use and protection. In the past, the Forest Service has allowed activities in RWAs and WSAs that are not allowed in Wilderness areas. It is understood that the Forest Service has management discretion by allowing motorized and mechanized uses in these areas but allowing these uses sets up a situation that may not actually maintain the character and therefore those areas won[rsquo]t be included in the National Wilderness Preservation System. If an area is designated by Congress into the National Wilderness Preservation System that had continued use by the mountain biking and motorized communities, a significant conflict is inevitable. This is avoidable by managing the WSA and RWA to maintain wilderness character and to not allow activities in these areas that are not allowed in Wilderness areas. The Forest Service in Region 1 addressed this challenge by providing guidance which states the following points (See Appendix A).

1. Eliminate those uses that threaten the capability and availability either through a standard in the forest plan or a subsequent record of decision.
2. Adjust the management area boundary to eliminate the area with established uses.
3. Not recommend the area for wilderness designation.

This guidance was developed to help resolve the ongoing problem of inconsistent management of RWAs, the lack of understanding of wilderness characteristics and the eventual loss of opportunity to consider areas for wilderness recommendation.

Recommendations:

Review and follow the guidance produced for Region 1.

Do not allow non-conforming uses such as motorized and mechanized activities in Recommended Wilderness Areas, as called for in Alternative C.

Include a standard mirroring FW-STD-BCA-07 that says that new access to and development of minerals shall minimize impacts to recommended wilderness areas.

Bridger/Bangtail and Crazy Mountains Geographic Area:

GYC supports Recommended Wilderness in the Crazy Mountains with boundaries matching those of the proposed backcountry area in Alternative C. Recommended Wilderness is the best solution to protect the range[rsquo]s cultural values as well as its ecological integrity. We are aware of the challenges posed by the checkerboard of public and private land in that range, but if it is possible to manage isolated sections of backcountry, the same is true for recommended wilderness seeing as it requires even less management action than other designations.

The Crazies hold immeasurable cultural and traditional value for the Crow (Apsaalooke) people, who have and continue to recognize the range as one of the most important, sacred places in their homeland. Yet promises made by the US Forest Service to Apsaalooke Tribal members to amend the 1987 forest plan to recognize the cultural, historic, and spiritual qualities of the Crazies remain unfulfilled. We stand with the Apsaalooke people in asking that the Crazies be managed to not allow expanded mechanized or motorized travel, mining, building of any new roads, construction of any new energy or utility corridors, or development of any new recreation sites or facilities.

The Crazies are also the highest, largest, and wildest of Montana[rsquo]s island ranges. They are vital for headwater streams, plants, native fish, and wildlife. They supply water for a number of creeks and the Shields River, which support native cutthroat trout. Outstanding habitat also exists here for wildlife species including grizzly bears, wolves, elk, bighorn sheep, and wolverine.

As communities like Livingston and Bozeman continue to grow, it is more important than ever to permanently protect the unique and irreplaceable cultural and biological values of the Crazy Mountains. Recommended wilderness is the only surefire way to do this as well as to accomplish the goals of the Apsaalooke Nation.

Recommendations:

Include Recommended Wilderness in the Crazy Mountains with boundaries matching those for the backcountry area proposed in Alternative C.

Madison, Henry[rsquo]s Lake, and Gallatin Mountains Geographic Area:

GYC fully supports the Gallatin Forest Partnership proposal for all the Recommended Wilderness Areas. Please see comments on Collaboration for more information.

GYC also supports recommended wilderness boundaries for Lionshead as suggested in the Proposed Action, as it strikes the appropriate balance between varied recreational access and resource conservation without incorporating cherry stems.

Recommendations:

Fully consider the Gallatin Forest Partnership recommendations for Recommended Wilderness Areas. Refer to comments in the section on Collaboration [ndash] Gallatin Forest Partnership.

Include Lionshead Recommended Wilderness Area as called for in the Proposed Action.

Absaroka Beartooth Mountains Geographic Area:

In addition to the recommended wilderness areas in Alternative C, the Greater Yellowstone Coalition advocates for recommend wilderness for the Chico Peak, Emigrant Peak and Dome Mountain roadless backcountry on the west side of the Absaroka mountain range. We support the mapping and recommendations made by Outdoor Alliance Montana for this region of the Custer Gallatin National Forest (Appendix I). The Outdoor Alliance Montana recommended wilderness for Chico Peak, Emigrant Peak and Dome Mountain is a modification of Alternative D in the Custer Gallatin National Forest Draft Environmental Impact Statement. Our recommendation includes the three inventoried roadless areas (Chico, Emigrant and Dome) as marked on the map for Alternative D in the Custer Gallatin National Forest Draft Environmental Impact Statement (DEIS Appendix A pg. 44) as well as surrounding roadless lands that were not included in the RARE II mapping. A corridor for the existing two-track road and for a future connecting trail between Emigrant Gulch and Arrastra Creek is intentionally left out of the OAMT recommended Wilderness for Chico Peak and Emigrant to account for future mechanized recreation opportunities.

Emigrant Peak and Chico Peak offer world-class backcountry skiing opportunities that are only a 30- minute drive from Livingston. While significantly quieter than backcountry skiing locations like Hyalite Canyon, Beehive Basin and the northern Bridger Range, the Emigrant Gulch area has grown in recreation popularity in the past decade. Part of the growth in backcountry skiing interest here was due to the threat of a gold mine from Lucky Minerals and the desire for skiers to protect the landscape by bringing local, regional and national attention to its outstanding scenery, wildness, and alpine skiing terrain.

According to Thomas Turiano[rsquo]s Select Peaks of the Greater Yellowstone, the first ski descent of Emigrant dates back to the 1950[rsquo]s with Dave Wessel skiing off the north summit (Peak 10,567). Legendary skiers Tom Jungst and Jim Conway skied off the true summit in 1983. Now, on a weekend with stable snowpack in February, March or April it is possible to find six or more parties enjoying different aspects of Emigrant Peak. Nevertheless, due to its massif-geology with three distinct bowls and roughly a dozen couloirs both short and long, solitude and wildness is easy to come by. Chico Peak continues to be

Emigrant[rsquo]s quieter neighbor in terms of recreation traffic but yields the same high-quality ski terrain with open bowls, faces and couloirs. Both areas are used by our supporters and staff.

Members of the Montana Backcountry Alliance and Southwest Montana Mountain Bike Association (both Outdoor Alliance Montana members) worked together in 2018 to reach agreement on recommended wilderness management for the aforementioned three roadless areas (Chico, Emigrant and Dome). Both groups agreed that there is no current mechanized trail use in the area and all motorized use is restrained to the road systems in the center of Emigrant Gulch and Arrastra Creek. This agreement came out of vetting the discussion with avid mountain bikers and backcountry hunters in the Livingston and Paradise Valley community [ndash] none of which ride mountain bikes within the roadless areas or along trails accessing existing wilderness boundaries such as Six Mile Creek. Both groups also agreed that the exceptional wildlife values in Chico Peak, Emigrant Peak and Dome Mountain roadless areas associated with wolverine, elk and grizzly bear appropriately elevate the three landscapes to recommended wilderness. All three species have been observed with regularity across these roadless areas; and Dome Mountain is recognized across the region for its important winter range for elk. For these reasons, the Greater Yellowstone Coalition advocates for recommended wilderness in Chico Peak, Emigrant Peak and Dome Mountain as a modified and slightly expanded version of Alternative D in the Custer Gallatin National Forest Draft Environmental Impact Statement.

On the Northeastern edge of the geographic area, GYC recommends the East Rosebud to Stillwater Recommended Wilderness Area, as called for in Alternative D. This area provides critical wildlife habitat and is directly upstream from the West Rosebud River, as well as Montana[rsquo]s newest Wild and Scenic River, the East Rosebud. A Recommended Wilderness Area designation would protect this valuable habitat and benefit the river below it. It would also help ensure adequate buffering from the Stillwater mining Complex.

Recommendations:

Include the Chico Peak, Emigrant Peak, and Dome Mountain Recommended Wilderness Areas as defined and called for by Outdoor Alliance Montana.

Include the East Rosebud to Stillwater Recommended Wilderness Area as called for in Alternative D.

Pryor Mountains Geographic Area:

In addition to the Lost Water Canyon Recommended Wilderness Area, GYC recommends the creation of Big Pryor, Bear Canyon, and Punch Bowl Recommended Wilderness Areas as called for in alternative D. There are over 100 miles of motorized routes in the Pryors providing ample motorized access. These new Recommended Wilderness Areas would allow for quiet, primitive recreation opportunities and the development of a few non-motorized, non-mechanical hiking trails to allowing access to the wild sections of the range and to escape the noise of the motorized corridors. Stated Desired Conditions of natural processes playing their role, modern human use leaving little permanent or long-lasting evidence, and a predominance of quiet non-motorized recreation opportunities are best provided by a Recommended Wilderness Designation. A Recommended Wilderness Designation is further supported by the area[rsquo]s outstanding and unique ecological, geological, and biological values.

Recommendations:

Include the Lost Water Canyon, Big Pryor, Bear Canyon, and Punch Bowl Recommended Wilderness Areas as called for in alternative D.

Wild & Scenic Rivers
Based on our review of the Custer Gallatin National Forest[rsquo]s Draft Environmental Impact Statement for Forest Planning and based on the proposed action, the Greater Yellowstone Coalition has supplemental comments on Wild and Scenic Rivers eligibility that should serve as additional input to our Greater Yellowstone Coalition Report on Recommended Wild and Scenic Rivers on the Custer Gallatin National Forest (2017) (see Appendix B) and the addendum comments proposed for the Proposed Action (2018). Please see the former document for a more thorough analysis on recommendations for eligible Wild & Scenic Rivers on behalf of the Greater Yellowstone Coalition.

Similar to what we noted before in our addendum comments, the three topics that we still wish to bring to the Forest Service[rsquo]s attention that have been unresolved by Forest Service staff include: the need to place more emphasis on wildlife-specific Outstandingly Remarkable Values across the Forest; the need to recognize climate refugia as an Outstandingly Remarkable Value on the Forest; and, the justification

for including the Taylor Fork of the Gallatin River, South Fork of the Madison River, and Hellroaring Creek of the upper Yellowstone River as eligible Wild and Scenic Rivers.

Wildlife as an ORV

The Greater Yellowstone Coalition is encouraged to see that the Custer Gallatin National Forest recognizes 30 streams as eligible Wild and Scenic Rivers (managing 13,808 acres in this administrative protection) in the Draft Environmental Impact Statement of the Forest Plan (pgs. 838-839). These recognized streams hold important values related to native fish, recreation, scenery, geology and

heritage. We[rsquo]d like to note that Chapter 3.7 in the Proposed Geographic Area Direction lacks a summary and table for eligible Wild & Scenic Rivers in the Gallatin, Madison and Lionhead Area (pgs. 187-188 are blank). What[rsquo]s more, The Appendix E: Wild and Scenic Rivers Eligibility Study Process from the Proposed Action, lacks substantial recognition of high value wildlife habitat that is both: 1) river related, and 2) unique or exemplary in the region of comparison. It is a significant oversight for the Forest Service to only identify two streams as holding exemplary wildlife habitat across more than 3 million acres of public lands. Much of the Custer Gallatin National Forest lies within the world-renowned Greater Yellowstone Ecosystem (GYE) [ndash] a place understood to be the last, relatively intact temperate ecosystem in the world. Riparian habitat, which is without a doubt [ldquo]river related[rdquo] hosts extremely important vegetation cover and food sources for species that migrate such as ungulates, and species that are moving to re-colonize historic ranges, like grizzly bear and wolverine. With high profile species such as elk, bighorn sheep, moose and bison, as well as sensitive species such as the grizzly bear and wolverine throughout the GYE of the Custer Gallatin, it is hard to fathom that the important wildlife habitat along riparian zones, does not fit within the guise of [ldquo]river related[rdquo] and [ldquo]exemplary.[rdquo]

The Greater Yellowstone Coalition recommends that the Forest Service, again, take a closer look at streams such as the Taylor Creek and its tributaries (Alp and Lightening Creek), South Fork of the Madison, Hellroaring Creek, Davis Creek, and the East Fork of the Boulder River and recognize the wildlife Outstandingly Remarkable Values associated with these drainages. The GYC Report on Recommended Wild and Scenic Rivers includes mapping that showcases high value core grizzly bear habitat and ungulate migrations associated with these streams. The narratives also include information about documented wolverine presence along these streams.

Recommendations:

Recognize the wildlife outstandingly remarkable values associated with migratory ungulates and sensitive species such as grizzly bear and wolverine in drainages such as the Taylor Creek and its tributaries (Alp and Lightening Creek), South Fork of the Madison, Hellroaring Creek, Davis Creek, and the East Fork of the Boulder River.

Climate Refugia as an Outstandingly Remarkable Value

The Greater Yellowstone Coalition disagrees with the Forest Service[rsquo]s conclusion that climate refugia does not fit an [ldquo]Other[rdquo] ORV because there is so much of it on the Custer Gallatin National Forest.

Perhaps this is the shortsightedness of using the Greater Yellowstone Ecosystem as a region of comparison for climate refugia. The Forest Service writes in Appendix E of the Proposed Action:

[ldquo][hellip]an accepted fisheries climate vulnerability model for this area (Isaak et al.) finds many streams in the ROC [region of comparison] that would be climate refugia and therefore would not meet a definition of outstandingly remarkable.[rdquo]

In a January 8, 2018 meeting at the Forest Supervisor[rsquo]s office in Bozeman, Forest Watershed Program Manager, Jake Chaffin, reiterated the agency[rsquo]s stance that the Custer Gallatin has a lot of climate refugia streams, and that because there are many scientifically identified areas of climate refugia, none of it rises to the top for being considered outstandingly remarkable. We would appreciate that the Forest Service reconsider this position. While climate refugia models (i.e. Isaak et al.) point out the importance for protecting and maintaining cold water streams across the Greater Yellowstone Ecosystem (and beyond) these models are based on current water temperature calculations and future water temperature projections. In the GYC Report on Recommended Wild and Scenic Rivers, we took the water temperature projections for 2040 in climate refugia models and overlaid that GIS shapefile with prime habitat layers for fish and wildlife to make recommendations for an Outstandingly Remarkable Value associated with climate refugia. We encourage the Forest Service to perform the same analysis.

This approach inevitably parses out a subset of streams that will support both climate refugia and provide important habitat for native fish and wildlife. In our perspective, this approach further validates climate refugia as an ORV on the Custer Gallatin National Forest. We appreciate the fact that the Forest Service has included climate change and climate adaptation into the focus of Conservation Watershed Networks and we strongly believe the same approach should go in to using climate refugia as an Outstandingly Remarkable Value for recognizing eligible Wild and Scenic Rivers.

Recommendations:

Acknowledge that certain rivers on the Custer Gallatin National Forest are indispensable climate refugia for species and therefore climate refugia should be considered an [ldquo]outstandingly remarkable value[rdquo] where pertinent.

South Fork Madison River as Eligible Wild and Scenic

The Greater Yellowstone Coalition Report on Recommended Wild and Scenic Rivers on the Custer Gallatin National Forest recommends that the South Fork of the Madison River be included as eligible Wild and Scenic. The report highlights the fish, wildlife and climate refugia values associated with this stream.

