TOWN OF RICO

DOLORES COUNTY, COLORADO
INCORPORATED OCTOBER 11, 1879
2 North Commercial Street
Post Office Box 9
Rico, Colorado 81332
Office # 970.967.2861
Fax # 970.967.2862
www.ricocolorado.org

RLUC Review

Date: 5.14.2025
Segment: Joint Board Review V-X
Start:
Stopping point:

Notes:
General comments:
Loop Holes: Mayor was curious if there were attempts to close loop holes, staff discussed some work around items such as submission requirements, flood plains work, things that are handled by staff, organization of RLUC materials to aid in more user friendly approaches, public hearing processes and what qualifies.
Discussion: Affordable housing**: Affordable housing** is typically subsidized and targets lower-income households, while **attainable housing** aims to provide more affordable, but unsubsidized, options for a wider range of income brackets, often focusing on the "Missing Middle". Attainable housing is more market-rate than affordable housing but still strives to be within reach for a broader segment of the population.
Discussion Septic: it would be difficult to require high density developments to build their own septic and also pay into a sewer system that is not present to join into.
Discussion Reviews 60 Days: uniform change from 45 to 60 days with the Preliminary review. Uniform is to refer to all Article V actions including subdivisions, RPUD and any process difference for condominiums.
Discussion Tree Ordinance: Staff will send out the link for WUI and fire compliance at the state mandate level for Joint Board Reviews, Staff will put together some RLUC section for undeveloped lots and clear cutting. Both boards agree for this.

CLEAN UP
Article V
504.4: needing a definition of unsuitable lands
Discussion for condominiums and presentation of adding a clause and a regulation if the development is modified within five (5) years of the initial application to increase the total number of dwelling units on the subject property to a number greater than 3 will require an increase in total affordable housing compliance.
534.2 Removing USGA just having township and range.
538.3 section rather than paragraph language
560.2: Change to: The Planning Commission Chair and/or Town Board Mayor shall ensure that each phase of the application material is addressed.

Article VI- None

Article VII- None

Article VIII
804.6: Removal of Wildlife Habitat
808.4: Teasing the statements so they are within the appropriate areas. This section will be struck in Subdivisions

4. **WILDLIFE HABITAT AREAS.**
   A. High impact activities, including, but not limited to, commercial, industrial, and road construction, should avoid Wildlife Habitat Areas where technically possible;
   B. R~~r~~esidential development shall be clustered to minimize wildlife habitat impacts;
   C. R~~r~~emoval of native vegetation shall be minimized;
   D. W~~w~~ater holes, springs, seeps, marshes, ponds, and watering areas shall be preserved and protected with a 100-foot buffer; and,
   E. M~~m~~esh, barbed, and woven fences shall be prohibited, and no fences shall be allowed which exceed 42 inches in height, except to protect vegetable and flower garden areas from animals, provided a natural avenue for the animals' egress and access is available.

Discussion: protection of habitat concepts.
825.4 Have the attorney review the phrasing.

Worksession ended: 8:23 p.m.
Stopping point: **825.4**

PLANNING COMMISION MEETING MINUTES

Date: May 14, 2025

Call to order
Chairman Mike Contillo called the meeting to order at 6:06PM.

Present: Chairman Mike Contillo
Kiplynn Smith
Skip Zeller
Todd Gillman

Absent:
Andrew Romanyshyn

Staff Present. Chauncey McCarthy, Jen Stark, Anna Wolf (Zoom)

Approval of the Agenda

Motion
To approve the agenda.
Moved by Kiplynn Smith, seconded by Skip Zeller.

Vote. A roll call vote was taken and the motion was approved, 4-0.

Approval of the Minutes
Motion
To approve the minutes.
Moved by Skip Zeller, seconded by Kiplynn Smith.

Vote. A roll call vote was taken and the motion was approved, 4-0.

Public Comment:

Trustees Present:
Mayor Patrick Fallon
Mayor Pro Tem Cristal Hibbard
Trustee Benn Vernadakis
Trustee Gerrish Willis
Trustee Scott Poston
Trustee Chris Condon (zoom)

Trustees Absent:

Trustee Joe Dillsworth

Discussion Items:
Rico Land Use Code global revision
Land Use Code revision was discussed through 8.25
Joint meeting on June 11, 2025.

Meeting adjourned unanimously.

_____
_____

Anna Wolf
Rico Town Clerk

Michael Contillo
Chairman

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Planner Report: Wildlife Habitat and Rico 5.31.2025
To: Rico Planning Commission and Rico Town Board of Trustees
RE: CPW information on Wildlife in and around Rico

Commissioners and Trustees
In follow up to the last joint meeting in May, we did a reach out to the Wildlife Biologiest out of the Southwest CPW Durango office. We are including the following information for your review. Of course, if you would like to request a printed copy, please let the manager know and we can have that ready for you prior to the next joint meeting.

****REPRESENTATION:** The critical piece in this report is really that the CPW and many other stakeholders have entered into this Montelores Coalition. The Coalition currently does NOT have a representative from Rico attending. The staff does not currently have the bandwidth to attend on a regular basis, but decisions that affect the Rico area in terms of management could occur without Rico representation.

GOCO has put over 50 million dollars into supporting coalitions such as this one. To see how Coalitions affect management systems, we have also included the Chaffee County Coalition work and report.
If after reviewing any of this material ANY of you had any interest in being a representative for Rico, now would be a very advantageous time to join the Montelores Coalition meetings. You can attend via in person or Zoom. Further contact and information is available by emailing the Town Planner @ townplanner@ricocolorado.gov.
Please consider it.

Grigg - DNR, Jamin

Hey Jen,

Thanks for reaching out on this. It might be easiest for us to go over this on the phone or in person, but I will try to give the basics in this email. Several points:

Habitat and "critical" habitat will vary by species. Everything around Rico is wildlife habitat, but the level of use and importance of that habitat will obviously be different depending on whether we are talking about elk, bears, lynx, or songbirds.

CPW updates all of its wildlife habitat layers every four years, and they are publicly available for download on the CPW GIS website (https://cpw.state.co.us/maps-and-gis). Depending on the species, there is often a summer habitat layer and a winter habitat layer, and sometimes, if we have the data to support that level of precision, these are further refined to "critical" layers.

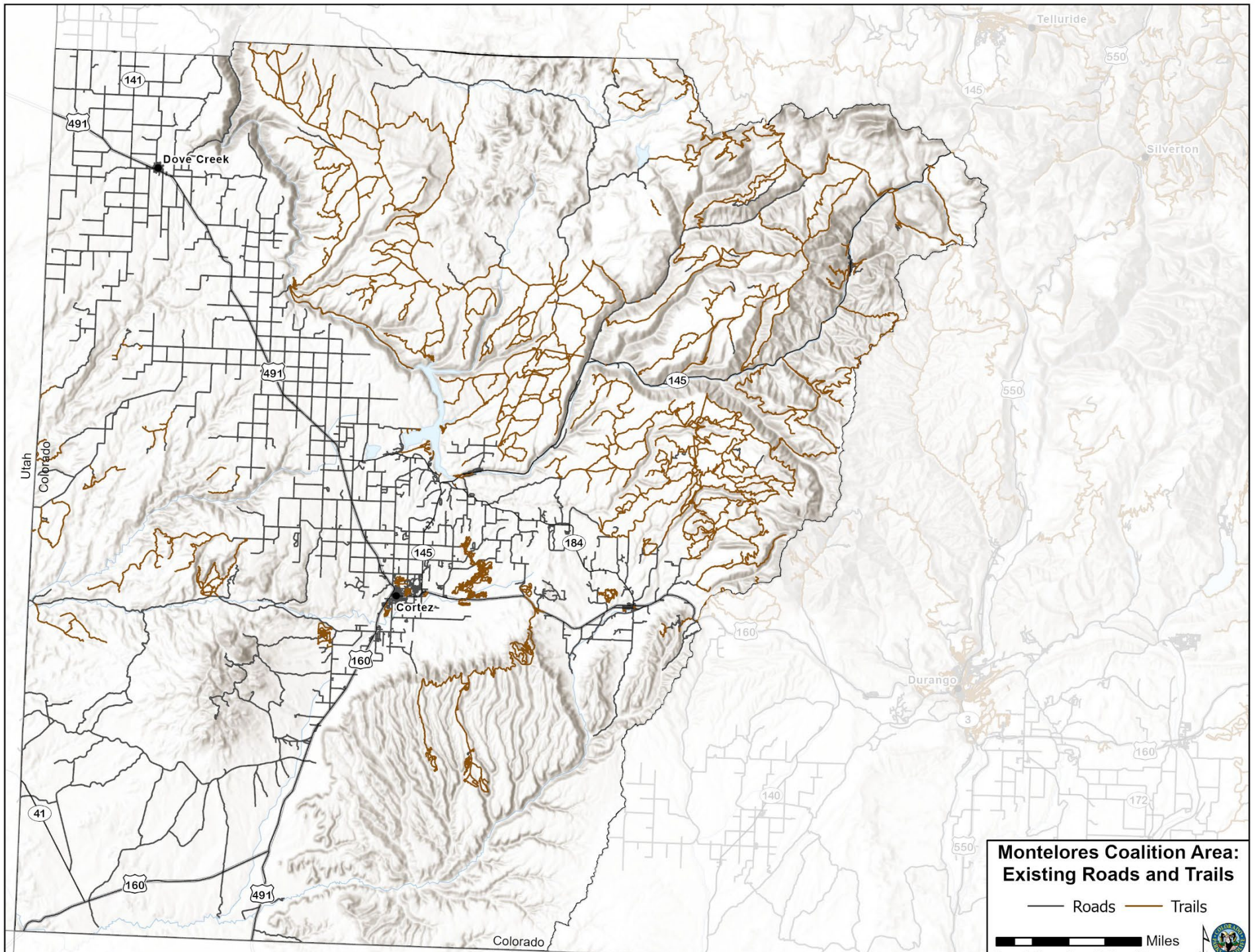
CPW and the Regional Partnerships, including the Montelores RP, have been developing GIS models of sensitive/critical wildlife habitat, using a composite of all of the various wildlife habitat layers for a specific geographic area. I can explain how the model works and what the maps indicate, or the attached user guide from the Envision Chaffee RP describes it well, too. I have attached the maps for the Montelores geographic area (Montezuma and Dolores counties). One is a "mean" or combined map of all wildlife layers, one is a winter wildlife habitat map, and one is a summer (or what we call the production time period when most wildlife species are giving birth and rearing their young) wildlife habitat map. I've

