Beverly Compton, [redacted]

September 16, 2021
Bull Creek Specific Comments to be included with my Southern HDs Landscape Restoration Project EA comments please.

Arguments to include the entire Bull Gulch watershed into this project
Since July of 2020 I have hike in Bull Gulch every week that the Forest Service gates have been unlocked. I now know this class 6 sub-watershed well.

Compelling reasons to include the top of Bull Gulch in this project.

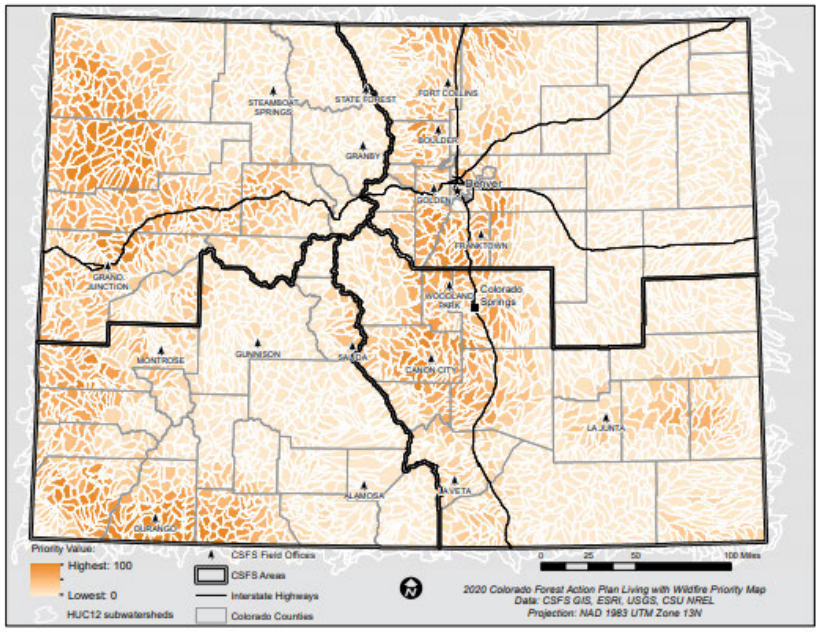
1. If this project is to be called "**landscape**" than the entire length of the Bull Creek watershed needs to be included. If this description of "landscape" only refers the size of the project area (35,000 acres) then this project is not landscape-level planning based on science but subjective, arbitrary choosing of boundaries. You cannot claim to be using science to direct this action and pick and choose what parts of the land you are going to attempt to manage. The report "An Assessment of Forest Ecosystem Health in the Southwest" by the Rocky Mountain Forest and Range Experiment Station, Southwest Region states that "**Ecosystem management** is the overall concept which determines that Forest Service approach to restoring and maintaining forest health." Not including the headwaters of Bull Creek is not ecosystem management. Chapter 7: managers must consider the dynamics of the entire landscape; forest ecosystem health can be achieved only with the context of adaptive ecosystem management. The entire Bull Creek watershed needs to be included in this EA.
2. This same report, chapter 6 asks "is adequate provision made for **the conservation of biological diversity?**" If the SJNA does not field inventory plant and animals species but only provides locations of habitat you cannot say the project is based on conservation biology or biological diversity. You have to know what living there to know what needs to be protected and the habitat during this treatment.
3. USGS and other participants in the article "Drought-induced shift of a forest-woodland ecotone: rapid landscape response to climate variation" states "the Responses of vegetation to variations in climate are expected to be **most rapid and extreme at ecotones,** the boundaries between ecosystems. In our area, the HDs Mountains are

considered the most eastern point of the Colorado Plateau. The HD's are this boundary. "Semiarid ponderosa pine forest and pinon-juniper woodland shifted extensively and rapidly through mortality in response to a severe drought." This describes Bull Creek and the state of the "exceptional" drought predicted to return to the HD's.

