Comments to GMUG NF's regarding Plan and EIS

Thank you very much for the opportunity to submit comments on the revised Grand Mesa, Uncompahgre, and Gunnison National Forests' Plan and EIS. The Colorado Native Plant Society has 1425 members who appreciate Colorado native plants and plant communities. We have reviewed the revised Plan and EIS and are offering comments regarding those documents. We understand how much work went into planning and building these two documents. During the years Barry Johnston, PhD, was the Forest Botanist on the GMUG, rare plants and rare plant communities were much more at the forefront of GMUG planning and project analysis. We feel that the GMUG NF's are now in need of a full-time Forest Botanist. We hope that in the future the GMUG will consider hiring one.

The spreadsheet below contains comments regarding Plan components, Ecosystems, Riparian Management and Groundwater, Invasive Species, At-Risk Species, Soil, Range Management, Recreation Management (Winter Resorts), Recreation (Biophysical Impacts), Watersheds and Water Resources, Utility Corridor, EIS Appendix A, and Monitoring. GMUG components advocating protection for fen and alpine ecosystems are a high priority for the Colorado Native Plant Society. Most of the proposed SCC plants live in fen and alpine habitats. Many of these habitats on the GMUG have threats or are being impacted by human activities.

STND/GDL	**Change needed**	**Why?**
Plan, FW-DC-ECO-02	Add: There are uncommon ecosystems in the GMUG (ie. fens, alpine tundra) that are not resilient to human activities (ie. ditching, flooding, off-trail motorized vehicles).	Fens are one of these sensitive ecosystems (Austin & Cooper 2015). Alpine tundra is also very sensitive to off-trail vehicle use and takes decades to be restored.
Plan, FW-DC-RMGD-05	None needed - good job!!!	
Plan, FW-STND-RMGD-07, Table 3	The Watershed Conservation Practices Handbook (FSH 2509.25) is way out of date, especially regarding fens (Austin, see WCPH edits attachment). A 100' buffer is not big enough for GMUG fen protection (Kate Dwire, Research Ecologist, Rocky Mountain Research Station).	Intersecting the groundwater source(s) to a fen may alter the hydrologic function of the fen and cause loss/heavy damage to the fen. This would be "irreversible or irretrievable commitment of resources" because of the thousands of years it takes to form a fen (40 CFR Part 1502.14, National Environmental Policy Act, 1992).
Plan, FW-STND-RMGD-08	Add on to this standard: Update existing Fen Inventory (Johnston et al. 2012) using Google Earth.	Johnston inventory was completed using aerial photos and many fens were missed.
Plan, FW-STND-RMGD-10	None needed - good job!!! Glad to hear it got changed from a guideline to a standard!	

Plan, FW-GDL-RMGD-12	Fuel, oil, gas, and other toxicants could definitely impact the water quality in a fen. Please change this to a standard!	Toxicants/pollutants in a GMUG fen may cause “irreversible or irretrievable commitment of resources” because of the thousands of years it takes to form a fen (40 CFR Part 1502.14, National Environmental Policy Act, 1992).
Plan, FW-GDL-RMGD-13	Add: Revisit firelines to ascertain no sediment delivery into fens, wetlands, or streams.	Clean Water Act
Plan, FW-GDL-RMGD-15	Please change to standard!	If negative impacts occur to the "ecological services" provided by fens (ie. high biodiversity, carbon sequestration, rare plant habitat), it may not be restorable.
Plan, FW-DC-SOIL-02 (new)	Soil disturbance with heavy equipment is minimized on the GMUG.	The more ground disturbance, the more chance of invasion by noxious weeds.
Plan, FW-STND-SOIL-04 (new)	To maintain the presence of Histosols (ie. peat) and carbon sequestration in the GMUG, concentrate water storage development and maintenance on already heavily impacted fens that are not restorable (ie. X-fens)(Austin 2008).	Ground disturbance of a GMUG fen may cause “irreversible or irretrievable commitment of resources” because of the thousands of years it takes to form a fen (40 CFR Part 1502.14, National Environmental Policy Act, 1992).
Plan, FW-GDL-SOIL-05	Does the "landslide-prone areas" referred to include the Grand Mesa landslide bench?	
Plan, FW-GDL-IVSP-07	Please change to standard!	Having the flexibility to spot spray or broadscale spray around At-Risk rare plants should not be an option.
Plan, FW-STND-IVSP-06	New one - please add: On fires to avoid spreading noxious weeds/invasives across a wildfire area, predetermine helicopter and support vehicle staging areas without noxious weeds.	On the Burn Canyon Fire, I watched helicopters land in the main staging area that was covered with knapweed, a noxious weed. People were walking through the knapweed to load on the helicopters. Support vehicles were also parked in areas with large amounts of knapweed.