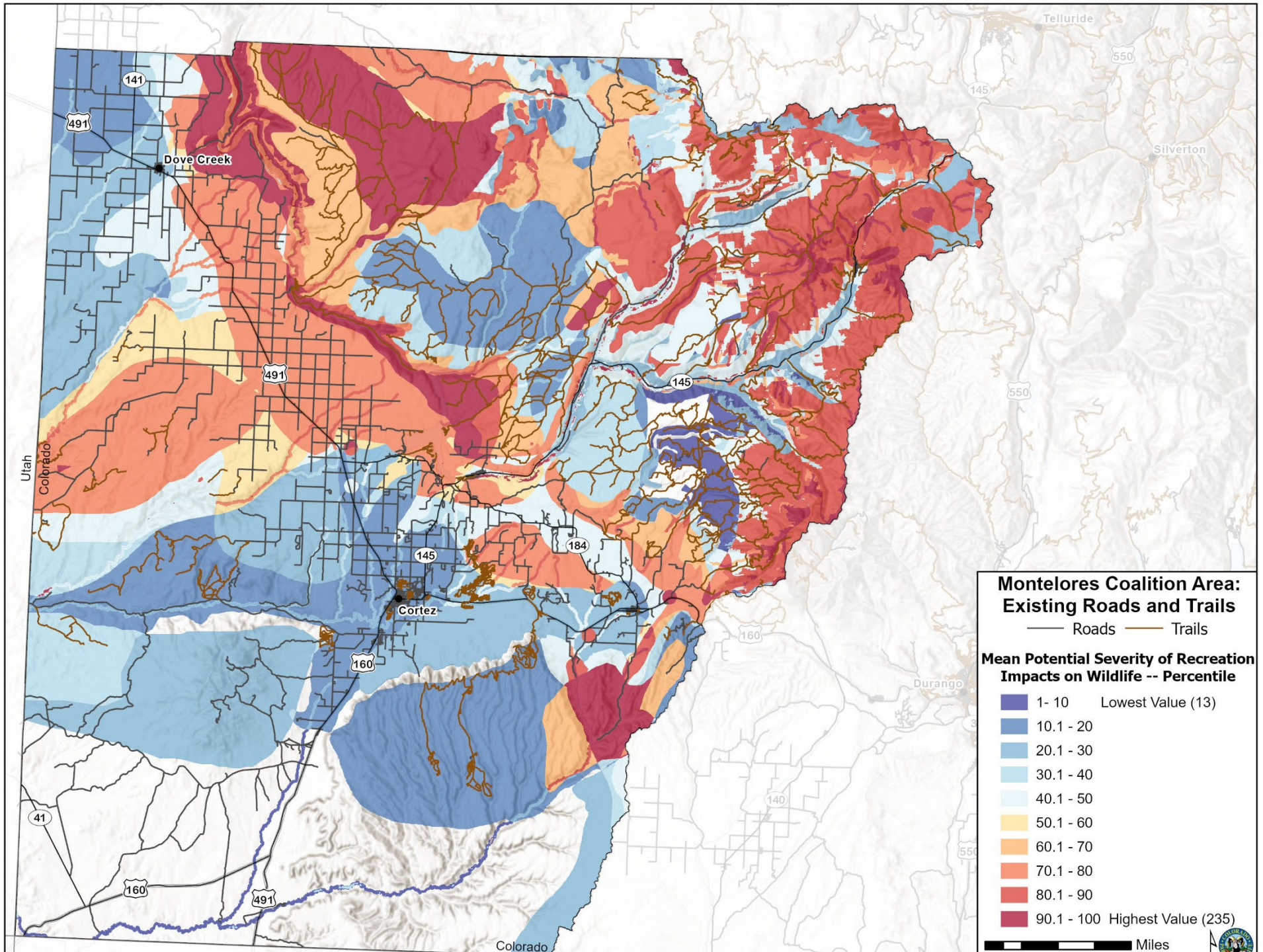
also included a map depicting current road and trail infrastructure, as well as that infrastructure overlaid with the mean wildlife habitat map. And lastly, I included the spreadsheet depicting the various wildlife habitat layers used in the model. What obviously stands out from these maps is that the entire upper Dolores watershed is valuable wildlife habitat, especially during the summer/production months.

Anyway, take a look at these maps, then let's chat. I don't know if Rico has a GIS person, but if so, they could pull the individual layers from our website and customize them for the Rico area as much as is wanted. I'd be happy to present all of this sometime if we can find a time that works with my schedule.

Jamin

Jamin Grigg
Southwest Region Senior Wildlife Biologist
LIVE LIFE OUTSIDE
Cell 406.570.2031
415 Turner Drive, Durango, CO 81303
jamin.grigg@state.co.us | cpw.state.co.us


Telluride
Silverton
Durango
Dove Creek
Cortez
Utah
Colorado
Colorado
141
491
145
184
160
41
550
140
172
3
Montelores Coalition Area:
Existing Roads and Trails
Roads
Trails
Miles


Montelores Coalition Area:
Existing Roads and Trails
Roads
Trails
Mean Potential Severity of Recreation Impacts on Wildlife -- Percentile
1- 10 Lowest Value (13)
10.1 - 20
20.1 - 30
30.1 - 40
40.1 - 50
50.1 - 60
60.1 - 70
70.1 - 80
80.1 - 90
90.1 - 100 Highest Value (235)
Miles
Dove Creek
Cortez
Telluride
Silverton
Durango
Utah
Colorado
Colorado
141
491
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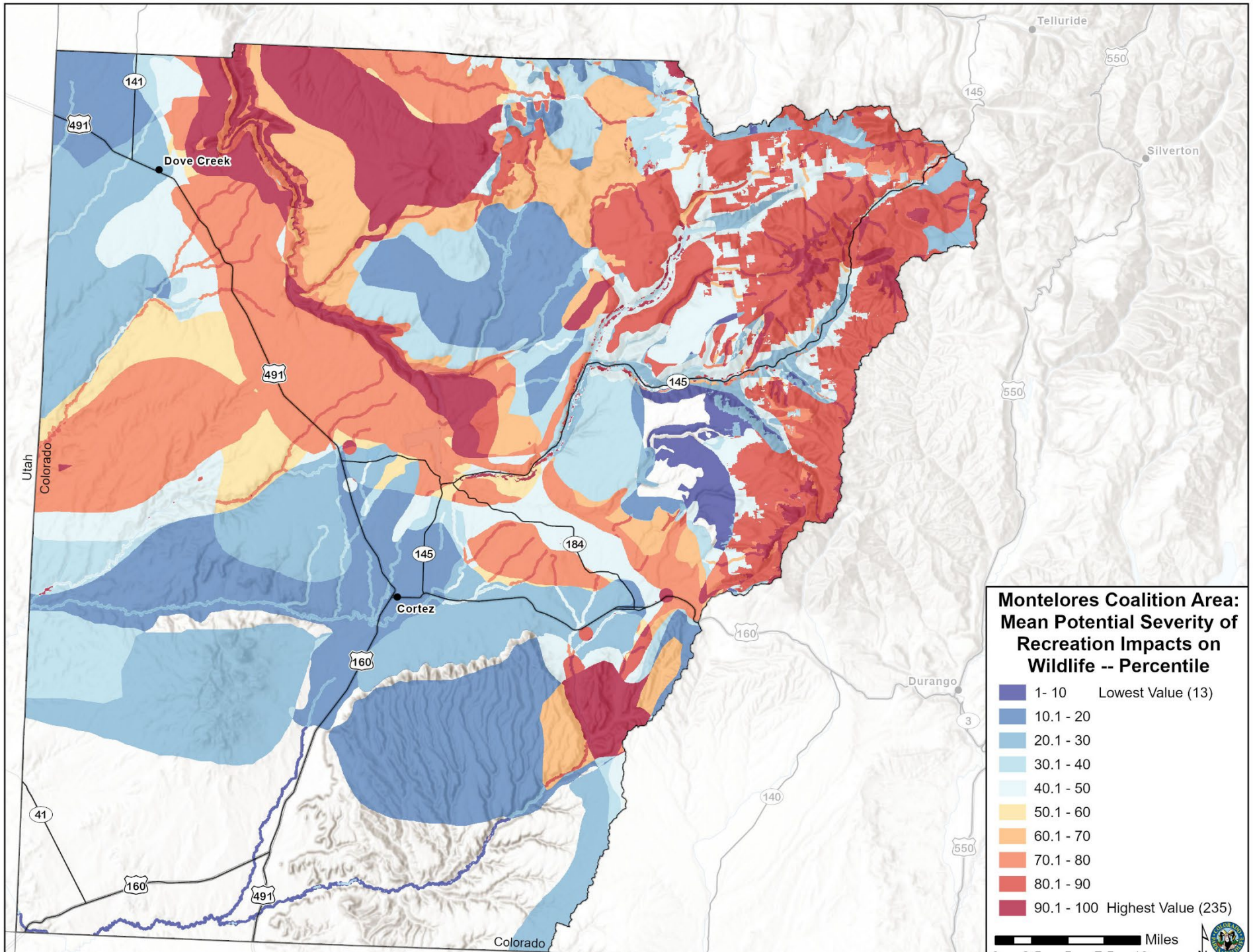
184
160
41
550
140


Montelores Coalition Area:
Mean Potential Severity of
Recreation Impacts on
Wildlife -- Percentile
1- 10 Lowest Value (13)
10.1 - 20
20.1 - 30
30.1 - 40
40.1 - 50
50.1 - 60
60.1 - 70
70.1 - 80
80.1 - 90
90.1 - 100 Highest Value (235)
Miles
Dove Creek
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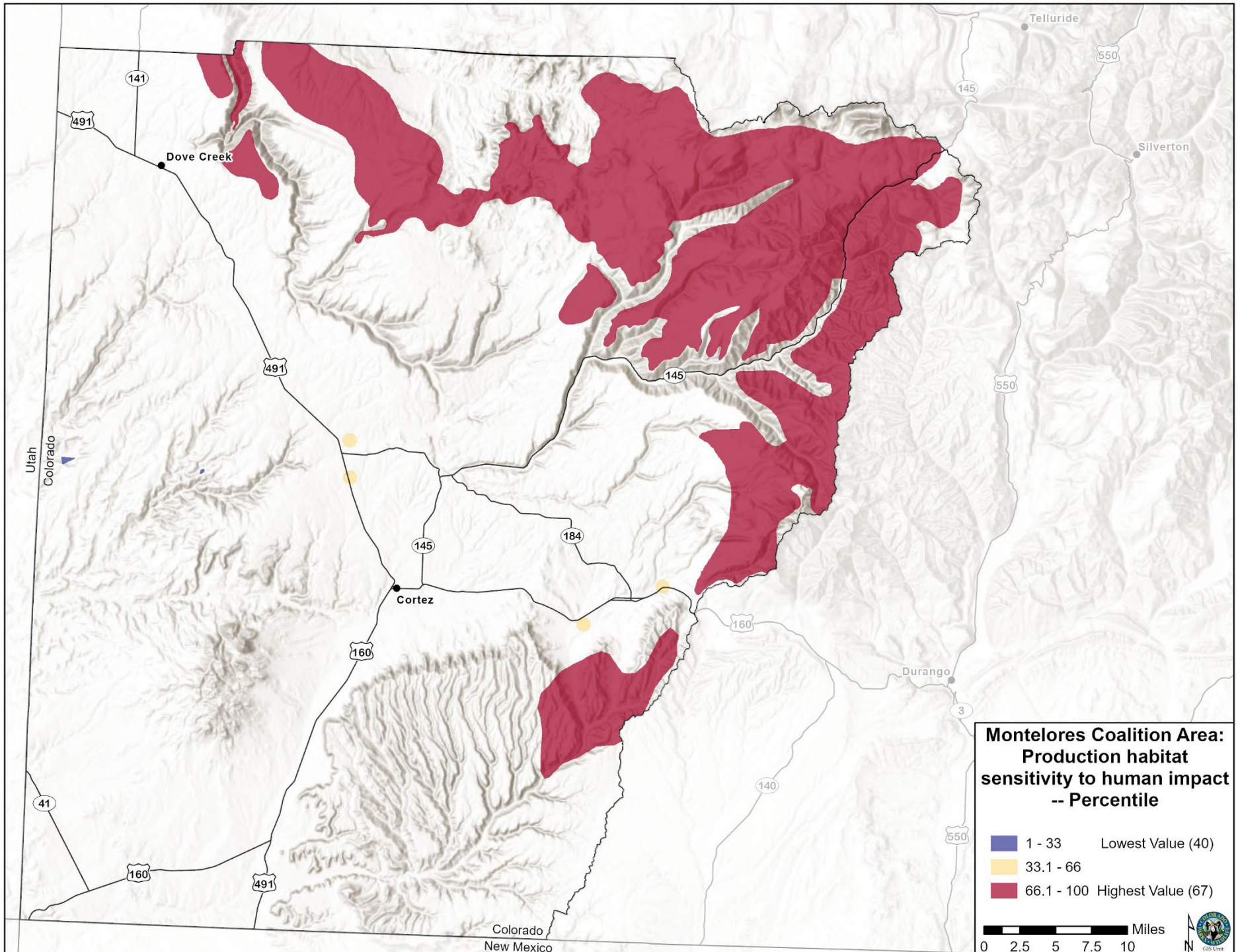
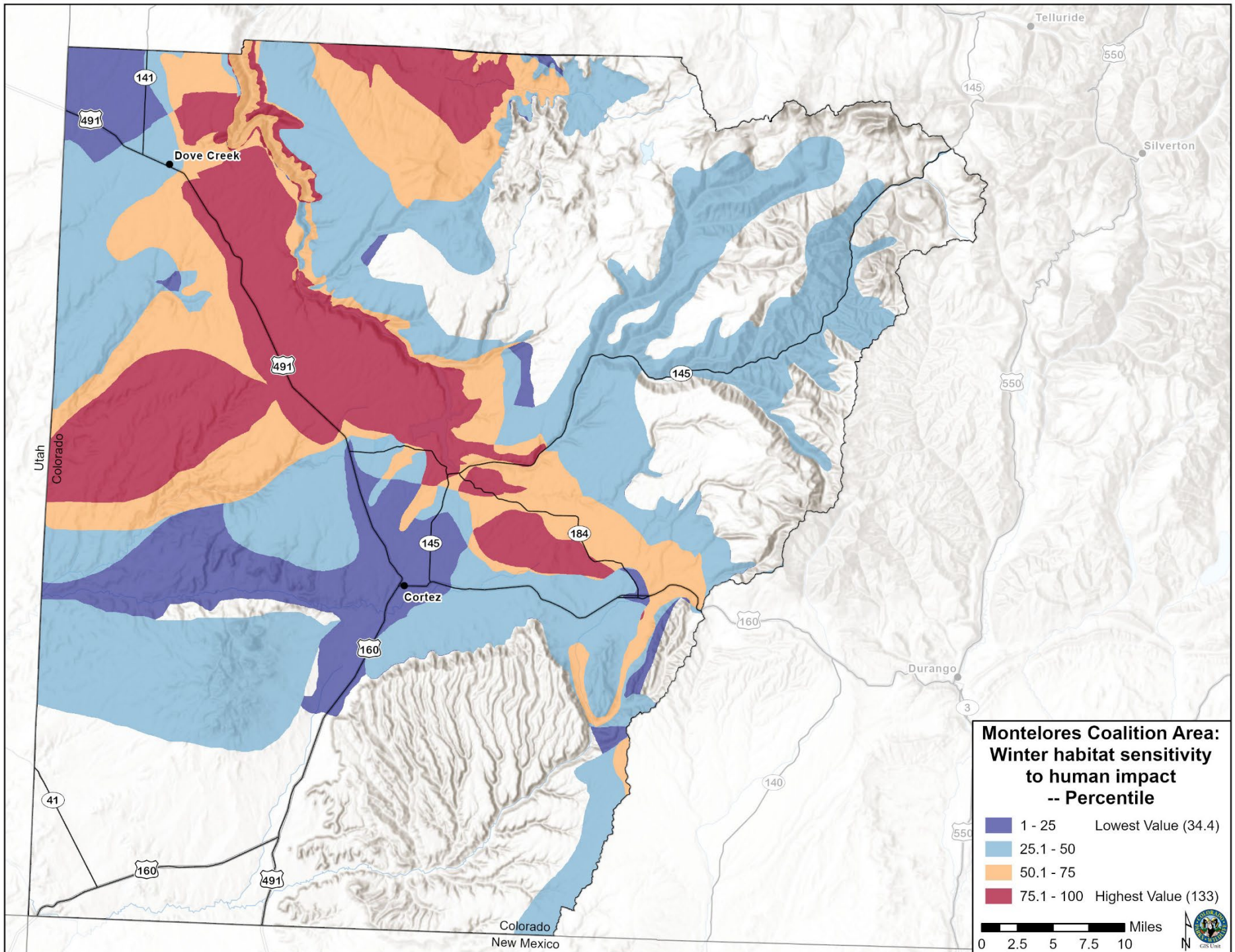

