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Comments: DRAFT CoNPS comments to DRAFT GMUG Forest Plan

7/21/2019

Key Ecosystem Characteristics (ECO)

Page 13, Table 1. Why not include mountain big sagebrush (*Artemisia tridentata* ssp. *Vaseyana*) ecosystems?

Page 14, Guidelines, FW-GDL-ECO-05. Good!

Page 16, Sagebrush, Desired Conditions, FW-DC-TEV-02. Include another sentence: Sagebrush systems have a diversity of understory species and lack of soil disturbance that allow them to resist invasion and ultimate conversion to cheatgrass.

Page 16, Alpine Uplands, Objectives, FW-OBJ-TEV-04. Within 10 years of plan approval, enhance the resiliency of alpine ecosystems on 100 acres of GMUG lands through implementing recreation management plans, road/trail decommissioning, completing mine land reclamation, or conducting other management activities.

Page 16, Alpine Uplands, Guidelines, FW-GDL-TEV-06. To maintain the ecological integrity of and associated native species and biological soil crusts in alpine ecosystems, management activities and visitor use should not result in a long-term net increase in ground disturbance in alpine ecosystems.

Page 17, Riparian Management Zones and Groundwater-Dependent Ecosystems (RMGD), Desired Conditions, FW-DC-RMGD-05. Change first sentence to: Groundwater systems with flow through soil profiles function under normal patterns of recharge, flow, and discharge[hellip] Change 2nd sentence to: Groundwater-dependent ecosystems (e.g. wetlands, fens, springs, and stream baseflows) have the water sources and hydrologic processes (e.g. water-table elevations, water quality) necessary to persist[hellip]

Page 19, Riparian Management Zones and Groundwater-Dependent Ecosystems (RMGD), Guidelines, FW-GDL-RMGD-10. Change 1st sentence to: To reduce the likelihood of sediment input to wetlands, fens, and streams and reduce adverse[hellip] Sediment is especially detrimental to fens. Any type of fill in wetlands violates CORPS 404 permitting.

Page 20, Riparian Management Zones and Groundwater-Dependent Ecosystems (RMGD), Guidelines, FW-GDL-RMGD-15. Good!

Page 20, Riparian Management Zones and Groundwater-Dependent Ecosystems (RMGD), Guidelines, FW-GDL-RMGD-16. Add sentence: Avoid altering fen water quality and quantity.

Page 21, Invasive Species (IVSP), Desired Conditions, FW-DC-IVSP-01. Add sentence: Soil disturbance is minimized to reduce the spread of invasive species.

Page 25, Native Species Diversity (SPEC), General Species Diversity. Interesting that this section doesn't include anything related to plant diversity!

Page 25, Native Species Diversity (SPEC), General Species Diversity, Species (General), Desired Conditions. Add: FW-DC-SPEC-03: Native plant diversity is encouraged through minimal soil disturbance during project implementation, avoidance of seed use in small project areas to allow native plant recolonization (e.g. trail reroutes), and native seed mixes when needed.

Page 28, Native Species Diversity (SPEC), At-risk Species (plants, wildlife, fish, mollusks, etc.)

Page 29, Native Species Diversity (SPEC), At-risk species (plants, wildlife, fish, mollusks, etc.), At-risk Species (General), Guidelines, FW-GDL-SPEC-25. Add: [hellip]including construction of new roads or trails[hellip] Good job on this one!

Page 29, Native Species Diversity (SPEC), At-risk species (plants, wildlife, fish, mollusks, etc.), At-risk Species (General), Guidelines. Add: FW-GDL-SPEC-27: To maintain populations of at-risk species in Botanical Special Interest Areas (SIAs), only non-manipulative research and minimal foot traffic use will be permitted. No heavy equipment would be permitted. See also Special Interest Areas [ndash] MA 2.1.

Page 34, Native Species Diversity (SPEC), At-risk species (plants, wildlife, fish, mollusks, etc.), Soil Resources, Standards, FW-STND-SOIL-03. Add sentence: When maintaining roads, minimize soil disturbance.

Page 45, Native Species Diversity (SPEC), At-risk species (plants, wildlife, fish, mollusks, etc.), Range (RNG) Standards, FW-STND-RNG-05. Add Rangewide Conservation Plan monitoring guidelines and reference.