Plan, pg. 30	Add: Species of Conservation Concern (SCC), Table 51, to the last sentence.	SCC species (Table 51) were left out and should be included.
Plan, pg. 33	At the top of the page before "Objectives", put the names of the Federally Listed plants, just like you did with the lynx (below).	Silly little thing but it's important to Botanists.
Plan, pg. 33	Need Desired Conditions: Plant habitats will be free from vehicle dust and off-trail motorized use.	Important to include Desired Conditions, just as you do with wildlife Federally Listed species.
Plan, Recreation Management, Winter Resorts, MA-DC-MTR-02	Last sentence - please change to: Disturbed areas are revegetated with plant species native to the area to protect scenery and minimize erosion.	The CO Native Plant Society asks the GMUG to please use local native plant seed as much as possible to avoid spreading aggressive plants commonly used in seed mixes (ie. smooth brome) and to maintain genetic diversity of native plant communities.
Plan, MA-STND_MTR-06 (new)	Ground disturbance and trail construction is avoided in areas with rare plants and alpine plant communities.	Federally Listed and SCC plant species are CRITICAL to the GMUG's biodiversity! The CO Native Plant Society urges stronger protection for these plants.
Plan, FW-STND-REC-07 and FW-STND-REC-08, Biophysical Impacts	None needed - good job! Especially saying, "Observable indicators of unacceptable biophysical impacts include sparse ground vegetation due to soil compaction, widespread bare mineral soil, evident soil erosion, and/or ruts channeling water in wetlands/fens".	

Plan, FW-GDL-RNG-11	Change this guideline to a standard please.	Trailing sheep through Federally Listed or SCC populations must not occur. The GMUG has the option to provide habitat/ecological conditions devoid of sheep grazing. Federally Listed and SCC plants are critical to the GMUG's biodiversity. The Colorado Native Plant Society supports maintaining the populations of these important plants.
Plan, FW-STND-SPEC-30 (new)	Need a standard common to all Federally Listed and SCC plant species: Prohibits ground disturbance within 600 feet of all Federally Listed and SCC plant species.	Federally Listed and SCC plant species are CRITICAL to the GMUG's biodiversity! The CO Native Plant Society urges stronger protection for these plants.
Plan, FW-GDL-SPEC-31	This guideline needs to be changed to a standard please.	Guidelines are less likely to be taken seriously than a standard. Federally Listed and SCC plants are critical to the GMUG's biodiversity. The CO Native Plant Society supports maintaining the populations of these important plants and urges stronger protection.
Plan, FW-GDL-SPEC-32 (new) - recommend this as a standard.	Add the Rio Grande NF Plan guideline: "G-SCC-2 prohibits permanent ground disturbance within 100 feet of this species" (Rio Grande Plan pg. 199).	Federally Listed and SCC plants are critical to the GMUG's biodiversity. The Colorado Native Plant Society supports maintaining the populations of these important plants.
Plan, Watersheds & Water Resources (WTR), Management Approaches, last bullet statement	The Watershed Conservation Practices Handbook (FSH 2509.25) is way out of date, especially regarding fens (Austin, see WCPH edits attachment). A 100' buffer is not big enough for GMUG fen protection (Kate Dwire, Research Ecologist, Rocky Mountain Research Station).	Buffer for fens needs to be extended.