Telluride
Silverton
Dove Creek
Cortez
Durango
Utah
Colorado
New Mexico
141
491
145
184
160
41
140
550
3
Montelores Coalition Area:
Production habitat
sensitivity to human impact
-- Percentile
1 - 33 Lowest Value (40)
33.1 - 66
66.1 - 100 Highest Value (67)
Miles
0 2.5 5 7.5 10
N
GIS Unit


Telluride
Silverton
Dove Creek
Cortez
Durango
Utah
Colorado
Colorado
New Mexico
141
491
145
184
160
41
3
140
550
Montelores Coalition Area:
Winter habitat sensitivity
to human impact
-- Percentile
1 - 25 Lowest Value (34.4)
25.1 - 50
50.1 - 75
75.1 - 100 Highest Value (133)
Miles
0 2.5 5 7.5 10
N

Wildlife Decision Support Tools for Recreation

Protecting wildlife and associated economic, ecosystem and experiential benefits as recreation use increases in Chaffee County, Colorado

Feb. 20, 2021

Summary

According to research, 8 of 13 key wildlife populations in Chaffee County — or 65% — are in steady decline. This includes bighorn sheep, down 29% since 2000; mountain goat, down 32% since 2000; and elk, down 11% since 2000. Detailed data provided by Colorado Parks and Wildlife and USFS biologists on these species is available in the Chaffee Recreation Report.

There are multiple factors driving these wildlife population declines, according to wildlife biologists, but there is an increasing body of data from studies across the West that show recreation has measurable negative effects on wildlife, especially in production and winter ranges. Recreation activities displace wildlife, moving them out of high quality to lower quality habitats, these studies show. This reduces the area wildlife use, decreasing the number of animals the landscape can support. Recreation pressure in production areas, from elk calving to raptor nests, has also been shown to decrease the survival of young.

One of the Chaffee Recreation Plan (CRP) objectives is to stabilize local wildlife populations, including not only sheep, goat and elk but also smaller yet important species. The objective directly supports the CRP's goals, which are to maintain healthy natural resources while sustaining excellent outdoor experiences and the benefits of the county's recreation-based tourism economy.

There is also evidence that outdoor enthusiasts support the objective to stabilize wildlife populations. In the Chaffee Recreation Survey, which collected data from 3,836 respondents from 41 states, 95% of respondents indicate that managing recreation to protect wildlife is important to them. Analysis of the survey data further indicates that wildlife is the single most unifying factor that outdoor users of all types and from all places value the most. Economic data collected for the Chaffee Recreation Report also shows that wildlife-related recreation (fishing and hunting and wildlife viewing) is the largest contributor to the local recreation economy, at an estimated $70 million per-year benefit.

Stabilizing wildlife populations requires working holistically through the CRP process and implementation to reduce recreation-related impacts on wildlife and their habitats. Potential strategies toward achieving the objective identified by the planning process include focusing new recreation development where it will have the least impact to wildlife, enhancing important habitat, strategic seasonal habitat closures, and an offset program for new trails and roads proposed in sensitive habitat.

The wildlife decision support tools described in this report were created to provide the community science-based data to support community strategies that protect wildlife. Developed in partnership with Colorado Forest Restoration Institute at Colorado State University, the map set is the result of extensive work with Colorado Parks and Wildlife, Bureau of Land Management, U.S. Forest Service, Colorado Natural Heritage Program, Quiet Use Coalition and others. The work was supported by funding and in-kind resources from these organizations, the Colorado the Beautiful grant fund and the Chaffee Common Ground Fund. The tool uses geospatial models that identify where the most and most-important habitats are at the highest risk from recreation pressure in Chaffee County.

This report provides details about the data collection and decision-making processes involved in creating the maps. The map set's key products are the Recreation Suitability Tool and the Recreation for Planning Wildlife Tool, which is a combination of current recreation impacts and habitat quality, from high-quality to low. The set provides a basis to make strategic planning

decisions. For example, a top-rated wildlife management strategy tested in the recreation survey showed that 96% of respondents support focusing new recreation development where it has the least impact to wildlife and their habitats. The maps set identifies where this land is and provides the ability to plan accordingly.

The following sections of this report describe preliminary data and analysis to characterize: 1) current recreation use, and 2) animal habitat impacts.

1. Current Recreational Use

Contributors: Ben Lara (USFS, Salida Ranger District), Kalem Leonard (BLM, Royal Gorge Field Office), Jamin Grigg (CPW, Salida Office) and Tom Waters (Arkansas Headwaters Recreation Area).

Trails and routes

Envision Chaffee County acquired a spatial dataset of recreation assets recently inventoried by Great Outdoors Consultants (GOC). The GOC "Chaffee_Routes Trails" layer was used to represent recreation trails and roads in several analyses. This layer includes trails, road-based recreation assets, and roads important for recreation access attributed with their name and intended use(s).

We estimated annual recreational use for routes and trails in Chaffee County using trail counter data, the Strava Global Heatmap (2020), and local manager experience. Trail use estimates are intended to serve two purposes: 1) provide a gross estimate of trail use in the County, and 2) map areas of high and low use to inform subsequent analyses of recreation impacts.

The data sources used to generate trail use estimates are described in Table 1 and Figure 1. Routes and trails are represented spatially with the GOC routes and trails dataset. Trail count data from multiple agencies provided observed levels of use at specific locations in the trail network and times of the year (e.g., summer versus winter use). To extrapolate use to the remainder of routes and trails in Chaffee County, we first cross-walked use intensity measures from the Strava global heatmap (2020) to broad use levels from the counter data (Table 2). The resulting trail use estimates were subsequently reviewed and modified as needed by local managers (Ben Lara, Kalem Leonard, Jamin Grigg and Tom Waters) to correct for the Strava bias towards fitness- and cycling-oriented activities. The resulting map depicts current annual use by route and trail (Figure 2). Use was assigned in broad categories (Table 2; Figure 2) to reflect the accuracy of the input data and manager review process. The map provides a good estimate of landscape-scale use, but it may not capture all non-official or undesignated non-system recreational routes.

Table 1: Data sources used to assign recreation use levels to trails in Chaffee County.

Data source	Description
Great Outdoors Consultants (GOC) routes and trails	Spatial depiction of Chaffee County recreational routes and trails in vector polyline format. Routes and trails are attributed with names, allowed uses, and additional data depending on the original source.
Trail counter data from multiple agencies	Trail use estimates from automated counters over the past 2-4 years. Data came directly from the USFS (contact Ben Lara) and from the Chaffee Trail Counts site.
Strava global heatmap (2020)	The Strava global heatmap is a raster depiction of recreation use intensity based on user submitted GPS data over the period April 2018 to April 2020.

Table 2: Initial use level classification scheme to translate Strava use intensity (normalized from 0-100) to annual use informed by trail counter data.