4. You cannot **subjectively manage** the bottom half of Bull Creek and ignore the serious wildfire threat at the top. The large bowl shape area, below Pargin Mountain that is the top of Bull Creek's watershed is covered in 10 foot tall, thick, impassible Gambel Oak dominating the steep hillsides. I know firsthand because I have attempted to hike it- not possible. This area has not been treated to prevent catastrophic wildfire. If not, a wildfire starting there may be impossible to stop and will reduce the entire watershed of Bull Creek to ash.
5. **2014 Northern HD restoration plan** The science in this document will be from 2013 or older and is not landscape ecology and is not based on climate science. Simply saying the top half of Bull Creek is in this plan and does not need to be included in the Southern HD restoration plan is not science but a subjective decision. There is nothing in the Northern HD's landscape Restoration Project EA that is compelling to leave the top half of Bull Creek in that EA.

6. The **State of Colorado Forest Service, Forest Action Plan** shows that the HD's are at high risk of wildland fire making the headwaters of Bull Creek extremely important to manage for fire.

Subwatershed Priority Map for Implementing Living with Wildfire Goals



Geospatial layers incorporated:

» Wildfire risk 2017 — defined as the possibility of loss or harm occurring from a wildfire and includes four values at risk: current wildland-urban interface, drinking water assets, forest assets and riparian assets, which are combined with burn probability. Layer weights consistent with 2017 Colorado Wildfire Risk Assessment [2].

7. If a **wildfire** starts and blows up at the headwaters of Bull Creek there is a high probably that the following old growth will be lost: A. Ponderosa Pine old growth trees stand mid-way down Little Bull Gulch. B. the polygon of old growth Ponderosa Pine trees just below and to the south of the ATV trail 682 where it goes over the saddle down into Turkey Creek will be lost C. along with the exceptionally large Juniper trees with trunks at the ground 20 feet around at their base, on the ridge, south of the proposed 17U well site and above the polygon of old growth Ponderosa.
8. If a **catastrophic fire** occurs in the Bull Creek drainage and burns all the way to the Piedra River, invaluable endangered SW Will Flycatcher and Yellow-Bill Cuckoo potential habitat on the Piedra at Bull Creek may be lost.
9. A **catastrophic fire** will sterilize the soil and combined with the warming climate, the current vegetation species may never return and with the never-ending weed source from the road, ATV trail and well pads, the headwaters may become a grand showcase of these weeds. The HD's remain in "severe drought and the long range forecast is the area will return to exceptional drought.

<u>Other critical issues in Bull Creek that must be considered in the Southern HDs Landscape Restoration Project relevant to both the upper and lower portions of the creek.</u>

1. The two **water guzzlers** I have found, one on the 16U ATV trail and the other one to the south of the saddle going into Turkey Creek must be removed. These failed water collectors only have red colored, foul water in them and any small wildlife that gets into them will die because they cannot get back out. I believe there are more guzzlers in Bull Creek and they also need to be removed.
2. The **2007 NSJBCBM EIS** states: In the southeastern portions of the APE (where Bull Creek watershed is located) there is an increase in sites **(cultural resources)** at higher elevations – Chapter 3, page 3-553. "There is a high probability of finding (cultural resources) on the ridge or mesa tops, in the meadows and along the intermittent stream – as found in the L&RMP, page C-28. 5.NSJB CBM EIS Page3-553 "in the southeastern portion of the APE there is an increase in sites at higher elevations – Bull Creek is in the southeastern portion of the APE. Because of these statements the landar aerial photos used need to be re-examined, the map plotting that was done needs to be checked to insure that it was done correctly to insure potential locations of cultural locations are accurate so they can be found and protected as a part of this landscape restoration project. The Memorandum of Understanding between the State of Colorado and the US. Department of Agriculture states on page 6 of 10 that "the Partners will protect sacred sites and preserve cultural resources". Once you disturb, burn, drive over, mechanically treat and in any other way completely harm or destroy the soil these cultural artifacts will be lost forever. A complete, thorough and honest field inventory must be done before any treatment is done. An inventory that is new, more accurate than the one done for the NSJB CBM EIS where many sites were not found, not protected or mapped. This current proposed project is 35,000 acres much of it unroaded. I have to believe that little of it has been field surveyed for potential cultural resources and needs to be done BEFORE any disturbance.
3. The SJNF LRMP asks the question on page 255 "how many significant **heritage/cultural resources** in danger of being lost have been protected/preserved/stabilized? Please provide this answer to what is in Bull Creek.
4. Even though none of the well pads in Bull Creek and on Fosset Gulch road have been restored – doing so will be impossible. The **well pads** are completely covered in either highly invasive native plants like the yellow sweet clover and common sunflower or non-native noxious weeds like foxtail, cheat grass, mullein and thistle. These well pads are now a permanent source of weeds and weed seeds that already have found their way deep into the forest in all directions. I know because I've hiked in all directions off

of the Bull Creek road and ATV trail. The only way to eliminate these well pads of weeds is to sterilize the soil which makes planting something there impossible. The soil would be dead and not able to sustain plant life. The saved "topsoil" is also completely covered in weeds. The notion in the NSJBCBM EIS that saving topsoil and using it when the well is done and the pad will be restored to its natural state will never happen.

