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Comments: January 17, 2023

Christopher Wehrli

District Ranger

Powell Ranger District

Dixie National Forest

PO Box 80

Panguitch, UT 84759

Dear Ranger Wehrli,

Thank you for this opportunity to comment on the Showalter Range Water Improvement project. Please accept these corrected attached comments in pdf format from me on the Showalter Range Water Improvement project.

January 16, 2023

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Dear Ranger Wehrli,

Thank you for this opportunity to comment on the Showalter Range

Water Improvement project. Please accept this comments from me

on the Showalter Range Water Improvement project on behalf of the

Alliance for the Wild Rockies, Center for Biological Diversity, Yellowstone to Uintas Connection and Native Ecosystems Council.

PURPOSE AND NEED

"The purpose of and need for the Showalter project is a more reliable and broader distribution of available water sources across all the pastures to increase distribution of cattle and other ungulates to disperse available forage utilization throughout both allotments consistent with the AMP and Forest Plan. Wildlife habitat effectiveness would also improve with better water distribution."

The EA does not demonstrate that wildlife habitat effectiveness would improve with better water distribution. Please better demonstrate that the project will meet the purpose and need.

Please analyze the effect of the project on Monarch butterflies, California condor, Western Yellow-billed Cuckoo, and the Mexican spotted owl.

When was the last time the project area was surveyed for Monarch butterflies, California condor, Western Yellow-billed Cuckoo, and the Mexican spotted owl?

Would the project benefit Monarch butterflies, California condor, Western Yellow-billed Cuckoo, and the Mexican spotted owl?

Would the project harm the Monarch butterflies, California condor, Western Yellow-billed Cuckoo, and the Mexican spotted owl?

We believe that the Forest Service must complete a full environmental impact statement (EIS) for this Project because the scope of the Project will likely have a significant individual and cumulative im-

pact on the environment. Alliance has reviewed the statutory and regulatory requirements governing National Forest Management projects, as well as the relevant case law, and compiled a check-list of issues that must be included in the EIS for the Project in order for the Forest Service's analysis to comply with the law. Following the list of necessary elements which we wrote in our scoping comments but you apparently ignored so we are resting them below.

Alliance has also included a general narrative discussion on possible impacts of the Project, with accompanying citations to the relevant scientific literature. These references should be disclosed and discussed in the EIS for the Project.

I. NECESSARY ELEMENTS FOR PROJECT EIS: A. Disclose all Dixie National Forest Plan requirements for grazing projects and explain how the Project complies with them;

B. Disclose the acreages of past, current, and reasonably foreseeable logging, grazing, and road-building activities within the Project area;

C. Solicit and disclose comments from the Utah Division of Wildlife Resources regarding the impact of the Project on wildlife habitat;

D. Solicit and disclose comments from the Utah Department of Environmental Quality regarding the impact of the Project on water quality;

E. Disclose the biological assessment for the candidate, threatened, or endangered species with potential and/or actual habitat in the Project area;

F. Disclose the biological evaluation for the sensitive and manage-

ment indicator species with potential and/or actual habitat in the Project area;

G. Disclose the current, during-project, and post-project road densities in the Project area;

H. Disclose the Dixie National Forest's record of compliance with state best management practices regarding stream sedimentation from ground-disturbing management activities;

I. Disclose the Dixie National Forest's record of compliance with its monitoring requirements as set forth in its Forest Plan;

J. Disclose the Dixie National Forest's record of compliance with the additional monitoring requirements set forth in previous DN/FONSIs and RODs on the Dixie National Forest;

K. Disclose the results of the field surveys for threatened, endangered, sensitive, and rare plants in each of the proposed units;

L. Disclose the level of current noxious weed infestations in the Project area and the cause of those infestations;

M. Disclose the impact of the Project on noxious weed infestations and native plant communities;

N. Disclose the amount of detrimental soil disturbance that currently exists in each project area from previous cutting, burning and grazing activities;

O. Disclose the expected amount of detrimental soil disturbance in each unit after ground disturbance and prior to any proposed mitigation/remediation;

