February 19, 2018

Greg Brown – Principle
Crow Creek Pipeline Project
C/O Stantec
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Salt Lake City, Utah 84107

Derek J.S. Ibarguen - Acting Forest Supervisor
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Re: Crow Creek Pipeline Project

Comments emailed to: comments-intermtn-caribou-targhee-montpelier@fs.fed.us

Mr. Brown, Mr. Ibarguen,

We appreciate the opportunity to submit comments on your January 29th, 2018 scoping letter, which solicits comments on the proposed Lower Valley Energy Crow Creek Pipeline Project (the Project). These comments are submitted on behalf of Yellowstone to Uintas Connection(Y2U). Y2U is a 501c3 organization working to restore habitat in Idaho, Utah, Wyoming and the Regionally Significant Wildlife Corridor connecting the Greater Yellowstone Ecosystem to the Uinta Mountains and Southern Rockies.

The scoping letter states the purpose of the project is to "provide natural gas to the Afton/Star Valley, Wyoming area by pipeline." Y2U's primary concern is that a large portion of the pipeline route runs through Idaho Roadless Area (IRA). We are specifically worried about OHV use along the pipeline route. We also want to address concerns such as potential effects of soil disturbance and methane leaks. Despite our reservations in regards to the Project, the public scoping meeting on February 15th, 2018 in Montpelier convinced us that the Forest Service and Stantec have done a good job of routing the pipeline overall.

Some features of your proposal invoke direct, indirect, and cumulative ecological impacts which must be analyzed and disclosed in the Environmental Assessment (EA). These are particularly of concern where the pipeline route leaves authorized roads and trails that are already in place and enters IRAs. The construction of pipeline leaves a visible scar on the landscape as it removes all vegetation along the construction site. Because the pipeline may need maintenance, the vegetation restoration efforts are limited to grasses and forbs, species that can easily be removed again if the need arises. OHV vehicles would easily spot this cleared path and may mistake it for a trail. Yellowstone to Uintas Connection is concerned that OHVs will use the cleared pipeline area as a road into IRAs. Y2U wants to see the use of OHVs in unauthorized areas (specifically IRAs affected by the pipeline construction) mitigated by the use of physical barriers such as gates and berms. The presence of OHVs would cause the pipeline route to effectively be a road, albeit unauthorized.

There is extensive research into the effect of roads and motorized vehicles on wildlands and wildlife. Roads and motorized vehicles increase human ability to access remote areas, lead to damaged environmental resources, looted archaeological sites, and noise pollution.[1,2,3,4] Noise itself has detrimental effects to wildlife, creating stress,

[1] Forman, Richard T.T., L.E. Alexander. 1998. Roads and Their Major Ecological Effects. Annu. Rev. Ecol. Syst. 29: 207-31
[2] Iverson, R.M., B.S. Hinckley, and R.M. Webb. 1981. Physical Effects of Vehicular Disturbance on Arid Landscapes. Science v.212:915-917
[3] Miller, J.R., L.A. Joyce, R.L. Knight, R.M. King. 1996 Forest roads and landscape structure in the southern Rocky Mountains. Landscape Ecology 11: 115-127
[4] Oxley, D.J., M.B. Fenton, G.R. Carmody. 1974. The effects of roads on populations of small mammals. J. Applied Ecology 11:51-59

loss of hearing, and early emergence from hibernation resulting in death.[5] [6] Additional ecological effects of roads and/or mechanized use include air pollution from fuels, avoidance of road or machine-affected areas by wildlife, and habitat fragmentation.[7,8,9,10] Motorized vehicles of all types disturb their local environment whether there is a maintained trail or not. The increased human activity fragments habitats. At a certain size, the fragmented area cannot retain its original ecosystem functions and begins losing species, including those with large ranges.[11,12,13,14,15] It has been shown that areas with densities of more than about 1 mile of road for every 1 square mile of land experience a decline in the number and diversity of species, meaning that roads act to fragment habitat. These negative impacts of motorized human travel can lead to sensitive species relocation or local extirpation[16].

Soil disturbance leading to soil erosion,[17,18] sedimentation of waterbodies, and spread of invasive species[19,20] transport is of particular concern for the Project. Studies in southern Utah have shown that OHV travel not only negatively impacts the distribution and abundance of small mammals, plants, and aquatic organisms, but also increases sedimentation from road crossings and interruption in the continuity of riparian wetlands.[21] Laying the Crow Creek Pipeline poses erosion and sedimentation risks. Y2U is especially aware of the negative impacts on riparian systems in locations where the pipeline runs through or adjacent to streams or wetlands. These areas of disturbed soil could reduce water quality and have negative impacts on aquatic organisms during precipitation events. Soil disturbance also leads to increased risk of invasive species due to loss of topsoil, removal of native species, and transport of invasive species on construction equipment. Yellowstone to Uintas Connection is particularly concerned about the transport of cheatgrass (Bromus tectorum) into IRAs.