5. The only way to **restore these well pads** is to scraped off all the weeds and their roots, bring in new topsoil, destroying some other landscape and seed and water twice a day or more. Growing anything new on these well pads is no different than growing a new lawn. Every new planting here has to be water at least daily for two years. This is never going to happen with these well pads. These openings created for well pads will be there forever. The forest service has failed.
6. The **highest diversity** and the wildest place in Bull Creek is the run of north facing, dark timber that runs from the top of Bull Creek along the creek bed, down to the Piedra River. This is a long stand of multi-tree species, multi-aged, and dead standing and down dead trees, lush understory of plant species. Steep, impassible and critical habitat for wildlife that thrives in these environments including the imperiled Northern Goshawk, a sensitive species. "Mixed conifer stands are in very small pockets within the analysis area" This is a stand of mixed conifer that must be protected and not destroyed. Potential **Northern Goshawk** nests must be documented and protected and no adverse management activities should occur at any time in suitable nest areas.
7. The pockets of **Cottonwood/Willow** wet areas in Bull Creek's creek bed are micro wetlands and defined in law, as stated in the San Juan/Tres Rios Climate Change Ecosystem Vulnerability Assessment "an area typically flooded or saturated with sufficient frequent and/or duration, with surface water or groundwater… "Appendix G of the LRMP on page G-2 states that "Of particular concern are seasonal springs, seeps, small ponds and small wetlands". These rare areas in Bull Creek and in openings in this watershed must be protected.
8. There are **Pinyon Pine** trees in Bull Creek. Because of their low number they need to be protected. They provide important bio-diversity in this drainage. We need to save these trees. The Rocky Mountain Forests at Risk publication by the Union of Concerned Scientists and the Rocky Mountain Climate Organization describes Pinyon Pine as a "foundation species of the forests that flank the Southern Rockies." Find these trees, flag them and protect them from any treatment. This report also recommends "Manage for resilience". If you destroy them you cannot manage them for resilience. The Pinyon pine trees in Bull Creek are found with Juniper trees. The

report “Pinyon-Juniper Landscape: San Juan Basin, Colorado Social-Ecological Climate Resilience Project states that there are “nearly 25 bird species depend on this habitat type and a “number of rare plant species” Which of these species are found in Bull Creek and should be protected? These trees need to be flagged and not destroyed. This report also states “Identifying, protecting, and managing patches that are likely to persist in the face of climate change will assist in maintain a resilient pinyon-juniper landscape” These patches found in Bull Creek must be protected. Provide a map of these trees. If prescribed fire in the Ponderosa Pine forest does not regenerate because of a warming climate and less moisture then these pockets of Pinyon-Juniper become a exceedingly important seed source to revegetate the Ponderosa Pine areas lost.