While our explanation for qualifying climate refugia as an Outstandingly Remarkable Value has been described above, we also find it important to emphasize the high value wildlife habitat in the South Fork of the Madison that elevates it to [ldquo]outstandingly remarkable.[rdquo]

High value wildlife habitat is described in the GYC report as:

[ldquo]The South Fork of the Madison River contains high value core grizzly bear habitat above Highway 20, according to Craighead Institute models. The habitat includes thick willow, wetlands, beaver dams, and has green healthy conifers above riparian zone with little sign of beetle infestation and no sign of recent

wildfire. Moose tracks were observed throughout the riparian zone and in the creek during a field visit.[rdquo]

(GYC, Report on Recommended Wild and Scenic Rivers on the Custer Gallatin National Forest, 22)

In addition to this explanation, GYC would like to point out that the Forest Service[rsquo]s own Travel Plan Final Environmental Impact Statement brings attention to the importance of riparian and aquatic habitat for mammal and bird species in the South Fork of the Madison River:

(Gallatin National Forest Travel Plan FEIS Chapter 3-485-486)

The South Fork of the Madison also receives considerable fishing interest and summer motorized and winter motorized recreation along the road corridor. As such, the Greater Yellowstone Coalition recommends a fourth ORV for the South Fork Madison: recreation. An internet search for fishing and snowmobile recreation on the South Fork Madison River yields many web pages results. In terms of fishing, it is described as a place where one can fish in solitude and peace and still catch large trout. The internet contains visually stunning fishing videos, such as the following by Josh Blumental: https://vimeo.com/104420334, as well as several blog posts such as http://flyfishyellowstone.blogspot.com/2010/09/ and http://www.greater-yellowstone.com/West-Yellowstone-MT/fishing.html. The South Fork of the Madison appears to be on the radar for angler

guides from Big Sky, Montana to Driggs, Idaho. Three Rivers Ranch Outfitters, based in Idaho, describes the South Fork Madison as, [ldquo]a favorite amongst fly fisherman[hellip]The fish typically range between 14 to 18 inches with some into the 20 inch category. (https://trroutfitters.com/river-information/other-places-we-fish/) Other well-known guest ranches such as the Bar N Ranch, Under Canvas and the Firehole Ranch also emphasize the beauty and solace of fishing the South Fork of the Madison.

Due to the dirt road that parallels the South Fork of the Madison for much of its length, the corridor affords easy motorized access. Summertime tourists and locals alike ride ATV[rsquo]s along the road to view wildlife and access fishing holes. In the winter, when snow typically piles up deep in the Hebgen Basin, the road along the South Fork Madison becomes a very popular snowmobile route. In fact, Destination West Yellowstone ranks it the second-best snowmobile trail in West Yellowstone; only second behind riding in Yellowstone National Park. (http://www.destinationyellowstone.com/the-7-best-snowmobile-trails-in-the-west-yellowstone-area/)

Recommendations:

Include South Fork of the Madison as an eligible Wild & Scenic River.

Taylor Creek and Hellroaring Creek as Eligible Wild and Scenic due to Wildlife ORV

The Greater Yellowstone Coalition Report on Recommended Wild and Scenic Rivers on the Custer Gallatin National Forest recommends that Taylor Creek be given eligible Wild and Scenic River status due to scenic, recreation, wildlife and climate refugia outstandingly remarkable values. The report also endorses Hellroaring Creek of the Yellowstone Headwaters as Wild and Scenic eligible due to its fish, wildlife and scenic values. As GYC has recommended 58 of the 761 streams on the Custer Gallatin National Forest as Wild and Scenic, we recognize this represents a bit of a discrepancy with the 31 streams that the Forest Service has recommended. While we have thorough justification for all 58 streams within our recommendation report, GYC feels that of all the streams not initially considered eligible Wild and Scenic by the Forest Service, Taylor Creek and Hellroaring Creek absolutely rise to the top of the list as high profile [ndash] outstandingly remarkable streams [ndash] due to their wildlife habitat.

An important wildlife ORV habitat consideration for the Taylor Creek and Hellroaring Creek is the fact that both streams have gravel-bed river floodplains. A recent article by Hauer et al. in Applied Ecology, titled Gravel-bed river floodplains are the ecological nexus of glaciated mountain landscapes (June 2016) concludes that gravel-bed river floodplains in mountain landscapes, particularly from the Yellowstone to the Yukon regions, disproportionately concentrate diverse habitats, nutrient cycling, productivity of biota and species interactions, contributing (again, disproportionately) to landscape-scale ecological integrity. Hauer et al. explain:

Many large mammals, such as moose (Alces alces), beaver (Castor Canadensis), and river otter (Lutra Canadensis), are obligate users of wetlands, rivers, and floodplain habitats. However, the wide variety of large mammals generally considered as upland species but which rely heavily on gravel-bed river

floodplains for many portions of their life histories is often overlooked[hellip]Gravel-bed river floodplains in the region provide the overall highest annual primary productivity, the earliest appearance of spring emergent vegetation, and the latest continuance of fresh vegetation in the fall. Critical grasslands and shrub and aspen stands required for winter maintenance of large ungulates, such as bison (Bison bison),

elk (Cervus elaphus), and deer (Odocoileus spp.), dominate the vegetation of alluvial fans, which extend onto broader gravel-bed river floodplains at the lower elevation valley bottoms. Gravel-bed river floodplains provide boreal lichens for woodland caribou (Rangifer tarandus) and a key habitat for large carnivores such as wolves (Canis lupus), grizzly bear (Ursus arctos), and mountain lion (Felis concolor).

Other research further supports these claims. Additional information can be found in: Hansen et al. Spatial patterns of primary productivity in the Greater Yellowstone Ecosystem, Landscape Ecology 2000; Hebblewhite et al. Modeling wildlife-human relationships for social species with mixed-effects resource selection models, Applied Ecology 2008; Hebblewhite el al. A multi-scale test of the forage maturation hypothesis for a partially migratory ungulate population, Ecological Monographs 2008; and, Chetkiewicz et al. Use of resource selection functions to identify conservation corridors, Applied Ecology 2009.

The Greater Yellowstone Coalition strongly encourages the Forest Service to acknowledge the outstandingly remarkable wildlife values associated with the Taylor Creek and Hellroaring Creek. In both drainages, the gravel-bed substrate contributes significantly to existing ungulate migratory paths and associated carnivore activity. This ungulate activity and high value core grizzly bear habitat is mapped in the Greater Yellowstone Coalition Report on Recommended Wild and Scenic Rivers on the Custer Gallatin National Forest. We strongly believe Wild and Scenic eligibility is justified on both the Taylor Creek and Hellroaring Creek due to the exemplary wildlife values in both drainages.

Recommendations:

Include Taylor Fork and Hellroaring Creek as eligible Wild & Scenic Rivers.

Energy and Minerals (EMIN)
Greater Yellowstone Coalition has a 35-year history of involvement in energy and mining issues throughout the Greater Yellowstone Ecosystem. This includes explorations and mines at every level including major projects such as the New World District near Cooke City, the phosphate patch of eastern Idaho, oil and gas leasing on the Beartooth front in Wyoming, the Stillwater Mine and the Emigrant- Crevice Withdrawal. Our emphasis in these comments resides in the GYE portions of the Custer Gallatin National Forest (Hebgen, Bozeman, Yellowstone and Beartooth Ranger Districts), but our interests extend forest wide.

The Greater Yellowstone Coalition does not approach this work from an anti-mining position. Rather, we consider every project with particular attention to the nature of the ore-bodies, unique threats posed to the surrounding water, lands and wildlife, impacts to surrounding economies and property rights and other factors. Since the Gallatin and Custer Forest Plans in 1986/87 there has been a massive amount of local and national public interest in preventing large scale gold mines in the New World, Emigrant and Crevice Mining Districts; all in tributaries to the Yellowstone River. During that same time frame the major Stillwater mine near Nye has gone on-line and since expanded across drainages and is today the largest employer in the state of Montana.

Forest Planning provides a rare opportunity for the US Forest Service to clearly address how the agency will fulfill all its commitments to the interests of the public, Congress and to statutes such as the National Forest System Land Management Planning Rule (part 219 of Title 36 of the Code of Federal Regulations) as well as relevant mining regulations. The Energy and Minerals (EMIN) Desired Conditions, Goals, Objectives, Standards and Guidelines section is really at the 30,000[rsquo] level and lacks granular guidance needed to provide direction to forest managers as well as give certainty to the industry. The Draft Forest Plan abdicates responsibility for management of these resources entirely to the regulatory framework at the project level without consideration of the discretionary elements available to the

agency to best manage for [ldquo]other resource values that may be present[rdquo] (FW-DC-EMIN 01).

GYC acknowledges that, while Congress and the regulatory framework presses the Forest Service to focus management on energy and mineral production, interest in protecting water quality, wildlife habitat and recreation are among the primary values driving public participation across the forest. As proven by Congressional designations like the New World mineral withdrawal, Emigrant-Crevice withdrawal, and East Rosebud Wild & Scenic River as well as many other collaborative and NEPA projects across the ecosystem, the Forest Service is well-aware of rising demands to fairly consider other values in addition to natural resource extraction.

Draft EIS Section 3.17 goes to great lengths to outline the regulatory framework (Pages 644-646) regarding energy and minerals development. GYC recognizes how this framework directly influences the management of mineral and energy resources but the Forest Plan retains considerable discretion, if not responsibility, to provide adequate guidance to current and future forest managers as well as the minerals industry by including the monitoring questions, desired conditions, standards and other elements of the Forest Plan that provide adequate opportunity for future projects to consider other resource values and ecosystem services regardless of the statutory framework at any given time in history.

Thus, it is noticeable that the Draft Revised Forest Plan has ZERO monitoring questions relative to energy and minerals (EMIN), arguably one of the most impactful and controversial management areas. This noticeable lack of monitoring questions and standards at the Forest Plan level does not provide the clear guidance required by both forest managers and industry operators.

In fact, a January 2016 report from the United States Government Accountability Office (GAO) recommends that the BLM and US Forest Service [ldquo]could do more[rdquo] to expedite the mine plan review process (GAO-16-165). The report cites a key factor in delays being a lack of [ldquo]quality of mine plans.[rdquo] As proven time and time again, any energy and mine development in the GYE creates a significant volume

of public interest. For example, information obtained in a Freedom Of Information Act (FOIA) request by GYC and Earthjustice on July 1, 2015 showed the Custer Gallatin National Forest consulting with Lucky Minerals for many months prior to the June 2, 2015 scoping notice sent to the public regarding a categorical exclusion Lucky Minerals were pursuing a permit for gold exploration on public lands in Emigrant Gulch. By December of that same year, tremendous public interest and hundreds if not thousands of public comments proved that the information provided by Lucky Minerals did not address cumulative impacts nor identify reasonably foreseeable future conditions when combined with their simultaneous applications with the State of Montana. Thus, their request for a categorical exclusion was denied, sending the company back to the drawing board. As proven by this experience and the

government[rsquo]s own GAO report, we can not always rely on the information and analysis provided at the

project level. What is needed is clear direction of what is expected and required of potential operators before any permits, leases or plans of operation are granted. This certainty and context for the industry and future forest managers is paramount, if not welcomed. There is no better opportunity to set these standards than during the Forest Plan process.

Recommendations:

Develop adequate and specific monitoring questions to guide future land managers when analyzing energy and mineral development in the GYE outside of the Stillwater Land Allocation. Such monitoring questions might involve, Canada lynx habitat, expanding occupied grizzly bear habitat, sage grouse habitat, big game impacts, connectivity and key linkages, base-line water quality monitoring, valid existing rights, cumulative impacts, and consultation with other agencies.

Geologic Areas of Interest

The two goals listed in the EMIN Section 2.4.8 relate only to caves and CERCLA sites. Meanwhile five of the nine overall standards all relate to caves (05-09).

For example, the recent Flathead Forest Plan includes these valuable resources under [ldquo]Soils and

Geology.[rdquo] Where the CGNF includes caves and karst is not as important as it is to clearly emphasize that the often-controversial extractive industries of oil and gas leasing and minerals mining require adequate consideration and of direction on their own and in a manner that is clear to all stakeholders including industry.

Once you remove the cave and karst specific components (which GYC is not qualified to comment on), it becomes clear how the limited the Desired Conditions, Standards, Goals and Guidelines are for Energy and Minerals (EMIN) development. They lack any discrete guidance needed to provide direction to forest managers as well as give certainty to the industry.

Recommendations:

Geologic areas of interest such as caves and karst, paleontological and geologic hazards and the unique management requirements for these resources, including desired conditions, standards, guidelines and goals, should be independent of the overall Energy and Minerals direction.

Due to their unique and irreplaceable values and contributions to ecosystem services, GYC strongly recommends appropriate monitoring questions regarding cave, karst, and paleontological resources. Furthermore, monitoring questions should be included to properly manage geologic hazards, their threat to human safety and appropriate mitigation.

Desired Conditions (FW-DC-EMIN)

Desired Conditions 01 & 02 of the Draft Revised Forest Plan states, [ldquo]Energy and mineral resources (and

renewable energy sources) are available in consideration of other resource values that may be present.[rdquo]

This is ambiguous and given the lack of associated Standards and monitoring questions, vague. As proven time and time again in the GYE, there is considerable public interest and outright controversy

over any mineral or energy development despite the current regulatory framework. This framework is subject to interpretation and change throughout the life of the Forest Plan just as are the number and scope of competing resource values [ldquo]that may be present.[rdquo]

These include but aren[rsquo]t limited to urban growth, recreational pressure, Congressional actions, market demands, availability of nearby resources, mining law reform, de-regulation, expanding (and shrinking) wildlife populations and many impacts related to climate change. As such, it is incumbent on the agency to include a

primary Desired Condition for energy and minerals that more strongly recognizes changing conditions throughout the life of the plan and is adaptable and encouraged to analyze cumulative impacts, reasonably foreseeable conditions, alternative uses and resource values which have been proven by the courts to be legitimate considerations within the current regulatory framework.

Desired Condition 03 of the Draft Revised Forest Plan states, [ldquo]Abandoned mines land and areas impacted by past mining activities are returned to a state of site condition comparable to pre-mineral activity and provide comparable form and function based on site potential.[rdquo] Similarly, proposed Standard 04 is the only guidance provided on how to manage for this Desired Condition stating (page 86), [ldquo]Potential effects to human health and safety and to infrastructure investment from geologic hazards such as abandoned mine lands, mass wasting, naturally occurring acid rock drainage, naturally occurring radioactive materials, and naturally occurring fibrous materials shall be mitigated, reduced, or eliminated during land management activities in areas where they are known to or may reasonable occur.[rdquo]

DC 03 and STD 04 together are vague and incomplete. Due to the historic nature of most mining districts in the GYE, [ldquo]site potential[rdquo] and [ldquo]pre-mineral activity[rdquo] (which in some cases pre-dates the existence of the US Forest Service) is unclear and does not adequately account for the current ecosystem services that may be dependent on these areas. More direction is required.

GYC recommends strengthening the Desired Conditions applicable to abandoned mines to direct the forest in a pro-active manner consistent with other resource values. Or alternatively, this could be included as a Goal.

Recommendations:

Desired Condition 01: Energy and mineral resources are available based upon public interest, in-service needs, material availability, and valid existing rights, where consistent with desired conditions for other resources.

Desired Condition 02: Renewable energy resources (geothermal, hydropower, solar and wind energy) is available based upon public interest, in-service needs, material availability, and valid existing rights, where consistent with desired conditions for other resources.

Include an additional plan component that abandoned mines that present physical or chemical hazard are identified, inventoried and reclaimed in the appropriate manner, with priority given to those that pose a human health risk.

Standards (FW-STD-EMIN)

Standard 01 states, [ldquo]New mineral and energy management activities shall only be authorized when the associated reclamation plan includes provisions to return the disturbed areas to stability and land use comparable to adjacent lands and pre-operational site conditions to the extent practicable[rdquo] (page 86 of the Draft Revised Forest Plan). The language [ldquo]pre-operational site conditions and to the extent

practicable[rdquo] is vague at best. Since locatable mineral activity will almost always occur in a historic district, past evidence of mining will most likely be present. Yet these failed mining districts are recognized to be home to past, new and emerging resource values like recreation, migration corridors, endangered species habitat, and water refugia in the face of climate change. Hence the definition of

pre-operational site conditions is debatable. Furthermore, the phrase [ldquo]to the extent practicable[rdquo] (which could be extended to incorporate any number of factors including the bonding and solvency of the operator), and the distinct lack of monitoring question or standards leaves the door open for operators to define pre-operational conditions and a reclamation plan without proper consideration of public interest, in-service needs, cumulative and reasonably foreseeable impacts and desired conditions for other resources.

Additionally, by including the various effect analysis from Minerals Management across the various sections in the Forest Plan, direction for energy and minerals development is confusing and GYC is concerned it will prove difficult for both industry and forest managers to adequately address all resource values which will lead to very permitting delays and the added expenses that the plan is attempting to address.

