COLORADO

Parks and Wildlife

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June 28, 2021

Grand Mesa, Uncompahgre and Gunnison National Forests
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RE: CPW Comments- List of Species of Conservation Concern for the Grand Mesa, Uncompahgre, and Gunnison National Forests

Dear Plan Revision Team:

Thank you for the opportunity to provide cooperating agency comments on the Species of Conservation Concern List (SCC April 1, 2021) for the Grand Mesa, Uncompahgre, and Gunnison National Forest's (GMUG) Draft Forest Plan and associated Draft Environmental Impact Statement. CPW's mission is *to perpetuate the wildlife resources of the state, to provide a quality state parks system, and to provide enjoyable and sustainable outdoor recreation opportunities that educate and inspire current and future generations to serve as active stewards of Colorado's natural resources.* This mission is implemented through our 2015 Strategic Plan[1] and the goals it embraces which are designed to make CPW a national leader in wildlife management, conservation, and sustainable outdoor recreation for current and future generations.

The GMUG staff asked Colorado Parks and Wildlife (CPW) to review the SCC lists "On" and "Off" tables to provide species-specific review on the four factors listed in FSH1909.12 12.52d.3.f.1-4 to designate Species of Conservation Concern. Where we had additional information, we have populated the columns in these tables included as Attachment 1. As you will recall, CPW provided comments on the At Risk Species Assessment in January of 2018. In our comments, we detailed specific risk factors that should be included in the updated At-Risk Species Assessment, as well as species specific recommendations for the SCC list. Many of those recommendations were not carried forward in the April 2021 SCC list. In addition, plan components could be strengthened in the Draft Plan to address species conservation issues for many of the species that were considered for the SCC list but do not meet the criteria for SCC designation.

There are several species in CPW's assessment that warrant SCC designation based on the criteria in the Land Management Handbook these include: southern white-tailed ptarmigan, pinyon jay, black swift, little

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brown bat, and Rocky Mountain and desert bighorn sheep. We have attempted to articulate the factors that lead to a "Substantial Concern" rating for these species below. Additionally, we recommend that river otter be removed from the SCC list because they do not meet the criteria outlined in the Handbook.

White-tailed ptarmigan- *Lagopus leucurus altipetens*

Recent research has documented that Colorado has a subspecies *altipetens* of white-tailed ptarmigan (Langin et al 2018). This species is described as the southern white-tailed ptarmigan. This species was petitioned for listing under the ESA in 2010. In 2012, the USFWS found that the petition presented substantial information to consider it for listing. Upon review, the species was found to be 'not warranted' for listing by the USFWS in 2020 mostly due to the perceived relative security of the alpine habitat under federal land management. However, the USFWS cited climate change as a substantial threat to the species in the future and the SCC Table summarizes highly vulnerable (with very high confidence) to climate change.

The risk factors that should make this species a Regional Forester's Sensitive Species include livestock grazing and recreation that are occurring on the GMUG. The Mesa Seco area of the GMUG was intensively examined by CPW from 2012-2017 as part of a statewide assessment of the species that included abundance estimates, reproductive output, survival, and movement (Seglund et al 2018). Our data suggested that southern white-tailed ptarmigan at this site appeared stable during the study, but in recent follow-up surveys in 2018, 2019, and 2020 numbers and pair occupancy have shown a decreasing trend. The population of ptarmigan in southwest Colorado (San Juan Mountains) is disjunct from the rest of the species' distribution. The southern population exhibits fine scale genetic differences from the rest of the State (Langin et al. 2018). Lack of gene flow is due to the fact that ptarmigan will not fly long distances across unsuitable habitat.

Throughout CPW monitoring efforts at Mesa Seco we have observed that domestic sheep grazing has degraded that habitat especially during the last three years of drought. Sheep are also present on the site when females have chicks, and CPW has observed females becoming separated from broods and not being able to reunite with their young. Grazing impacts on southern white tailed ptarmigan may be exacerbated by domestic grazing in the alpine because of warmer springs, earlier snowmelt, and reduction in summer monsoonal moisture. We also recommended on the At Risk Assessment (2018) that recreation should be considered a risk factor in the alpine environments. We have documented recreation impacts to ptarmigan habitat (Seglund 2018) with female ptarmigan permanently emigrating from an area where heavy recreation is occurring. To that end we recommend plan components include management recommendations for white-tailed ptarmigan habitat designed to ensure that the maintenance of hiking trails and ATV roads do not become deeply incised so as to properly disperse rain and snowmelt runoff to avoid the dewatering and drying out of meadows, wetlands, and willow cars. Also sheep grazing is better managed in light of current drought conditions in the alpine and recreation is monitored to assess and limit disturbance to this alpine species. For these reasons, CPW believes that there are substantial concerns for this species and it should be added to the SCC list and plan components generated to avoid, minimize, and mitigate impacts to this species.