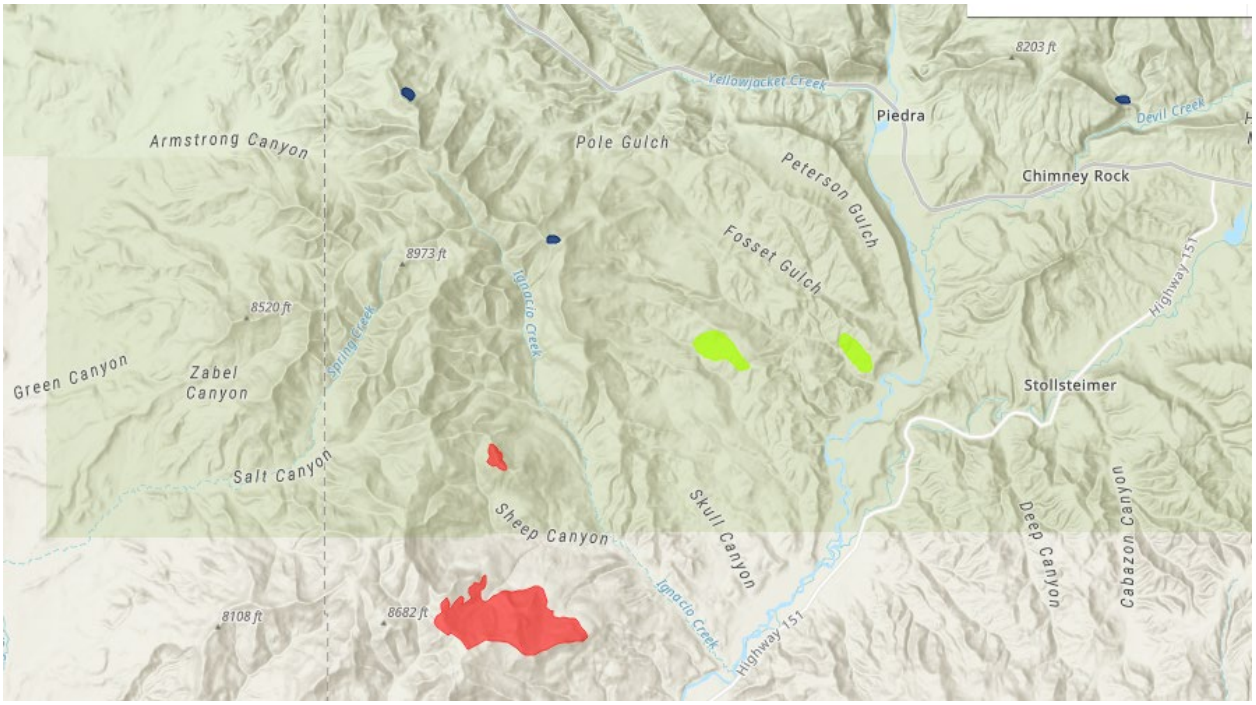
Climate Change Assessment for the San Juan Mountain Region, Southwestern Colorado USA

General Change Expected	Specific Change Projected Over the Next Century	Observed Changes	Information about Seasonal or Patterns of Change	Confidence	Source(s) and Context
Piñon-Juniper Woodlands					
Decrease or increase in area based on two models; decrease with expected future disturbances	Loss of twoneedle piñon and Utah juniper and reduced co-occurrence of these two species; increases in elevation of 500 and 100 meters, respectively	Landscape scale changes in this community occurred as a result of recent regional drought; more drought-tolerant junipers were also affected	Historically twoneedle piñon expanded in wet climatic periods; historic fires were stand-replacing and infrequent; fires today are within this range of variability	Moderately High confidence –climate literature suggests both an increase and a decrease; decrease also expected given future disturbance potential	Anderson and Feiler 2009; Keane et al. 2008; Rehfeldt et al. 2006; Romme et al. 2008