Standard 02 is baffling as it specifically calls out the [ldquo]extent and mode of new access for mineral activity shall be commensurate with the stage of mineral activities.[rdquo] Again, this leaves open the door for operators to define these conditions with no consideration of other resource values or impacts. As one plausible example, forest managers or the industry could arbitrarily determine, [ldquo]this stage of mineral activity only requires a categorical exclusion.[rdquo] Clarity and specificity in the Desired Conditions and Standards, as well as the regulatory framework provided by the National Environmental Policy Act and others should provide the guidance required here, not the project managers. Since most mineral development projects are approached in phases, in most cases over many years or field seasons, the proponents should have an idea of their overall intention or desired project scope. To analyze projects without considering cumulative impacts or reasonably foreseeable conditions undermines the intention of the Forest Plan[rsquo]s ability to consider and mitigate impacts on other resources.

Standard 04 may not account for past or future human-caused acid rock drainage. GYC recommends clarifying Standard 04 to include human-caused hazards.

Recommendations:

Standard 01: New mineral and energy management activities including special use permits for access shall only be authorized when the associated reclamation plan includes provisions to return the disturbed areas to stability and land use comparable to adjacent lands and pre-site conditions that are based upon public interest and consistent with desired conditions for other resources.

Include an additional Goal or Guideline (along with corresponding monitoring questions) that requires mineral developers outside of the Stillwater Land Allocation to disclose current and reasonably foreseeable operational plans. At a minimum there should be adequate monitoring questions developed to address the notion and definition of [ldquo]stage of mineral activities.[rdquo]

GYC supports Standard 03 with regards to closing underground mine features.

Addition to Standard 04: Human-caused hazards such as acid mine drainage, hydraulic fracturing chemicals, all radioactive materials including in-situ leaching, and any other exposed hazards due to mining or leasing activities

Effects Analysis for Mineral Development

In general, the Effects Analysis of Minerals Development found in each section for the Draft Environmental Impact Statement for the Draft Revised Forest Plan, is insufficient. It can best be summarized as [ldquo]a plan to have a plan.[rdquo] GYC recommends specific Goals or Guidelines under Energy and Minerals that clearly outlines each of the critical mitigation and reclamation considerations required for energy and mineral operators. At the very least, these elements should point directly to each section of the Forest Plan that needs to be address as indicated by the effects analysis within the Draft EIS. This should include wildlife (grizzly bears, lynx, big horn sheep, big game, sage grouse, and at-risk species), watershed, aquatic and riparian zones, invasive species, terrestrial vegetation, recreation, socio- economic factors and tribal concerns.

In one example, reviewing the effects analysis for Energy and Minerals specific to Watershed, Aquatic Species and Habitat, and Riparian Ecosystems (Section 3.4), it states, [ldquo]All revised alternatives include direction that would provide adequate protection to water quality and other aquatic resources from the potential impacts due to energy or mineral extraction[rdquo] (Page 100). It goes on to declare, [ldquo]Standards and guidelines

direct the implementation of new operations by requiring measures to mitigate for potential impacts to vegetation and potential water table alterations.[rdquo] Where in the Standards is this direction? It is assumed they are left to future managers at the project level. The Guidelines offer some support through FW-GDL-EMIN 02. GYC recommends a broader set of Guidelines specific to mineral development to address other critical ecosystem services and resource values. For example:

Recommendations:

Include an additional Guideline that new mineral development operations outside the Stillwater Land Allocation should minimize adverse effects to grizzly bear and big game security in the Primary Conservation Area (PCA), occupied grizzly bear habitat, key linkage zones and recognized migration corridors. If these management zones cannot be avoided, then operators shall submit mitigation and reclamation plans commensurate with the associated resources that may be affected by the operations. Required bonding must consider (in the estimation of bond amount) the cost of reclamation and mitigation required on the area of operations and surrounding lands.

Suspended Leases

Oil and gas leases covering 100,531 acres of the historic Gallatin National Forest are currently suspended under the Conner v Buford decision [605 F. Supp. 107 (D.Mont.1985)] and upheld by the 9th Circuit Court of Appeals (amended July 1, 1988). The Conner v Buford case requires these existing leases to undergo an EIS and this plan explicitly states, [ldquo]a leasing decision will not be part of this analysis[rdquo] (page 649, Draft Environmental Impact Statement for the Draft Revised Forest Plan). However, it is critical that the

overarching architecture for oil and gas development in the revised Forest Plan is robust enough to provide management direction and certainty for future analysis independent of any court rulings. The required EIS, should it happen, will need direction and the revised Forest Plan may well outlive any court rulings.

Recommendations:

Appropriate standards should be developed that apply to the 68 suspended leases as well as future new oil and gas leases.

Consultation

Transparency in the energy and minerals sector is paramount to everyone involved including the agency, the industry and the public. GYC recognizes the CGNF often, if not always, consults with other agencies responsible for minerals and/oil and gas development. However, it is important for the public to maintain this reasonable expectation through a clear Standard in the Forest Plan and at every stage of analysis and permitting. It is not uncommon for operators to be pursing multiple applications with different agencies which have a high probability of cumulative impacts that MUST be considered by forest managers.

Recommendations:

Include an additional Standard that mineral development including special use permits shall not be allowed or granted without prior consultation with nearby or appropriate regulating agencies. These may include but are not limited to the Montana Department of Environmental Quality, Montana Fish, Wildlife & Parks, Bureau of Land Management, National Park Service, and US Fish and Wildlife Service.

Include appropriate monitoring question(s) should for occurrences of any special use permits or plans of operations related to mineral and energy projects.

Mineral Withdrawals

In addition to mineral withdrawals for Wilderness, Wild and Scenic, recreation and administrative sites, there are two high-profile Congressionally designated withdrawal areas near Yellowstone National Park. These are 26,223 acres in the New World Mining District that are withdrawn from all forms of entry, appropriation, and disposal under the public land laws, from location, entry and patent under the mining laws, and from disposition under all mineral and geothermal leasing laws. And more recently, 30,370 acres went under a locatable mineral withdrawal for the combined Emigrant and Crevice areas, subject to valid existing rights.

When the Draft EIS was published, the Emigrant-Crevice area was under a 20-year mineral withdrawal created by Public Land Order (PLO) #7578 signed by then-Secretary of Interior Zinke and published in the Federal Register October 12, 2018. This withdrawal, the maximum allowed by law, was recommended by the Custer Gallatin National Forest on September 21, 2018. The agency cited the underlying purpose, [ldquo]to protect and preserve the scenic integrity, important wildlife corridors, and high- quality recreation values[rdquo] (Emigrant Crevice Mineral Withdrawal Draft Environmental Assessment, page

5). On March 12, 2019, President Trump signed Public Law No. 116-9, the [ldquo]John D. Dingell, Jr. Conservation, Management, and Recreation Act.[rdquo] This act included the [ldquo]Yellowstone Gateway Protection Act[rdquo] making the 30,370 acre administrative withdrawal permanent.

Unpatented mining claims exist throughout these areas and continue to be maintained by the owners, as is their right. Of course, ownership of a documented and up-to-date unpatented mining claim does not mean that claim has a [ldquo]valid existing right.[rdquo] This is only defined after a field examination by a qualified minerals examiner using the general procedure given in BLM Manual 3920 (1976). The mining claimant must prove that the valid existing right existed and was physically disclosed at the time of segregation or withdrawal. For Emigrant and Crevice this date is November 22, 2016, the date then- Secretary of Interior Jewell published the original withdrawal application, triggering the initial mineral segregation. The Interior Board of Land Appeals (IBLA) has stated that a [ldquo]distinct difference exists between evidence of mineralization which will induce men to engage in further prospecting or exploration in search of valuable mineral deposits and that which will induce them to expend their means in attempting to develop a valuable mine. Only the latter constitutes a valid discovery.[rdquo] United States v. Jones, 2 IBLA, 140, 149 (1971).

[ldquo]Valid Existing Rights,[rdquo] therefore, only exist when a claimant can demonstrate that a reasonably prudent person would be justified in expending effort to further the actual development of the claim. The courts have consistently upheld this higher burden of proof required to claim a valid existing right. In other words, a mining claimant must have established by the time of a mineral withdrawal that [ldquo]the mineral can be extracted, removed, and marketed at a profit[rdquo] in order to have valid existing rights. United States v. Coleman, 390 US 599, 600 (1968).

This brief summary is provided as a snapshot to demonstrate the legal realities, if not the common mis-perceptions and confusion, of what rights are available to the holder of an unpatented mining claim within a Congressionally designated withdrawal area like the New World, Emigrant and Crevice.

Considering the high number of unpatented claims (particularly in Emigrant and Crevice), the high cost of maintaining them and the added burden required to determine Valid Existing Rights, GYC recommends introducing a standard to this revised Forest Plan, that despite stating the obvious, will encourage mine operators and owners of unpatented claims to adequately pursue their legal rights before making exploration or

mine applications. Again, this simple and clear standard provides certainty to the mining industry. This is not unique as this same standard is included in the recently approved Flathead National Forest Plan (Nov 2018).

Recommendations:

The Final EIS must be updated to acknowledge passage of Public Law No. 116-9 and ensure the Desired Conditions in the revised Forest Plan represent the agencies previous analysis in recommending the original 20-year withdrawal.

Include an additional Standard that mineral development shall not be allowed in areas withdrawn from mineral entry, subject to valid existing rights as determined by the appropriate process.

Stillwater Land Allocation

The Draft Environmental Impact Statement for the Draft Forest Plan (Section 3.22.6) specially recognizes that mining activities will take place in the [ldquo]Stillwater Land Allocation[rdquo] of 102,945 acres. This designation appears to emphasize the unique nature of the Stillwater Complex (SWC), the unique geology and presence of the rare and strategic PGM group metals (platinum and palladium) as well as the contributions to socio-economic values.

GYC generally supports the Stillwater Mine and its value to the local economies, national strategic importance and contributions to industry and technology. As such, the two Desired Conditions for the SWC under section 3.5.7 are certainly valid and important. However, a lack of Standards, Goals and Monitoring questions around these Desired Conditions leaves a question mark as to what the exact purpose of this special land allocation is for. That is, the Forest Plan goes to great lengths in other sections to explain how the agency is compelled by the General Mining Law of 1872 (and other

regulations) to facilitate and allow for mining operations. The Draft EIS suggests, [ldquo]the area would receive

forest plan allocation to recognize such use in alternatives B, C, and E[rdquo] (page 349). But the question

remains, what additional guidance does the special [ldquo]Stillwater Land Allocation[rdquo] provide forest manager

and industry that is not already contained in the regulatory framework?

As described in the effects analysis in the Draft Environmental Impact Statement for the Draft Forest Plan, at least two key species intersect with the Stillwater Land Allocation area. These are Canada lynx (page 348-9) and big horn sheep (page 439-40). Big horn sheep in particular are identified to have abandoned habitat in the Stillwater Complex. Grizzly bear, moose, elk and white bark pine are additional species of note that are found in the area of the Stillwater Land Allocation. There are also recreation interests for access to the Absaroka Beartooth Wilderness, Stillwater River, Fishtail Creek, East Boulder River and other areas. It is entirely unclear how these values and species are to be managed in the Stillwater Land Allocation. These uncertainties must be addressed with proper monitoring questions and other plan components.

This recommendation is not intended to delay or stop any current or future approved mining operations in the SWC. GYC believes wildlife values and other public interests like recreation can be adequately maintained and balanced in coordination with the future goals and objectives of the Stillwater Mine.

Our recommendation is that specificity and clarity at the Forest Plan level will improve future project level plans proposed for the Stillwater Land Allocation zone and elsewhere.

Recommendations:

Develop proper monitoring questions, standards, and goals for the proposed Stillwater Land Allocation. These should address wildlife concerns (particularly big horn sheep monitoring and reclamation of habitat and potential presence of grizzly bears), water resources, recreation access and timing.

No Surface Occupancy

It is clear the Forest is required to follow the regulatory framework for leasable minerals. It does, however, retain considerable discretion and management control over the surface occupancy of oil and gas development. GYC recommends a number of critical instances where the Forest Plan should set a clear Standard for No Surface Occupancy (NSO). Not only does this identify and protect important other

resources, it provides the clarity required and demanded by industry. These areas will be address individually below.

These NSO recommendations can be made as a modification to any of the plan revision alternatives and are consistent with FW-DC-EMIN 01.

The Beartooth Front includes previous management areas known as West Rosebud, Black Butte, East Rosebud, Butcher Creek, Red Lodge Creek, West Fork Rock Creek, Grizzly Peak, Palisades, Rock Creek, Glacier Lake, Scenic Byway, and Line Creek. This area is comprised of roughly 93,000 acres.

As shown in the current DEIS as well as the [ldquo]Beartooth Mountains 1993 Oil & Gas Leasing EIS,[rdquo] the entire area ranks high in other resource values such as scenery, wildlife habitat, winter range, endangered species, recreation, and even renewable energy (West Rosebud). Throughout the same area, there are very few acres of [ldquo]high[rdquo] oil and gas potential and a preponderance of [ldquo]very low[rdquo] to [ldquo]moderate[rdquo] potential. It is strongly encouraged and recommended that the Forest Plan include a standard for a no surface occupancy (NSO) stipulation within the Stillwater Land Allocation and in all non-Wilderness forest lands south of the proposed Stillwater Land Allocation, also known as the

[ldquo]Beartooth Front,[rdquo] subject to existing rights.

The clear direction of NSO and no new leases in the revised forest plan provides the necessary certainty required by the oil and gas industry.

To be clear the NSO stipulation applies only to leasable minerals. Due to the value and importance of the Stillwater complex to the socio-economic and strategic minerals values, a NSO standard for leasable minerals will limit the cumulative impacts that would be inevitable with oil and gas leasing and prevent potential delays and unintended consequences impacting the intention of the Stillwater Land Allocation. Again, this provides an important level of certainty for all stakeholders, including the Stillwater mine and oil and gas developers.

As discussed elsewhere in these comments, Standards and Guidelines in the draft plan that ensure secure habitat for grizzly bears are only applicable to the recovery zone or Primary Conservation Area (PCA). This fails to account for not only current grizzly bear distribution but also grizzly bear expansion into historic habitat and recognized management directions that may be developed during the life of this plan. For the mineral development industry, this lack of clarity is challenging and only encourages weak permit applications that create delays and uncertainty.

To address this, GYC recommends that, at minimum, an additional standard for a No Surface Occupancy Stipulation be applied to all existing and future oil and gas leases within the grizzly bear Primary Conservation Area (PCA), subject to existing rights. However, as shown in our grizzly bear section of these comments, the proposed Forest Plan revision does not go far enough to provide direction for management beyond the PCA

into current (and future) occupied grizzly bear habitat. With this in mind, we encourage an additional standard that includes both the PCA and documented occupied grizzly bear habitat.

Overall, the Forest Plan should provide clear direction for the management of energy and minerals within the Yellowstone grizzly bear Primary Conservation Area (PCA) as well as occupied grizzly habitat. For example, the recent Flathead National Forest plan provides no less than nine clear standards. This direction at the Forest Plan level will create clarity and help avoid incomplete plans at the project level.

The greater sage-grouse is one of the species of conservation concern identified by the Regional Forester. As stated on page 597 of the Draft Environmental Impact Statement for the Draft Forest Plan, [ldquo]The primary concerns for sage-grouse are loss and fragmentation of their habitat.[rdquo] The Draft Plan identifies 2,200 acres of priority habitat in four allotments (all in eastern districts). Although GYC focuses our comments on the GYE portion of the forest, our concerns for wildlife and the impacts of energy and minerals development extends forest wide.

Recommendations:

Include an additional Standard that within the Stillwater Land Allocation and in all non-Wilderness forest lands south of the proposed Stillwater Land Allocation, also known as the [ldquo]Beartooth Front[rdquo] and subject to existing rights, all leases for leasable minerals shall include a no surface occupancy (NSO) stipulation.

Include an additional standard that, within the grizzly bear Primary Conservation Area (PCA) and documented occupied grizzly bear habitat and subject to existing rights, all leases for leasable minerals shall include a no surface occupancy (NSO) stipulation.

