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Terri A. Lorenzon, Director  
Wyoming Environmental Quality Council  
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Director Lorenzon:

This correspondence is in opposition to the Sand Creek Rare and Uncommon petition in the Northern Black Hills.

I am a field ecologist having worked in the Black Hills since 1966. My occupancy has been continuous except for 5 years in graduate school. A large part of my practical research and extension effort over the decades was to develop field guides, the first of which in 1970, *Plants of South Dakota Grasslands*, ultimately served as a springboard to a 2007 effort, *Plants of the Black Hills and Bear Lodge Mountains*.

This most recent book, which required 8 seasons of field work, includes roughly 600 plants which are pictured, described and discussed. They range from those which are uncommon to the ubiquitous. Species chosen for inclusion came from our own knowledge and that of field resource managers, botanists, and biologists intimately familiar with the "Hills area". Important editorial reviews and comments included those from Hollis Marriott. A conscious decision was made to include rare species, but that inclusion is not comprehensive.

During our field work, none of the species believed necessary to include were limited to the Sand Creek watershed. Throughout the central and northern Hills similar habitats occur with the same plant species. However, I believe it is appropriate that the BBNF Plan has two botanical areas, Dugout Gulch and Spottedtail, recognized as having high value. Even these, it is important to note, are not pristine as they contain invasive species, not the least of which are common buckthorn and smooth brome grass. These areas are within the proposed petition area and as such are already afforded protection from excessive human intervention including withdrawal from mineral entry. Additional layering of the same protections is simply unwarranted.

The "kitchen sink" approach has been used in the petition to leave misleading impressions for the uninformed regarding rare plant species. Attachment 3 provides a

list of 71 plant species identified as rare. This is a support document for presentations made in the body of the petition. The fact of the matter is that many, many of these species range from abundant, to locally common, to more common in the Bear Lodge Mtns., to indeed rare. Consider these from the Attachment:

*Picea glauca*, Black Hills spruce. If the Black Hills has a signature species, this is it! It is abundant. It is found no where else. If it is rare in the Sand Creek proposal area, then there is not enough habitat for it.

*Ostrya Virginiana*, Eastern hop hornbean. Again, this is a locally abundant, low to mid-elevation plant in the central and northern BH and more abundant in the Bear Lodges. Habitat lacking? I suspect so.

*Penstemon grandiflorus*, Shell-leaf penstemon. This is a common prairie penstemon that reaches into the lower grassland habitats in the Hills. In the right habitat, it is present as a common species.

*Ulmus americana*, American elm. I have witnessed the death of American elm along spring creek, along with elms elsewhere in the North America, they are falling to Dutch elm disease. Clearly this is a misuse of information.

*Antennaria neglecta*, Littleleaf pussytoes. We found this frequently through the Hills, at mid- to high elevations in several environments.

Other entries are just as questionable. This broad-brush approach is totally inappropriate when used as scientific leverage to shore up the arguments for the petition. The information as presented is simply false.

Respectfully,

Dr. James R. Johnson,  
Professor Emeritus of Range Science and  
Extension Range Management Specialist (retired)

Johnson, James R. and Gary E. Larson. 2007 (rev.) Grassland Plants of South Dakota and the Northern Great Plains. So. Dak. Sta. Univ. B566. 288pp.

Larson, Gary E. and James R. Johnson. 2007 (rev.) Plants of the Black Hills and Bear Lodge Mountains. So. Dak. Sta. Univ. B732. 2nd edition, August 2007. 608pp.

Sent electronically