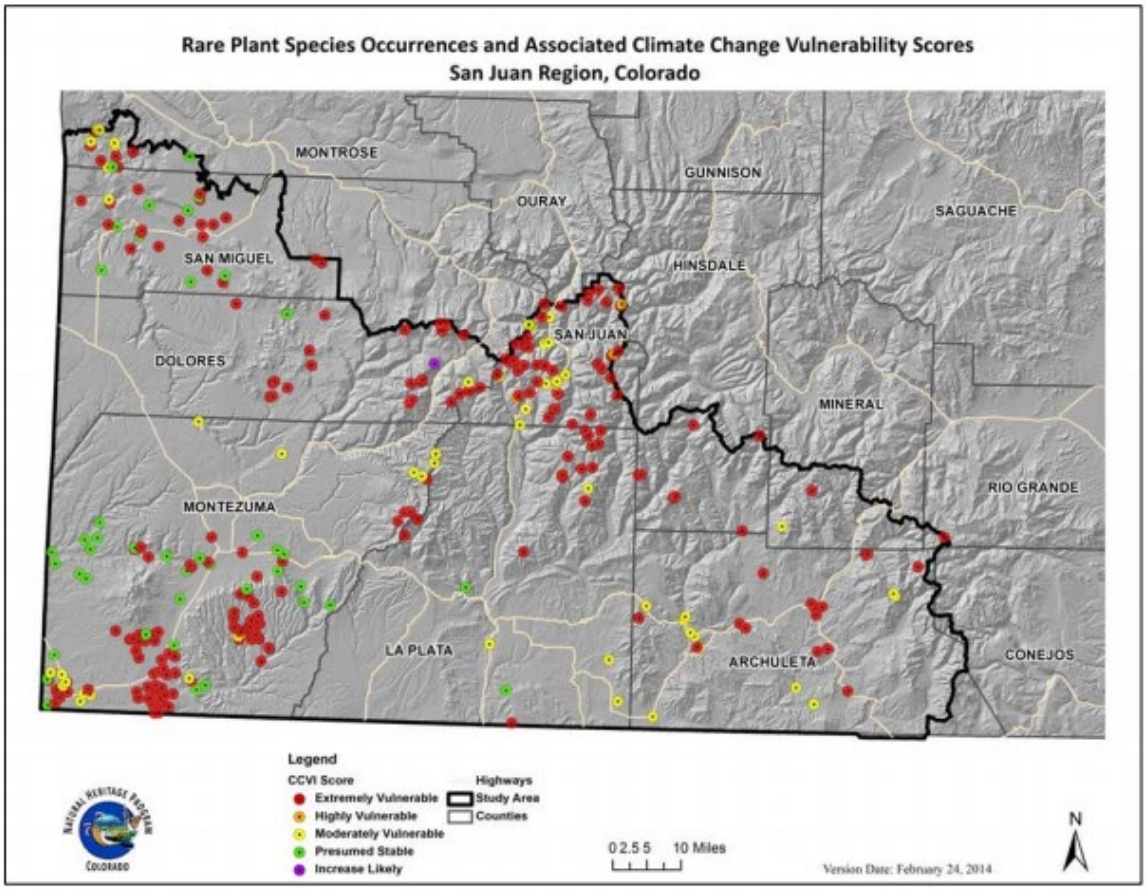
9. **Old Growth Stands of Ponderosa and Juniper**. The old growth stand of Ponderosa Pine trees on the lower half of Bull Creek just below where Little Bull Creek flows into Bull Creek is on a steep hillside with 10 foot, impassible Gambel Oak growing underneath. This stand of trees needs to be protected and hand cutting of the gambel oak is critical in doing so. The same is true of the polygon of Ponderosa Pine trees south of the bench where the ATV trail 682 drops down into Turkey Creek. On the same bench, the very large, some with trunks at their base 20 feet around, Junipers also need to be protected. Old-growth Forests in the Southwest and Rocky Mountain Regions, proceedings of a workshop 1992. Page 48 – “forest management in the Southwest should include objectives that maintain or improve existing old-growth stands and that also begin to create supplemental old growth. Identification and Ecology of Old Ponderosa Pine trees in The Colorado Front Range study: In the current landscape, old-growth stands are usually small, fragmented, and isolated. Current dense forest conditions place montane forests at risk of stand-replacing wildfire. Trees old enough to become old growth in the future must also be protected.
10. There are **noxious weeds** everywhere, on both sides of Bull Creek road and Bull Creek ATV trail 682. Weeds are now found deep in the forest on both sides of the road and ATV trail. Every tiny opening of sunlight has weeds growing there. I have hiked up

above and below this road and ATV trails on both sides from the locked gate to the saddle at the top that goes down to Turkey Creek. The road and ATV trail is moving noxious weeds up and wildlife is carrying them into the forest. The control of noxious weeds is a failure. I've hiked up on the right side, at the bottom of Bull Creek, going up creek and the entire hillside has noxious weed Foxtail in every opening where the sun hits the ground. I monitored all 5 well sites on Fosset Gulch and Bull Creek 8.9.21 and found every well pad and surrounding lands are completely covered in highly invasive common sunflowers and non-native noxious weeds. Critical winter wildlife forage in open meadows is being replaced by noxious weeds and highly invasive native plants. The HDs are known to be critical winter habitat for deer and elk and soon their forage will be replaced by weeds. The well owner has not fulfilled its responsibility of spraying these weeds. Any additional disturbances through this EA action will only make an unmanageable weed control problem even worse. Weed control by the SJNF is a complete failure. And accepting that weeds will spread in this new proposal is clear indication that the SJNF plans to continue doing the same thing as you always have in the notion of controlling weeds and expecting a different outcome. With the warming climate and the real climate science concerns that once an area is disturbed it may not return as it was; it's time for the SJNF to use new science on how to control the weed infestation because without it this proposed plan could be as destructive as not doing anything. This plan, as it is proposed now will create vast open areas that will be a noxious weed seed source for ever.