Black Swift

Climate related reductions in insect biomass are thought to be the reason for black swift declines across the range. Other risk factors include recreation and disturbance at breeding sites. Population levels have declined by an estimated 94% (BBS/Partners in Flight) and experts predict that there will be an additional 50% population level loss in the next 16 years (Partners In Flight). While the species is found throughout

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the west, Colorado has more known occupied breeding sites than all other western states and Canada combined. Therefore, actions to conserve the species across the range have to be taken in Colorado for the conservation of the species as a whole. For these reasons, CPW believes that there are substantial concerns for this species and it should be added to the SCC list and plan components generated to avoid, minimize, and mitigate impacts to this species.

Pinyon Jay

Pinyon jay populations are in steep decline (Boone et al. 2018). There are a number of substantial threats to pinyon jay including climate change, beetle kill epidemics, raven predation at nesting colony areas, and impacts of habitat treatments done for fuels reduction, big game, and sage-grouse management. Pinyon jays have high site fidelity and ravens are the dominant predator at nesting colony areas, making them vulnerable to disturbance and habitat alterations. Pinyon-juniper forests are well distributed, but die-offs of areas are apparent due to beetle kill and drought. Nesting colonies are located on the edges of open areas as jays like to have cache sites and forage areas next to nesting sites. Because jays have high site fidelity to nesting colonies, prior to treatments in PJ, areas should be surveyed to identify nesting colony areas. Ravens are the dominant predator at nesting colonies and so management of trash and dumping of carcasses may be warranted (Seglund et al. 2020). Some treatments in PJ areas could benefit jays.

Current literature suggests that there have been dramatic declines in the numbers of Pinyon jays across the species range since 1967, with these declines thought to be more pronounced than for any other broadly distributed landbird in the interior west. Management and monitoring could be instituted to help conserve this species. For these reasons, CPW believes that there is a substantial concern for this species, and it should be added to the SCC list with plan components generated to avoid, minimize, and mitigate impacts to this species.

Bats

CPW appreciates the plan components FW-GDL-SPEC-11, SPEC-12 and SPEC-13 in the Working Draft of the Revised Management Plan directly aimed at bat species conservation efforts. However, they do not directly address disease risk factors of White Nose Syndrome (WNS), wind energy development, and renewed mining interests that constitute significant threats to myotis species, hoary bat, and Townsend's big-eared bat. In our 2018 letter, we highlighted three species of bats that we felt warranted consideration for designation as SCC species including little brown bat, hoary bat, and Townsend's big-eared bat. These species will benefit from additional plan components and plan monitoring requirements under a SCC designation to ensure that the USFS management can take specific and immediate actions to address the threats.

Little brown bat- There is a substantial concern for the little brown bat on the GMUG. Little brown bats have experienced severe declines in eastern portions of their range where WNS has occurred. In our review, it appears that the NatureServe Rank for this species has not been updated since 2016. Declines in portions of range with WNS have been severe enough to elicit a Federal ESA listing review (2020) and Species Status Assessment (pending). Range maps for this species are published in Navo et al. 2018. There are 76 records for this species on the GMUG (11 additional records within 1 mile of GMUG). All myotis species are considered highly vulnerable to extreme population declines once WNS becomes established within

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their ranges. Estimating bat population numbers is extremely difficult (see O'Shea and Bogan 2003). However, monitoring occurrence and activity can be accomplished with passive acoustic monitoring (e.g., NA Bat). The monitoring of little brown bats will effectively provide monitoring coverage for the cohort of myotis species found on the GMUG. Monitoring will help to mobilize appropriate forest management response if WNS is confirmed or relative abundance declines in the species are detected on the GMUG. Please add this species to the SCC list.