Category #	Annual use (visitors)	Min Strava Intensity	Max Strava Intensity
1	0 - 100	0	5
2	100 - 500	5	25
3	500 - 1K	25	35
4	1K - 5K	35	45
5	5K - 10K	45	55
6	10K - 50K	55	75
7	50K - 100K	75	95
8	100K - 500K	95	100

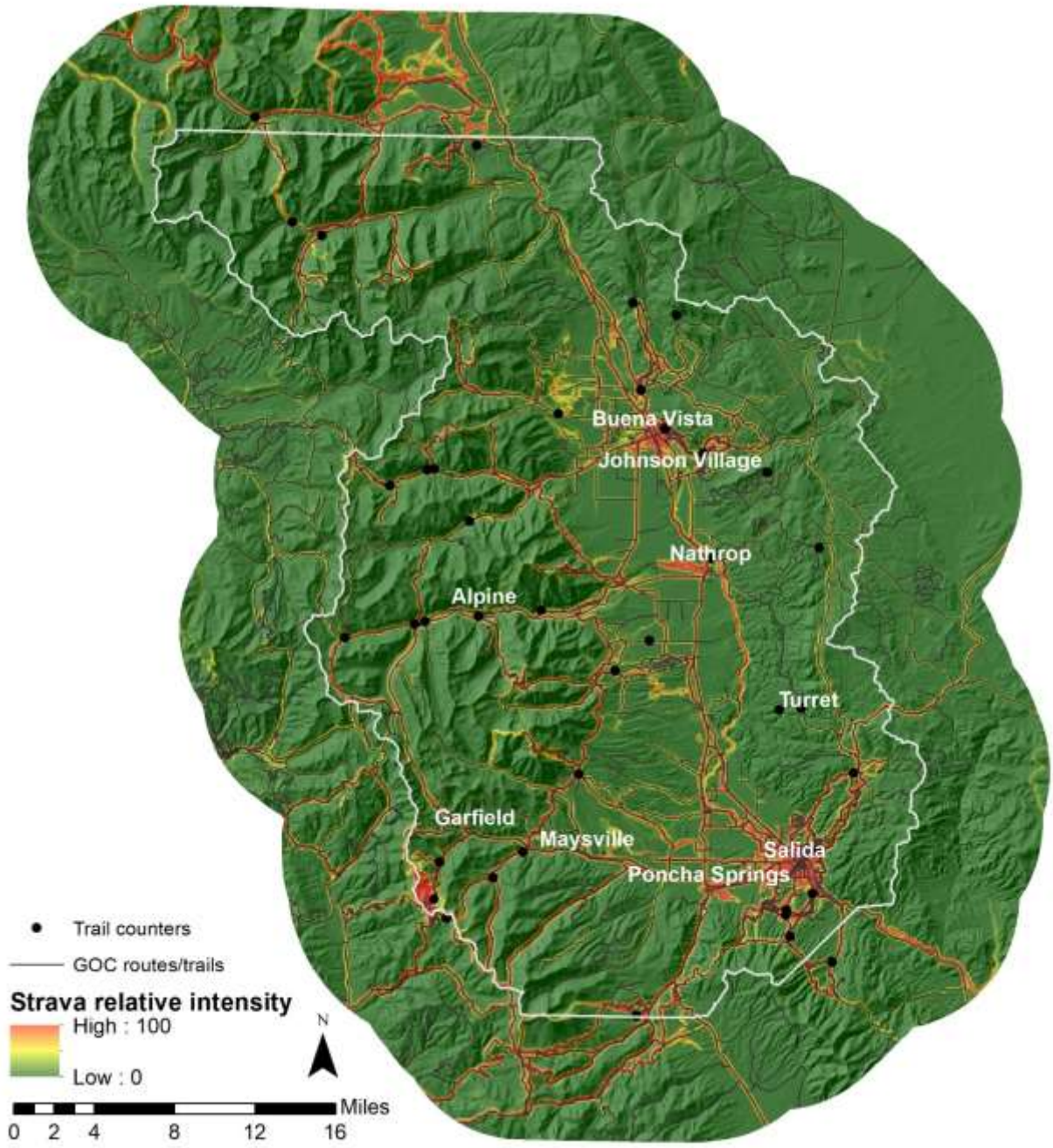


Figure 1: Data sources used to generate trail use estimates.

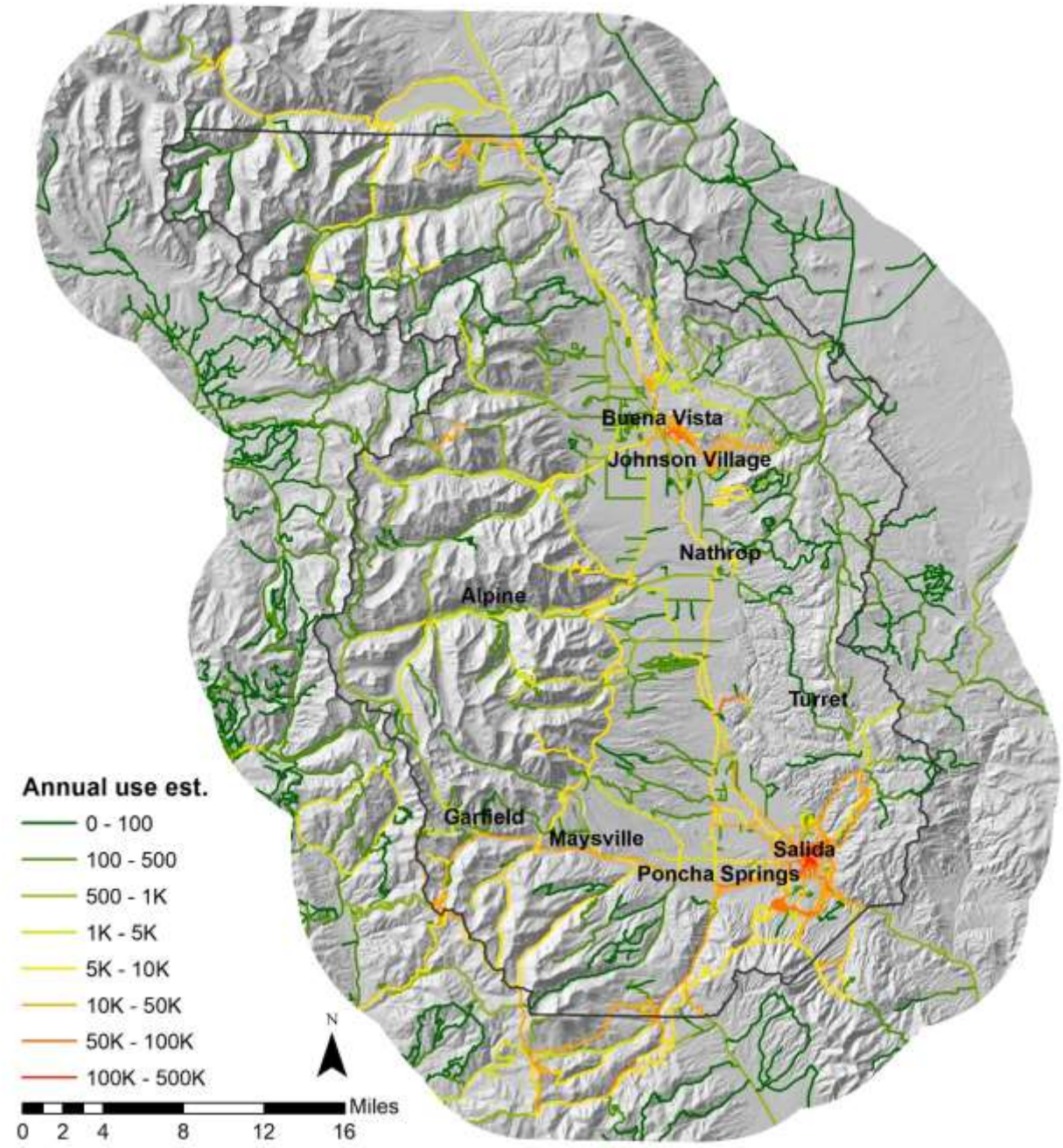


Figure 2: Annual recreational use estimates for GOC routes and trails.

The final product of the analysis is the "GOC_trails_use" feature class in the "Use" feature dataset. The feature class includes all the original attributes of the "GOC_routes_trails" feature class plus attributes to document the trail use estimates (Table 3). Again, it is important to recognize that this layer may not capture all recreational use, especially on non-official or social recreational routes.

Table 3: Use level attributes.

Field	Values	Description
Strava	0 - 100	Average Strava use intensity within a 100-m radius buffer around the linear route or trail feature.
EstCat	1-8	Initial categorical use level from Table 4 assigned based on the Strava use intensity.
FinalCat	1-8	Final categorical use level from Table 4 after the initial estimates were manually reviewed and revised by local recreation experts.
CatName	Text	Final use level name from Table 4.
Reason	Text	Brief comments explaining why use categories were changed from the Strava estimates.

Campgrounds

USFS campgrounds are described by a point feature class ("USFS_campgrounds"). The data set contains 31 campgrounds. Use data was compiled for the 13 managed campgrounds in the Salida Ranger District. The point locations are from the USFS spatial data gateway (https://data.fs.usda.gov/geodata/) and the use records came from Ben Lara (ben.lara@usda.gov) and Trevor Bolls (trevor@rockymountainrec.com).

Table 4: USFS campgrounds attributes.

Field	Description
OpenDay_XX	Number of open days per year (XX = two digit year).
CampVis_XX	Number of camping visitors per year (XX = two digit year).
DayVis_XX	Number of day use visitors per year (XX = two digit year).
OccSite_XX	Number of site-nights occupied per year (XX = two digit year).
TotVis_XX	Number of camping visitors and day use visitors per year (XX = two digit year).

CPW campgrounds are described in the point feature class ("CPW_campgrounds"). The data set contains 11 campgrounds. Use data was compiled for the five sites managed by the Arkansas Headwaters Recreation Area for 2019 by Jennifer Crawford (jennifer.r.crawford@state.co.us).

Table 5: CPW campground attributes.

Field	Description
SITE_COUNT	Number of sites.
FeesUSD_19	Collected campground fees in 2019.
ResCnt_19	Number of site reservations in 2019 (multi-day reservations count as one reservation).
NigCnt_19	Number of site-nights occupied in 2019.

The Recreation Impact Monitoring System (RIMS), a precursor of the current Campsite Collector APP, also documents dispersed campsites described in the “Campsites” point feature class. These points include many attributes related to distance from streams and roads; presence of fire rings, tent pads, picnic tables, fencing, and social trails; and waste type and amount. The database only includes RIMS data through the end of 2019, so Envision Chaffee County should be consulted for more recent data. The RIMS data includes 1,035 of an estimated 5,000 total dispersed camp sites in the County as of 2019.

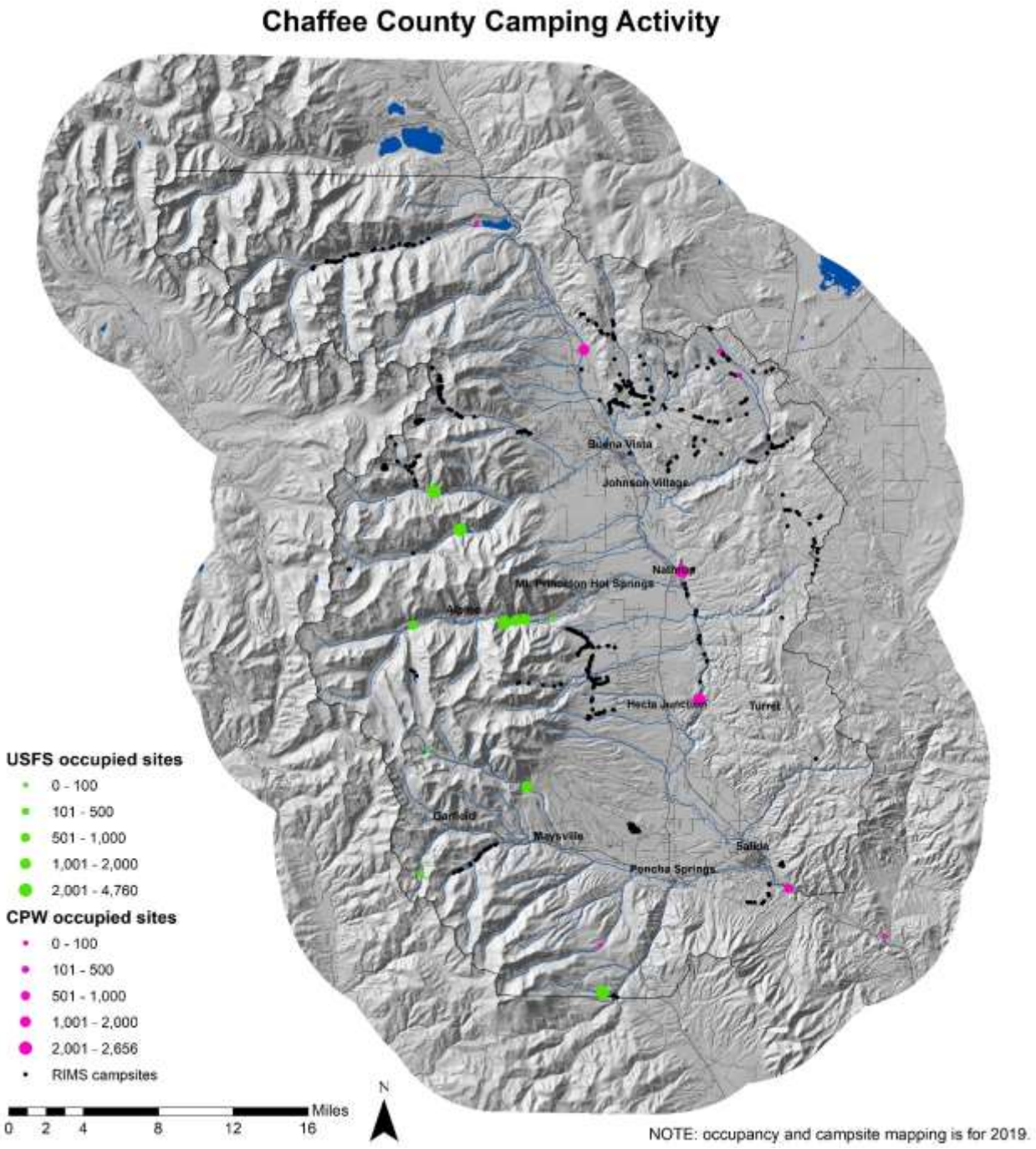


Figure 3: Camping data for 2019.