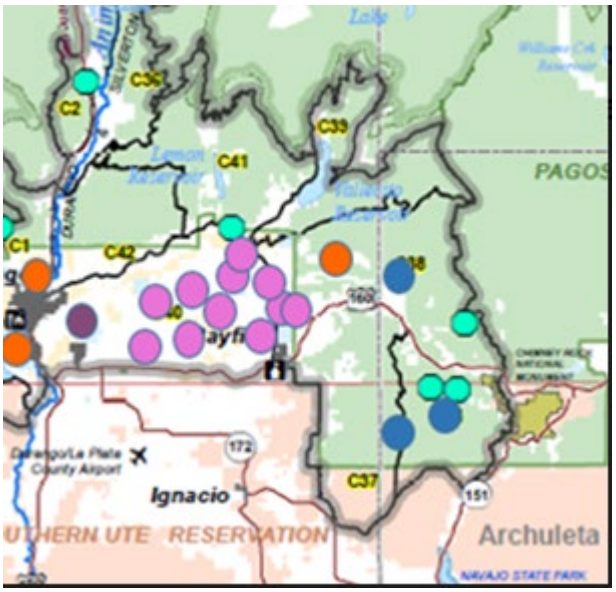
11. The Colorado State Forest Service, as found in their 2019 Insect and disease update, aerial detection surveys of **Roundheaded pine bark beetle** complex in lower Bull Creek. What efforts will be made in the control of this beetle infestation? How will the efforts of this proposed action make the infestation worse?



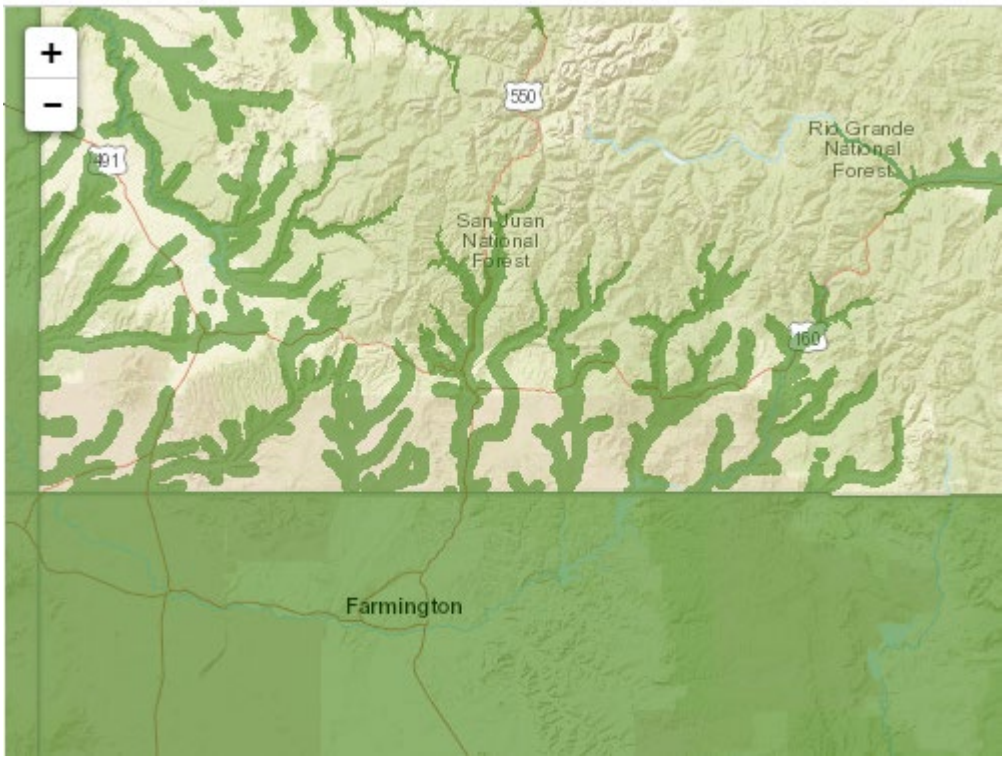
12. There is an area of **Arboles Milkvetch** on the sides of Bull Creek Road just before the road turns to the left and goes down to the 16U-1 well pad. Most of the Arboles Milkvetch was destroyed when the road was constructed. The Colorado Natural Heritage Program describes this native as a “plant of concern” with no protection. The Forest Service needs to protect it.
13. The **San Juan Rare Plant Climate Change Vulnerability Assessment** by the Colorado Natural Heritage Program indicates that there are 2 rare plant species near Bull Creek. There may be also in Bull Creek and we do not know simply because no onehas looked for them. An inventory in Bull Creek for these two species must be done before any treatment is done.



