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Letter to the Custer Gallatin Forest Service Proposed Action Team for the Revised Management Plan

To Whom It May Concern:

This letter addresses concerns about the scope, intent, and approach to development of the Revised Forest Plan as presented in the Proposed Action-Revised Forest Plan, Custer Gallatin National Forest (CGNF), January 2018.

(1) The 2012 Planning Rule

Many of my concerns flow from the 2012 Planning Rule Section 219.2a through 219.9, some of which I include here in order to easily refer to pertinent sections:

(ii) Consider the goals and objectives of the Forest Service strategic plan (§ 219.2(a)).
(iii) Identify the presence and consider the importance of various physical, biological, social, cultural, and historic resources on the plan area (§ 219.6), with respect to the requirements for plan components of §§ 219.8 through 219.11.

Every plan must include the following plan components:

(i) Desired conditions. A desired condition is a description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources

should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates.

c§ 219.9 Diversity of plant and animal communities. This section adopts a complementary ecosystem and species-specific approach to maintaining the diversity of plant and animal communities and the persistence of native species in the plan area. Compliance with the ecosystem requirements of paragraph (a) is intended to provide the ecological conditions to both maintain the diversity of plant and animal communities and support the persistence of most native species in the plan area. Compliance with the requirements of paragraph (b) Is intended to provide for additional ecological conditions not otherwise provided by compliance with paragraph (a) for individual species as set forth in paragraph (b). The plan must provide for the diversity of plant and animal communities, within Forest Service authority and consistent with the inherent capability of the plan area, as follows: (a) Ecosystem plan components. (1) Ecosystem integrity. As required by§ 219.8(a), the plan must include plan components, including standards or guidelines, to maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore their structure, function, composition, and connectivity.

(2) Ecosystem diversity. The plan must include plan components, including standards or guidelines, to maintain or restore the diversity of ecosystems and habitat types throughout the plan area. In doing so, the plan must include plan components to maintain or restore:

The planning rule with regard to "desired conditions" as shown above states that a desired condition should be a description of specific ecological characteristics of the plan area or a portion of the plan area and be specific enough to show that progress toward their achievement can be determined.

From a botanical and ecological perspective, I'm deeply concerned that the plant communities that make the Pryors unique within the CGNF landscape are lumped into a meaningless table, titled "Region 1 Broad Potential Vegetation Types" that includes vague and overgeneralized categories such as "Sparsely Vegetated" (p.41). Such verbal over-simplification can have real and disastrous impacts on the Pryors' remarkable and, in some cases, singular species.

For example, the exposed limestone outcrops and ridges that contain the species of concern Shoshonea pulvinata (Shoshone carrot) are treated as part of this single ecosystem type and therefore may receive scant management attention or few benefits from monitoring plans. Likewise, the species of concern Sullivantia hapemanii (Sullivant's coolwort), found on wet limestone outcrops, is lumped into the generalized "sparse vegetation" group.

Similarly, the 2018 Proposed Action fails to mention or even recognize, Big Pryor's impressive expanse of subalpine meadows; the Punchbowl area's tall forb fields; or Dry Head Vista's fantastic collection of cushion plants. None of these plant communities fits conveniently into the too-general categories outlined in that Region 1 vegetation table. The specific plant communities mentioned above are likewise missing from the report entitled, "The Non-forested Terrestrial Ecosystems (Reid, 2016)," a supporting document cited in the Proposed Action.

The Proposed Action section that describes the Pryor Mountains Geographic Area (pgs 117-123) lists some Pryor Mountain ecosystems ("subalpine meadows and ridges, montane coniferous forests, meadows, foothill shrublands and grasslands and semi-desert vegetation", p.117) and refers to the area as a "botanical hotspot" rich in species and community diversity. However, nowhere does the plan adhere meaningfully to the intent of sections 219.9 a and b of the 2012 Planning Rule. Where are the specific descriptions of the ecological conditions for specific unique plant species and plant communities? Where are the plan components for maintaining and/or restoring ecological integrity of particular habitat types throughout the plan area and specifically in the Pryors?

The vague language used in Planning Rule section 219.9 regarding Ecosystem Integrity and Ecosystem diversity (see above) must be addressed and the Pryors' varied ecosystems honored through careful identification and description within Proposed Action. Otherwise, it will be impossible to develop an effective and useful Monitoring Plan.

The CGNF needs to identify and map the boundaries of the habitat types of its Pryor Mountain landscape using the two-species approach (e.g. as in Forest Habitat Types of Montana by R.D. Pfister et al., 1977; or Grassland and Shrubland habitat types of Western Montana by W.F. Mueggler and W.L. Stewart, 1978) as the BLM has done for its lands in the Pryors. This step speaks to the need for and goal of more unified management and it should be included as part of the goals, vision, desired conditions, standards, and guidelines for the Pryor Mountains in the Revised Forest Plan. If such a survey has already been completed by the USFS, then it should be used in this Proposed Action to meet the intent of the Planning Rule Section 219.9.