Arkansas River Boating

Water-based recreation was mapped for the main stem of the Arkansas River in the "AHRA_river" polyline feature class. River segments were manually digitized from Arkansas Headwaters Recreation Area maps and attributed with the 2019 use levels provided by John Kreski (john.kreski@state.co.us).

Table 6: Arkansas Headwaters Recreation Area river segment attributes.

Field	Description
ID	Segment number/code.
Name	Segment name.
Rafts_19	Number of commercial rafts in 2019.
Kayaks_19	Number of commercial kayaks in 2019.
Clients_19	Number of commercial clients in 2019.
Staff_19	Number of commercial staff in 2019.

Monarch Ski Area

Monarch Ski Area is represented by the “USFS_MonarchSkiArea” polygon feature class. It is attributed with visitors by ski season with ski seasons defined with the starting and ending year.

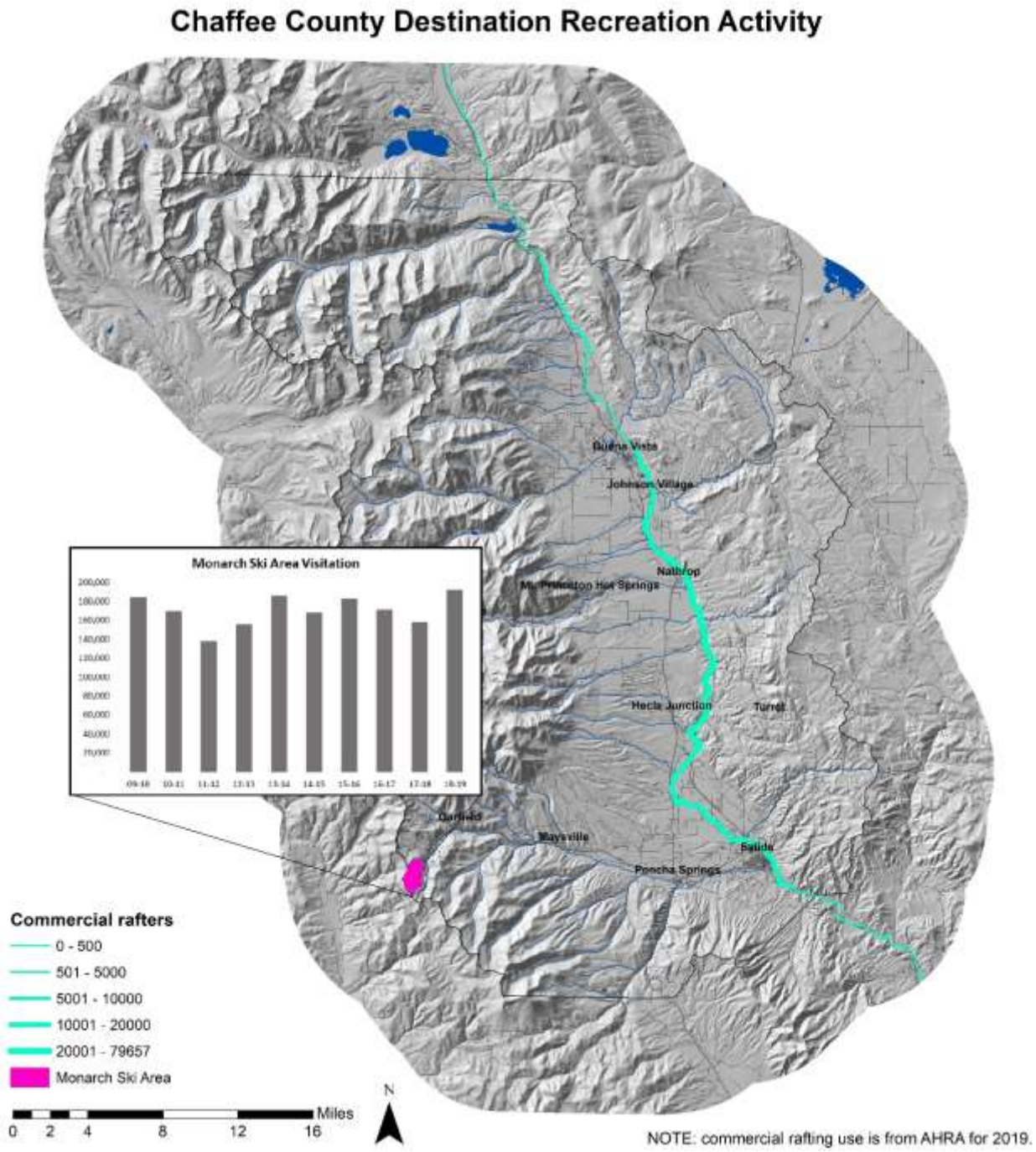


Figure 4: Arkansas Headwaters Recreation Area commercial boating use and Monarch Ski Area use.

2. Animal Habitat Impacts

Contributors: Jamin Grigg (CPW, Salida Office), Stephanie Shively (USFS, Salida Ranger District), Tom Sobal (Quiet Use Coalition) Cindy Williams (Envision Chaffee County) and other biologists at BLM, USFS, CPW and the Colorado Natural Heritage Program.

Animal habitat impacts were assessed with a model inspired by wildfire risk assessment (Scott et al. 2013) that accounts for habitat extent, habitat importance, and recreation effects by disturbance intensity to construct a relative measure of recreation impact. The wildlife team guided data collection, rated habitat importance, and developed response functions to translate recreation intensity into a relative measure of habitat degradation. For monitoring or plan evaluation, the model can be applied to a spatial representation of recreation disturbance in categories of low, moderate, and high intensity for past, current, or hypothetical future conditions. It can also be applied assuming recreation of a given intensity occurs everywhere on the landscape to understand where recreation impacts may be benign or very harmful to wildlife. This model is intended to provide an objective and quantitative measure for strategic planning tasks related to recreation development, maintenance, and management to help the agencies and community mitigate current recreation impacts and to steer future recreation development away from critical habitats. It is not meant to replace site specific surveys and analysis required for project-level planning.

Data Collection

The team took an iterative approach to identifying and critiquing spatial habitat layers for use starting with species of high economic importance and species with significant conservation concerns (e.g., Federal Threatened or Endangered, USFS species of conservation concern, or BLM special status species). Not every species of interest had high quality spatial habitat data with consistent coverage across the planning area required for use in the analysis. These species are especially important to consider in project-level planning. To aid strategic recreation planning, spatial habitat data must have a reasonable level of detail to show variation in habitat presence at the county scale. Including species with coarse habitat maps that cover all or most of the county would raise the total estimate of recreation impacts on animal habitats, but it would not help to spatially prioritize recreation management. For this reason, the final model includes mainly well-documented species with economic or conservation importance. Given the recreation management focus, we excluded some species that had little to no habitat mapped on public lands and we excluded some species of conservation concern that are not currently known or suspected to be threatened by common forms of recreation.

The final model includes the 35 habitats described in Table 7. Data sources include habitat layers and species presence observations from Colorado Parks and Wildlife (CPW) (2019-2020) and the USDA Forest Service, and Potential Conservation Areas (PCAs) delineated by the Colorado Natural Heritage Program (2019). The specific source of each habitat layer is described in the metadata document. A general representation of fish habitat was created by

buffering perennial streams, lakes, and reservoirs from NHDPlus (USEPA and USGS 2012). The intent is for this layer to also represent the many other animal values located in adjacent riparian areas. Species that were considered but not included in the final assessment are described in Table 8.

Table 7: The habitats included in the assessment are grouped by broad categories and species groups (used to control for multiple habitats per species as explained later). Each habitat is described by a GIS feature class which can consist of point, line, or polygon data types and an optional buffer distance to extend the spatial extent of high precision data to represent the zone of recreation influence to the habitat. The source of each GIS feature class is described in the metadata document.

Category	Species or Group	Habitat	Data Type	Buffer (m)
Aquatic & riparian	Boreal toad	Boreal toad breeding sites	Point	300
Aquatic & riparian	Fish	Fishable streams	Polyline	100
Aquatic & riparian	Fish	Fishable waterbodies	Polygon	100
Big game	Bighorn sheep	Bighorn sheep production areas	Polygon	0
Big game	Bighorn sheep	Bighorn sheep winter range	Polygon	0
Big game	Bighorn sheep	Bighorn sheep migration corridors	Polygon	0
Big game	Bighorn sheep	Bighorn sheep habitat (generic)	Polygon	0
Big game	Black bear	Black Bear Fall Concentration	Polygon	0
Big game	Elk	Elk production areas	Polygon	0
Big game	Elk	Elk severe winter range	Polygon	0
Big game	Elk	Elk winter concentration areas	Polygon	0
Big game	Elk	Elk migration corridors	Polygon	0
Big game	Elk	Elk winter range	Polygon	0
Big game	Lynx	Lynx corridors	Polygon	0
Big game	Lynx	Lynx habitat (generic)	Polygon	0
Big game	Mountain goat	Mountain goat production areas	Polygon	0
Big game	Mule deer	Mule deer severe winter range	Polygon	0
Big game	Mule deer	Mule deer winter concentration areas	Polygon	0
Big game	Mule deer	Mule deer migration corridors	Polygon	0
Big game	Mule deer	Mule deer winter range	Polygon	0
Big game	Pronghorn	Pronghorn severe winter range	Polygon	0
Big game	Pronghorn	Pronghorn winter concentration areas	Polygon	0
Big game	Pronghorn	Pronghorn migration corridors	Polygon	0

Other sensitive	Bats	Townsends big-eared bat PCA	Polygon	0
Other sensitive	Bats	Bat occurrence points	Point	107
Other sensitive	Insects	Susans purse-making caddisfly PCA	Polygon	0
Other sensitive	Ptarmigan	Ptarmigan winter range	Polygon	0
Plants	Sensitive plants	Brandegee wild buckwheat PCAs	Polygon	0
Plants	Sensitive plants	Arkansas canyon stickleaf PCAs	Polygon	0
Raptors	Bald eagle	Bald eagle nests	Polygon	0
Raptors	Golden eagle	Golden eagle nests	Point	800
Raptors	Northern goshawk	Northern goshawk nests	Point	800
Raptors	Osprey	Osprey nests	Polygon	0
Raptors	Peregrine falcon	Peregrine falcon nests	Point	800
Raptors	Prairie falcon	Prairie falcon nests	Point	800

Table 8: Species that were considered but not included in the final assessment.