Include an additional standard that, within any designated big game migration corridors or key linkage areas (as recommended elsewhere in GYC[rsquo]s comments) and subject to existing rights, all leases for leasable minerals shall include a no surface occupancy (NSO) stipulation.

Follow the lead from the Flathead National Forest (FW-STD-E&M) and add clear human health and safety Standards to ALL Energy and Minerals projects found outside of the Stillwater Land Allocation.

Include an additional standard that, within priority habitat identified for the greater sage-grouse and subject to existing rights, all leases for leasable minerals shall include a no surface occupancy (NSO) stipulation.

Cumulative impacts of private land minerals development

Should any plans of operation on private lands within the PCA or occupied grizzly bear habitat intersect with Forest management for access or any other reason, these applications should by analyzed and permits only granted provided the operator follows the Forest Plan standards. Bears do not know private or public land boundaries and including this Standard is in the best interest of human and bear safety for all forest visitors. No one wants to see bear-human conflict with visitors on forest land that is propagated by a sloppy operator on nearby private land. In a nutshell, this provides the forest a much- needed opportunity for more in-depth analysis than what is typically available under the traditional categorial exclusion offered on special use permits like road use in sensitive and controversial areas such as the Emigrant Crevice Withdrawal area. In this example, this standard also protects the intention of the Forest Services[rsquo] recommended mineral withdrawal for these areas.

Recommendations:

Include an additional Standard that, within the Primary Conservation Area (PCA) as well as documented occupied grizzly bear habitat (outside of the Stillwater Land Allocation), any Forest Service special-use permits or similar access granted to locatable and saleable minerals and oil and gas leasing on private

lands will require a plan of operations to be analyzed for cumulative impacts under all existing Forest Plan Standards.

Summary for EMIN Comments

By not exerting clear direction and expectations on energy and mineral development for areas found in the GYE, the Draft Revised Forest Plan misses the rare opportunity to recognize truly unique ecosystem services, alternative socio-economic and resource values while also providing clarity to an industry plagued by inconsistent direction and oversight. Our recommended Monitoring Questions, Desired Conditions and Standards are required to provide more of the certainty required for both forest managers and the industry regarding mineral development. This will lead to better applications and plans of operations while providing the transparency and opportunity for the public to be part of the process and properly consider other valuable resource values. To be clear, GYC relied heavily on the Flathead National Forest Plan (Nov 2018) in developing these comments. But these comments were also developed after recent and historical experience with public processes and litigation regarding locatable mineral proposals. These comments reflect the analysis and comments made by others in the courts, various Environmental Analyses (both state and federal) as well as recent and past Congressional actions.

Watershed, Aquatic, and Riparian Resources

As discussed in previous sections there are many aspects of the plan related to watershed, aquatic and riparian resource management the we find encouraging and valuable. Notably lacking however is the recognition of westslope cutthroat trout (WCT) as a species of conservation concern (SCC) and the associated management actions that designation would provide. While it is accepted that many elements of the draft plan will provide enhancement and support for native species, additional protections could be achieved with the designation. Also, with western pearlshell mussels an SCC in the Custer Gallatin being directly affected by the decline of WCT it stands to reason that WCT should be designated as an SCC. Custer Gallatin forest staff have previously identified westslope and Yellowstone cutthroat trout as [ldquo]potential species of conservation concern[rdquo]. The forest is participating in several working groups that support those determinations. The Regional Forester[rsquo]s determination should be reversed, and native trout should be listed as SCC for the Custer Gallatin. At that time the Forest can evaluate plan area distribution and could find that the current distribution is sufficiently distributed for viability.

RECOMMENDATION: The Regional Forester should support forest staff and designate native trout as an SCC for the Custer Gallatin.

Future projects developed under the plan need to define outcomes and standards more clearly to best protect aquatic SCC[rsquo]s and water resources that support them better. It is not clear how [ldquo]habitat and

ecological conditions[rdquo] are defined on a decision-making level are defined. When upholding outcomes under DC-WTR-03 and DC-WTR-04 project managers know their actions along stream reaches or in

riparian habitat locations fulfill on plan criteria like [ldquo]express(es) physical integrity[hellip]within their aquatic natural range of variation[rdquo] are being met. Another ambiguous definition is a condition of [ldquo]within their

natural range of variation.[rdquo] These DC[rsquo]s do not set conditions that can be met in the proposed forest

plan.

RECOMMENDATION: The plan should define criteria for determining defensible standards and conditions to measure objectives and outcomes.

Custer Gallatin National Forest Proposed Action[mdash]Revised Forest Plan Chapter 2 Riparian Management Zones (RMZ)

Inner and outer RMZ zone dimensions

[ldquo]The RMZ widths extend either to the distance listed below or to the top of the inner gorge slope break, whichever is greater. The inner RMZ will extend to the top of the slope break where side slopes exceed 35 percent, as these areas have the highest potential for sediment delivery to water bodies.[rdquo]

30ft (10m) slope buffer distances should be added to "on the ground" RMZ area definitions. As stated, areas with steep slopes have the highest potential for sediment delivery to water bodies. Changes management actions and treatments should occur away from slope breaks to minimize increases of sediment delivery to water resources.

RECOMMENDED Zone Boundary Definitions:

Category 1: Perennial and intermittent fish-bearing streams: consist of the stream and the area on either side of the stream extending from the edges of the active channel to top of the inner gorge plus 30 feet, or to the outer edges of the 100-year floodplain, or to the outer edges of riparian vegetation, or to a distance equal to the height of two site-potential trees, or 300-feet slope distance (600 feet, including both sides of the stream channel), whichever is greatest.

Category 2: Perennial non-fish-bearing streams: consist of the stream and the area on either side of the stream extending from the edges of the active channel to top of the inner gorge plus 30 feet, or to the outer edges of the riparian vegetation, or to a distance equal to the height on one site-potential tree, or 150-feet slope distance (300 feet, including both sides of the stream channel), whichever is greatest.

Category 3: Intermittent non-fish-bearing streams: consist of the stream and the area on either side of the stream extending from the edges of the active channel to top of the inner gorge plus 30 feet, or to the outer edges of the riparian vegetation plus 30 feet, or to a distance equal to the height on one site- potential

tree, or 100-feet slope distance (200 feet, including both sides of the stream channel), whichever is greatest.

Category 4: Wetlands greater than one acre, natural lakes/ponds, and constructed ponds/reservoirs: consist of the body of water or wetland and: the area to the outer edges of the riparian vegetation plus 30 feet; or to the extent of the seasonally saturated soil plus 30 feet; or to the extent of unstable and potentially unstable areas; or to the distance of the height of one site-potential tree; or 150-feet slope distance from the edge of the wetland greater than 1 acre or the maximum pool elevation of constructed pond and reservoirs with shorelines comprised of riparian vegetation whichever is greatest...

Category 5: Wetlands, seeps, and springs less than or equal to one acre and/or lands identified as landslide prone: consist of the body of water or wetland or the extent of unstable or potentially unstable areas plus 30 feet and: the area to the outer edges of the riparian vegetation plus 30 feet; or to the extent of the seasonally saturated soil plus 30 feet; or to the extent of unstable and potentially unstable

areas plus 30 feet; or 100-feet slope distance from the edge of the wetland, whichever is greatest. RMZs do not apply to seasonal ditches that were constructed to deliver water to downstream users.

Additional Recommendations:

Complete restoration projects for stream, headwater springs, lake, pond, and wetlands at the rates and amounts called for in Alternative D. Relates to FW-OBJ-WTF-01

Monitor outcome indicators for stream, headwater springs, lake, pond, and wetland restoration projects to assess their benefits the resource. Relates to FW-OBJ-WTF-01.

Wildlife
Introduction

As one of the last remaining intact temperate zone ecosystems on the planet, the GYE hosts important habitat for a variety of important and iconic wildlife species. The CGNF encompasses much of the Montana portion of the GYE. With large amounts of wild, secure land, the CGNF hosts crucial core habitat for a wide variety of native species and provides the doorstep for wildlife connectivity to other ecosystems in the Northern Rockies.

Our supporters have a strong interest in management that affects wildlife of the GYE. We advocate for thriving populations of grizzly bears, wolves, and ungulates in Greater Yellowstone and work to maintain important ecological processes like migrations and long-distance dispersal. Our work blends policy advocacy with on the ground projects that reduce conflicts with wildlife, remove barriers to wildlife movement, and build public support for the iconic species of Greater Yellowstone.

GYC provided extensive science-based comments in our assessment letter (appendix C). We maintain many of the concerns outlined in the wildlife section of those comments. In general, the draft forest plan could be improved through including more plan components that provide actionable and measurable stepping stones toward achieving the lofty goals outlined in the desired conditions. GYC is encouraged by the progress made around connectivity, through application of rigorous modeling and proposed designation of key linkage areas. While this aspect of the draft plan is promising, it does not go far enough to ensure habitat connectivity for dispersing species like grizzly bears and migrating species like elk, deer, and pronghorn. Additionally, both the wildlife and recreation portions of the draft plan and associated analysis fail to adequately consider the potential impacts of recreation on wildlife.

We also raise concerns in the following comments regarding the overall strategy the CGNF appears to be taking for ensuring viable wildlife populations, as well as the ways in which the monitoring plan could be greatly improved. The sections that follow are structured by overarching observations/themes of the wildlife sections of the draft plan and DEIS, with general recommendations and species-specific recommendations relevant to each of those broader themes.

Logical flaw in strategy

The National Forest Management Act (NFMA) 16 U.S.C. [sect] 1604(g)(3)(B) requires the Forest Service to manage for diverse plant and animal communities and maintain viable populations. The approach taken by the CGNF in the draft revised forest plan to building management direction that ensures species viability is based upon the coarse-filter/fine-filter approach. The assumption underlying this approach is that healthy ecosystem characteristics- vegetation, soils, water, and air quality- within the natural range of variation create the conditions needed to maintain viable populations of animal communities. This ignores the reality that for some species, the limiting factors may not be related to any of these ecosystem characteristics and stem from stressors external to ecosystem integrity and function.

Therefore, for the approach to be successful, there need to be enough species specific or fine filter plan components to ensure limiting factors unique to a given at risk species are addressed. In general, the CGNF fell short in capturing species specific plan components needed to mitigate the effects of limiting factors for a variety of species. Throughout the sections that follow, we include species specific recommendations as examples.

Within this coarse-filter/fine-filter strategy, it appears the secondary approach to ensuring species viability is to rely on land designations that offer protections of some kind as a proxy for protecting habitat for wildlife. This strategy decouples management direction from an understanding of the limiting factors for species. Once again, we wonder whether the Forest Service has adequately examined their assumption that there are not stressors either present in or unique to various land allocations that might be limiting factors for some species.

There are cases where the logic that land designations like recommended wilderness provide adequate species protections do not hold. Again, we provide species specific examples throughout the sections that follow.

The DEIS abuses the concept of natural range of variation throughout the analysis of effects on wildlife. For the same reasons mentioned above, it is illogical to assume that conditions within the natural range of variation are adequate to ensure species viability. Climate change poses substantial uncertainty around future conditions and potentially limiting factors for wildlife. The Custer Gallatin NF needs to demonstrate how they have considered the effects of management direction on at risk wildlife species in the context of best available science around the specific conditions and stressors for each individual species, and climate driven changes in stressors over time.

Recommendation:

Given the flaws associated with the strategy for ensuring species viability, incorporate additional species-specific plan components that account for limiting factors not captured through the coarse- filter, to ensure maintenance of viable populations. Specific recommendations for several species are included throughout these comments.

Key indicators and monitoring

As an initial matter, the key indicators portion of the wildlife diversity section of the DEIS mentions key indicators for wildlife tier up to ecosystem indicators listed in other sections. The Forest Service needs to be explicit about which of these ecosystem indicators are being used to consider effects of management direction on wildlife species and progress toward desired conditions for wildlife. For example, which of the ecosystem characteristics and associated indicators from Table 30: Terrestrial vegetation key ecosystem characteristics (Page 144, DEIS) are being considered as indicators for which

wildlife species? It is very difficult for the public to effectively review the draft plan and DEIS without clarity and transparency around what indicators the CGNF is using to assess wildlife status. The Forest Service needs to resolve ambiguity and inconsistency around key indicators, how they are tied to species, and how they are used.

With regards to monitoring, the 2012 planning rule directives state: [ldquo]The Responsible Official has discretion to set the scope, scale, and priorities for plan monitoring within the financial and technical capabilities of the administrative unit but shall include one or more monitoring question(s) and associated indicator(s) for the eight items set out in the Planning Rule at 36 CFR 219.12(a)(5).

1. Each plan monitoring program must contain one or more monitoring questions and associated indicators addressing each of the following:

1. The status of select watershed conditions.
2. The status of select ecological conditions including key characteristics of terrestrial and aquatic ecosystems.
3. The status of focal species to assess the ecological conditions required under [sect] 219.9.
4. The status of a select set of the ecological conditions required under [sect] 219.9 to contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern.
5. The status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives.
6. Measurable changes on the plan area related to climate change and other stressors that may be affecting the plan area.
7. Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities.
8. The effects of each management system to determine that they do not substantially and

permanently impair the productivity of the land (16 U.S.C. 1604(g)(3)(C)).[rdquo]

Wildlife monitoring questions and indicators are grounded in substantial assumptions around what coarse filter measures of habitat characteristics can tell us about the health of wildlife populations. Many of the outcome indicators for wildlife are vegetation related. Given vegetation conditions are not necessarily limiting factors for all at risk species, the monitoring plan design does not meet the requirement of providing information about status of focal species or progress toward wildlife related desired conditions.

Additionally, there are no aspects of recreation monitoring geared toward tracking changes in recreational demand or use pattern, and in turn the potential impacts of recreation on wildlife.

Recommendations:

Provide clarity around what ecosystem and vegetation indicators are outcome indicators for which wildlife species.

Build a more rigorous wildlife monitoring plan that allows for assessment of progress toward desired conditions and status of wildlife species.

Plan components that ensure progress toward desired conditions and plan clarity

We recognize and appreciate many of the strong desired conditions outlined for wildlife, however believe the plan would be greatly improved and better meet NFMA and 2012 planning rule requirements around species viability and connectivity through more plan components that guide the design of projects (standards and guidelines) and thus ensure progress toward desired conditions.

Additionally, the plan could be improved by ensuring species specific plan components are consistent with stated desired conditions for all wildlife. The Forest Service also needs to provide more transparency, clarity, and detail around several aspects of the wildlife effects analysis and draft plan.

Recommendations:

FW-DC-WL-02: Habitat conditions contribute to species recovery needs such that population trends of listed species are stable or increasing across their range. Lands within critical habitats designated by the

U.S. Fish and Wildlife Service provide the physical and biological features identified as essential to the conservation and recovery of listed species.

We support this desired condition but believe the geographic scope of habitat protections for grizzly bears in the draft plan is inconsistent with this desired condition. It is logical that achieving this desired condition requires addressing the effects of forest activities on species across their distribution on the forest. To ensure species specific plan components are compatible with this desired condition, we suggest extending grizzly bear habitat protections to reflect current grizzly distribution (see grizzly bear section for more detail).

Incorporate standards and guidelines that provide certainty around progress toward desired conditions. Species specific recommendations are included throughout these comments.

Provide more transparency around what constitute desired non-native species, and the process for determining these species.

Provide more specific information about the types of human infrastructure considered in the wildlife analysis of proportions of unique habitat types and other habitat types falling within areas impacted by infrastructure. For example, was recreation infrastructure considered in this analysis? (page 313, DEIS).

Species specific examples regarding progress toward desired conditions and plan clarity

Lynx

Lynx are a rare carnivore listed as threatened under the Endangered Species Act in 2000 and are to be managed consistent with the 2007 Northern Rockies Lynx Management Direction. The U.S. Fish and

Wildlife Service designated critical lynx habitat in 2014 (see appendix C, page 55, figure 26). The draft plan simply references the 2007 lynx management direction. For the public to assess possible conflicts between the draft plan and the 2007 lynx management direction/2014 critical habitat, the relevant lynx plan components need to be integrated into the draft plan.

Recommendation:

Rather than including lynx management direction by reference, incorporate plan components that address desired conditions, goals, objectives, standards and guidelines that will integrate 2007 lynx management direction and 2014 critical habitat updates.