Page 45, Native Species Diversity (SPEC), At-risk species (plants, wildlife, fish, mollusks, etc.), Range (RNG) Standards, FW-STND-RNG-06. Good!

Page 45, Native Species Diversity (SPEC), At-risk species (plants, wildlife, fish, mollusks, etc.), Range (RNG) Standards, Guidelines, FW-GDL-RNG-10. Good!

Page 45, Native Species Diversity (SPEC), At-risk species (plants, wildlife, fish, mollusks, etc.), Range (RNG) Standards, FW-STND-RNG-11. Good!

Page 47, Native Species Diversity (SPEC), At-risk species (plants, wildlife, fish, mollusks, etc.), Recreation (REC), Standards, FW-STND-REC-05. Add sentence: Indications of unacceptable ecological impacts include ruts channeling water in wetlands/fens and tracks off trails or roads through alpine areas.

Page 53, Timber and Other Forest Products (TMBR), Standards, FW-STND-TMBR-05. Change sentence: Timber shall not be harvested on lands where soil, slope, fens, or other watershed conditions may be irreversible damaged, [hellip] Otherwise, good!

Page 60, Special Interest Areas and Designations (MA 2), Special Interest Areas [ndash] MA 2.1 (SIA), Guidelines, MA-GDL-SIA-03. PLEASE change 1st sentence and add sentence: To maintain the characteristics for which the special interest area is established, special use permits or other appropriate authorizations should be compatible with the special interest area, including the collection of rocks, minerals, or paleontological materials. In a Botanical Special Interest Area, the collection of plants, rocks, or minerals is not compatible with the special interest area and is not authorized. There are at risk species in the Botanical SIA and plant collection there is a threat.

Page 62, Recreation Emphasis Management Areas (MA 4), Mountain Resorts [ndash] MA 4.1 (MTR), Desired Conditions, MA-DC-MTR-02. Add sentence: The primary focus of the Mountain Resorts Management Area is the protection of sustainable recreation resources and public safety. Ecological values are provided to the extent

possible while protecting the public and meeting primary recreation use objectives. At risk plant species populations within ski area boundaries are healthy and reproducing. Note: there is an at-risk rare plant species that is only found in 1 place in CO and that is on Crested Butte Mountain within the ski area boundaries.

Page 63, Recreation Emphasis Management Areas (MA 4), Mountain Resorts [dash] MA 4.1 (MTR), Guidelines, MA-GDL-MTR-13. Add sentence: To avoid disturbance to an at-risk plant species, ground disturbance and trail construction is avoided within 600 feet of the population.

Page 72, Monitoring Question, How is GMUG climate changing relative to historic norms?, Indicator(s). Add sentence: Work with partners (e.g. Mountain Studies Institute, Colorado Natural Heritage Program) to complete climate change alpine vegetation transect monitoring.

Page 73, Monitoring Question, What is the status and trend of terrestrial ecosystem integrity on the GMUG? Associated Plan Component(s). See Page 16, Sagebrush, Desired Conditions, FW-DC-TEV-02 above.

Page 73, Monitoring Question, What is the status and trend of terrestrial ecosystem integrity on the GMUG? Adaptive Management Actions. Add: Sagebrush ecosystems are reseeded immediately after soil disturbance. Road maintenance in sagebrush ecosystems minimizes soil disturbance.

Page 77, Monitoring Question. Change sentence to: What is the status and trend of soil productivity, function, and disturbance?

Page 77, Monitoring Question. What is the status and trend of soil productivity, function, and disturbance? Associated Plan Component, FW-DC-SOIL-01. Add sentence: Soil disturbance with heavy equipment is minimized.

Page 78, Monitoring Question: What is the status and trend of aquatic and riparian ecosystem integrity on the GMUG? Indicator(s). Add cell: Threats to fen plant species and their habitats on the GMUG. Data Source: Field data. Frequency Reported: As it occurs. Add cell for Adaptive Management Actions: Immediately address threats to fens (loss of groundwater to fens brings oxygen into the system and initiates peat decomposition).

Page 80, Add Monitoring Question: What is the status and trend of rare plants and their habitats (including at-risk species and focal species) on the GMUG?

Page 80, Indicator(s). Add cell: Rare plant and rare plant community presence. Data Source: CNHP, Other partners. Frequency Reported: 2 years.