Any area cleared of vegetation, including the Project, provide ideal places to travel in the winter as well as summer. Over-snow travel on authorized or unauthorized roads can also impact soil and vegetation. Soils under snow that has been compacted by snowmobiles are colder than unpacked snow, leading to a decrease in soil bacteria, which can affect seed vernalization, seed dispersal, spring germination and changes in plant species distribution, density and productivity.[22] If snow cover is limited, then snowmobiles and other OHVs can impact small trees and shrubs causing damage, deformities and a decline in vigor or death[23]. By compacting snow, snowmobiles create travel routes that can affect species distribution, movement, habitat use patterns and

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[5] A. Anthony and E. Ackerman, "Biological Effects of Noise in Vertebrate Animals," Technical Report 57-647, Wright Air Development Center, Wright-Patterson Air Force Base, OH, 1957

[6] B, H. Brattstrom and M. C. Bondello, "Effects of Off-Road Vehicle Noise on Desert Vertebrates," in *Environmental Effects of Off -Road Vehicles: Impacts and Management in Arid Regions*, eds. R. H. Webb and H. G. Wilshire (New York: Springer-Verlag, 1983).

[7] T. W. Clark, P. C. Paquet, and A. P. Curlee. 1996. Large Carnivore Conservation in the Rocky Mountains of the United States and Canada," Conservation Biology 10: 936–939.

[8] Trombulak, S. C. & C. A. Frissell. 2000. The ecological effects of roads on terrestrial and aquatic communities: a review. Conservation Biology 14:18-30

[9] Andrews, A. 1990. Fragmentation of habitat by roads and utility corridors: a review. Aust. J. Zool. 26:130-141

[10] Harris, L.D., and P.B. Gallagher. 1989. New initiatives for wildlife conservation: the need for movement corridors. In G. Mackintosh, ed. Preserving communities and corridors. Defenders of Wildlife, Washington, D.C. Pp. 11-34

[11] D. A. Saunders, R. J. Hobbs, and C. R. Margules. 1991."Biological Consequences of Ecosystem Fragmentation: A Review," Conservation Biology 5 (1991): 18-32.

[12] Hitt, N.P. and C.A. Frissell. 1999. Wilderness in a landscape context: a quantitative approach to ranking Aquatic Diversity Areas in western Montana. Presented at the Wilderness Science Conference, Missoula, MT, May 23-27, 1999.

[13] The Importance of Roadless Areas to Idaho's Fish, Widllife, Hunting & Angling. 2004. Trout Unlimited. http://www.tu.org/atf/cf/%7B0D18ECB7-7347-445B-A38E-65B282BBBD8A%7D/Roadless_Idaho.pdf

[14] J. R. Stirtholt and D. A. DellaSala, Importance of Roadless Areas in Biodiversity Conservation in Forested Ecosystems: A Case Study-Klamath-Siskiyou Ecoregion, U.S.A. 2001. Conservation Biology 15 (6): 1742-1754.

[15] G. E. Heilman, Jr., J. R. Stirtholt, N. C. Slosser, and D. A. DellaSala. 2002. Forest Fragmentation of the Conterminous United States: Assessing Forest Intactness Through Road Density and Spatial Characteristics. Bioscience 52 (5): 411-422.

[16] Forman, Richard T.T., Anna M. Hersperger. 1996. Road ecology and road density in different landscapes, with international planning and mitigation solutions. In: Trends in addressing transportation related wildlife mortality. Evink, G.L., P. Garrett, D. Zeigler and J. Berry, eds. Florida Department of Transportation, Tallahassee, Florida. 1996. Pps. 1-22

[17] Dittmer, M., and A.A. Johnson. 1975. Impacts of high-intensity rainstorms on low-volume roads and adjacent land. Transportation Research Board Special Report, (160) Pp. 82-91

[18] Montgomery, D. 1994. Road surface drainage, channel initiation, and slope instability. Water Resour. Res. 30:192-193.