Plan, pg. 104, bullets	Why is the GMUG not proposing to monitor any Federally Listed or SCC plants? Even if 5 per year were monitored, it would be something.	Federally Listed and SCC plants are critical to the GMUG's biodiversity. The Colorado Native Plant Society supports maintaining the populations of these important plants. There may even be members who would be willing to search for historic locations.
Plan, pg. 298, Data and Information Considered	Please consider the following GMUG plant communities (PCA's, CNHP 2021) of "Outstandingly Remarkable Value". None were included in the EIS 2, Table 60. Why was this?	*Betula gladulosa*/*Sphagnum* spp. Shrub Fen (G2 S2), *Carex aquatilis-Sphagnum* spp. Fen (G2G3 S2S3), *Sphagnum angustifolium* (G5 S2), *Kobresia myosuroides-Thalictrum alpinum* Fen (G2 S2), *Kobresia simpliciuscula-Triphorum pumilum* Fen (G2 S2), *Carex buxbaumii* Fen (G3 S1), *Carex limosa* Fen (G2 S1S2), *Carex livida* (G5 S1), *Carex vesicaria* Wet Meadow Fen (G4Q S1), *Carex saxatilis* Fen (G3 S1), *Carex illota* Wet Meadow Fen (GUQ S1), *Carex lasiocarpa* Fen (G4? S1), *Carex microglochin* Fen (Gu SU).
Plan & EIS, 2 different codes for "Standard" - STND (Plan) and STD (EIS).		It is difficult to search for Plan Components by code in Plan and by code in Appendix 3 if you don't know this.
EIS 2, Appendix A, *Carex leporinella*	FW-STD-RMGD-10 needs to be added for this plant species.	The standard will help protect this fen species. A guideline is too flexible.

EIS 2, Appendix A, *Sphagnum angustifolium*, Ecological Conditions	"Iron fen obligate species". Change "Requires constant supply of iron-rich water…". Change to: Requires groundwater flowing through pyrite and other complex water quality actions (Cooper et al. 2002), peat accumulation, undisturbed conditions in the iron fens and their contributing watersheds. Freedom from direct and indirect impacts from recreation (off-road vehicle use and off-trail hiking), highway maintenance, private land uses, sedimentation, mining, ditching, heavy equipment, and dewatering.	Please use the best science for this description. Some iron fens have multiple sources of groundwater, acidic at the surface and neutral/calcareous deep in the peat.
EIS 2, Appendix A, *Sphagnum girgensohnii*	"Iron fen obligate species". Change "Requires constant supply of iron-rich water…". Change to: Requires groundwater flowing through pyrite and other complex water quality actions (Cooper et al. 2002), peat accumulation, undisturbed conditions in the iron fens and their contributing watersheds. Freedom from direct and indirect impacts from recreation (off-road vehicle use and off-trail hiking), highway maintenance, private land uses, sedimentation, mining, ditching, heavy equipment, and dewatering.	Please use the best science for this description. Some iron fens have multiple sources of groundwater, acidic at the surface and calcareous deep in the peat.
EIS 2, pg. 83	Why aren't Regional Forester Sensitive Plant species included here under "Sensitive Species Considered in the Analysis"?	???

EIS 2, pg. 89	Why aren't Regional Forester Sensitive Plant species included here under "Alpine Uplands and Alpine Rocky Slopes, Screes, and Cliffs"? *Botrychium paradoxum* (G3G4 S1), *Braya glabella* subsp. *glabella* (G5T5 S1S2), *Ranunculus gelidus* are restricted to alpine habitats and should be included here.	*Botrychium paradoxum* (G3G4 S1), *Braya glabella* subsp. *glabella* (G5T5 S1S2), *Ranunculus gelidus* are Regional Forester Sensitive Plant species restricted to alpine habitats and should be included here for analysis.