Bats

Recommendation:

Given the potential for humans to be vectors for spread of white nose syndrome, which is the primary limiting factor for bats in the North America right now, the CGNF should consider proactive plan components around the suitability of important roost sites or winter hibernacula for recreational caving.

Bighorn sheep

The draft forest plan contains a desired condition for bighorn sheep that seeks to establish habitat conditions supporting robust bighorn sheep populations that could ultimately serve as source populations for facilitating

restoration in other areas. However, the only additional plan components specific to bighorn sheep are related to mitigating disease spread. While disease has certainly been a substantial factor in bighorn sheep decline and therefore must be addressed, there are other stressors that could inhibit maintenance of robust populations, such as human recreational disturbance on winter range and habitat fragmentation from highways. Evidence suggests bighorn sheep avoid areas of human activity in the winter, thus reducing available habitat during a stressful and vulnerable time of the year (Courtemanch 2014). The CGNF could include additional plan components that mitigate potential recreation impacts on ungulates like bighorn sheep (more information provided in the recreation and wildlife section below). We also suggest a goal around permeability of highways adjacent to National Forest lands.

Recommendations:

We maintain our comments on the proposed action: [ldquo]Similar to what the Bridger-Teton and Caribou-Targhee National Forests in Wyoming have instituted (See the [ldquo]Don[rsquo]t Poach the Powder[rdquo] program - https://jhalliance.org/campaigns/dont-poach-the-powder/; Figure 4), we recommend that the CGNF consider big game winter closures that prohibit all human presence/activities during critical time periods to mitigate the potential for significant recreational impacts to big game.[rdquo]

Include plan components that reference permeability of adjacent highways (see connectivity and key linkage area comments below for more detail around example language).

Connectivity and key linkage areas

GYC appreciates CGNF leadership in incorporating rigorous connectivity modeling and proposing key linkage area designations as part of the draft forest plan. We believe the restrictions outlined in the key linkage areas are an important first step toward facilitating connectivity for a variety of species.

However, the restrictions associated with the key linkage areas are not enough to ensure connectivity is achieved and maintained into the future. For example, we suggest the CGNF be more explicit about commitment to facilitating connectivity across interstate 90. Interstate 90 separates the Gallatin key linkage area from the Bridger key linkage area and represents a substantial barrier to movement for a variety of wildlife species. At the Montana Wildlife and Transportation Summit in December, stakeholders had the opportunity to hear from Washington Department of Transportation and Forest Service employees who shared a variety of insights related to their success in accomplishing a suite of Snoqualmie pass wildlife crossings. One lesson learned was that connectivity language in the Okanogan- Wenatchee National Forest plan that specifically referenced wildlife permeability across Interstate 90 allowed for a more collaborative, efficient process when Washington Department of Transportation began work on highway improvements adjacent to National Forest lands. An MOU between the Federal Highways Administration (FHWA) and the U.S. Forest Service allows the Forest Service to adopt a FHWA NEPA without a separate decision if the highway project is designed to be consistent with the Forest land management plan (e.g. ecological connectivity included as part of the purpose and need for the Washington Department of Transportation highway improvement project). Another example is the Carson National Forest in New Mexico, which included the following plan components in their draft revised forest plan (2019):

[ldquo]Consider identifying linkages and barriers to wildlife movements and to mitigating such threats during project design by working with NMDFG, New Mexico Department of Transportation, and others.[rdquo] And:

[ldquo]Consider working collaboratively with NMDGF and NMDOT to identify wildlife migration routes and

important habitat, to improve or maintain connectivity for terrestrial species.[rdquo]

In addition to barriers such as highways, it[rsquo]s important for the Forest Service to consider that the cover and species diversity offered by riparian ecosystems through stream corridors provide important habitat for wildlife movement through landscapes. The CGNF emphasizes coarse filter ecosystem characteristics as foundational to providing the habitat conditions needed for ensuring wildlife species viability yet falls short in providing specific plan components with clear and predictable direction that link wildlife connectivity to riparian ecosystems. The CGNF could be explicit about management for stream corridors that provide dispersal and

connectivity opportunities. The forest plan could provide more specificity around desired riparian conditions and plan components for achieving those conditions. For example, specificity around native species, woody debris, litter, root masses, vegetation, overstory cover, water temperature, spatial extent of riparian communities within the context of natural range of variation, and ecological resiliency are all important and not adequately addressed (WTR-DC-03, page 22, draft plan is vague). The CGNF needs to be more specific about desired habitat characteristics around streams, water bodies, seeps and springs, etc. Scales or levels of management activities in riparian areas could be defined to not inhibit progress toward desired conditions, and management direction could include avoidance of motorized equipment in riparian areas.

In addition to lack of consideration for the impacts of highways and importance of riparian corridors for wildlife connectivity, the proposed management direction for key linkage areas is inadequate for ensuring viable metapopulations of wildlife at varying spatial scales. Functional connectivity requires conditions suitable for occupancy and in cases of long-range dispersal, conditions that will contribute to foraging, denning, cover, interspecific relationships, and other vital functions for wildlife to survive. In addition to restricting additional facilities and the number of years in a 10-year period when high disturbance projects are allowed, management in key linkage areas should be proactive and create conditions needed for connectivity. This could include:

-Removal of unneeded structures or other barriers to wildlife movement

-Timing restrictions for human use of sensitive habitat like winter range or nesting areas

-Removal or eradication of invasive species to improve foraging opportunities in wildlife movement corridors

-Quick rehabilitation of temporary roads in key linkage areas

-Closure and rehabilitation of unneeded roads and trails

-Restoration of decommissioned routes still being used

-Requirements around mitigation of some kind when new routes are constructed

-New trails cannot be constructed in important wildlife corridors regardless of whether or not the area falls within a designated key linkage zone

-Design facilities to minimize human/wildlife conflict.

We also have a few critiques of the analysis the CGNF used to assess areas important for connectivity. The analysis extent of 100 miles around the CGNF boundary is arbitrary, and appendix B of the DEIS (page 140) does not acknowledge this or attempt to explain why broader scales were not considered. We recognize there were likely substantial computational limitations, but if this is the reason for the arbitrary analysis extent, then the CGNF should provide transparency around those limitations.

The more important issue is our concern with the human modification index used in the connectivity modeling. Our understanding is that this index does not take into consideration recreation related infrastructure. The DEIS states that human use/trails may play a role in habitat fragmentation and connectivity, yet recreational infrastructure wasn[rsquo]t a factor considered in the connectivity models.

Given the abundant evidence that recreation may influence wildlife behavior and in turn habitat selection (Larson et al. 2016), the connectivity modeling exercise may not have fully captured the true permeability of the landscape for a variety of wildlife species. While recreational infrastructure doesn[rsquo]t necessarily equate to recreational use, our recent recreation inventory indicated that hotspots of recreation infrastructure at least correspond to recreation demand in some cases (Regan 2018). Given there is little spatially explicit data on recreational use (other than what can be found in digital applications like Adventure Projects, Strava, etc.), recreational infrastructure may be the best proxy the forest can use to evaluate potential recreation influences on connectivity. Incorporating recreation infrastructure into the connectivity modeling may have influenced model outcomes and provided differing results in areas with a high density of trails and other recreation sites. Perhaps this would have altered key linkage designations.

Regardless of the model outcomes, recreation is another stressor that wasn[rsquo]t adequately considered in developing more specific plan components that will ensure progress toward desired conditions for connectivity. With regard to recreation infrastructure in the context of connectivity, it appears the Forest Service proposed key linkage designations in areas not otherwise protected by a designation such as Wilderness, Recommended wilderness, Backcountry areas, etc. As alluded to in our comments about the strategy of the draft plan, we believe this premise is problematic because it assumes there are not stressors present in Wilderness, Recommended wilderness, or Backcountry areas that may impact habitat connectivity for wildlife. With rapid growth in visitation to Yellowstone National Park and the Custer Gallatin National Forest, as well as the growth rate of Gallatin county and the city of Bozeman, there may be rising recreational pressure and changing recreational patterns in many areas of the forest. Increasing recreational pressure in Wilderness, Recommended wilderness, and Backcountry areas could potentially fragment habitat through proliferation of user created trails (Ballantyne et al.

2014, Barros et al. 2013, Pickering et al. 2012, Monz et al. 2010). The CGNF needs to demonstrate how the potential effects of recreation and recreation infrastructure on vital functions for species, such as movement, feeding, breeding, etc. have been considered and accounted for in the draft plan. Key linkage areas and the associated restrictions on no additional infrastructure should include other important areas for connectivity, regardless of other land designations. The effects analysis doesn[rsquo]t describe how other land designations will serve as an adequate proxy for a key linkage area designation in protecting migrating or dispersing wildlife.

Recent research on grizzly bear habitat connectivity between the GYE and NCDE (Peck et al. 2017), an analysis of important areas for connectivity between isolated wolverine populations (Inman et al. 2013, Inman 2013), and current knowledge of potentially important migratory routes for elk, mule deer, and pronghorn (appendix C, pages 27-32, figures 8-11) all highlight the importance of the Madison mountain range as a stepping stone to low elevation valleys and the Tobacco Root and Gravelly mountain ranges on the Beaverhead-Deerlodge NF. Additionally, the CGNF lands in the Gardiner basin play an important role for ungulates moving out of Yellowstone National Park into lower elevation lands of the Paradise valley in the winter (appendix C, pages 31-35, figures 1-3). However, no portion of either the Madison mountain range or the Gardiner basin was included as a key linkage area, presumably because the assumption is that habitat connectivity through the area will be protected by some other proposed or existing land designation. We disagree with this logic given stressors inhibiting wildlife movement may not be eliminated by other land designations.

Recommendations:

FW-DC-WL-05: Landscape patterns throughout the Custer Gallatin provide habitat connectivity for wildlife, particularly wide-ranging species such as medium to large carnivores and wild ungulates. Resulting habitat connectivity facilitates daily and seasonal movement, as well as long-range dispersal of wildlife to support genetic diversity, allowing animals to adapt to changing conditions over time.

We strongly support FW-DC-WL-05 for wildlife habitat connectivity, and we are concerned there are not adequate fine-filter plan components to ensure progress toward this desired condition. We provide more specific recommendations in each species-specific section below.

Include a desired condition for permeability of highways adjacent to Custer Gallatin National Forest lands, including Interstate 90.

Include more specific plan components for desired ecological characteristics and progress toward to those conditions in riparian areas and stream corridors.

Incorporate additional proactive key linkage plan components to facilitate conditions needed for wildlife to forage, den, seek cover, nest, avoid human stress, and engage in interspecific relationships, such as:

*
* Removal of unneeded structures or other barriers to wildlife movement
* Timing restrictions for human use of sensitive habitat like winter range or nesting areas
* Removal or eradication of invasive species to improve foraging opportunities in wildlife movement corridors

* Quick rehabilitation of temporary roads in key linkage areas
* Closure and rehabilitation of unneeded roads and trails
* Restoration of decommissioned routes still being used
* Requirements around mitigation of some kind when new routes are constructed
* New trails cannot be constructed in important wildlife corridors regardless of whether or not the area is designated as a key linkage zone
* Design facilities to minimize human/wildlife conflict.

Assess the effects of not considering recreation infrastructure in connectivity modeling

Consider additional key linkage designations in important connectivity areas regardless of other lands designations already in place.

Species specific recommendations regarding connectivity and key linkage areas

Grizzly bear

Connecting Greater Yellowstone grizzly bears to the Crown of the Continent is a priority for Greater Yellowstone Coalition because it is key to ensuring the persistence of grizzly bears in the lower 48 over the long-term. We provided extensive science-based comments on this topic as a part of the Northern Continental Divide Ecosystem (NCDE) Forest Plan Amendment process, as well as for Helena Lewis and Clark National Forest Plan revision (see appendices E, F, and G). As detailed in our assessment letter, GYC had substantial concerns over the 2016 delisting rule and conservation strategy failing to adequately address lack of connectivity as a threat to the long-term persistence of grizzly bears in the lower 48 (see appendix C).

The grizzly bear was listed as a threatened species in the contiguous lower 48 states under the U.S. Endangered Species Act (ESA) (40 Fed. Reg. 31,734 (July 28, 1975), and should be recovered and managed as a large well-connected Northern Rockies meta-population. The recent ruling by Chief District Judge Dana Christensen in Crow Indian Tribe et al. vs. United States of America et al. (2018) over the 2016 delisting rule underscores the importance of considering population segments like the GYE within a broader context. Judge Christensen found that the U.S. Fish and Wildlife Service, [ldquo]Failed to consider how reduced protections in the Greater Yellowstone Ecosystem would impact the other grizzly populations[rdquo] (page 3). Additionally, the judge found the U.S. Fish and Wildlife Service to be arbitrary and capricious in their application of the ESA threats analysis for two reasons, one of which related to the [ldquo]illogical[rdquo] conclusion that the Greater Yellowstone grizzly population can remain genetically self-

sufficient (page 3). The U.S. Fish and Wildlife Service must consider how the currently isolated GYE grizzly bear population can qualify as recovered without regulatory mechanisms to provide for connectivity between this population and the NCDE population. The Custer Gallatin Forest Planning process offers the Forest Service an opportunity to commit to and provide for such connectivity.

Connectivity between the GYE and NCDE populations is key to restoring the meta-population structure that historically characterized grizzly bear presence within the intermountain west (Merriam 1922, Picton 1986, Craighead and Vyse 1996). Genetic isolation poses a threat to self-sustainability of the GYE grizzly bear population over the long-term (Haroldson et al. 2010), and management that restores and supports a meta-population structure will be important to the future of grizzly bears in the United States (Proctor et al. 2005). The grizzly bear management plans for both western Montana and southwestern Montana (respectively, Dood et al. 2006 and Montana Fish, Wildlife, and Parks 2013) articulate connectivity between the NCDE and GYE grizzly bear populations as a long-term management goal. The 2006 Dillon Resource Management Plan (page 70) includes habitat requirements that support connectivity for dispersing species like grizzly bears (BLM 2006). The Interagency Grizzly Bear Committee included enhancing connectivity between ecosystems as a goal in its 2018-2022 plan (IGBC 2018). The National Forest Management Act (NFMA) 16 U.S.C. [sect] 1604(g)(3)(B)

requires the Forest Service to manage for diverse plant and animal communities and maintain viable populations.

Ultimately, grizzly bear viability will depend on a meta-population structure with functional connectivity between recovery areas. As detailed in appendices E and F, section 7 of the ESA also requires that the Forest Service consider effects of forest plan components on the viability of GYE grizzly bears within a broader context, given the viability of lower 48 grizzlies depends on connectivity between populations that are currently isolated (https://www.fws.gov/endangered/lawspolicies/section-7.html).

We are very disappointed to see that the CGNF did not address concerns GYC previously raised (appendix C). Standards and guidelines that ensure secure habitat for grizzly bears are only applicable to the grizzly bear recovery zone/Primary Conservation Area (PCA) in the draft plan, and therefore fail to account for current grizzly bear distribution. The recovery zone is only roughly half of currently occupied grizzly bear habitat in the GYE. The 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem requires managing for a stable population of grizzly bears. To manage for a stable population, there need to be habitat protections that at a minimum reflect the area in which population health is monitored (the Demographic Monitoring Area) and should reflect current grizzly bear distribution. This shortcoming undermines the NFMA requirement to maintain viable populations.

We are encouraged by the attempts in the draft plan to establish plan components to support connectivity for a variety of species, including wide ranging habitat generalists like grizzly bears. We also recognize the efforts to include connectivity related plan components specific to grizzly bears. However, we are confident these plan components do not do enough to ensure functional connectivity, especially given habitat standards are limited in scope to the recovery zone/PCA.