[19] Gelbard, Jonathon L. 1999. Multiple-scale causes of exotic plant invasions in rangelands of the Colorado Plateau and Great Basin, USA. M.S. Thesis, Nichols School of the Environment, Duke University. 71 pp

[20] Schmidt, W. 1989. Plant dispersal by motor cars. Vegetation 80:147-152

[21] Mitchell, S., and B. Woodward. 1993. Man's effects on aquatic and riparian organisms in the canyons of Canyonlands and Arches National Parks and Natural Bridges National Monument. Rock Springs, Wyoming: Western Wyoming College

[22] W. J. Wanek, "Snowmobiling Impact on Vegetation, Temperatures and Soil Microbes," in *Snowmobile and Off-Road Vehicle Research Symposium Proceedings*, Technical Report No. 8 (Department of Park and Recreation Resources, Michigan State University, Lansing, MI, 1971), 117–130.

[23] W. J. Wanek and L. H. Schumacher. "A Continuing Study of the Ecological Impact of Snowmobiling in Northern Minnesota," final report (Center for Environmental Studies, Bemidji State College, Bemidji, MN, 1975).

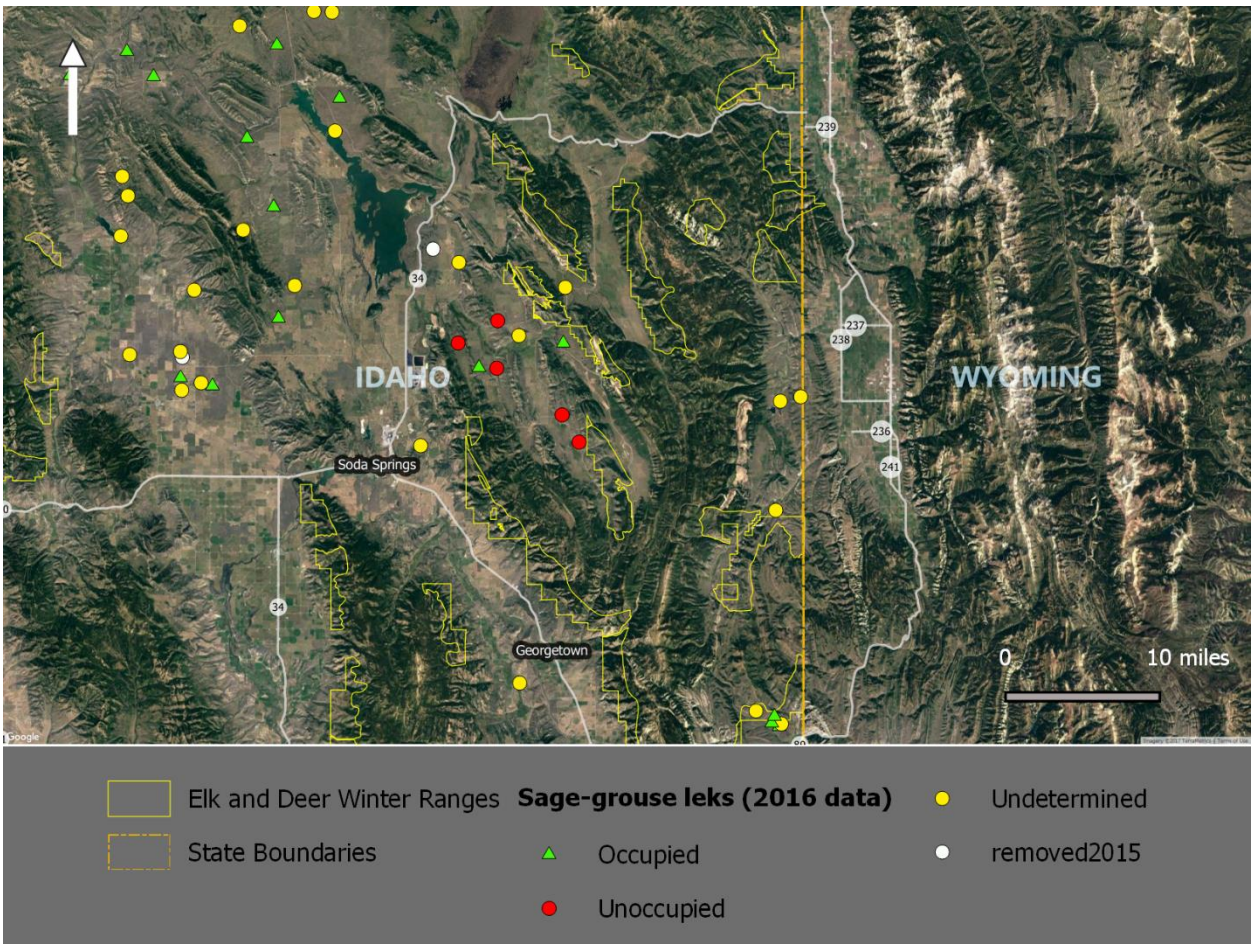
population dynamics. These same routes can become barriers to subnivean animals by fragmenting their habitat.[24]