P. Disclose the expected amount of detrimental soil disturbance in each unit after proposed mitigation/ remediation;

Q. Disclose the analytical data that supports proposed soil mitigation/remediation measures;

R. Disclose the timeline for implementation;

S. Disclose the funding source for activities proposed;

T. Disclose the historic levels of mature and old growth juniper in the Project area;

U. Disclose the level of mature and old growth juniper necessary to sustain viable populations of dependent wildlife species in the area;

V. Disclose the amount of mature and old growth juniper that will remain after implementation;

W. Disclose the amount of current habitat for juniper- sagebrush dependent species in the Project area;

X. Disclose and address the concerns expressed by the ID Team in the draft Five-Year Review of the Forest Plan regarding the failure to monitor population trends of MIS, the inadequacy of the Forest Plan old growth juniper standard, and the failure to compile data to establish a reliable inventory of sensitive species on the Forest;

Y. Disclose how Project complies with the Roadless Rule;

Z. Disclose the impact of climate change on the efficacy of the proposed water developments;

AA. Disclose the impact of the proposed project on the carbon storage potential of the area;

BB. Disclose the baseline condition, and expected sedimentation during and after activities, for all streams in the area;

CC. Please disclose how this project will enhance wildlife habitat;

DD. Please disclose how this project will degrade wildlife habitat;

EE. Please explain the cumulative impacts of this proposed project.

FF. Disclose maps of the area that show the following elements:

1. Past, current, and reasonably foreseeable logging units in the Project area;

2. Past, current, and reasonably foreseeable grazing allotments in the Project area;

3. Old growth forest in the Project area;

4. Big game security areas;

Sage Grouse

How would the project affect sage grouse?

Page 19 of the BE states:

Greater Sage Grouse

Reference Condition: Sage grouse are found throughout southern Utah within sagebrush-steppe areas and are located within the project area. At least one sage grouse lek site was identified as a result of spring surveys during 2021. Several satellite lek sites were also identified which is an indication of the affinity of sage grouse for habitat conditions found within the project area. Based upon the vegetation analysis found within the project area, sage grouse

are highly likely to be located within the project area. Current For-
est Service direction for management of sage grouse and habitat
can be found within the Greater Sage Grouse record of Decision
for Utah. Attachment (C) provides direction for the Utah plan
amendment, and those plan components are incorporated here by
reference (USDA, 2015). The proposed Showalter pipeline project
would follow these recommendations. More specifically this project
would avoid the nesting season by abstaining from placement of
the pipeline during the sage grouse nesting period. (WL-2: Instal-
lation of pipeline will avoid ground bird nesting seasons from April
15-July 1.)

Please analyze the effect of increased grazing in the leks because of
the water development.

To provide cover for nests and chicks, livestock grazing should be
managed in breeding habitat to promote residual cover for conceal-
ing sage-grouse nests and chicks from predators. There is no evi-
dence in the EA that the Forest Service is doing this.

Please find attached, "Livestock Grazing and Sage-Grouse Habitat:
Impacts and Opportunities," by Boyd et al. 2014.

Consequently, research on grazing parameters that promote nest and
chick survival for sage-grouse populations (including timing, class
of livestock, and duration and intensity of use) is needed. Ranch and
rangeland managers can reduce the indirect influences of grazing
practices by following recommendations to reduce fence collisions,
limiting livestock watering facilities and turning them off when not
in use, by installing bird ramps in stock tanks, and by avoiding

treatments that reduce long-term sagebrush abundance. Understanding how livestock grazing impacts the structure and composition of sagebrush plant communities provides a critical foundation for assessing the ramifications of grazing to sage-grouse habitat. Establishing a common understanding can reduce conflict over grazing management and focus management efforts in the most impactful direction.

Please find attached, an article by George Wuerthner titled, "The Role of Livestock in Sage Grouse Decline," which states: "Stock tanks are good breeding habitat for mosquitoes. Mosquitoes carry West Nile Virus which kills sage grouse. In some populations, as much as 29% of the birds have died from the infection."