Species	Reason Excluded	Species	Reason Excluded
American marten	Lack of accurate GIS data, habitat similar to Canada lynx and reflected as such	Gunnison prairie dog	Lack of accurate GIS data.
American pika	Lack of accurate GIS data, habitat similar to White-tailed ptarmigan	Gunnison sage grouse	Located outside of Chaffee County
American white pelican	Located in nearby Reservoirs	Hog nosed skunk	Lack of accurate GIS data
Black swift	REMOVE - One location reflected on assessment	Little brown myotis	Lack of accurate GIS data
Brewers sparrow	Lack of accurate GIS data for this species	Loggerhead shrike	Lack of accurate GIS data
Brown-capped rosy-finch	Lack of accurate GIS data, habitat similar to White-tailed ptarmigan	Lewis' woodpecker	Habitat found throughout Cottonwood Galleries of Chaffee County
Burrowing owl	Lack of accurate GIS data, habitat tied to prairie dog colonies	Mexican spotted owl	No locations in Chaffee County have been found
Ferruginous hawk	Lack of accurate GIS data	Northern harrier	Habitat found throughout grasslands of Chaffee County
Flammulated owl	Lack of accurate GIS data	Northern leopard frog	Lack of accurate GIS data.
Fringed myotis	Lack of accurate GIS data	Olive-sided flycatcher	Habitat found widespread throughout Chaffee County
Greenback cutthroat trout	Lack of accurate GIS data. Unclear taxonomy.	Uncompahgre fritillary butterfly	No known locations in Chaffee County

Effects assessment

Recreation effects on each habitat are represented in the model using quantitative response functions to describe the relative level of impact on scale from zero for no impact to 100 for maximum habitat degradation for low, moderate, and high level of recreation disturbance. The levels of recreation disturbance were defined broadly so that they would be applicable to most species and habitats (Table 9) and because spatial data and criteria to map current disturbance intensity were not finalized at the start of this effort. We also developed a rubric to standardize the response function impact assignments (Table 10). A higher impact assignment means the habitat is sensitive to recreation disturbance of the specified level. Additionally, resource

specialists described the level of scientific evidence for recreation impacts on in categories of low, moderate, and high confidence.

Table 9: General description of disturbance levels.

Disturbance level	Description
Low	Infrequent, short duration, and relatively quiet human activities in locations with primitive facilities (e.g., a low traffic non-motorized single-track trail) or areas beyond the core of moderate and high disturbance areas. Areas with approximately < 1 mile of trail per square mile or equivalent.
Moderate	Moderate frequency and duration activities with varying levels of noise at recreation facilities restricted to linear corridors or small areas (e.g., moderate to high traffic motorized and non-motorized trails, access roads, trailheads) or areas beyond the core of high disturbance areas. Areas with > 1 mile of trail per square mile or equivalent but less than a concentrated trail network or developed recreation site.
High	Frequent, long duration, and relatively loud human activities at moderately to highly developed recreation facilities that modify habitat characteristics over several acres or more (e.g., campsites, picnic areas, shooting ranges, ski areas, high use, high density trail networks). Areas with concentrated trail networks or developed recreation sites.

Table 10: Rubric used to assign impact level on a continuous scale from zero for no impact to 100 for maximum degradation.

Impact level	Example impacts
0-30	Activity causes increased animal vigilance, may decrease feeding time, may cause temporary/short term displacement, may cause low stress. No evidence of increased mortality.
30-70	Species may be moderately to largely displaced from habitat or timing of habitat use, higher energy cost, may impact survival, may impact population.
70-100	Species may abandon young or abandon area with immediate impact to population. Direct mortality or damage to nests (e.g., trampling). Indirect impacts from disease (e.g., boreal toad).

The resource specialist-defined response functions are presented by habitat in Table 11. Most habitats were considered fully degraded under high levels of recreation disturbance. Highly sensitive habitats, such as raptor nests and big game production areas were considered mostly or fully degraded at low or moderate levels of recreation disturbance. A third of the response functions are based on high levels of scientific evidence. It is important to acknowledge that the remaining two thirds of the response functions are based on a mix of scientific evidence and professional expertise.

Table 11. Recreation effects response function by disturbance level with evidence rating.

	Impact by recreation disturbance level			
Habitat	**Low**	**Mod**	**High**	**Evidence**
Boreal toad breeding sites	100	100	100	Low
Fishable streams	0	25	50	Low
Fishable waterbodies	0	25	50	Low
Bighorn sheep production areas	50	100	100	High
Bighorn sheep winter range	25	50	100	High
Bighorn sheep migration corridors	20	50	100	Moderate
Bighorn sheep habitat (generic)	20	50	100	Moderate
Black Bear Fall Concentration	20	50	100	High
Elk production areas	50	100	100	High
Elk severe winter range	25	50	100	Moderate
Elk winter concentration areas	20	50	100	Moderate
Elk migration corridors	20	50	100	Moderate
Elk winter range	30	70	100	Moderate
Lynx habitat (generic)	25	25	50	Moderate
Lynx corridors	25	25	50	Moderate
Mountain goat production areas	50	100	100	Moderate
Mule deer severe winter range	50	75	100	High
Mule deer winter concentration areas	50	75	100	High
Mule deer migration corridors	20	70	100	High
Mule deer winter range	30	70	100	High
Pronghorn severe winter range	50	75	100	Moderate
Pronghorn winter concentration areas	50	75	100	Moderate
Pronghorn migration corridors	20	50	100	Moderate
Townsends big-eared bat PCA	50	75	100	Low
Bat occurrence points	50	75	100	Low
Susans purse-making caddisfly PCA	50	75	100	Moderate
Ptarmigan winter range	25	50	100	High
Brandegee wild buckwheat PCAs	25	50	100	Moderate
Arkansas canyon stickleaf PCAs	25	100	100	Moderate
Bald eagle nests	50	75	100	High
Golden eagle nests	50	75	100	High

Habitat importance

Resource specialists assigned habitat importance scores based on the sum of five components described in Table 12. The intent was for these scores to capture objective measures of species importance for society and conservation and our confidence that the data used in the assessment are high quality. Habitats with uncertain spatial data or response functions were assigned lower importance than habitats described with high confidence. The final importance scores are presented in Table 13.

Table 12: Habitat importance rank components and scoring criteria.

Component	**Scoring criteria**
Population trend	This component captures the local population trend of the associated species: 1 = increasing, 2 = stable or unknown/no data, 3 = slightly declining (<0.5%/yr), 4 = clear decline (0.5-1%/yr), and 5 = strong decline (>1%/yr).
Economic contribution	This component captures the local direct economic impact of the species: 5 = species that have more than $5M/yr impact (Elk, fishing), 4 = $1 to $5M, 3 = $100k to $1M, 2 = $50k to $100k, and 1 <$100k, = no known/documented economic impact. To the extent possible, species economic contributions were based on a 2008 report that showed wildlife contributed $35M annually to the local economy. It was assumed that these figures have roughly doubled since then.
Rarity	This component captures species rarity and need for conservation: 5 = on federal threatened or endangered species list, 4 = on other protected/threatened species lists, 3 = near protected/threatened status, 2 = some threat, and 1 = not threatened.
Specificity	The component captures how well the spatial data reflects the occupied habitat: 5 = point occurrence locations and CPW polygons of discrete habitat elements developed from surveys, 3-4 = increasingly broad representations of general habitat, and 1-2 = occurrence points from sparse surveys and broad habitat models.
Sensitivity & evidence	This component captures our confidence that the species use of the habitat is sensitive to recreation. Sensitivity was defined as the sum of the response function impacts for the low, moderate, and high disturbance intensity levels. This component was scored as: 5 = sensitivity >225 and high evidence, 4 = sensitivity >225 and low-moderate evidence, 3 = sensitivity >175 and high evidence, 2 = sensitivity >175 and moderate evidence, and 1 = others. Migration corridors were assigned a score of two.

Table 13: Habitat importance scores by component. The habitats are sorted from high to low importance.

	Component importance scores					
Habitat	**Population Trend**	**Economic**	**Rarity**	**Specificity**	**Sensitivity & Evidence**	**Total**
Bighorn sheep production areas	5	2	3	5	5	20
Elk production areas	4	5	1	5	5	20
Boreal toad breeding sites	5	1	4	5	4	19
Mule deer severe winter range	3	4	2	5	5	19
Susans purse-making caddisfly PCA	4	1	5	5	4	19
Mule deer winter concentration areas	3	4	2	4	5	18
Townsends big-eared bat PCA	4	1	4	5	4	18
Elk severe winter range	4	5	1	5	2	17
Bald eagle nests	2	1	5	5	4	17
Bighorn sheep winter range	5	2	3	3	3	16
Elk winter concentration areas	4	5	1	4	2	16
Mountain goat production areas	5	2	2	3	4	16
Bat occurrence points	4	1	4	3	4	16
Ptarmigan winter range	3	2	4	4	3	16
Golden eagle nests	2	1	3	5	5	16
Northern goshawk nests	2	1	4	5	4	16
Prairie falcon nests	2	1	4	5	4	16
Bighorn sheep migration corridors	5	2	3	3	2	15
Elk migration corridors	4	5	1	3	2	15
Brandegee wild buckwheat PCAs	3	1	5	4	2	15
Arkansas canyon stickleaf PCAs	3	1	5	4	2	15
Osprey nests	2	1	3	5	4	15
Peregrine falcon nests	2	1	3	5	4	15
Fishable streams	2	5	1	4	2	14
Fishable waterbodies	2	5	1	4	2	14
Mule deer migration corridors	3	4	2	3	2	14
Elk winter range	4	5	1	1	2	13
Bighorn sheep habitat (generic)	5	2	3	1	1	12
Black Bear Fall Concentration	2	2	1	4	3	12
Lynx corridors	2	1	5	3	1	12

Spatial assessment

The habitat layers, effects assessment response functions, and importance scores were combined spatially to calculate several products describing recreation impacts on animals. First, all habitat data were converted to 30-m binary presence/absence rasters with the same alignment and extent. Then, the response functions were applied individually to each spatial representation of disturbance intensity and habitat extent. For example, areas mapped as low intensity disturbance within bighorn sheep migration corridors were assigned an impact of 20 suggesting recreation would degrade the habitat by 20%. This raster surface was then multiplied by the total importance score of 15 assigned to bighorn sheep migration corridors divided by the maximum allowable score of 25. During this process, the species group field (Table 7) was used to group related habitat elements to control for layer quantity in the analysis. If there were multiple habitats in a species group, each pixel was assigned the maximum impact of any overlapping habitats. This favors the most sensitive and important habitat of the species. The weighted impact measures by species group were then summed to create a composite raster of recreation impact to wildlife.

In math terms, this is expressed as:

$$Compositeimpact = \sum_{i=1}^{N} \left(\bigvee_{j=1}^{O} PresenceRaster \times ImpactLevel \times \left(\frac{ImpScore}{25} \right) \right)$$

Where *i* is the index for the *N* species groups, *j* is the index for the *O* habitats in the species group, PresenceRaster depicts the habitat extent (1 = presence, 0 = absence), ImpactLevel is the level of habitat degradation from the quantitative response function (Table 11), and ImpScore is the importance score (Table 13).

Recreation Disturbance Intensity

To characterize current levels of recreation disturbance, we adapted a framework developed by the Outside 285 Master Plan (2020). We revised some of the criteria to fit with the available data in Chaffee County. The spatial criteria are described for each level in Table 14. It should be noted that these criteria diverge slightly from our original broad descriptions (Table 9) but align with the general intent. Non-recreation disturbances including building locations and highways were added to the criteria. Including non-recreation disturbances is important to account for the cumulative impacts of recreation and other disturbances on wildlife. Since non-recreation development is not influenced by recreation management, we produced two sets of maps: the first includes all disturbances described in Table 14 and the second focuses only on the recreation-related disturbances.

Table 14: Spatial criteria for defining recreation disturbance intensity.