# (2) The Monitoring Plan (p. 147)

The Monitoring Plan refers to addressing the topic of "At Risk Plant Habitats" as shown in Table 1 (see below) from Chapter 4 of the Revised Forest Plan, p. 150. However, the Revised Forest Plan has failed to identify any

specific Plant Habitats. The "R1 Broad Vegetation Types" are not plant habitats. It is not possible to monitor habitats that contain specific species such as Shoshonea pulvinata or Penstemon caryi without including (as mandated by Section 219.9 of the Planning Rule) a plant community or habitat type assignation for these plant species! Other habitat types such as dry cushion plant meadows, subalpine meadows, tall forb meadows, are also not described within the Revised Forest Plan.

Please, remember that for many of the Pryors' admirers, the mountain's upper, unforested sections and associated plant communities are just as beautiful and important and incredible as the range's forested areas. And though the value of this area may not be measurable in board feet or suitable commercial timber, it is felt by all of us (and there are a lot!) who seek the solitude and quiet recreation this remarkable range provides. And that's not to mention the area's abundance of habitat for pollinating insects, invertebrates, birds, and other wildlife. These habitats include but are not limited to limestone outcrops, open and expansive cushion plant communities, subalpine meadows that bloom riotously in summer, and tall forb meadows that cover much of the northern Punchbowl area in blankets of gold, purple, and pink wildflowers.

Create a monitoring plan that actually effectively monitors the health of real plant communities.

Table 1. (Excerpt from the Proposed Action Monitoring Plan)

### 3. Invasive Species

The Invasive species section of the plan fails to specifically mention the responsibility of ranchers (who operate via Forest Service permit) for preventing the establishment or spread of invasive plant species within their allotments. Keeping in mind, the Service's limited resources (and increased geographical purview), CGNF agents should leverage the intellectual might of surrounding communities, qualified members of which (like myself) would gladly volunteer their time and experience to help in this effort. Specifically, we could provide weed identification services and offer methods and techniques for weed eradication and spread avoidance. In addition to managing these operations for hounds tongue, Canada thistle, spotted knapweed, and other extremely invasive weeds, permitees should adhere to a monitoring schedule as part of their leases and a yearly monitoring program of those allotments included in the Revised Forest Monitoring Plan.

#### 4. Soils

The soils section of the Revised Forest Plan (p. 17) include "desired conditions" that ensure there that areas of highly erodible soils or land types with high mass failure potential are not destabilized. This statement should be expanded to include roadbeds as well. Several of the motorized trails (approximately eight in the Big Pryor, some of which are particularly steep and curvy) are highly destabilized from increased usage by ORVs. These vehicles are designed in such a way that their wheels spray the roadbed to the side and away from the road surface at speeds too fast for the road type. Without some recognition of this problem in the Revised Forest Plan, there is no way to officially include this issue in the Monitoring Plan and, thus, no way to implement either speed rules or road closures due to prevent severe erosion.

### 5. Ecological integrity and diversity (2012 Planning Rule 219.)

The Proposed Action uses phrases like "ecological diversity"(p. 37) and "ecological integrity" (pgs. 4,15,20,29,101,151) fairly often. For example, p. 29 states that for at-risk species, "Forested desired conditions are designed to maintain and enhance the ecological integrity, diversity, function, and resiliency while contributing to social and economic sustainability as required by the 2012 Planning Rule."

Additionally, under forest-wide "Desired Conditions" for CGNF, the Proposed Action states that, "Habitat conditions support the recovery and persistence of plant species that are recognized as risk species. Ecological conditions and processes that sustain the habitats currently or potentially occupied by these species are present,"(Pg. 28).

However, in order for these "Desired Conditions" to be met, maintained or restored for plant species of concern, it will be important to develop a monitoring plan specific and detailed enough to detect negative impacts to the plant communities in which these species occur. Otherwise, any statements regarding the agency's "Desired Conditions" for at-risk plant species are just empty words.

At present, the chapter discussing the Monitoring plan for CGNF (Pg. 147), is little more than a brief plan outline, which is not acceptable at this stage in the drafting/planning process. Without a clear link from Desired Conditions to focused actions detailed in a Monitoring plan, it will prove extremely difficult to measure ecological integrity and diversity over time. There must be baseline surveys from which to determine, during the life of the Management Plan, if habitats are moving toward or away from Desired Conditions.

While the CGNF Proposed Action demonstrates an initial effort toward building a useful and effective Management Plan, the final version's true power will come, not from vague, conciliatory statements but from great attention to detail and to the specific actions laid out in Planning Rule 219. This rule requires specific actions to protect specific and well-defined issues of ecological integrity and diversity. This includes clear descriptions of existing plant communities within the forest boundaries, not just characterization as "Broad Vegetation Types" but real categories that distinguish one xeric grassland patch from another. While this letter focuses mainly on the Pryor Mountains, I think the fragile alpine zone of the Beartooth Mountains will benefit from a similar, detailed approach as well as from regular plant surveys within the Alpine zone.