With regards to grizzly bear specific connectivity components, it appears the premise of the stated objectives is that identifying suitable relocation sites will facilitate connectivity. While we strongly support identification of relocation sites as one tool to facilitate connectivity, as quoted in our comments on the Proposed Action, [ldquo]Translocation-based strategies do not create self-sustaining populations as mandated under the ESA [ldquo]but rather rel[y] on long-term intensive management to counteract the effect of connectivity loss on species viability[rdquo] (Carroll et al. 2001, page 2). The

characteristics associated with effective linkage zone function for large carnivores and ungulates include low open road density, low concentrations of human occupancy and development, an abundance of productive foraging habitat, and a healthy mix of forested and nonforested lands (Craighead et al. 2001; Walker and Craighead 1997; Servheen et al. 2003; Olimb and Williamson 2006).[rdquo]

Currently occupied ranges in the NCDE and GYE are around a minimum of 110 kilometers apart (Peck et al. 2017). While this distance between occupied ranges is within the range of dispersal distances identified for male grizzly bears (Blanchard and Knight 1991, McLellan and Hovey 2001, Proctor et al.

2004), dispersal over these distances would likely take place over a year or even several (Peck et al. 2017). Therefore, dispersal over this time frame requires conditions suitable for seasonal occupancy; others have shown secure habitat is important for connectivity for this very reason (Primm and Wilson 2004). As a result, the success of bears in connectivity areas will depend on many of the same habitat characteristics in the recovery zone that have driven successful population recovery.

Given habitat conditions must facilitate seasonal occupancy for functional connectivity between the GYE and NCDE to occur, it is reasonable to assume that the conditions needed in areas beyond the recovery zone/PCA to encourage functional connectivity would not be all that different than those necessary to foster demographic connectivity, which in the NCDE conservation strategy are structured around consistent evidence that roads negatively impact grizzly bears. An NCDE population level model containing covariates for indicators of human use such as road density was among the best fitting models out of the entire set of candidates in the Peck et al. (2017) study, providing another piece to the already large body of evidence indicating that grizzly bear habitat selection and as a result movement is influenced by roads and motorized access. Roads also influence grizzly bear survival (Proctor et al. 2018). Motorized access management in linkage areas between occupied habitats is an important component of maintaining genetic and demographic connectivity, and thus healthy and

sustainable grizzly bear populations (Proctor et al. 2018). Demographic connectivity areas to the Cabinet-Yaak (CYE) and Bitterroot (BE) ecosystems require no increase in road density using conditions that have allowed for female occupancy in zone 1 as the baseline.

As we previously emphasized (appendix C), [ldquo]The Forest Service must consider that roads (permanent or temporary, open or closed) and site development will increase human-bear conflicts and grizzly bear mortality and affect the potential for connectivity through important linkage areas. Both roads and development significantly contribute to habitat deterioration and fragmentation and are the two strongest predictors of grizzly bear survival/mortality on the landscape (Mace et al. 1996, Schwartz et al. 2010). Road density is also strongly related to secure habitat, which is critical to the survival and reproductive success of grizzly bears (Mattson et al. 1987; IGBC 1994; Schwartz et al. 2010) and is primarily achieved through motorized access management. As such, connectivity and secure habitat are often described in terms of open road density and large non-motorized habitat blocks. Managing the landscape to reduce hazards to bears requires balancing road density standards with the amount of

secure habitat available (Summerfield et al. 2004); [ldquo][I]f road densities become too great, secure areas become isolated islands surrounded by heavily roaded areas. Travel among secure islands then becomes more hazardous, effectively fragmenting the landscape[rdquo] (Schwartz at al. 2010, page 661).[rdquo]

Recent research on potential grizzly bear movement corridors used a randomized shortest path algorithm and step selection functions based on individual grizzly bear movement data within the GYE and NCDE (Peck et al. 2017). This approach allows for a more realistic look than least cost path

modeling at the movement characteristics of a dispersing grizzly bear (Peck et al. 2017). In other words, the highest quality habitat that provides the least resistance to movement may not actually be the most likely corridor for a species like the grizzly bear, where movements are much more exploratory in nature (Peck et al. 2017). The model predictions in currently unoccupied range were validated by 21 confirmed observations (Peck et al. 2017). Model predictions highlight the importance of the Northern Gallatins as an important linkage area to the Bridger mountains, which could facilitate movement North, as well as the Madison range as a stepping stone for connectivity to the Gravelly mountains and beyond to the Tobacco Roots. See appendix C for a variety of grizzly bear connectivity figures included in our assessment letter.

While the CGNF acknowledged the importance of the Norther Gallatins and Bridgers through the proposal for key linkage areas in those zones, we are concerned the plan components specific to the key linkage areas are not enough to ensure secure habitat for grizzly bears. Additionally, we are concerned that no portion of the Madisons were included as a key linkage area. The DEIS analysis alludes to there being no need for a key linkage designation given so much of the area is designated Wilderness, Recommended Wilderness, or given some other special designation. This assumption fails to account for the potential impacts of increased human use of wild places that could lead to increased conflicts with bears, as well as the potential loss of secure habitat that could occur in the small portions of the Madisons outside of any designated area, thus allowing potential opportunities for new barriers to grizzly bear movement and population sinks.

As a safeguard, grizzly bears should be designated a Species of Conservation Concern for the reasons we previously outlined (appendix C):

[ldquo]The USFWS determination to remove the GYE population of grizzly bears from the federal list of endangered and threatened wildlife is not a surrogate for a NFMA determination of absence of concern within the planning area. In fact, the 2012 Planning rule (p. 36) states that species in the following categories must be considered for SCC designation (emphasis added):

1. Species with status ranks of G/T1 or G/T2 on the NatureServe ranking system. See exhibit 01 for description of NatureServe Conservation Status Ranks. Note: Species with NatureServe G/T1 or G/T2 status ranks are expected to be included unless it can be demonstrated and documented that known threats for these species, such as those threats listed for the species by NatureServe, are not currently present or relevant in the plan area.
2. Species that were removed within the past 5 years from the Federal list of threatened or endangered species, and other delisted species that the regulatory agency still monitors. Grizzly bears are an

umbrella species and a [ldquo]conservation reliant[rdquo] species, in that they will perpetually require efforts to conserve them on the landscape (Scott et al. 2005).

Arguably, this reliance, the current genetic isolation of the Yellowstone population, and the relatively limited occurrence of bears within their historic range in the lower 48 calls for additional caution and therefore protections. These factors should warrant designation and the accompanying protections as a Species of Conservation Concern.[rdquo]

Conflicts with livestock are increasingly a source of mortality for grizzly bears as they expand their range into different landscape contexts where livestock are more prevalent (IGBST 2019, MFWP 2019). This will continue to be a challenge as bears move out of Greater Yellowstone and will be a challenge that

requires constant commitment to solutions if the NCDE and GYE populations are ever connected. There are a variety of proactive conflict reduction measures allotment permittees can take to prevent conflicts and in turn prevent losses of both livestock and grizzly bears. However, recent research has shown that bear density is in itself an important factor related to probability of depredation (Wells et al. 2019), further emphasizing the need to create conditions that 1) allow GYE bears to move beyond the GYE and

1. do not add more opportunities for conflict (in the form of restocking vacant allotments) to the landscape, unless restocking these allotments is alleviating chronic conflict elsewhere.

Recommendations:

Plan components should secure some level of habitat protection on lands that reflect grizzly bear distribution in order to ensure a stable population.

2016 Conservation Strategy habitat standards and guidelines should extend beyond the recovery zone/PCA and into the DMA (at a minimum)

FW-DC-WLGB-02 (page 65): Outside the primary conservation area and recovery zone, grizzly bears occur where habitat is biologically suitable and grizzly bear occurrence is socially acceptable. Availability of secure habitat contributes to habitat connectivity, which facilitates grizzly bear movement between the Greater Yellowstone Area and other grizzly bear ecosystems.

This desired condition is strong but there are no stated goals, objectives, standards, or guidelines that will ensure maintenance of secure habitat for grizzly bears outside the recovery zone/PCA an in important connectivity areas. Additionally, the Forest Service must provide transparency around what areas are socially acceptable, and how the forest will make this determination. All the CGNF in southwest Montana is biologically suitable habitat. We recommend less restrictive language around where bears can occur outside the PCA and DMA, given statewide and IGBC goals for connectivity between the GYE and NCDE. We also recommend the same standards we suggested in our comments on the CGNF proposed action be applied to all areas outside the recovery zone/PCA that will facilitate grizzly bear dispersal to the north and west (appendix C):

[ldquo]Standards that limit future increases in open road densities in areas where secure core is adequate, and standards that reduce open road densities where it is currently too high to promote use by male grizzly bears through an area (see Schwartz et al. 2010). Open road densities above 1.0 mi/ mi2 and total road densities above 2.0 mi/mi 2 have been shown to suppress local habitat use by grizzly bears (Mace and Manley 1993, Wakkinen and Kasworm 1997), while survival rates for grizzly bears decreases relative to high road density with sub-adult male survival decreasing sharply with road densities above 1.0 mi/mi 2 (Boulanger and Stenhouse 2014). Specifically, areas with road densities at or below 1 mi/mi 2 should be maintained at this level, and areas with high road densities (>2mi/mi 2) should be reduced to 2mi/mi 2 .

In the very least, a standard that [ldquo]there shall be no net increase in miles of roads open to public

motorized use on NFS lands above the baseline[rdquo] should be applied to lands throughout the DMA as well

as potential connectivity areas (including lands outside the PCA and DMA).

We also recommend inclusion of a standard pertaining to and limiting site development to one increase above baseline per decade throughout connectivity areas, including outside the PCA. Though food storage orders help reduce the potential for conflicts associated with unsecured attractants, enforcement is often difficult, and compliance not guaranteed. Limiting the number of developed sites

on public lands is another means to prevent increased bear-human conflicts and associated mortalities as bears begin using these areas as desired.

The Forest must also consider that motorized use of trails including ATVs and dirt bikes can displace grizzly bears (see Ladle et al. 2018) and mountain biking can increase the likelihood of conflicts with bears. Similarly, to roads, we ask CGNF to consider managing trails in such a way that doesn[rsquo]t increase conflict and mortality and to include specific plan components to support this. For example, before new trails are developed and/or opened to mountain biking in grizzly bear habitat, there should be careful evaluation of the safety of enhancing mountain bike access in to an area where bear density is high (See:https://bloximages.chicago2.vip.townnews.com/helenair.com/content/tncms/assets/v3/editorial/f/51/f5163100-6bd2-518d-b95f-ffab9b03c829/58c3179d5fa81.pdf.pdf). To help mitigate displacement from motorized use, Ladle et al. 2018 referred to the importance of access management and suggested that [ldquo]restricting trail use by motorized recreationists will allow grizzly bears to maximize foraging opportunities and reduce required investment in avoidance behaviors[rdquo]. The forest should consider seasonal closures of trails for mountain bike and ATV use during key bear use seasons.[rdquo]

Grizzly bears should be designated a Species of Conservation Concern in Region 1

FW-GO-GRAZ-02 (Alternative D, page 76 draft plan): When evaluating vacant livestock allotments, the Forest Service may emphasize allotment closure for accelerated ecological enhancement in areas of greatest conservation concern This includes, but not limited to proposed or established research natural areas or special areas, at risk species habitat, under-represented reference areas, native species restoration areas, key linkage areas, conservation watershed networks, areas with opportunities for reduced risk of disease transmission between domestic and wild animals, or retention for forage reserves (grassbanks) or opportunities to enhance management or improve resources through combination with adjacent allotment(s). The Forest Service may de-emphasize use demand as a consideration in these types of conservation areas.

We support this plan component proposed in alternative D and recommend revising to add areas important for wildlife connectivity (not limited to key linkage zones) and areas of high grizzly bear density and thus higher probability of conflict (Wells et al. 2019) to the list of factors considered in evaluating allotment closure.

FW-STD-GRAZ-02/03 (alternatives B and C, pages 76-77 draft plan): We support these restrictions on sheep or goat stocking in certain geographic areas with stocking in some areas contingent on disease risk mitigation. However, we strongly recommend these contingencies include potential risk for conflicts with grizzly bears, especially in the Bridger/Bangtail/Crazy Geographic area, given the potential of these corridors for grizzly bear dispersal to the NCDE. If risk of conflict is determined to be low, sheep and goat stocking for the purposes of weed control should only be allowed if robust predator/livestock conflict prevention measures will be applied. These conflict prevention measures could be captured in the draft plan in the form of standards.

Given the role of livestock conflicts in grizzly bear mortality, we recommend the Forest Service establish a goal to work with livestock permittees on identifying and incorporating proactive conflict prevention measures in allotment management plans.

Given active livestock allotments within the recovery zone are below the 1998 baseline (DEIS, page 383) and restocking of vacant allotments is possible, we ask that the Forest Service commit to maintaining

vacant allotments that were previously retired for the purposes of reducing conflicts between bears and livestock.

Big game

We described the importance of big game migrations in our assessment letter (appendix C):

[ldquo]Each year, thousands of elk migrate back and forth between distant winter ranges in Wyoming, Montana, and Idaho to high-elevation summer ranges near the core of Yellowstone National Park. Their abundance sustains diverse carnivores and scavengers, attracts tens of millions of dollars to gateway communities, and inspires national and global interest in America[rsquo]s premier national park. These migrations define and unify Greater Yellowstone, both ecologically and culturally, and are considered by scientists to be the [ldquo]engine of the ecosystem.[rdquo] The Custer Gallatin is home to and used by many of these elk, including the Madison herd (see Figures 2 and 3) and provides access to critical big game winter range for many GYE species (see Figure 3). However, The Greater Yellowstone Ecosystem, of which the Custer Gallatin is an integral and essential part, is not immune to a growing number of ecological changes and conservation challenges. Subdivision of critical winter range, human and energy development, increased recreation, and roads have reduced and fragmented the corridors and habitats needed to sustain seasonal wildlife movements. In addition, some populations are being impacted by hotter and drier summers, invasive species, and introduced diseases. A combination of these factors has led to declines in several elk herds across the region (see Wyoming Migration Initiative [ndash] www.migrationinitiative.org and Greater Yellowstone Migrations [ndash] www.greateryellowstonemigrations.com).

Additionally, as elk migrate from Yellowstone[rsquo]s core to winter ranges each fall, they cross an incredibly complex terrain of land ownership and management regimes. Moving from the national park, to Forest Service, Bureau of Land Management, state, and private lands, wildlife are forced to navigate roads, subdivisions, fences, pump-jacks, livestock operations, and many other challenging features that stem from a diversity of land ownership and increasing development. Even within federal agencies, land management provisions can change radically at jurisdictional borders. The incremental loss of critical seasonal habitat outside park boundaries threatens Yellowstone[rsquo]s migratory wildlife. Simply put, if migration corridors are severed, there will no longer be elk, pronghorn, mule deer, bighorn sheep, or moose in Yellowstone National Park or beyond (see Figure 1 showing migration pathways for these species).

The Forest Service clearly states the importance of wildlife corridor connections between mountain ranges within the Proposed Action under Distinctive Roles and Contributions. It highlights the three unique mountain ranges (Bridger, Bangtail, Crazy mountains) that include most native species and is a potential wildlife corridor between the Greater Yellowstone Ecosystem and other large blocks of wildlife habitat to the north, such as the Northern Continental Divide Ecosystem in northwest Montana (Page 131, Proposed Action). GYC also includes the Gallatin and Madison mountain ranges as unique and important for wildlife migration to the north and west of those ranges.[rdquo]

Given the role of the CGNF in facilitating migrations for several big game species (see assessment letter, appendix C), we maintain our previous recommendations, including those related to coordination with state agencies around Secretarial Order 3362:

Recommendations:

Work with Montana Fish, Wildlife, and Parks to identify and designate critical big game habitat and migration pathways using best available science and data.

Develop forest plan components that will protect and preserve these designated areas, including:

*
* No surface occupancy for oil and gas leases in designated corridors
* Seasonal closure of important big game winter ranges

* Commitment to working with Montana Department of Transportation to ensure permeability of highways adjacent to designated migration routes

Develop coordinated administrative actions that result in cross-boundary recognition and protections for migration routes to ensure Yellowstone National Park[rsquo]s iconic wildlife survive in a time of climate change and increasing human pressure.

Use the FIA data and VMAP data to model vegetation patterns on the landscape Create and implement ecosystem integrity targets

Review and fully consider Department of Interior Secretarial Order 3362 to leverage the directives, resources and partnerships for the benefit of wildlife corridor conservation.