Townsend's big-eared bat- This bat species utilizes abandoned mines and caves in Colorado. Notable colonies of this species occur on habitat found on the GMUG. Renewed mining interests at abandoned mine locations, improper gate designs, and recreational disturbances from caving and climbing constitute significant threats to this species. Additional threats and range maps for this species are described in Navo et al. (2018) and include 3 records on the GMUG (11 additional records within 1 mile of GMUG). We recommend adding additional plan components to strengthen protection of Townsend's bats under FW-GDL-SPEC-11 from renewed mining interests.

Hoary bat- Notable declines in migratory bat species have been documented where wind energy installations occur. Thus, wind energy development constitutes a significant threat to this species from habitat loss and direct mortality. There is ever increasing demand for renewable energy projects to be located on federal lands. There are existing wind energy facilities near Monticello, UT that occur in similar habitat to what is found on the GMUG. See range maps in Navo et al. 2018. This species should be relatively common on the GMUG. However, only 34 records (2 additional records within 1 mile of GMUG) have been documented. Efforts to survey for this bat species on the GMUG would assist in future wind energy proposals on the forest. Please add plan components to ensure that adequate baseline monitoring studies would be conducted prior to the siting of wind energy facilities on the GMUG.

Rocky Mountain Bighorn Sheep and Desert Bighorn Sheep General:

Pertaining to 12.52d 3.b it indicates that species identified by Federal, State, federally recognized tribes or Alaska Native corporations as a high priority for conservation should be considered as a SCC. CPW lists Bighorn sheep (*Ovis canadensis*) is a Tier 2 Species of Greatest Conservation Need in the State Wildlife Action Plan (SWAP: Colorado Parks and Wildlife 2015). Cliffs and canyon bighorn habitat are considered a priority habitat for management under the CPW SWAP. Rocky Mountain Bighorn sheep (*Ovis canadensis canadensis*) are listed as an R2 sensitive species with the USFS Region 2 Regional Forester's Sensitive Species. Bighorn sheep are also considered a SCC in the Rio Grande National Forest Land Management plan (2019), with respiratory illness due to comingling with domestic sheep considered the primary limiting factor for most Rio Grande NF sheep populations (USDA Forest Service 2010).

Interagency and Cross-Boundary Management Coordination: The core herd home range and/or summer source habitat for several bighorn sheep herds on the Rio Grande National Forest is shared with adjacent Forest Service units and/or Bureau of Land Management (BLM) units. Most bighorn population units in the GMUG share jurisdictional boundaries with other forests or federal agencies, which include RBS-21 (BLM, San-Juan NF, Rio Grande NF), RBS-22 (BLM, Rio Grande NF), RBS-12 (San Isabel NF), S13 (White River NF), S54 (National Park Service, BLM), S70 (BLM), S24 (BLM), and S62 (BLM). CPW management approach to these cross-jurisdictional boundaries is reflected in herd management (GMU or

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DAU boundaries) encompassing biological delineations rather than jurisdictional boundaries. Cross-boundary management coordination is especially important to disease management and habitat management. For instance, domestic sheep allotment permittees are also shared between the land management agencies in some instances (See criteria 1 below). Coordination and consistency of management approaches regarding risk of contact with domestic sheep, monitoring, livestock permit administration, and communication remains a significant barrier to bighorn sheep management across the landscapes that support their long-term viability and population persistence. Forest fire suppression and bark-beetles can have impacts on the movement potential among disjunct populations (see Criteria 3 below). Cross-boundary cooperation regarding bighorn sheep management with regard to SCC status and the corresponding forest plan components is needed.

Rocky Mountain Bighorn Sheep:

1. Significant threats.
   A) Disease (risks related to contact with domestic sheep on and off GMUG properties) is a threat to the long-term persistence of bighorn populations in Colorado (George et al. 2009). On the GMUG, CPW's Herd Management Plans (RBS21 and RBS22) focused on the disease threats to long term population persistence. Disease related risks are due to sudden all-age die off events (George et al. 2008, CPW unpublished data on RBS22 and RBS23) or long periods of suppressed lamb recruitment due to chronic pneumonia (Manlove et al. 2016, Grigg et al. 2017, Wood et al. 2017).

   B) Little evidence exists of competition with elk for forage as only slight competition has been documented (Constant 1972, Weigand 1994). Additionally, bighorn utilization is concentrated on or near steeper and more rugged terrain than what elk are currently utilizing (CPW unpublished telemetry studies). There may also be other ungulates (wild and domestic) that are competing with bighorn sheep for forage to a similar degree as elk, but no information is available at this time.

