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Comments: Comments on Cibola NF Draft Desired Conditions

Dear Cibola National Forest,

Attached (both as .pdf and .doc documents) are the comments of Grand Canyon Trust on the Draft Desired Conditions for the Cibola National Forest plan revision.

Please let us know if you have any questions. Thank you for considering these comments.

Mary O'Brien

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This text was entered from the attachment by the Forest Service personnel on behalf of the commenter

It may be necessary for the Cibola NF to display alternative Desired Conditions for a full range of reasonable alternatives, including an alternative that emphasizes native species and ecosystems.

P. 6, Adjusting Desired Conditions to Account for Vulnerability to Climate Change

Climate change vulnerability is not limited, as would seem to be implied on p. 6, to forests:

In areas of high vulnerability to climate change, based on 100-year climate projections (Triepke et al. 2014), tree basal area is restored or maintained at the low end of the desired range to mitigate water stress and increase resiliency to climate change. In these areas, early and mid-seral species dominate over late-seral species, given the adaptations of many early and mid-seral species for warmer and drier conditions. Early seral species characteristic of lower-elevation life zones (e.g., Douglas-fir on a spruce- fir site) are maintained. Late-seral species (especially large specimens) are maintained primarily in locally cooler (north-facing aspects) and wetter (draws, seeps) areas to maintain diversity, wildlife habitat, and a local seed source.

Add to the above Desired Condition

The diversity, density, root growth, and reproductive capacity of native grasses, forbs, and shrubs are maintained

at site potential for resilience to heat, drought, erosion, and invasive species.

FOREST VEGETATION TYPES

P. 10, Landscape-Scale Mixed Conifer with Aspen

Add to Desired Condition:

Aspen communities have multi-height stems (except in early stages following fire) and adequate recruitment to perpetuate aspen communities, including site-appropriate, native, biodiverse understories.

p. 10

Suggest dropping "primarily even-aged" in the following Desired Condition:

A mosaic of groups and patches of trees, primarily even-aged, and variable in size, species composition, and age is present.

Replace with:

A mosaic of groups and patches of trees variable in size, species composition, and age is present.

P. 10, Mid-Scale Mixed Conifer with Aspen:

Add:

Aspen communities have multi-height stems (except in early stages following fire) and adequate recruitment to perpetuate aspen communities, including site-appropriate, native, biodiverse understories.

P. 11, Fine-Scale Desired Conditions for Mixed Conifer with Aspen:

Add "native" before plant diversity:

Organic ground cover and herbaceous vegetation provide protection for soil and moisture infiltration 15 and contribute to native plant diversity and ecosystem function.

P. 11, Landscape Scale Mixed Conifer - Frequent Fire Forest

Suggest: Add "multi-height" to aspen desired conditions:

Groups of multi-height aspen and all structural stages of oak are present.

P. 13, Mid-Scale Mixed Conifer - Frequent Fire Forest

Add "young" to even-aged forest structure. There should not be up to 50 acres of even-aged aspen, for instance.
Add "native" to desirable ground cover of perennial grasses and forbs. See below:
The mosaic of tree groups generally comprises an uneven-aged forest with all age classes and structural 16 stages. Small patches (usually <50 acres) of young, even-aged forest structure are occasionally present.

Ground cover consists primarily of native perennial grasses and forbs capable of carrying surface fire, with basal vegetation cover ranging from about 5-20% depending on site conditions.

P. 16
Mid-Scale Ponderosa

Add "native" prior to perennial grasses and forbs. Note that "native" does precede perennial grasses and forbs on pp. 19 and 20 in the Desired Conditions for landscape- and mid-scale pinyon-juniper.

Ground cover consists primarily of native perennial grasses and forbs capable of carrying surface fire, with 3 basal vegetation values ranging between about and 20%.

P. 21

Why should a desired plant composition compared to site potential be 33% reduced? This should say 80% rather than 66%.

Suggested Desired Condition:

Overall plant composition similarity to site potential is greater than 80% [Delete 66%] for the relevant natural seral condition.

P. 24, Madrean Woodland -Landscape Scale

Why should a desired plant composition compared to site potential be 33% reduced? This should say 80% rather than 66%.

Suggested Desired Condition:

Overall plant composition similarity to site potential is greater than 80% [Delete 66%] for the relevant natural seral condition.