Disturbance Level	Description
Low	Within 100-m of infrequent human occupation: • Trails with ≤ 1,000 users per year (our estimates in Figure 2) • Secondary roads with ≤ 1,000 users per year (our estimates in Figure 2) • River segments with ≤ 1,000 commercial users per year (AHRA records in Figure 4) Or, within expanded 400-m buffer area around moderate and high disturbance areas: • Trails with > 1,000 users per year (our estimates in Figure 2) • Secondary roads with > 1,000 users per year (our estimates in Figure 2) • River segments with > 1,000 commercial users per year (AHRA records in Figure 4) • Designated and dispersed campsites (USDA Forest Service, CPW, Chaffee County RIMS) • Monarch Ski Area • Buildings (from Caggiano et al. 2016 and Microsoft 2018) • Highways (from GOC routes and trails)
Moderate	Within 100-m of frequent but not permanent human occupation: • Trails with > 1,000 users per year (our estimates in Figure 2) • Secondary roads with > 1,000 users per year (our estimates in Figure 2) • River segments with > 1,000 commercial users per year (AHRA records in Figure 4) • Designated and dispersed campsites (USDA Forest Service, CPW, Chaffee County RIMS) • Monarch Ski Area
High	Within 100-m of frequent or permanent human occupation: • Buildings (from Caggiano et al. 2016 and Microsoft 2018) • Highways (from GOC routes and trails)

Spatial Products

For strategic planning, several products were created to communicate the potential recreation impact on wildlife from future recreation development. The first set are geared towards informing where future recreation should be avoided to conserve the most important habitat. Composite recreation impact is calculated assuming disturbance of a given intensity occurs everywhere on the landscape (Figure 5). Habitat impact increases with disturbance intensity as specified in the response functions (Table 11).

To simplify use, it is helpful to view the average recreation impact assuming equal likelihood of low, moderate, and high intensity recreation disturbance (Figure 6). Recreation impact measures can also be transformed into percentiles to frame conservation priorities towards a given percent of the most important habitat (Figure 7). The average habitat impact from future disturbance (Figure 6) is recommended for most planning tasks because it best communicates the magnitude of impact. Despite the relative nature of the impact measure, it has a clear meaning. For example, an impact score of 100 is equivalent to 100% degradation of a habitat with the maximum importance (25 out of 25 in Table 19). Higher values can result from

overlapping habitats. Percentiles (e.g., Figure 7) may be useful for communicating with some audiences, but it should be recognized that the distribution of habitat impact measures is right skewed, so the highest percentiles will lump areas with considerably different levels of habitat impact. A hybrid approach, where a threshold percentile is mapped over the habitat impact (Figure 6), is preferred to communicate both magnitude and the high level protection strategy (e.g., limit recreation development from the top 20th percent of habitat).

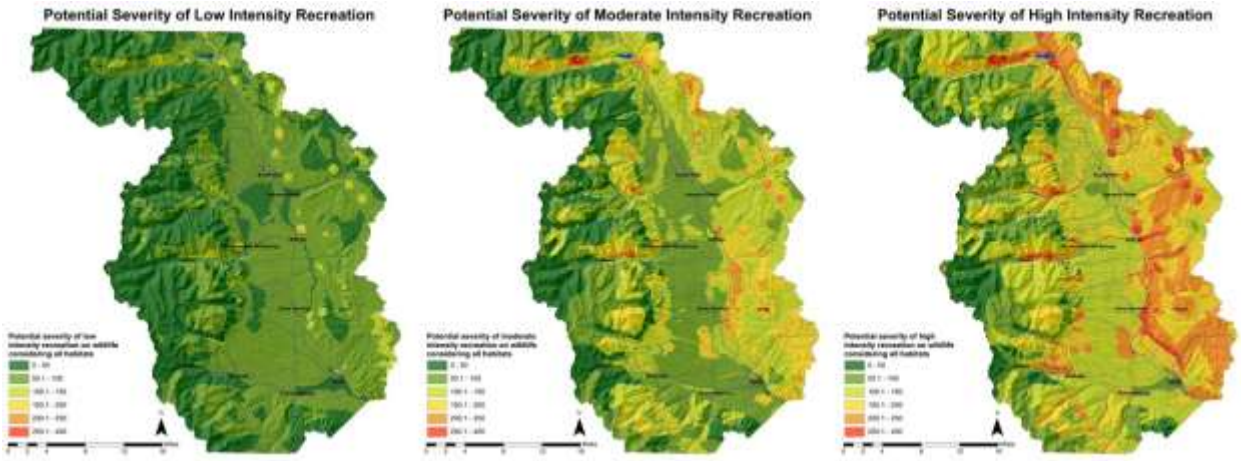


Figure 5: Potential severity of recreation impacts on wildlife by levels of low, moderate, and high intensity recreation. These maps show the potential impact assuming uniform low, moderate, and high intensity recreation disturbance is applied across the entire County.

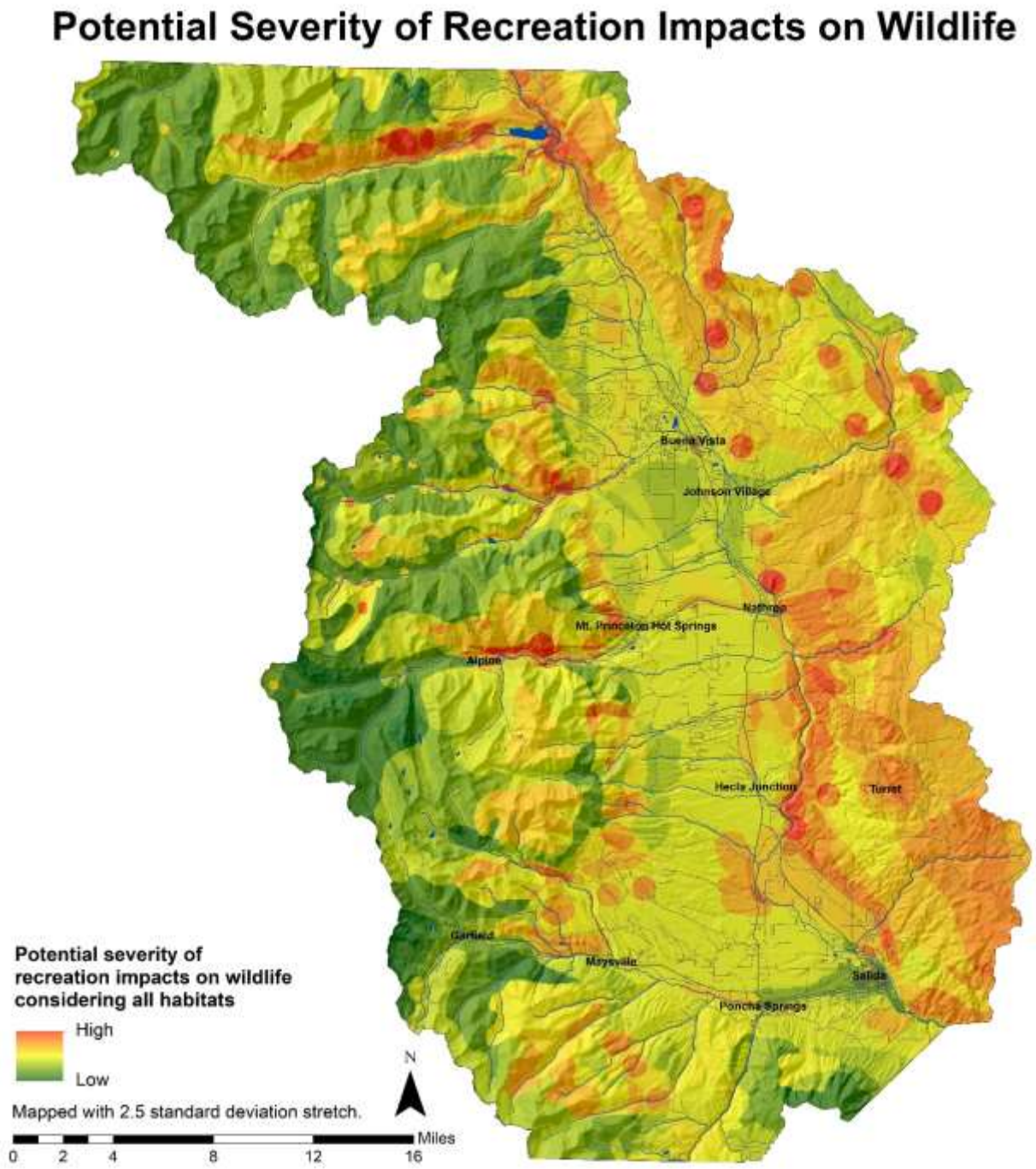


Figure 6: Potential severity of recreation impacts on wildlife for average recreation disturbance (mean of low, moderate, and high intensity). This map shows where recreation could cause the most habitat impact.

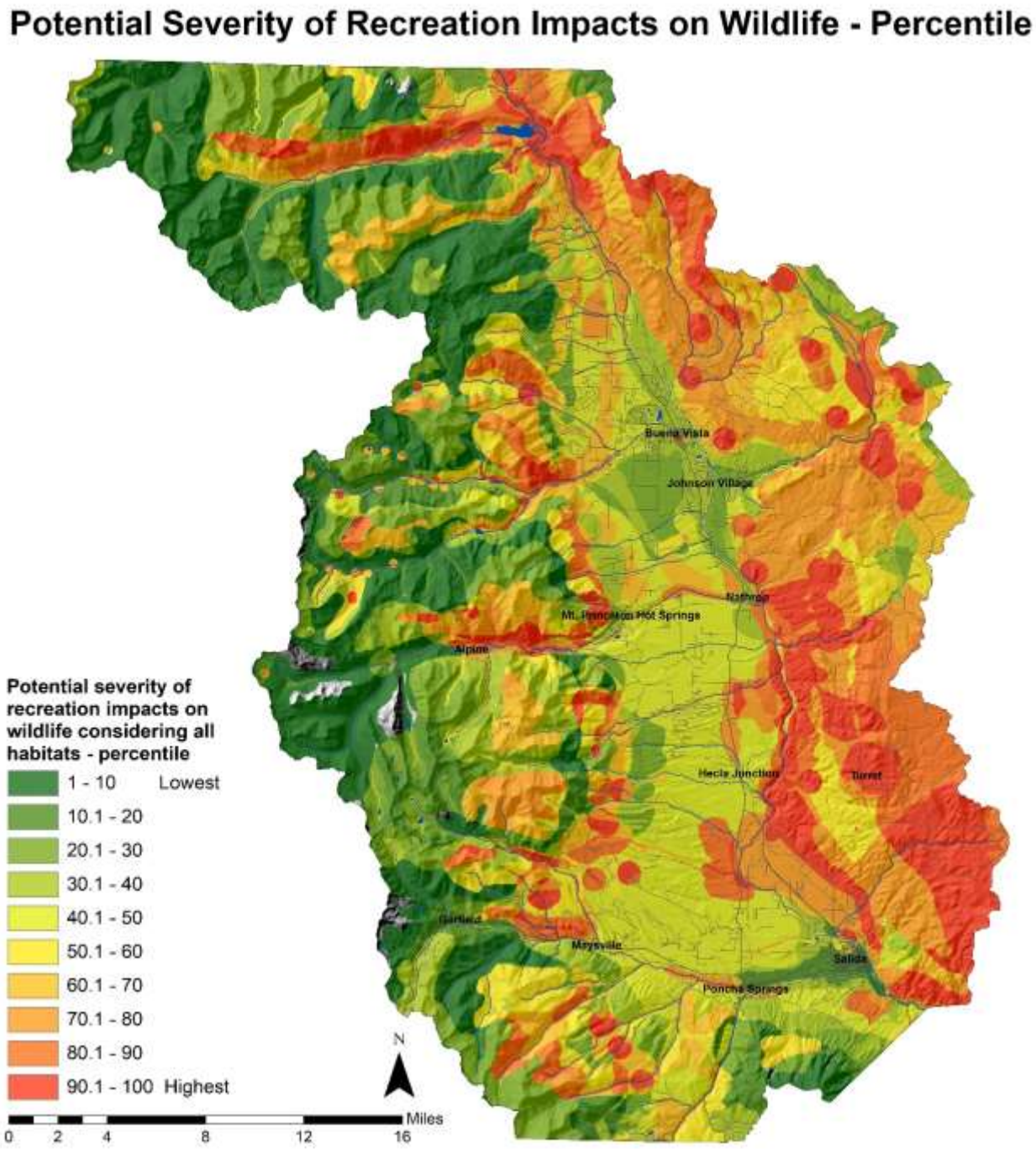


Figure 7: Percentile of potential severity of recreation impacts on wildlife for average recreation disturbance (mean of low, moderate, and high intensity). This map shows where recreation could cause the most habitat impact.