#### 6. Desired Conditions, Standards, Guidelines and the Monitoring Plan

The Monitoring Plan is an essential piece of the agency's Management strategy because it develops and directs the plant community surveys that either establish baseline ecological conditions for key ecological areas (those with species of concern, e.g.), or that continue monitoring work. Hopefully, these surveys proceed on, at least, a five-year rotation, which will help determine if habitats are trending toward or away from Desired Conditions.

For example, does the Forest Service have any measures to determine if the trend for Desired Conditions in the 1987 Forest Management Plan has been positive or negative for various ecosystems? Currently, the Monitoring Plan contained in the Proposed Action is simply a statement of intent, but the specifics of that intent (survey number and type, method, and timeline) are not clear.

Let's focus on the Pryor Mountain GA and its monitoring needs for non-forested plant communities for a moment. The current "Vision statement" (p.118) for the Pryor Mountains GA in the CGNF Proposed Action outlines, in a very general sense, current conditions. However, a vision statement should seek to express what the Forest Service would like to see it in the future. Furthermore, a statement of Desired Conditions is missing from the Pryor Mountains GA except in The Wild Horse Range and the proposed Backcountry Areas sections. The Pryor Mountain GA deserves consideration as a landscape .

The following describes some possibilities for Desired Conditions for the Pryor Mountain GA.

## Sample Desired Conditions:

(01)Because the Pryor Mountains are considered a "botanical hotspot", rich in native plant species and incredible ecological diversity with more than 400 native plant species, including many found only in this region, the ecological integrity and diversity deserves to be maintained and, in some cases, restored. Include new plant communities. For example....

(02)The mountains have a rich cultural history that includes traditional spiritual, subsistence, and ceremonial uses by the Crow tribe that should continue to be honored by the Forest Service.

(03)Local ranchers will continue to their use of historical allotments in the Pryors along with their responsibility to control invasive species on their allotments and conserve native landscapes.

(04)Educational use of the Pryor Mountains by local schools, colleges, and universities should be encouraged and supported by the Forest Service.

(05)Construction of additional hiking trails will enhance the opportunity for quiet enjoyment of plant areas. Sample Standards:

(01)New hiking trails will be constructed and provided with signage to encourage quiet exploration of the Pryor Mountains

(02)Road traffic will be allowed only when conditions are appropriate and impacts are minimal.

(03)No new roads will be constructed and existing roads will be open subject to Forest Service ability to maintain them in good condition.

Sample Guidelines:

(01)The Forest Service will assign a seasonal ranger to the Pryor Mountains to assess road conditions and determine road suitability for use.

(02)The Forest Service seasonal ranger will be available to work with student groups and educational researchers to enhance their knowledge about the Pryor Mountains.

(03)The Forest Service will monitor or oversee research projects that monitor the ecological integrity and diversity of the Pryors on an ongoing basis (including impacts by road use, invasive species, and the condition of the plant communities over time in order to determine trends to or away from Desired Conditions.

In order to determine if management of non-forested vegetation in the Pryors over the life of the new

Management plan successfully moves the landscape toward Desired Conditions, a

Monitoring Plan should include (among others) the following measures:

(01)Establish GPS located baseline surveys (or continue existing surveys) in 5-10 ecosites throughout the nonforested areas of the Pryors. These surveys ensure that the FS satisfies the requirements of the 2012 Planning Rule that mandates the agency to protect ecological integrity and diversity (see note below).\* \*[These could be patterned after those established in 2013 by two Rocky Mountain College students at nine sites throughout the Pryors (or the Forest Service could adopt these survey sites). For the sampling design two 100-meter lines across ecosites were established using GPS coordinates. The lines were laid out at right angles across the core of an ecosite (no permanent markers were left in the field). Researchers sampled Daubenmire plots every 10 meters along alternating sides of each 100-meter line to determine species composition, frequency and density (Shannon-Weaver Diversity Index). Invasive plant species were identified within plots and their abundance was recorded (5 of 9 sites contained non-native plants). These long-term monitoring sites, re-sampled every three to five years, will detect trends in the location/abundance/diversity of invasive species or decreasing numbers of native plants), the Forest Service will institute appropriate management practices. ]

(02)The Forest Service personnel will inspect motorized trails (by driving and visual observation) in spring and fall to detect impacts to vegetation and take appropriate measures to reverse them.

(03)The Forest Service will staff the Pryors (perhaps at Sage Creek) from spring to late fall with a FS ranger, knowledgeable about the natural history of the Pryors to support education for schools and individuals and to show a commitment to the care and protection of the Pryor Mountain landscape. Because of the mixed public ownership of the Pryor Mountain Landscape, the Forest Service could coordinate this duty with other public land agency partners in the such as the BLM.

I look forward to the Draft CGNF Management Plan that offers a clear path to conserving the ecological integrity of the Pryor Mountains in such a way that its diverse plant communities will continue to thrive and to remain vigorous and interacting parts of the Pryor Mountain landscape.

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