Pp. 25-26, Tables 10 and 11

Insert "native" before "grasses" in Tables 10 and 11

P. 26 Mid-Scale Madrean Woodland

Insert "native" prior to perennial grasses and forbs, and basal vegetation values should be relative to site potential, not "site conditions".

Ground cover consists of native perennial grasses and forbs capable of carrying surface fire, with basal vegetation values between about 2 and 20% depending on site potential (delete "conditions"]

Fine-Scale Madrean Woodland Desired Conditions

Insert "native" prior to "grass/forb/shrub mix"

Interspaces between tree groups are variably-shaped and comprised of a native grass/forb/shrub mix.

P. 29, Sagebrush Shrubland

It is incorrect to say that science is not available to provide descriptions for sagebrush shrubland at multiple scales.

Delete:
Not enough science is available to provide descriptions at multiple scales for this vegetation type.

Replace the above sentence with the following:

A diversity of native grasses, forbs and shrubs as well as biological soil crust are present in the sagebrush interspaces at 80% of site potential.

P. 30

Correct spelling from Krascheninnikovia to Krascheninnikova

Pp. 30, 32, and 33, Tables 15-18, Intermountain, Chihuahuan Salt Desert Scrub, and Chihuahuan Desert Scrub

Insert "native" before "discontinuous grasses" in Tables 15 and 16

P. 33
Correct spellings of three species:

Dasyochloa pulchela to Dasyochloa pulchella; Muhlenbergia porter to Muhlenbergia porteri and Bouteloua eripoda to Bouteloua eriopoda.

P. 35, Montane/Subalpine Grassland

Insert:

Native grass diversity is similar to site potential, with "increaser" species not dominant, or measurably declining.

P. 37 and 39, Tables 20 and 21 , Colorado Plateau/Great Basin Grassland and Semi-Desert Grassland

Insert "native" prior to "perennial" in Tables 20 and 21.

P. 39, Semi-Desert Grassland

Insert as a Desired Condition:

Native grass diversity is similar to site potential, with "increaser" species not dominant, or measurably declining.

P. 40, Arizona Alder, Willow

Insert as a Desired Condition:

A diversity of native willow species exhibit diverse height and age structure. Density is at or measurably moving toward site potential, and alder density is not due to excessive browsing of willows.

Pp. 42-44 Fremont Cottonwood community types
Insert as a Desired Condition:

Fremont cottonwood communities support site-appropriate, native, biodiverse understories. Fremont cottonwood trees are multi-height (except in early stages following fire or other natural disturbance), with recruitment adequate to perpetuate Fremont cottonwood according to site potential.

P. 45, Herbaceous Riparian

Currently, there is no Desired Condition for the herbaceous riparian community, and the photo (Fig. 27) appears to exhibit ungulate shearing of banks, lack of overhanging vegetation, and short stature of the herbaceous vegetation. Insert as a Desired Condition:

Herbaceous riparian areas exhibit, or are making significant, measurable progress toward exhibiting potential native vegetation diversity, density, age structure composition, and cover.

Pp. 46-47 Narrowleaf and Rio Grande Cottonwood communities

Insert as a Desired Condition:

Narrowleaf and Rio Grande cottonwood communities support site-appropriate, native, biodiverse understories. The cottonwood trees are multi-height (except in early stages following fire or other natural disturbance), with recruitment adequate to perpetuate Narrowleaf and Rio Grande cottonwood according to site potential.

P. 48 Upper Montane Conifer, Willow

Insert as a Desired Condition:

Willow species exhibit diverse height and age structure, with recruitment maintaining willow density at site potential.

P. 49 Willow/Thinleaf Alder
Insert as a Desired Condition:

Willow species exhibit diverse height and age structure, with recruitment maintaining willow density at site potential. Thinleaf alder is not dominant due to excessive browsing of willow.

P. 49 Ponderosa pine/Willow

Insert as a Desired Condition:

Willow species exhibit diverse height and age structure, with recruitment maintaining willow density at site potential.

Pp. 50 and 51 Arizona Walnut, and Ponderosa pine/Willow

Insert as a Desired Condition for both vegetation types:

Willow species exhibit diverse height and age structure, with recruitment maintaining willow density at site potential.