Develop [ldquo]action plans[rdquo] if enough, existing plans do not exist, in coordination with states that include:

*
* Habitat management goals and associated actions related to big game winter range and migration corridors;
* Measurable outcomes; and
* Budgets necessary to complete respective action(s).

Assess state-derived migration data [ldquo]early in the planning process for land-use plans and significant project-level actions that bureaus develop.[rdquo] (from S.O. 3362)

Update existing Memorandums of Understandings with state agencies so that they address the conservation needs of winter range and migration routes.

Establish a goal to communicate with agencies across jurisdictions (including states) so that adjacent land use plans that host winter habitat or migration routes are consistent with one another.

Recreation and wildlife

We consistently noticed inadequate consideration of the potential impacts of recreation on wildlife. A recent systematic literature review indicated that in general, recreation has negative effects on wildlife, especially snow-based recreation (Larson et al. 2016). We recently conducted a thorough review of recreation impacts on lands, waters and wildlife which indicated a variety of negative effects of

recreation aren[rsquo]t adequately considered in land management frameworks (appendix H). While there remain a lot of questions regarding the population and community level effects of recreation on wildlife, and while effects may vary depending on the scale of study, the substantial evidence indicating negative effects of recreation on wildlife behavior and habitat selection (Larson et al. 2016) hasn[rsquo]t been well considered in the Custer Gallatin DEIS.

Recommendations:

Include plan components to account for potential recreation related impacts on wildlife. Recreation is a potential stressor to wildlife (Larson et al. 2016) and is not accounted for in the stated goals, objectives, standards, and guidelines that presumably will achieve desired conditions for wildlife forest-wide.

Provide clarity and specificity around how the CGNF will accommodate rising recreational demand while also maintaining balance and ensuring other resource values aren[rsquo]t degraded.

Species specific recommendations regarding recreation and wildlife

Wolverines

The wolverine is an imperiled species facing loss of habitat from climate change and recreational disturbance. Small populations are increasingly isolated. In our assessment letter (appendix C), we explained the outcome of the 2016 court ruling around the USFWS withdrawal of their proposal to list the North American wolverine as a threatened species under the ESA. Specifically, [ldquo]Summary

judgement was awarded to the plaintiffs on April 4, 2016 vacating the Service[rsquo]s August 13, 2014 withdrawal of its proposed rule to list the North American wolverine as threatened under the ESA. The Court agreed with the plaintiffs that: (1) the Service unlawfully ignored the best available science by dismissing the threat to the wolverine posed by climate change; (2) the Service unlawfully ignored the best available science by dismissing the threat to the wolverine posed by genetic isolation and small population size. And, [ldquo]As such, the Custer Gallatin plan is required to conserve the species under 36

C.F.R. [sect] 219.9(b)(1), by providing ecological conditions that [ldquo]protect, preserve, manage, or restore natural environments and ecological communities to potentially avoid federally listing of proposed and candidate species[rdquo] as defined by 36 CFR [sect] 219.19. The EIS must demonstrate that the plan direction will meet these regulatory criteria.[rdquo]

Recent research further highlighted the effects of motorized and non-motorized dispersed recreation on wolverine habitat use, yielding a substantial amount of loss of high-quality winter habitat for females (Heinemeyer et al. 2019). The Custer Gallatin draft plan acknowledges the potential effects of winter recreation on wolverines but falls short by not establishing any plan components to address the potential impacts of increasing dispersed winter recreation in high quality wolverine habitat. Given the threats posed to wolverine by winter recreation, the CGNF must demonstrate that management direction will protect habitat in a way that will avoid federal listing of this proposed candidate species.

Recommendations:

FW-GDL-WLWV-01: To provide secure habitat for reproductive wolverines, there should be no increase in special use authorizations or designation of winter routes in maternal habitat for wolverines during the reproductive denning season.

This guideline could be modified to account for the potential impacts of dispersed winter non-motorized recreation on wolverines documented by Heinemeyer et al. 2019, through winter closure areas to all uses in important female wolverine reproductive/denning habitat. If mandatory closures aren[rsquo]t feasible, the CGNF could create [ldquo]humility zones[rdquo] where emphasis is placed on educating the public about their potential impacts on wolverines if they choose to recreate in important reproductive/denning habitat.

Consider a key linkage designation in the Madison range, given the importance of the area for Wolverine habitat connectivity and potential for impacts from non-motorized recreation despite other designations like Wilderness that already exist in the area.

Big game and Bighorn sheep

In our assessment letter (appendix C), we stated:

[ldquo]The Gallatin County is one of the fastest growing counties in the nation and with this we can expect to see a continued increase in recreational pressures and impacts. An important and effective way to protect big game species, including their critical habitat and migration pathways, is through winter range closures. Winter closure areas can be essential to the survival of certain wildlife species when they are especially vulnerable (i.e. their energy reserves are low, pregnant females are in their final trimester, deep snow limits movement and access to forage, and plants have not yet begun to green-up). Like what the Bridger-Teton and Caribou-Targhee National Forests in Wyoming have instituted (See the [ldquo]Don[rsquo]t Poach the Powder[rdquo] program - https://jhalliance.org/campaigns/dont-poach-the-powder/; Figure 4), we recommend that the CGNF consider big game winter closures that prohibit all human presence/activities during critical time periods to mitigate the potential for significant recreational impacts to big game.[rdquo]

Recommendations:

Consider winter closure areas in important big game winter range.

Other Species-Specific Issues

Bison

GYC has a long history of involvement with issues of bison management surrounding Yellowstone National Park and our members consider bison one of the most treasured and iconic species in the region. Ultimately, we are working to ensure wild bison are valued and managed like other wildlife in Greater Yellowstone. We envision a day when Yellowstone bison are sustainably managed as healthy, free roaming wildlife throughout national parks, national forests and other suitable habitats within the GYE and across the West. Specifically, we want to see Yellowstone bison freely use and broadly distributed year-round throughout existing tolerances areas outside the Park.

We provided substantive comments regarding bison in our Custer Gallatin Assessment Letter (pages 43-

1. as well as a joint letter for the Proposed Action (PA) and ask that both be referred to and considered here as well (see Appendix C and D respectively). The joint letter includes our responses to proposed plan direction for bison from the PA along with specific bison management recommendations and a science-based rationale for why the Forest Service should reconsider their Species of Conservation

Concern (SCC) determination for bison. While we still feel strongly that bison should be listed by the Regional Forester as an SCC, our comments below focus on the CGNF plan components that would support an arguably [ldquo]at risk[rdquo] species deserving of SCC status, and provide the ecological conditions necessary to maintain and contribute to the long-term viability and persistence of bison in the plan area and beyond.

The Custer Gallatin National Forest surrounds much of Yellowstone National Park and is critical habitat for and used by wild, migratory and resident bison. Approximately 88% of lands in the newly designated tolerance zone (~380,000 acres in total) outside of the Park are on Custer Gallatin lands (Montana, 2013). As an SCC for which the Forest Service likely does not have the capability to maintain a viable planning area population, the Forest has an obligation to maintain or restore ecological conditions on the Forest that contribute to maintaining a viable population of bison within their range (36 CFR 219.9(b)(2)(ii)). Facilitating dispersal throughout the

tolerance areas is the necessary ecological condition that the Forest should provide to contribute to bison viability.

As discussed in previous comments (see Appendix C and D) the best available science demonstrates that bison are threatened by restricted distribution, among other factors, and are considered many to be ecologically extinct across their former range. Plumb et al. (2009) noted the concern over restricted distribution for the conservation of the Yellowstone herd stating that [ldquo]management agencies should continue to prioritize conservation of bison migration to essential winter range area within and adjacent to the park.[rdquo] Bison require access to large areas of land and habitat for viability, this is one of the ecological conditions necessary for their persistence. Though bison historical distribution once covered much of the state of Montana, including many areas of the Custer Gallatin (see Figures 1 and 2,

Appendix D), currently the only truly [ldquo]wild[rdquo] bison in the state are those essentially confined to the boundaries of Yellowstone National Park. Historically, bison inhabited about 20,000 square kilometers (4,942,108 acres) in the headwaters of the Yellowstone and Madison Rivers (Plumb et al. 2009). As of 2008, they occupied only 3,175 square kilometers (784,560 acres), predominantly inside Yellowstone National Park.

Though Yellowstone bison now have access to ~380,000 acres of land outside the Park, they are still only using a small fraction of this area. The significantly constrained distribution of bison within the CGNF planning area not only raises concerns over the resiliency, adaptability and persistence of the planning area population, and therefore is a viability concern for the population and the species as a whole (see Appendix D), it also further perpetuates the significant management issues surrounding this population (i.e. dependence on the unacceptable practice of shipping bison to slaughter, unsafe and inhumane hunting in overcrowded small patches of land, etc.). While we realize constraints on their current distribution are due in part to current and past management actions and hunting, there is much more the forest can do, from a habitat perspective, to help facilitate dispersal and use throughout current tolerance areas. Certainly, range expansion within current tolerance zones is acceptable and should be encouraged given the expansion was made considering social tolerance issues and the low potential for conflict in this area. The Forest should prioritize providing for significant suitable habitat for bison throughout current tolerance areas as a critical and essential piece to improving the future of Yellowstone bison management and contributing to the restoration of species viability.

General Bison Management Recommendations

[ldquo]The key role of Custer Gallatin National Forest relative to bison is to provide and improve suitablehabitat[rdquo] (emphasis added, Forest Plan Revision Assessment, page 134). Thus, forest plan components must include direction to manage for bison habitat on Forest lands and encourage habitat restoration projects aimed toward improving habitat for bison in appropriate areas. For example, thinning, prescribed burns, meadow and aspen restoration, restoration of native grass species and fertilization can enhance forage production in lodgepole pine stands (Lindgren and Sullivan, 2014) that predominate over much of the lower elevation Forest lands west of the Park. Such prescriptions could also likely address other key wildlife species needs, so long as such activities take careful consideration of the effects and potential impacts to other species.

While plains bison are known to use a variety of habitats including forested areas, they are primarily grazers and therefore thrive in open grasslands and meadow complexes. Suitable (general and winter) habitat for bison exists in a patchwork of areas throughout the Forest, including in the new western tolerance area. However, as shown in Figure 18 from the Terrestrial Wildlife Report, there is a lack of contiguous suitable habitat providing effective corridor areas for bison to migrate and disperse farther out on the landscape and in to places such as the Taylor Fork and Upper Gallatin. The Forest should identify and manage for corridor/migration route areas for bison migrating from the Park to the Forest to facilitate dispersal throughout new and existing tolerance areas. Specifically, routes to the Taylor Fork and Upper Gallatin tolerance area should be identified in the forest plan, and habitat improvement projects implemented to provide a contiguous pathway of suitable habitat to facilitate the restoration of native bison to this area.

As stated in our joint PA letter, the following general management recommendations should be incorporated into specific plan components, including Desired Conditions, Guidelines, Goals, and Standards, as part of the Forest Plan Revision Process:

*
* The forest plan should aim to improve utilization of expanded bison habitat, especially in the new west side tolerance area. This includes working with the Park Service and MFWP to identify areas outside the Park that could serve as suitable winter and year-round habitat (taking into consideration private lands and inholdings) as well as identify the most likely migration corridors for bison to reach these areas from the Park.
* The forest plan should direct the Forest to work closely with the Park, MFWP, and other IBMP partner agencies to assess options for how to effectively restore bison to suitable habitat areas throughout tolerance zones, and establish objectives to implement plan components to support such restoration.
* The forest plan should commit to and prioritize (through plan components and other plan content) improving and maintaining potential habitat and corridor areas for bison through habitat improvement projects including: thinning, prescribed burns, meadow and aspen restoration, and restoration of native grass species and fertilization to enhance forage production.
* The forest plan should encourage volunteer grazing allotment retirement, acquisition of private lands/conservation easement opportunities as those opportunities arise, and work with other jurisdictions and agencies to facilitate safe highway crossings for bison (and other wildlife).

Comments Related to Specific Plan Components in Proposed DEIS Alternatives.

In general, we support bison direction that actively provides for bison habitat and promotes access to year-round forage and presence on National Forest System lands as included in Alternatives B and C, in addition to direction supporting a year-round self-sustaining bison population on the national forest as supported in Alternative D. We do not support Alternative E which does not seek to facilitate bison habitat improvement projects and aims to minimize impacts to livestock operations at the expense of supporting native bison within tolerance areas. The Forest has an obligation to do more in terms of recognizing and prioritizing the conservation and restoration of bison as a native, at-risk wildlife species than what Alternatives A and E, and to a lesser extent B and C, provide alone. We believe the Forest can sufficiently meet their obligation to provide habitat and necessary ecological conditions for bison by incorporating the following recommendations for specific plan components in the new Forest Plan.

Desired Conditions (FW-DC-WLBI)

1. Native bison have access to forage, security and movement corridors to facilitate distribution of the species to suitable habitats within the plan area.
2. Suitable habitat accommodates bison migrating out of Yellowstone National Park in winter, as well as supporting year-round bison presence on the Custer Gallatin National Forest.

Adequate connecting corridors exist between suitable habitats to facilitate bison on the landscape with sufficient distribution to be resilient to stressors, adaptable to changing conditions, and contributing to stable or increasing genetic diversity.

1. Educational materials, including signage at trailheads and campgrounds where bison may occur, are available to help forest users understand wild bison behavior and act accordingly in order to avoid conflicts.
2. Alternative D: Bison are present year-round with sufficient numbers and adequate distribution to provide a self-sustaining population on the Custer Gallatin National Forest.

In general, we support the above Desired Conditions (FW-DC-WLBI-01, 02, 03, 04) and thank the Forest for their inclusion, and specifically for adding the desired condition (FW-DC-WLBI-02) in response to our PA recommendation to provide for suitable bison habitat and adequate connecting corridors between habitats to promote improved bison distribution on the landscape. We do however recommend that the first desired condition FW-DC-WLBI-01 be amended to read [ldquo]Native bison have access to forage, security and movement corridors to facilitate broad distribution and dispersal of the species to suitable habitats within the plan area.[rdquo] Also, the Desired Condition FW-DC-WLBI-04 to have bison presence year- round with [ldquo]sufficient numbers and adequate distribution to provide a self-sustaining population on the Custer Gallatin National Forest[rdquo] is critical for meeting population viability requirements for bison within the plan

area (36 CFR 219.9(b)(2)(ii)) while supporting broader bison recovery efforts (see Appendix C and D for supporting literature and additional justification).

Goal (FW-GO-WLBI)

01 The Forest Service engages with State, Federal, Tribal, and other willing partners to expand the science of bison ecology, foster awareness of the important biological, ecological and

cultural roles of bison on the landscape, and cooperatively develop adaptive strategies to manage bison and their habitats to facilitate natural movement of bison into and between suitable habitats.

We support the above Goal and thank the Forest for its inclusion. However, we recommend the addition of a goal for the Forest Service to work with state, federal, tribal, and NGO partners to identify suitable habitat and corridor areas for bison to use throughout current tolerance zones and to help guide habitat improvement projects.

Objectives (FW-OBJ-WLBI)

01 Alternatives B and C: Complete one habitat improvement project within, or for the purpose of creating or connecting, suitable bison habitat every three years.

Alternative D: Complete three habitat improvement projects within, or for the purpose of creating or connecting, suitable bison habitat per year.

We support the above Objective (FW-OBJ-WLBI-01) as outlined in Alternatives B and C, and are tremendously thankful to the Forest for its inclusion. Though we appreciate the inclusion of the Objective to complete three habitat improvement projects per year as defined in Alternative D, we feel that this is highly unrealistic. Instead, we recommend the Forest modify FW-OBJ-WLBI-01 to read, [ldquo]Complete one habitat improvement project within, or for the purpose of creating or connecting, suitable bison habitat at a minimum of every three years.[rdquo]

Guidelines (FW-GDL-WLBI)

1. Alternatives B, C and D: To promote bison expansion within management zones, vegetation treatment projects and management actions taken to resolve bison-livestock conflicts should favor bison within these zones.

Alternative E: To minimize impacts to livestock operations, vegetation treatment projects and management actions taken to resolve bison-livestock conflicts should favor livestock.