   C) Persistent drought conditions associated with climate change are also a concern (Epps et al. 2004, Creech et al. 2020). Climate change is likely already influencing the GMUG through bark beetle outbreaks, as partially driven by warming summer, winter temperatures, and drought stressing forests. Bighorn's low elevation water sources, fed by high elevation snow pack, may eventually be impacted by climate change.

   D) Recreation impacts from a variety of different user groups (motorized, non-motorized) on and off the GMUG are a force on the landscape and can cause significant disturbance in areas occupied by bighorn sheep in the area or inhibit the recolonization of suitable but unoccupied habitat (Papouchis et al. 2001, Longshore et al 2013, Widemann and Bleich 2014, Sproat et al. 2020).

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2. <u>Declining trend in population or habitat.</u>

A) Over the time span of ~150 – 200 years, bighorn populations throughout Colorado and Southwestern Colorado have declined. Bighorn populations have rebounded over the last 20 – 50 years due to intensive restoration efforts implemented by CPW. Migratory behaviors of these populations still have not recovered in the 3 – 5 GMUG bighorn herds re-established through translocations between 1960 – 2000, as it is estimated that migration behavior can take 30 – 200 years to be rediscovered (Jesmer et al. 2018, Lowrey et al. 2019). The loss of migratory behaviors has likely caused suitable areas/habitat to no longer be occupied.

B) Only 18 – 35% of the suitable habitat is currently occupied by Rocky Mountain bighorn sheep. Hobby and commercial domestic sheep do not allow an expansion of occupied range in a good proportion of these unoccupied but suitable areas.

C) Given the lack of a natural wildfire cycle, forests are likely denser and occur in larger stand sizes. Higher canopy cover and larger forest stands are occurring due to fire suppression resulting in forest succession and a loss of potential habitat through decreased security cover and forage availability (Robinson et al. 2020). Additionally see Criteria 1, part C above.

D) Recreation pressure has only increased over the past 30 – 50 years in the GMUG, thus representing another source for declining habitat given that bighorn are displaced from areas with high recreation pressures (See Criteria 1, part D above).

3. <u>Restricted range.</u> At one time, Southwest Colorado was comprised of continuous populations of bighorn, but now consist of various disjunct populations that require individuals to navigate forays and dispersals >10 miles to maintain connectivity. Barriers to bighorn navigating forays and dispersal habitats include: 1. lack of natural wildfire cycle, forests are likely denser and occur in larger stand sizes, which has made it more difficult for bighorn to navigate when conducting forays/dispersals. 2. Downfall associated with recent forest disease epidemics make it more difficult for ungulates to move through (Lamont et al. 2020). 3. Domestic sheep allotments where CPW removes any bighorn sheep. 4. Housing/recreational developments 5. Increasing highway vehicle traffic volumes. These five factors can lead to genetic isolation of these disjunct herds.

4. <u>Low population numbers or restricted EC:</u>

A) Only 18 – 35% of the suitable habitat on GMUG lands is currently occupied by Rocky Mountain Bighorn sheep depending on the model source ([CPW or USFS suitability analyses], Figure 1). Suitable habitat is unoccupied due to hobby and commercial domestic sheep on and off GMUG properties, forest fire suppression, the loss of migratory behaviors (Jesmer et al. 2018, Lowrey et al. 2019) and potentially other known factors that have changed bighorn distribution (i.e., recreation: see criteria 1 above).