WATERSHED RESOURCES

Surface Water Resources

P. 52

Explain to what the failure to meet water quality standards in the stream channels is due:

Of the 6,203 miles of mapped stream channels in the Plan Area, only about four percent are perennial, meaning they flow year round. Where assessed, water quality doesn't meet State standards.

In light of water quality not meeting State standards, the Desired Conditions document proposes on p. 52 to continue with BMPs that apparently aren't working:

Water resources, including water quality are maintained by ensuring Best Management Practices as described in the National Best Management Practices for Water Quality Management on National Forest System Lands and in FSH 2509.22 are implemented and monitored.

It would be assumed that "Best Management Practices" have been being implemented, as they are required in the Forest Service Handbook at 2509.22. If BMPs have not been implemented, what will change such that they will now be implemented? If they have been implemented, they do not appear to be succeeding at bringing water quality to State standards.

Therefore, add to the Desired Condition the following sentence:

Where Best Management Practices are not resulting in water quality meeting State standards, site-specific management actions demonstrated to successfully restore water quality are developed and implemented.

P. 52 also notes that "many" of the 7,569 acres of riparian area on the Forest " . . .are at risk in terms of proper functioning condition, largely due to lack of supporting riparian vegetation and/or stability."

P. 53

The following Desired Condition begs the question of whether the springs, riparian areas, and wetlands will be healthy, or whether they just appear to have the attributes believed to be associated with health:

Springs, riparian areas, and wetlands have the necessary soil, water, and vegetation attributes to be healthy and functioning.

Substitute a different Desired Condition:

Riparian and wetland areas exhibit, or are making significant, measurable progress toward exhibiting potential native vegetation diversity, density, age structure composition, and cover.

Add "native species" to the following Desired Condition:

Riparian, wetland, and spring dependent resources and native species are supported preferentially.

P. 53

"Natural range of variability" for bank characteristics is too subjective and vague:

Bank characteristics are stable within the natural range of variability.

Substitute the following Desired Condition:

Bank characteristics exhibit their potential stability in light of comparable reference streams and creeks.

P. 54

Add "native" before riparian vegetation and groundwater recharge:

Ephemeral channels which only flow during snow melt and in direct response to precipitation events with minimal or no riparian vegetation provide support to downstream subsurface flows, supporting native riparian vegetation and groundwater recharge.

Add "native" before riparian plants:

Native riparian plants such as willows (e.g., Bebb, Peach Leaf) are reproducing with all age classes present

P. 55 Watersheds

The following is meaningless, as roads, trails and impervious surfaces do impact the hydrologic regime:

The hydrologic regime within a watershed is not impacted by the density and distribution of roads, trails, and impervious surfaces.

The following Desired Condition would provide a greater commitment on the part of the Cibola NF:

Motorized routes and impervious surfaces are minimized and non-motorized trails are located and designed for minimized impact on watershed hydrologic regimes.

SOIL DESIRED CONDITIONS

P. 55. The following is a virtually meaningless Desired Condition:

*Soil condition is satisfactory

Substitute the following Desired Condition:

Soils exhibit, or are making significant, measurable progress toward permeability and infiltration rates that sustain potential site productivity or improve site productivity, considering the soil type, climate, and landform.

The following Desired Condition is too vague:

*Vegetation contributes to soil condition, nutrient cycling, and hydrologic regimes at natural levels.

Substitute the following Desired Condition (and note this is language from p. 13 of the FS Desired Conditions

document):

Organic ground cover and herbaceous vegetation protect the soil, facilitate water infiltration, and promote native plant and animal diversity and ecosystem function.

The following Desired Condition is meaningless, as some level of soil productivity is always present.

*Downed woody material occurs at levels (size, decay) sufficient to support soil productivity.

The Desired Condition should indicate that the soil productivity should be supported at its potential:

Downed woody material occurs at levels (size, decay) sufficient to support the site's potential soil productivity.

The following Desired Condition is meaningless, as some biocrusts are always "present." Present at 1% of potential? Present in one place?

*Biological soil crusts (e.g., mosses, lichens, algae, liverworts) are present.

Insert the following Desired Condition:

Mature biological soil crusts (e.g., mosses, lichens, liverworts) are maintained where present; and early successional biological soil crusts (e.g., thin and thick cyanobacteria) are present at approximately 80% of the diversity and cover of recovery reference sites on all soils vulnerable to erosion and capable of supporting biological soil crusts.