14. Rocky Mountain Restoration Intitative has mapped (see below) forest restoration/hazardous fuels reduction projects. There are two areas near Bull Creek that should be factored into this EA.



15. The federally listed, threatened **Yellow Billed Cuckoo** habitat may occur in Bull Creek. The Chimney Rock National Monument final EIS lists the Cuckoo as having potential habitat in the Monument. From a landscape perspective, Bull Creek and Chimney Rock are connected and have the same habitat. Even though Bull Creek is not a perennial stream there are pockets of Cottonwood and Willow along the creek bed. These might be potential habitat for the Yellow Billed Cuckoo and surveying prior to any treatment in Bull Creek must be done. US Fish and Wildlife Service shows current range of the Cuckoo in the Piedra River at Bull Creek.



16. **Migratory birds** play an essential role in the link between vast food chains and the aiding in plant dispersal, help pollinate nectar producing plants, and serve as biological control agents by consuming insects and are critical indicators of a healthy ecosystem. The Forest Service positon of providing “habitat” without no scientific field surveying of migratory birds makes providing habitat meaningless. This is not science but convenience. If nothing is living there, the habitat, regardless of its quality is nonsense not science. Migratory bird inventories including owls must be done before any treatment is done. **USFS Region 2 Designated Sensitive Species** including bats must be field surveyed.
17. Conversion of **Ponderosa Pine** tree to conifer establishment after fire as stated in the “Climate Drives Episodic Conifer Establishment after fire in dry Ponderosa Pine Forests of the Colorado Front Range, USA” **Regeneration** in dry ponderosa pine forest requires above-average moisture condition. The long term drought forecast for the HDs is “exceptional drought” and any cutting of Ponderosa Pines may not regenerate. “Double whammy: high-severity fire and drought in ponderosa pine forests in the Southwest”, NRCS Research states that “In southwestern ponderosa pine forests, our body of ecological knowledge suggests that regeneration will be poor when drought and high-severity fires are coincident, since the species is adapted to regenerate in a low-severity fire regime and fairly precise favorable climate conditions”. The San Juan/Tres Rios Climate Change Ecosystem Vulnerability Assessment written by the

Colorado Natural Heritage Program states on page 54 that “higher temperatures is likely to reduce ponderosa pine regeneration, especially in drier, lower elevation areas” How has the science of climate change and a warming environment and the effect on Ponderosa Pine trees been factored into the notion of cutting or burning Ponderosa Pine trees in Bull Creek? What is the percentage of likelihood that after prescribed fires Ponderosa Pine trees WILL NOT regenerate?

18. **Potential Mexican Spotted Owl habitat** – there are many conflicting studies as to what Mexican Spotted Owl habitat is, where they might be and not. FS/GOV MSO fact sheet description is a good description of Bull Creek: “HABITAT: Mexican spotted owls nest, roost, forage, and disperse in a diverse array of biotic communities. Mixed-conifer and pine-oak forests are commonly used throughout most of the range; however, they can be found in pinyon-juniper and ponderosa pine. Nesting habitat is typically in areas with complex forest structure or rock canyons, and contains mature or old growth stands that are uneven-aged, multi-storied, and have high canopy closure” This species must be surveyed for. The old growth Ponderosa Stand just below the confluence of Little and Bull Creek on the east side fits this description - steep, old trees with Pictured Cliff sandstone, rock cliffs nearby.

19. Forest Service Handbook (FSH 2509.25) 12.1 Standard (3) and Design Criteria 1 specify that actions be allowed in the W1Z only if they are “maintain or improve long-term health of the stream and the condition of the riparian ecosystem.” How will this project improve the condition of the riparian ecosystem in Bull Creek?