B) The restricted range has led to a lower population size of ~1,500 bighorn sheep that could be closer to a population size of 7,500 if all suitable habitat was occupied.
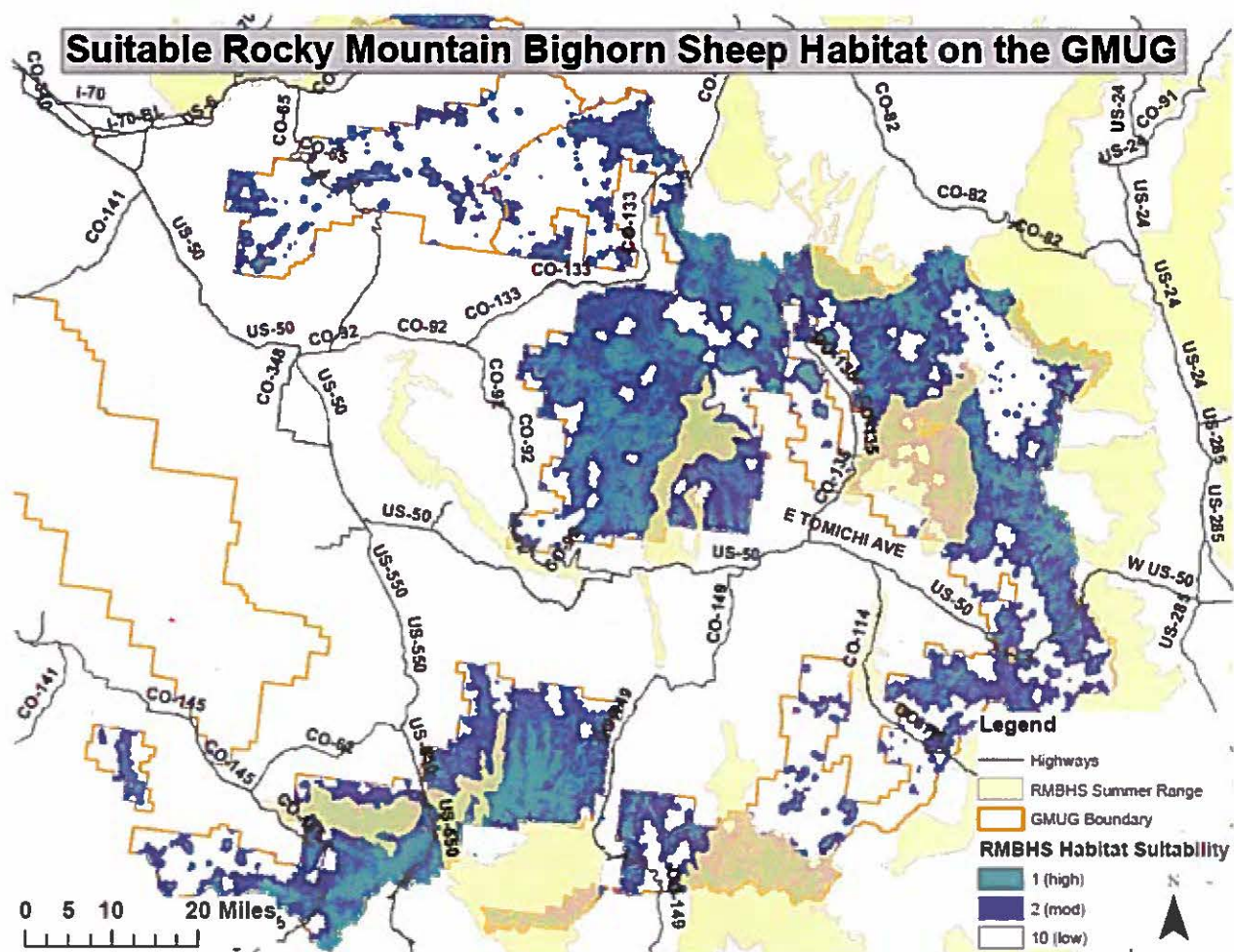
Figure 1. Suitable Rocky Mountain Bighorn sheep habitat and occupied Rocky Mountain Bighorn sheep summer range in the GMUG.

Desert Bighorn Sheep:

1. Significant threats. Disease (risks related to contact with domestic sheep on and off the GMUG; further interaction details, see USFS publication, Schommer and Woolever 2008; George et al. 2008) potentially resulting in low lamb survival (Manlove et al. 2016), predation threats to the populations, persistent drought conditions associated with climate change (Epps et al. 2004), and recreational impacts from hikers, bikers, UTVs/ATVs, and other vehicles (Papouchis et al. 2001, Longshore et al. 2013, Widemann and Bleich 2014, Sproat et al. 2020) are all factors influencing bighorn sheep survival and movements.

2. Declining trend in population or habitat.
   A) All of Colorado's desert bighorn sheep (*Ovis canadensis nelsoni*) populations are a result of translocations. The herd surrounding the GMUG is approximately 165 individuals. This small population leaves the sheep vulnerable to recovering from large disease-related, all-age die-offs, or other compounding factors impacting survival.

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B) Given the lack of natural wildfire cycles, forests are likely denser and occur in larger stand sizes. Higher canopy cover and larger forest stands are occurring due to fire suppression resulting in forest succession and a loss of potential habitat (Robinson et al. 2020).