Please analyze the effects of this project on mosquitoes and sage grouse.

Wuethner's article also states: "By far the worst thing that cattle do is trample the biocrust. And it's important to note that the entire Great Basin did not have large herds of grazing animals like bison in historic times. The plant communities are therefore not adapted to trampling and heavy hooves tearing up the soil."

How will this project effect biocrust and what is the cumulative impact of the project's effect on biocrust?

Weeds

Native plants are the foundation upon which the ecosystems of the Forest are built, providing forage and shelter for all native wildlife,

bird and insect species, supporting the natural processes of the landscape, and providing the context within which the public find recreational and spiritual opportunities. All these uses or values of land are hindered or lost by conversion of plants. The ecological threats posed by noxious weed infestations are so great that a former chief of the Forest Service called the invasion of noxious weeds "devastating" and a "biological disaster." Despite implementation of Forest Service "best management practices" (BMPs), noxious weed infestation on the Forest is getting worse and noxious weeds will likely overtake native plant populations if introduced into areas that are not yet infested. The Forest Service has recognized that the effects of noxious weed invasions may be irreversible. Even if weeds are eliminated with herbicide treatment, they may be replaced by other weeds, not by native plant species.

Invasive plant species, also called noxious weeds, are one of the greatest modern threats to biodiversity on earth. Noxious weeds cause harm because they displace native plants, resulting in a loss of diversity and a change in the structure of a plant community. By removing native vegetative cover, invasive plants like knapweed may increase sediment yield and surface runoff in an ecosystem. As well knapweed may alter organic matter distribution and nutrient through a greater ability to uptake phosphorus over some native species in grasslands. Weed colonization can alter fire behavior by increasing flammability: for example, cheatgrass, a widespread noxious weed on the Forest, cures early and leads to

Weed colonization can also deplete soil nutrients and change the

physical structure of soils. The Forest Service's own management activities are largely responsible for noxious weed infestations; in particular, grazing, water developments, and road construction and use create a risk of weed infestations.

Please address the ecological, social and ascetic impact of current noxious weed infestations within the project area. Include an analysis of the impact of the actions proposed by this project on the long and short term spread of current and new noxious weed infestations.

What treatment methods will be used to address growing noxious weed problems?

What noxious weeds are currently and historically found within the project area? Please include a map of current noxious weed infestations which includes knapweed, Saint Johnswort, cheat grass, bull thistle, Canada thistle, hawkweed, hound's-tongue, oxeye daisy and all other Category 1, Category 2 and Category 3 weeds classified as noxious in the Utah COUNTY NOXIOUS WEED LIST. 1975).

Are yellow and orange hawkweeds present within the project area?

Please address the cumulative, direct and indirect effects of the proposed project on weed introduction, spread and persistence that includes how weed infestations have been and will be influenced by the following management actions: burning and cutting of trees and shrubs

Noxious weeds are not eradicated with single herbicide treatments. A onetime application may kill an individual plant but dormant seeds in the ground can still sprout after herbicide treatment. Thus, herbi-

cides must be used on consistent, repetitive schedules to be effective. What commitment to a long-term, consistent strategy of application is being proposed for each weed infested area within the proposed action area? What long term monitoring of weed populations is proposed?

When areas treated with herbicides are reseeded on national forest land, they are usually reseeded with exotic grasses, not native plant species. What native plant restoration activities will be implemented in areas disturbed by the actions proposed in this project? Will disturbed areas including burn units be planted or reseeded with native plant species?

The scientific and managerial consensus is that prevention is the most effective way to manage noxious weeds. The Forest Service concedes that preventing the introduction of weeds into uninfested areas is "the most critical component of a weed management program." The Forest Service's national management strategy for noxious weeds also recommends "develop[ing] and implement[ing] forest plan standards . . .." and recognizes that the cheapest and most effective solution is prevention. Which units within the project area currently have no noxious weed populations within their boundaries? What minimum standards are in the Dixie Forest Plan to address noxious weed infestations? Please include an alternative in the that includes land management standards that will prevent new weed infestations by addressing the causes of weed infestation. The failure to include preventive standards violates NFMA because the Forest Service is not ensuring the protection of soils and native plant com-

munities.