Other snow-travel considerations in regard to snowmobile include the potential of displacement of species from preferred habitats, increased stress, and increased use of scarce energy reserves to flee from approaching vehicles. Motorized use (by snowmobiles) results in impacts to animals in Yellowstone and other national parks with animals in areas of snowmobile activity exhibiting elevated stress hormones when compared with those in areas where snowmobiles were absent.[25]

The Project takes place in the Y2U wildlife corridor and includes both summer and winter range for deer and elk in the region. This was recognized in the Caribou National Forest Revised Forest Plan. That RFP contains prescriptions identifying winter range for elk and deer and emphasizes the value of roadless areas and low road densities for elk security cover. It identifies an elk winter range in the project area of the Caribou Range and emphasizes the need for migration between that summer area and winter range (RFP Appendix D-6) that must be considered in the EA.

It is important to identify all winter and summer range and how much is affected by direct (pipeline installation) and indirect effects (human activity, road density, security cover) and how much has been affected by other activities in the EA. This would include fragmentation by roads, timber harvest, off-road vehicle use in summer and snowmobile use in winter.

Figure 7 shows winter range from the Forest Service GIS data obtained via FOIA.



[24] T. Olliff, K. Legg, and B. Kaeding, eds, Effects of Winter Recreation on Wildlife of the Greater Yellowstone Ecosystem: A Literature Review and Assessment. Report to the Greater Yellowstone Coordinating Committee (Yellowstone National Park, WY, 1999).

[25] S. Creel et al., "Snowmobile Activity and Glucocorticoid Stress Responses in Wolves and Elk," *Conservation Biology* 16, no. 3 (2002): 809–814.

There have been numerous publications illustrating the benefits of roadless areas and the effects of roads on wildlife and wildlife habitat. The importance of roadless areas was documented for both small (1,000-5,000 acres) and large (>5,000 acres) roadless areas under consideration in the Clinton roadless area environmental impact statement and for three case study regions (Klamath-Siskiyou, Appalachia/Blue Ridge, and Tongass National Forest) recognized by WWF for global biodiversity importance.[26] In general roadless areas in these exceptionally diverse regions were found to provide many ecological benefits compared to roaded landscapes. These benefits include relatively high levels of intact late-seral/old-growth forests; essential habitat for many species of conservation concern; buffer areas from exotic species invasions; edge effects; landscape and regional connectivity; areas most likely to have fire regimes operating within natural bounds; essential habitat for species key to the recovery of forests following disturbance such as herbaceous plants, lichens, and mycorrhizal fungi; habitat refugia for threatened species and those with restricted distributions such as endemics; aquatic strongholds for salmonids; undisturbed habitats for mollusks and amphibians; remaining pockets of old-growth forests; overwintering habitat for resident birds and ungulates; and dispersal "stepping stones" for wildlife movement across fragmented landscapes.[27] [28]

Please provide analysis of road densities and effects on wildlife. An integrated analysis of the effects of roads, human use, and habitat fragmentation on wildlife must be completed.

Please provide an analysis of soil conditions in the project area watersheds, noting any detrimental soil disturbance and its consequences for diminishing soil and land productivity. Please disclose the extent of soils in the project area already hydrologically impacted and analyze and disclose watershed impacts.

Please disclose ongoing soil and water impacts from roads in the project area that may be inadequately maintained. Please disclose the cumulative impacts on soil water, and wildlife of unauthorized (user created) roads and motorized trails. Please disclose compliance with motorized route restrictions, and if violations exist, perform an analysis of the resultant harm to wildlife habitat, soil, and water.

The EA must explicitly demonstrate the project would be consistent with all applicable Land management plan direction, including standards, guidelines, and other direction.

We must not forget these *are* public lands, and as such they represent the best remaining opportunities to provide needed habitats for native wildlife species. Please consider big game species, songbirds, and other wildlife including all species of conservation concern.

In conclusion, please keep our organizations fully informed of all further developments on the Lower Valley Energy Crow Creek Pipeline project proposal.

Respectfully,

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435-881-6917

[26] http://www.worldwildlife.org/wildplaces/kla/pubs/exec_sum.pdf

[27] R. L. DeVelice and J. R. Martin, "Assessing the Extent to Which Roadless Areas Complement the Conservation of Biological Diversity," Ecological Applications 11, no. 4 (2001): 1008-1018

[28] C. Loucks, N. Brown, A. Loucks, and K. Cesareo, "USDA Forest Service Roadless Areas: Potential Biodiversity Conservation Reserves," Conservation Ecology 7, no. 2 (2003): 5, http://www.consecol.org/vol7/iss2/art5/.