C) Additionally, one of the goals in the Colorado desert bighorn sheep management plan (CDOW and BLM 1989) stated that by the 21st century, there would be an overall population of 1,200 sheep. As of 2020, the desert bighorn sheep population for all four of the desert bighorn sheep units was 550 individuals.

3. Restricted range. Archeological evidence from petroglyphs indicates that desert bighorn likely occurred in Utah and southwest Colorado pre-settlement, but other data on historic population sizes is limited (CDOW and BLM 1989). Since all current populations resulted from translocations, it is difficult to know where they occurred before augmentation, but currently they exist on the edge of their range in the area surrounding the GMUG (Figure 2). This population is also disjunct from other surrounding populations near Moab, Utah, approximately 63 miles to the west. There are no desert bighorn sheep populations to the east, north, or immediately south of this population.
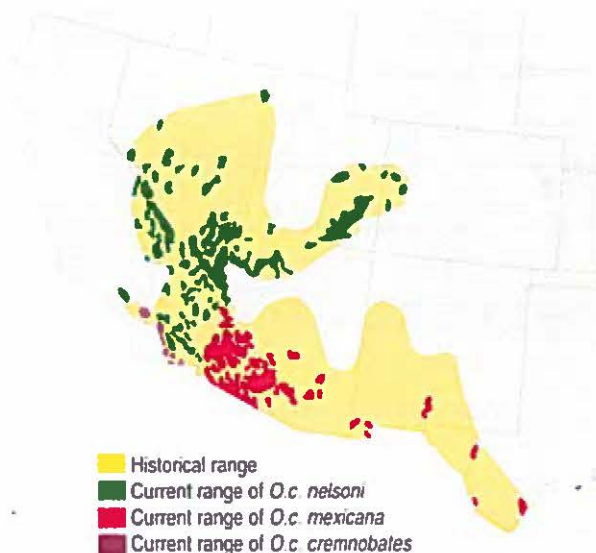

Figure 2. The historical and current range of desert bighorn sheep subspecies in the southwestern United States [McCutchen, H. E. 1995])