Additionally, the omission of an EIS alternative that includes preventive measures would violate NEPA because the Forest Service would fail to consider a reasonable alternative.

Rare Plants

The ESA requires that the Forest Service conserve endangered and threatened species of plants as well as animals. In addition to plants protected under the ESA, the Forest Service identifies species for which population viability is a concern as "sensitive species" designated by the Regional Forester (FSM 2670.44). The response of each of the sensitive plant species to management activity varies by species, and in some cases, is not fully known. Local native vegetation has evolved with and is adapted to the climate, soils, and natural processes such as fire, insect and disease infestations, and windthrow. Any management or lack of management that causes these natural processes to be altered may have impacts on native vegetation, including threatened and sensitive plants. Herbicide application - intended to eradicate invasive plants - also results in a loss of native plant diversity because herbicides kill native plants as well as invasive plants. Although native species have evolved and adapted to natural disturbance such as fire on the landscape, fires primarily occur in mid to late summer season, when annual plants have flowered and set seed. Following fall fires, perennial root-stocks remain underground and plants emerge in the spring. Spring and early summer

burns could negatively impact emerging vegetation and destroy annual plant seed.

What threatened, endangered, proposed, rare and sensitive plant species and habitat are located within the proposed project area?

What standards will be used to protect threatened, rare, sensitive and culturally important plant species and their habitats from the management actions proposed in this project?

Describe the potential direct and indirect effect of the proposed management actions on rare plants and their habitat.

Please explain to the public what wildlife species will be benefited by this project and what species will be harmed. We believe that the NEPA requires the agency to adequately demonstrate that the determination that this project will benefit all wildlife species needs to be included in the public involvement process, which in this case is scoping.

Use of an EA for this project is also invalid because the proposed vegetation treatments would occur within Inventoried Roadless Areas (IRA). This qualifies as an extraordinary circumstance that invalidates use of a EA. It is the existence of a cause- effect relationship between a proposed action and the potential effects on these resource conditions and if such a relationship exists, the degree of the potential effects of a proposed action on these resource conditions that determine whether extraordinary circumstances exist (36 CFR 220.g(b).

Drilling new wells for livestock tanks significantly alters the hydrol-

ogy and is antithetical to improving the health of the land. For one thing, such wells often cause natural springs, upon which native wildlife rely, to go dry as the water table is lowered. When that happens, the tiny streams they feed also disappear and any vegetation - such as cottonwoods and wetlands that line and cool the canyon bottoms - will likewise die. Please analyze the cumulative effects of the water developments on natural springs and the fish and wildlife that are dependent upon them.

Disrupting the natural springs steals the water that would otherwise provide for fish, wildlife and other downstream vegetation. In the end, there will be less or no water in the Dixie National Forest for frogs, deer, and anything else that requires water to survive - which is just about everything.

The EA claims - with no scientific evidence - that drilling water wells for cattle improve the health of the land by moving cows away from riparian areas. But the attached paper titled, Upland Water and Deferred Rotation Effects on Cattle Use in Riparian and Upland Areas" by Carter et al. found drilling wells for livestock tanks failed to relieve pressure on riparian areas, which makes sense since the riparian areas are cool, shady, and vegetated, which is why the cattle go there.

Although decades of range science research show the best way to improve the health of riparian areas is by reducing or eliminating cattle. Please analyze an alternative that removed cattle from the project area.

Without an understanding that groundwater is a complex issue, it is easy to just suppose that the existence of groundwater is a deep pool of flooded, rock strata. Nothing could be further from the truth in the area in question.