1. To facilitate progressive expansion of bison management zones over time, bison habitat improvement projects should be strategically placed within and in close proximity to existing management zone boundaries.
2. Alternatives B, C and E: To facilitate bison expansion into unoccupied, suitable habitat, management actions should not impede bison movement unless needed to achieve interagency bison population and distribution.

Alternative D: To facilitate bison expansion into unoccupied, suitable habitat, management actions should not impede bison movement.

We support the Guideline FW-GDL-WLBI-01 as defined in Alternatives B, C, and D and strongly oppose it as defined in Alternative E. We also support the Guideline FW-GDL-WLBI-02 as well as FW-GDL-WLBI-03 as defined in Alternative D. Because IBMP population objectives and tolerance zones are subject to

change over time and are currently based on an outdated and unacceptable plan (see Appendix C and D), we do not think the Forest should be implementing management actions that could in any way restrict bison use of the landscape or affect population abundance. Furthermore, as we[rsquo]ve previously argued, the Forest has an obligation outside of the IBMP context to support a viable population of wild bison on forest system lands and to contribute to the broader restoration of this species as a whole.

Therefore, we feel that the FW-GDL-WLBI-03 under Alterative D is a more appropriate, straightforward, and flexible guideline. If needed, the Forest could clarify the language to read: [ldquo]To facilitate bison expansion into unoccupied, suitable habitat within current tolerance areas, management actions should not impede bison movement.

The Forest should also include one or more guidelines to allow for the phase-out of grazing allotments if there is a willing permittee both within and adjacent to current tolerance areas, acquisition of private lands/conservation easement opportunities as those opportunities arise, and collaboration with other jurisdictions and agencies to facilitate safe highway crossings for bison (and other wildlife). Specifically, the voluntary phase-out of grazing allotments to the northwest and west of the Park both within and outside tolerance areas could have significant benefits to bison restoration on forest lands including the potential to adjust current tolerance zones to allow for bison dispersal into new areas of the forest, including areas where they are currently allowed but have no way to access given current tolerance boundaries and existing conflicts with cattle.

Monitoring Guidelines

The new forest plan should include direction that specifically promotes bison dispersal and broad distribution throughout suitable habitat areas within tolerance zones. The required 2012 Planning Rule Monitoring Plan should reflect this as well. Specifically, the selected plan components for the Monitoring Plan should also include the desired condition FW-DC-WLBI[ndash]01 as amended above and the monitoring question MON-WL-07 should be amended to read [ldquo]What management actions have occurred to improve/facilitate bison use of and broad distribution throughout new and existingtolerance areas?[rdquo] By simply asking what management actions have occurred [ldquo]to facilitate bison

movements[rdquo] is too vague. Movements to where and for what purpose? The monitoring language should be more explicit to reflect these goals and desired conditions. Under the Implementation indicators, the first Bison management action should read [ldquo]# and types, locations of actions that improve or facilitate opening corridors for bison movement and use of unoccupied suitable habitat[rdquo].

Recommendations:

The Desired Conditions (FW-DC-WLBI [ndash] 01, 02, 03), Goal (FW-GO-WLBI [ndash] 01), and Guidelines (FW-GDL- WLBI-01, 02) common to Alternatives B, C, and D to provide for bison habitat and promote use on forest service lands.

An Objective (i.e. FW-OBJ-WLBI- 01) for habitat improvement projects [ldquo]within, or for the purpose of creating or connecting, suitable bison habitat[rdquo] at a minimum of every three years (Alternatives B, C, D).

Plan components from Alternative D including the Desired Condition FW-DC-WLBI-04 that [ldquo]Bison are present year-round with sufficient numbers and adequate distribution to provide a self-sustaining population on the Custer Gallatin National Forest[rdquo], and the Guideline FW-GDL-WLBI-03 [ldquo]To facilitate bison expansion into unoccupied, suitable habitat, management actions should not impede bison movement.[rdquo]

The inclusion of a Goal that the Forest Service work with state, federal, tribal, and NGO partners to identify suitable habitat and corridor areas for bison to use throughout current tolerance zones to help guide habitat improvement projects.

The inclusion of one or more Guidelines to allow for the phase out of grazing allotments if there is a willing permittee both within and adjacent to current tolerance areas, acquisition of private lands/conservation easement opportunities as those opportunities arise, and collaboration with other jurisdictions and agencies to facilitate safe highway crossings for bison (and other wildlife).

Geographic Areas
Absaroka Beartooth Mountains Geographic Area

The Forest Service paints a picture of solitude, primitive recreation, and a diversity of wildlife species within the Vision section the Absaroka Beartooth Mountains GA section on page 158. It also speaks to the need for active management of front country areas, as well as the varied recreational opportunities found there. Beyond the current vision description, it needs to include management of a growing recreational and tourism economy that seeks out the places described in the Absaroka Beartooth Mountains. While the General Overview notes high visitation due in part to the area[rsquo]s proximity to Billings and Bozeman, we would like to see an acknowledgement of the likelihood of increasing use and the need to manage for sustainable recreation. This issue is bound to become increasingly significant as more people move to Bozeman and seek out the less recreated areas like the Bridger and Gallatin ranges. Within the Special Emphasis Areas and the Other Resource Emphasis Areas the challenges and resources available to address increased pressure need to be part of the GA focus. GYC believes the growing recreational uses in this GA must be a part of this plan in a very intentional and forward- thinking way to ensure the character and ecological values of the Absaroka Beartooth mountains and the quality of the outdoor experiences for everybody can be maintained. We would particularly like to see this emphasized with additional plan components for the Beartooth National Forest Scenic Byway (3.5.9) and Bad Canyon Backcountry Area (3.5.10).

Recommendations:

Explicitly state the challenge for managing the GA to include increased recreation, wilderness management and considerations for climate change. Build that into the management direction for this geographic area.

Include additional Desired Conditions for the Beartooth National Forest Scenic Byway and Bad Canyon Backcountry Areas that increasing recreational use is managed sustainably and does not impact the areas[rsquo] scenic, natural, historical, cultural, or archaeological qualities.

Refer to the recommendations for Recreation, Recreation Emphasis Areas, and Recommended Wilderness Areas in this document.

Bridger/Bangtail and Crazy Mountains Geographic Area:

We are glad to see that the Draft Plan references the Crazy Mountains for their special historical, spiritual, and cultural significance for the Apsaalooke (Crow) Nation, who have and continue to utilize the range for fasting, visions, and other traditional practices. The importance of the range to the Apsaalooke people cannot be understated. Therefore, we ask that the plan be enhanced to protect those cultural values and practices, guarantee tribal treaty rights, and protect the wild character of the Crazy Mountains. We stand with the Apsaalooke Nation in asking that the range be managed to not allow expanded mechanized or motorized travel, mining, building of any new roads, construction of any new energy or utility corridors, or development of any new recreation sites or facilities. To accomplish these goals, we recommend the Crazy mountains be designated as recommended wilderness to give them the highest level of protection possible. We also recommend the inclusion of desired conditions that express the need to enhance the public[rsquo]s understanding of the range[rsquo]s cultural history as well as to preserve the range[rsquo]s primitive natural character. Additional standards should call for management in close consultation with the tribe as well as management activities that do not pose adverse effects to the traditional cultural landscape.

This section also highlights that the three mountain ranges in this geographic area include most native species and is a potential wildlife corridor between the Greater Yellowstone Ecosystem and other large blocks of wildlife habitat to the north, such as the Northern Continental Divide Ecosystem in northwest Montana. On page 167 under the Social and Economic Characteristics the Forest Service describes the high use recreational areas including the [ldquo]M[rdquo] trail. The [ldquo]M[rdquo], along with many other trails are highly used and the area experiences intense recreation year-round. The challenge within the Bridger/Bangtail ranges is the important and distinct role the Bridger/Bangtail ranges could play for wildlife connectivity, especially for wide-ranging dispersing species like grizzly bears. The Forest Service needs to make the connection between how high levels of recreational use in these ranges may impact secure habitat for dispersing species in order to manage resources for the highest and best use. GYC considers the vision of this GA to be lacking in this regard.

Recommendations:

Refer to the recommendations in the Recommended Wilderness, Recreation, and Recreation Emphasis Areas in this document.

Explicitly state the challenge for managing the GA to include increased recreation and wildlife connectivity with considerations for climate change and build that into the plan components for this geographic area.

Include the following as additional Desired Conditions:

*
* Interpretation and adaptive use of cultural resources provide public benefits and enhance understanding and appreciation of Crazy Mountains prehistory and history.
* The Crazies are characterized by a natural environment where ecological processes such as natural succession, fire, insects, and disease function and exist. Impacts from visitor uses do not detract from the primitive natural setting.

Include the following as additional Standards:

*
* The Crazy Mountains shall be managed in close consultation to fulfill Crow treaty obligations, and the federal trust responsibility. The area shall be managed to protect and honor Crow reserved rights and sacred land. The uses of this area must be compatible with desired conditions and compatibility shall be determined through government-to-government consultation.
* Management activities within the Crazy Mountains shall not pose adverse effects to the Crazy Mountain proposed traditional cultural landscape. Management activities shall consider scientific research and ethnographic research as they relate to Crow cultural land-use identities when analyzing project effects.

Madison, Henrys Lake and Gallatin Mountains Geographic Area:

The Madison, Henrys Lake and Gallatin Mountains Geographic Area is the second largest GA sitting at 952,813 acres with 805,299 of those acres managed by the Forest Service. Under the Ecological Characteristics section of the Proposed Action the Forest Service describes the headwaters, Wilderness, Wilderness Study Area and Inventoried Roadless Areas as they relate to existing Wilderness in the Beaverhead-Deerlodge NF and Yellowstone National Park. The land and water configuration provides a large expanse of mostly undeveloped land, which underscores the importance of the CGNF for wildlife connectivity and habitat. In the Social and Economic Characteristics section of the Proposed Action, the diverse economic opportunities related to timber, grazing and recreation are highlighted. Recreation is an important consideration given the communities of Big Sky, Belgrade, Bozeman and Livingston are growing as people are attracted to the high quality of life and recreational opportunities surrounding these places. At the same time, the Yellowstone National Park gateway communities of Gardiner and West Yellowstone experience millions of park visitors each year.

GYC finds the vision for this GA in the Draft Plan to be lacking. Wildlife and recreation are mentioned, but the draft plan does not address how these two important resources in the forest are managed to minimize conflict, provide for wildlife movement, or reduce human to human recreation conflicts. GYC would like to see the vision include a description of how the resources will be managed sustainably, especially those that could be in conflict, such as rising recreational demand and viable wildlife populations. Further, the importance of wildlife movement and connectivity needs to be explicitly mentioned in the vision.

Recommendations:

Fully incorporate the Gallatin Forest Partnership Agreement into the final Forest Plan by including the

changes detailed in the Partnership[rsquo]s public comments.

Include a goal to partner with agencies, organizations and groups to monitor recreation, conflicts and impacts to wildlife.

Cabin Creek Recreation and Wildlife Area:

MG-DC-CCRW-02 states the Wilderness character is present with the recreation opportunities provided for in legislation. Please provide a Guideline that provides balance for wilderness character with growing recreational use.

Change MG-GDL-CCRW (page 178) from [ldquo]new recreation[rdquo] to [ldquo]current and new special uses should not detract from wildlife protection and wilderness character.[rdquo]

Buffalo Horn Backcountry Area:

Fully consider the GFP proposal to manage the BHBCA for wildlife as the priority value.

Develop an additional DC to manage habitat and recreation for the wildlife in the area including grizzly bear and elk.

Include a goal to partner with Montana Fish, Wildlife and Parks to best manage for habitat, wildlife and recreation use.

Include an additional Suitability point (MG-SUIT-BHBCA) to say: The backcountry area is not suitable for mineral and oil/gas development.

Pryor Mountains Geographic Area:

The Pryor Mountains are unique ecologically, geologically and biologically. The area is recognized for its exceptional birding opportunities and it hosts bird species found almost nowhere else in the state of Montana, such as Gray Flycatcher and Blue-Gray Gnatcatcher.

Bear Canyon supports breeding populations of more than a dozen species on the Montana Priority Bird Species List. The riparian corridor is home to a rich diversity of neotropical migrants, and the adjacent uplands are inhabited by Common Poorwills, Loggerhead Shrikes, Sage Thrashers, Green-tailed Towhees, Pinyon Jays, and Greater Sage-Grouse. Because of its unique value for bird habitat and biodiversity, a section of Bear Canyon has been designated as an Important Bird Area by Montana Audubon through a global initiative by BirdLife International. (see http://www.audubon.org/important-bird-areas/bear-canyon).

The Pryors are also recognized as providing breeding habitat for Greater Sage-grouse. Research has documented Greater-sage grouse nesting in Bear Canyon, and the broods subsequently moving to summering areas on Big Pryor Mountain. We support the Greater Sage-grouse guidelines (FW-GDL- WLSG) in the draft plan and granting Recommended Wilderness designation in the Pryors, especially the Bear Canyon Area, will provide further protection to sage-grouse from key stressors.

Recommendations:

Various Errors
MON-VEGF-02 for fire refers to table 8, but fire is in table 10.

Table 28 lists relationship between at risk species and areas with low risk for ground disturbance. It has two different values for number of species within low risk areas

Conclusion
The Greater Yellowstone Ecosystem (GYE) is one of the most iconic and beloved natural areas on Earth. Home to the world[rsquo]s first national park and a remarkable diversity of fish and wildlife, the region is one of the last intact ecosystems in the planet[rsquo]s temperate zones. GYC works with people to protect the lands, waters and wildlife of the GYE now, and for future generations. Our vision is a healthy and intact GYE where critical lands and waters are adequately protected, wildlife is managed in a thoughtful, sustainable manner and a strong, diverse base of support is working to conserve and sustain this special place as part of a larger, connected Northern Rocky Mountain Region.

As we noted in the General Observations section, the Forest Service is facing several new challenges in drafting this revised forest plan. GYC would like to see the Forest Service acknowledge and include rising recreational demand as one of the major impacts on the western side of the forest. There is a noticeable lack of consideration of human-wildlife conflict. GYC would like to see a more proactive approach to understanding and managing the potential impacts of recreation on wildlife, vegetation and connectivity. We also want to see

specific plan components addressing climate change. These two areas will require monitoring to ensure adaptive management decisions and strategies are well informed.

Crafting an effective forest plan will certainly require creative solutions and adaptive management. In general, we see great potential in many of the ideas represented in the DEIS, such as the approach to manage for ecosystem resilience while acknowledging and attempting to work with natural landscape- shaping forces. The Forest Plan will require a monitoring plan with meaningful indicators to track progress and conditions to ensure a resilient ecosystem. Improved and expanded monitoring components are necessary to understand and respond to changing threats on the landscape and to manage adaptively, as required by the 2012 planning rule. GYC encourages the Forest Service to develop enforceable and actionable plan components. Desired conditions could be less general and more measurable with standards and objectives that build progress toward those conditions.

Thank you for considering our comments. The CGNF forest plan revision process is critical to support the overall health of the GYE. Greater Yellowstone Coalition is grateful to the Forest Service to be able to participate in forest plan revision. We look forward to helping plan for climate change, water, wildlife and wilderness. The issues the forest must address are not easy but with a robust planning process the outcome will be a well-managed, healthy and resilient forest.

GYC staff Ryan Cruz, Darcie Warden, Bob Zimmer, Charles Drimal, Joe Josephson, Shana Drimal and Brooke Shifrin contributed to this document. A big thanks to this group for your energy, thought and time to help the Forest Service create a plan that supports a resilient and sustainable forest for the future.

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Appendices

Appendix A: Region 1 Recommended Wilderness Guidance Appendix B: GYC Wild and Scenic Eligibility Report Appendix C: GYC Assessment Letter

Appendix D: Proposed Action Joint Bison Letter

Appendix E: NCDE FPA for grizzly bear management direction Join Letter

Appendix F: GYC Objection to the NCDE FPA for grizzly bear management direction

Appendix G: GYC comments on the HLC NF DEIS Appendix H: GYC Recreation Literature Review

Appendix I: Outdoor Alliance Montana [ndash] Mapping and Recommendations