4. Low population number or restricted EC: Desert bighorn sheep currently occupy approximately 3 – 5% of suitable habitat in the GMUG on the Uncompahgre Plateau based on CPW and the USFS habitat suitability analyses (Figure 3). Forest succession (pinon-juniper encroachment, specifically) and lack of wildfire may be limiting desert bighorn's ability to colonize potentially-suitable cliff and canyon habitat in the GMUG's Uncompahgre Plateau units.
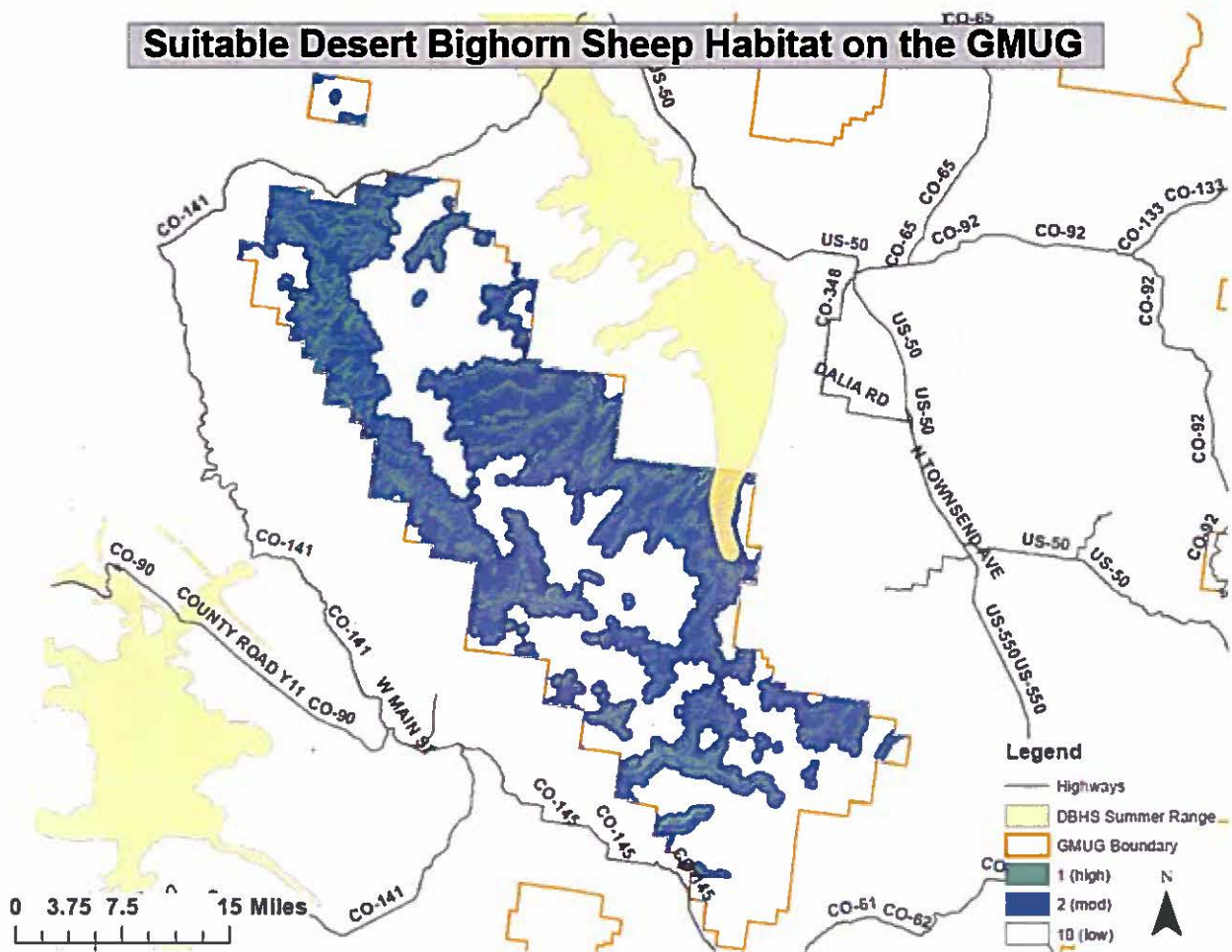
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Figure 3. Suitable desert bighorn sheep habitat and occupied desert bighorn sheep summer range in the GMUG.
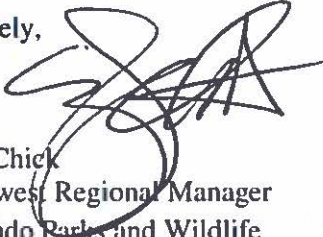
River Otter

River otter were extirpated from CO by the early 1900s. From 1976-1991, 114-122 river otters were reintroduced to CO, by releasing otters that were captured in other locations, including: Minnesota, Michigan, Wisconsin, Newfoundland, Oregon, Washington, and Alaska. The otters that were released in southwest CO that would be most likely to inhabit the GMUG came primarily from Wisconsin and the Pacific Northwest. The subspecies of otter that now exists in Southwest Colorado is not *sonora* but a mix of subspecies, *canadensis* and *pacifica*. Surveys that occurred on the major rivers of SW CO from 2002 to 2018 to follow up on the reintroduction efforts indicate that otter occupancy is high and populations have increased. Plan components outlined in Aquatic Ecosystems minimize impacts to this species. For these reasons, CPW believes that there is not a substantial concern for river otters on the GMUG relative to the threats and needs of other species that would benefit from additional plan components and monitoring. Therefore, we recommend that river otter be removed from the SCC list.

Conclusion

CPW appreciates the opportunity to provide information on the Species of Conservation Concern list. We recommend adding the southern white-tailed ptarmigan, pinyon jay, black swift, little brown myotis, and Rocky Mountain and desert bighorn sheep to the SCC list. We also recommend removing river otter from the SCC list. If you have any questions regarding our comments, please contact Southwest Region Land Use Coordinator, Brian Magee at 970 375-6707.

Sincerely,

Cory Chick
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Colorado Parks and Wildlife

XC: Matt Thorpe, SW Deputy Region Manager, JT Romatzke, NW Region Manager, Brian Magee, SW Land Use Coordinator, Brandon Diamond, Gunnison Area Wildlife Manager, Rachel Sralla, Montrose Area Wildlife Manager, Kirk Oldham, Grand Junction Area Wildlife Manager, Jamin Grigg, SW Senior Terrestrial Biologist, Brad Banulis, NW Senior Terrestrial Biologist.

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