Indeed, groundwater does exist in ancient, deep, saturated strata. However, there is another important water element that is poorly studied and understood, and that is the discrete flow of water through various fractures and tectonic fissures that frequently issues onto the surface as springs, artesian wells, and other surface water in general. These discrete subsurface flows can range for miles and come from very unlikely areas. Our concern is that unless these are defined in the area in question, it cannot be well understood what the short and long term effects will be on water quantity and quality at various surface water sources. Not only can wells that are drilled in the wrong area have significant impact on distant water source quantities, but the concentration of animal wastes at these areas can have devastating impacts on water quality at "downstream" springs and surface water, sometimes miles away.

BRIEF DESCRIPTION OF GROUNDWATER DYNAMICS

The emergence of water at a spring is not a spot where diffuse groundwater suddenly appears onto the land surface. By "diffuse", I am referring to water, some very ancient, that fell as rainwater and settled into a quiet existence in deep, rock strata. Spring water is

primarily the result of discrete, or channel flow that has at times come from miles distant, flowing through fracture channels and fissures until in intersects the surface. Typically, these spring flows contain elements of both diffuse groundwater and distant discrete water.

This is something that can be easily determined by monitoring the flow over time. Most discrete flow emerges right after rain water enters up the gradient, and will last for a few days. It will subside and the remaining flow is typically diffuse groundwater that seeps into the discrete channels slowly and provides the long term flow of a spring. Diffuse flow is typically clean water that has been in the ground for a very long time while discrete water may be heavily polluted due to activity on the surface where the water enters the discrete, subsurface, recharge area. A spring recharge area can be delineated through groundwater tracing work and the actual area on the surface that impacts the spring can be clearly defined.

Obviously this is a very dynamic situation and varies with each spring, or surface source of water. If it is not defined, then there is no way to say that drilling a well in a certain location will not impact surface water flow somewhere down the gradient. Not only can it impact the water flow of a distant spring, but an increase in animal excrement, if it occurs in the wrong area, can cause water that is carried into the subsurface to be very polluted and therefore emerge un-

changed at a distant spring.

So to summarize here, there are two very different and significant issues that must be explored before a decision can be made on drilling the wells. One is will the well intersect a discrete flow that pulls water from a distant spring, sometimes miles away. And secondly, will the increased animal excrement in the area fall in a discrete recharge area that will emerge at a distant spring as very polluted water. Without an answer to these issues, it is not wise to drill new wells indiscriminately. The effects could be devastating and have a very lasting effect.

Until you witness the incredible effects a herd of cows have on an area, it may not be easy to fully appreciate what is at risk here. In the time I have spent in the Cedar Mesa/Elk Ridge area I have seen some very disgusting situations where cows have literally destroyed areas around water sources. I have even had to tell rangers in the area that they needed to contact the rancher to take the issues in hand. Pristine areas that were clean and wild, utilized by wildlife, and pleasant to explore, have become cess pools with dead cows, trampled vegetation, and lack of natural wildlife. Elk and deer would no longer use the areas. While I appreciate the problems that herdsmen may have with cows in such remote areas, they do not own the land. It is there for everyone to explore and appreciate. While I know there is nothing we can do to stop the cows altogether, it is our responsibility to make sure that further destruction does not

occur.

It is imperative that the recharge areas of springs and surface water be defined in the general (several miles) area of the proposed wells. I have extensive experience in these endeavors as you can read in my Curriculum Vitae. I am retired now, but would be willing to offer my assistance in anyway possible to delineate the groundwater situation in the proposed well drilling areas. Regardless, it is the responsibility of BLM to make sure that we don't have to live with the results of poor judgment on the issues involved.

REFERENCES:

v Groundwater Tracing Handbook, Thomas Aley, 2019

v Baseline Groundwater Hydrology and Water Quality in and Around Bluff, Utah, USGS, 2019.

v Use of Dye Tracing to Determine Ground-Water Movement to Mammoth Crystal Spring, Sylvan Pass Area, Yellowstone National Park, Wyoming, 2006

v Ground Water Tracers, National Ground Water Association, 1985

Thank you for your time.

Sincerely yours,

Mike Garrity

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And on behalf of:

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