[Note: recovery reference sites are those that have been undisturbed less than 10 years, and thus are useful for setting feasible recovery goals for soils with the potential to support biocrusts and important for erosion prevention).

The following Desired Condition is meaningless. 100% free?

*Soils are free from pollutants that could alter ecosystem integrity or affect public health.

Substitute the following Desired Condition:

Where pollutants that could alter ecosystem integrity or adversely affect public health are present, a plan is present that will reduce or eliminate the pollutants.

The following Desired Condition focuses on the wrong issue (i.e., whether the soils exhibit "excessive" erosion). It is better to focus on whether the erosion is at all the result of or exacerbated by management activities:

*Soils do not exhibit excessive rill, sheet, or gully erosion.
Substitute the following Desired Condition:

Soils do not exhibit increased rill, sheet, or gully erosion due or contributed to by management activities compared to relevant, undisturbed reference sites.

The following Desired Condition focuses on the wrong issue (i.e., pedestaling is "minimal"). It is better to focus on whether the pedestaling or exposure of roots is at all the result of or exacerbated by management activities:

*The soil displays minimal pedestaling of plant, litter, and rocks with little exposure of roots.

Substitute the following Desired Condition:

Soils, compared to relevant, undisturbed reference sites, do not exhibit pedestaling of plants or root exposure contributed to by management activities.

TERRESTRIAL SPECIES AND HABITATS
P. 57
Change "The USFSW is responsible" to USFWS
p. 58
It is fully functioning populations, and not just "recovery" of native species that should not be in conflict with nonnative species,
Desirable nonnative species provide recreational opportunities where those opportunities are not in conflict with fully-functioning populations and the recovery of native species.
The following Desired Condition is too hedged:
Habitat is available at the appropriate spatial, temporal, compositional, and structural levels such that it provides adequate opportunity for breeding, feeding, nesting, and carrying out other critical life cycle needs for a variety of] vertebrate and invertebrate species.
Replace the above Desired Condition with the following:
Habitats are supporting, or are making significant, measurable progress toward supporting their full complement of Cibola National Forest native vertebrate and invertebrate species and are exhibiting conditions expected to provide for recovery ("conservation") of Federal threatened and endangered species or Federal proposed or candidate threatened or endangered and other special status species.

As relatively little is understaood about the persistence of species amid climate change, the following Desired Condition is insufficiently protective and appears to allow harassment:
Species are free from harassment and anthropogenic disturbance at a scale that impacts vital functions (e.g., breeding, rearing young) that could affect persistence of the species
Replace with the following:
Native species are free from anthropogenic disturbance that could contribute to decline in populations or ecosystem roles of the species.
NON-NATIVE INVASIVE SPECIES
The following Desired Condition is nearly meaningless:
Desirable non-native species are managed.
Replace with:
Desirable non-native species are managed in a manner that does not contribute to decline of native plant and wildlife species.

Add the following Desirable Condition:
The introduction, establishment and spread of non-native, invasive plant species are being prevented through management activities favoring native species.

RANGE AND GRAZING
The following description fails to note the public costs of livestock grazing:
Livestock grazing contributes to the livelihood of the permittees and to the economy of local communities and counties.

In fact, the contributions to local communities and counties can be extremely minimal and involve trade-offs for social and economic diversification. Recall that if the Forest states conclusions about economics in the Forest Plan, the Forest will need to document both public costs and private benefits; and will need to fully analyze the costs and benefits, including those of ecosystem services, and provide documentation.
Replace with:
Livestock grazing entails both public and private economic costs, while contributing to the livelihood of the permittees and variously to local communities and counties.
Add "native" to the following Desired Condition:

Proper livestock stocking rates and associated management activities contribute to healthy, diverse, native plant communities, soil stability, and wildlife habitat.

Add the Following Desired Conditions:

*A balance of grazed and ungrazed areas are present on the Forest for all vegetation types.

*Diverse and large ungrazed reference sites provide essential understanding of the impacts of livestock grazing on native plant and wildlife communities separate from climate change, drought, and native ungulate populations

The following Desired Condition is insufficiently protective:

Herbaceous native plant communities occur within the natural range of variability (NRV).
Replace with:
Native plant communities are maintained at or measurably moving toward those of ungrazed reference sites.