I have led this summer and will continue into the future the Bull Creek Citizen Science Inventory as a part of my volunteer work as a well monitor for the San Juan Citizen Alliance. The Weminuche Audubon has been volunteering every week to help count birds and has helped develop the protocol and methodology of the count, monitoring points and overall effort. We have counted birds once or twice a week, all summer from the start fo Bull Creek ATV 682 into the proposed new well 17U #1 and at the bottom of Bull Creek, on Fosset Gulch road at the Piedra River and up Little Bull Creek ATV trail 683. Each count location has 4 monitoring sites where we count and record bird species and numbers seen or heard. We also records birds seen or heard on the walk from monitoring point to monitoring point. All counts are recorded in Ebird. The current list of birds is below. On top, we will continue our weekly bird count until the Forest Service road gates are locked; on the bottom until the snow is too deep to hike up stream. We will not count bird during the rifle seasons but will do so in between them.

BULL CREEK CITIZEN SCIENCE BIRD COUNT		as of 9.3.2021
American Crow		Lesser Goldfinch
American Dipper		Lewis's Woodpecker
American Robin		MacGillivray's Warbler
Ash-throated Flycatcher		Mountain Chickadee
Bank Swallow		Mourning Dove
Black Phoebe		Northern Flicker
Black Capped Chickadee		Orange-crowned warbler
Black-Billed Magpie		Plumbeous Vireo
Black-headed Grosbeak	48 species	Pigmy Nuthatch
Blue-Gray Natcatcher		Red-Breasted Nuthatch
Broad-tailed Hummingbird		Red-Tailed Hawk
Brown Creeper		Spotted Towhee
Brown-headed Cowbird		Steller's Jay
Cedar Waxwing		Townsend's Solitaire
Chipping Sparrow		Violet-Green Swallow
Clar's Nutcracker		Warbling Vireo
Copper's Hawk		Western Bluebird
Cordilleran Flycatcher		Western Tanager

Dark-eyed Junco
Grace's Warbler
Green-tailed Towhee
Hairy Woodpecker
Hermit Thrush
House Wren
Western Wood Pewee
White-breasted Nuthatch
Yellow Warbler
Yellow-rumped Warbler

A native grass identification inventory was done along the Bull Creek ATV trail 682 and into the proposed 17U -1 well site. Here are the findings:

Grasses & Sedges Along Bull Creek Road, ATV Trail 682, and Near Potential Well Site				
Grass Species		Zone 1	Zone 2	Comments
Indian Ricegrass	Achnatherum hymenoides	X	X	Common native grass, infrequent in both zones.
Creeping Bentgrass	Agrostis stolonifera	X*		Introduced, seen in only one spot.
Purple Three-awn	Aristida purpurea		X*	Common native grass, seen in only one spot.
Smooth Brome	Bromus inermis	X	X	Introduced, common in both zones.
Japanese Brome	Bromus japonicus	X*		Introduced, seen in only one spot.
Cheatgrass	Bromus tectorum	X	X	Introduced, common in both zones.
Slender Wheatgrass	Elymus trachycaulus	X		Common native grass, infrequent in Zone 1.
Arizona Fescue	Festuca arizonica	X	X	Common native grass, common in both zones.
Foxtail Barley	Hordeum jubatum	X	X	Common native grass, common in both zones.
Junegrass	Koeleria macrantha	X	X	Common native grass, common in both zones.
Green Needlegrass	Nassella viridula	X		Common native grass, infrequent in Zone 1.
Western Wheatgrass	Pascopyrum smithii	X	X	Common native bluish colored grass, abundant in both zones.
Geyer's Sedge	Carex geyeri		X	Common native sedge. Only seen between ATV Trail 682 and potential well site.
Zone 1	20 feet on both sides of Bull Creek Road from gate near Fossett Gulch Road to start of ATV Trail 682.			
Zone 2	20 feet on both sides of ATV Trail 682 from Bull Creek Road to potential well site, including well site and area between ATV Trail 682 and well site.			
	An X in Zone 1 or Zone 2 means that species was collected and/or seen in that zone on July 15, 2021. An asterisk indicates species seen in only one location.			