Additionally, there is interest in considering additional or modified seasonal closures as one method to mitigate recreation impacts on critical habitats. The full list of habitats was subset into two categories representing the production season, which occurs in spring and early summer for most species, and the winter season (Table 15). Similar maps were produced for

these seasons using the same methods described above for the full set of habitats (Figure 8 and Figure 9).

Table 15: seasonal habitat types included in the supplementary analyses. Note that some production seasons overlap with winter; these habitats were not included in the winter season.

Production season	**Winter season**
Bighorn sheep production areas	Mule deer severe winter range
Elk production areas	Mule deer winter concentration areas
Bald eagle nests	Elk severe winter range
Mountain goat production areas	Bighorn sheep winter range
Golden eagle nests	Elk winter concentration areas
Northern goshawk nests	Ptarmigan winter range
Prairie falcon nests	Elk winter range
Peregrine falcon nests	Mule deer winter range
Osprey nests	Pronghorn severe winter range
	Pronghorn winter concentration areas

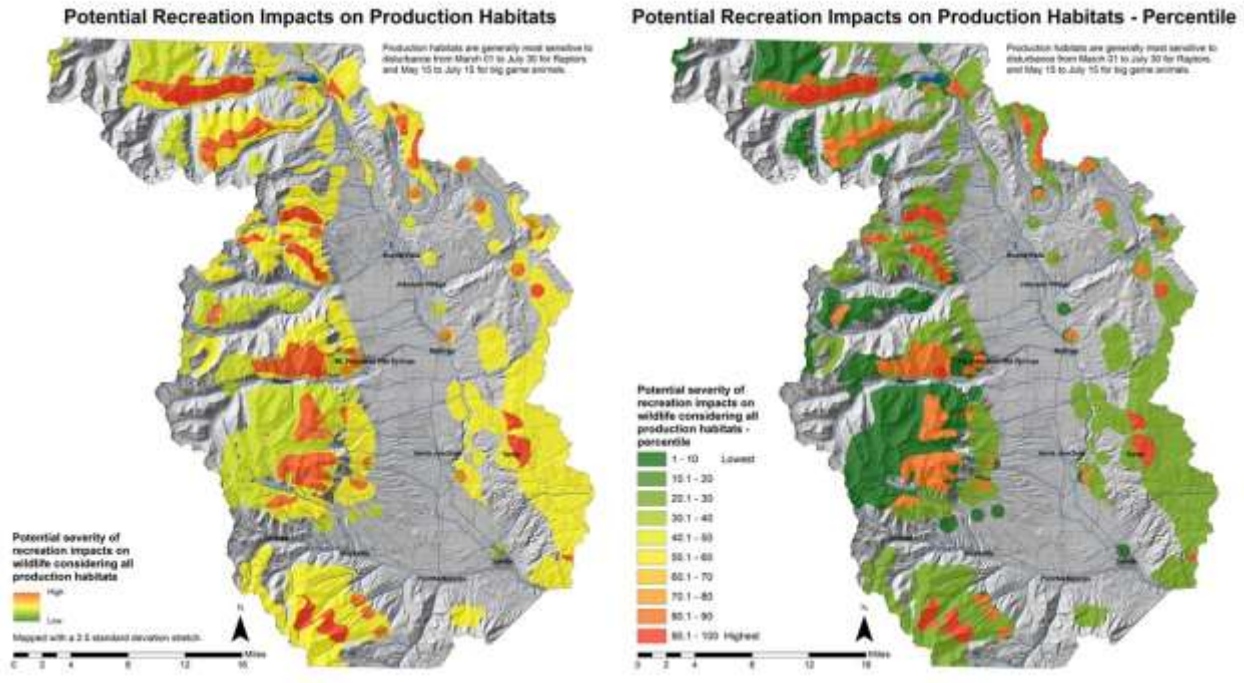


Figure 8: Potential severity of recreation impacts on wildlife production habitats for average recreation disturbance (LEFT), and potential severity percentiles (RIGHT). These maps shows where recreation could cause the most impact

to production habitats. Production habitats are generally most sensitive to disturbance from March 01 to July 30 for raptors and May 15 to July 15 for big game animals.

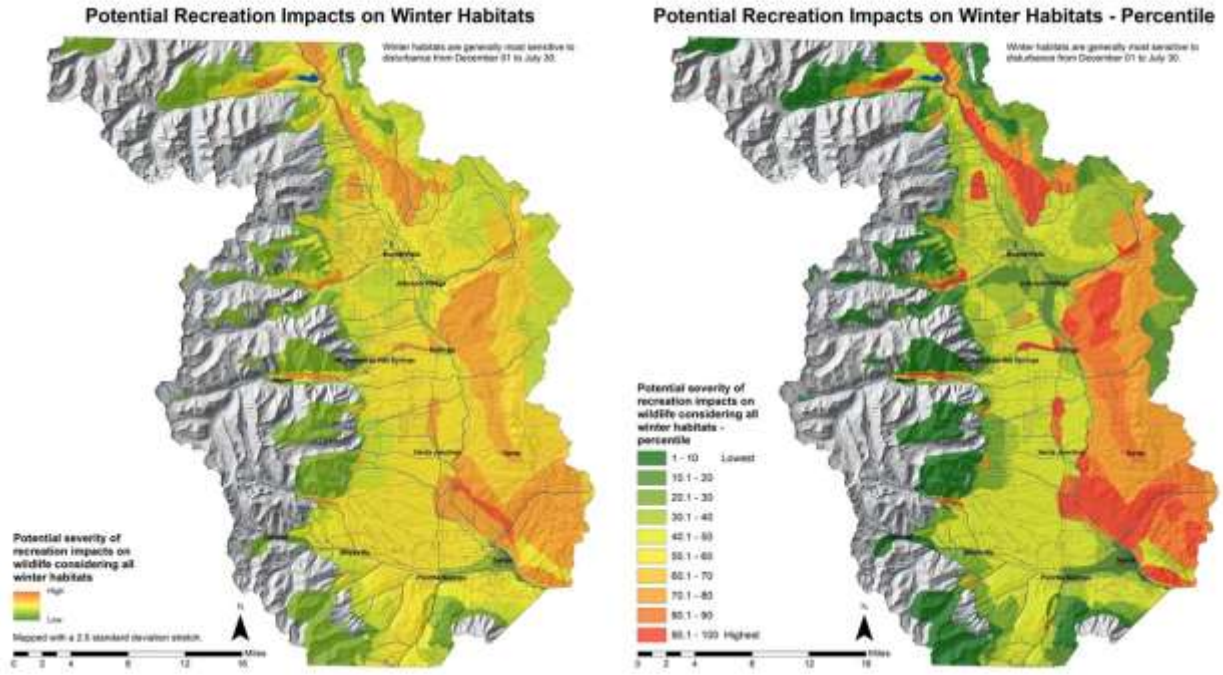


Figure 9: Potential severity of recreation impacts on wildlife winter habitats for average recreation disturbance (LEFT), and potential severity percentiles (RIGHT). These maps shows where recreation could cause the most impact to production habitats. Winter habitats are generally most sensitive to disturbance from December 01 to July 30.

To gauge current recreation conflicts with production and winter habitats, we performed an overlay analysis to calculate the length of routes and trails with percentiles of recreation impact by habitat type (Figure 10). The GOC routes and trails layer was used to represent all routes and trails. A custom layer of seasonal road and trail closures developed with input from local resource managers was used to represent the seasonal closures. Note that not all these route and trail closures are due to wildlife – some are due to difficulty of winter maintenance. The results are presented in Table 16. It is important to note that the routes layer includes many county and local roadways that may be essential for private property access and therefore are not likely candidates for seasonal closures.

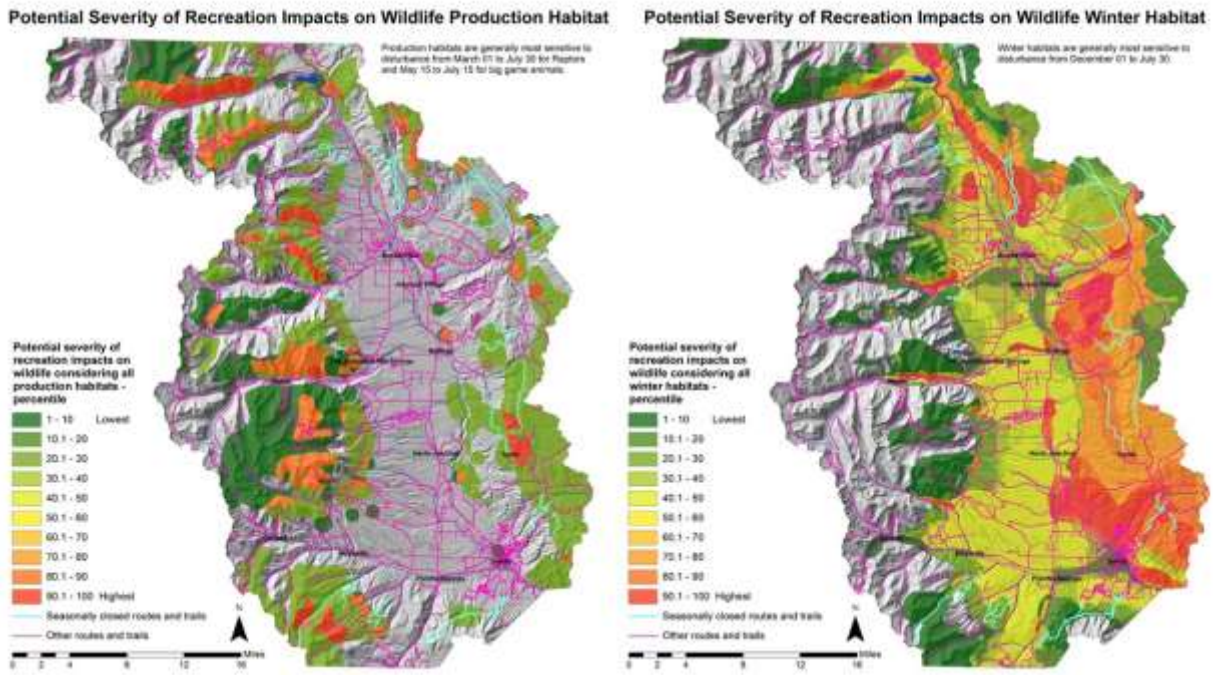


Figure 10: Overlay of existing routes and trails, seasonal closures, and percentiles of potential severity of recreation impacts on wildlife by season – production (LEFT) and winter (RIGHT). Production habitats are generally most sensitive to disturbance from March 01 to July 30 for raptors and May 15 to July 15 for big game animals. Winter habitats are generally most sensitive to disturbance from December 01 to July 30.

Table 16: Overlay of routes and trails with production and winter habitats by percentiles of potential impact (80-100 = highest 20th percent). Values reported are miles or percent of trails within the habitat type.

	Production habitats			Winter habitats		
Percentile	**All routes & trails (mi)**	**Seasonally closed (mi)**	**Seasonally closed (%)**	**All routes & trails (mi)**	**Seasonally closed (mi)**	**Seasonally closed (%)**
0-80	299.3	43.4	14.5	852.3	86.8	10.2
80-100	46.7	5.0	10.8	189.0	28.3	15.0
Total	345.9	48.4	14.0	1,041.3	115.1	11.1

To evaluate current levels of disturbance, we applied the impact framework to spatial representations of all disturbances and recreation-related disturbances. The current maps of disturbance intensity level are presented in Figure 11 using the criteria specified in Table 14. These maps only communicate the current level of disturbance intensity, not the impact on habitat. These maps provide reasonable estimates of landscape-scale use, but they may exclude some non-official or social recreational routes with limited data. The associated current maps of habitat impact are presented in Figure 12. These maps capture the effects and importance of disturbance on habitat (Table 11 and Table 13).

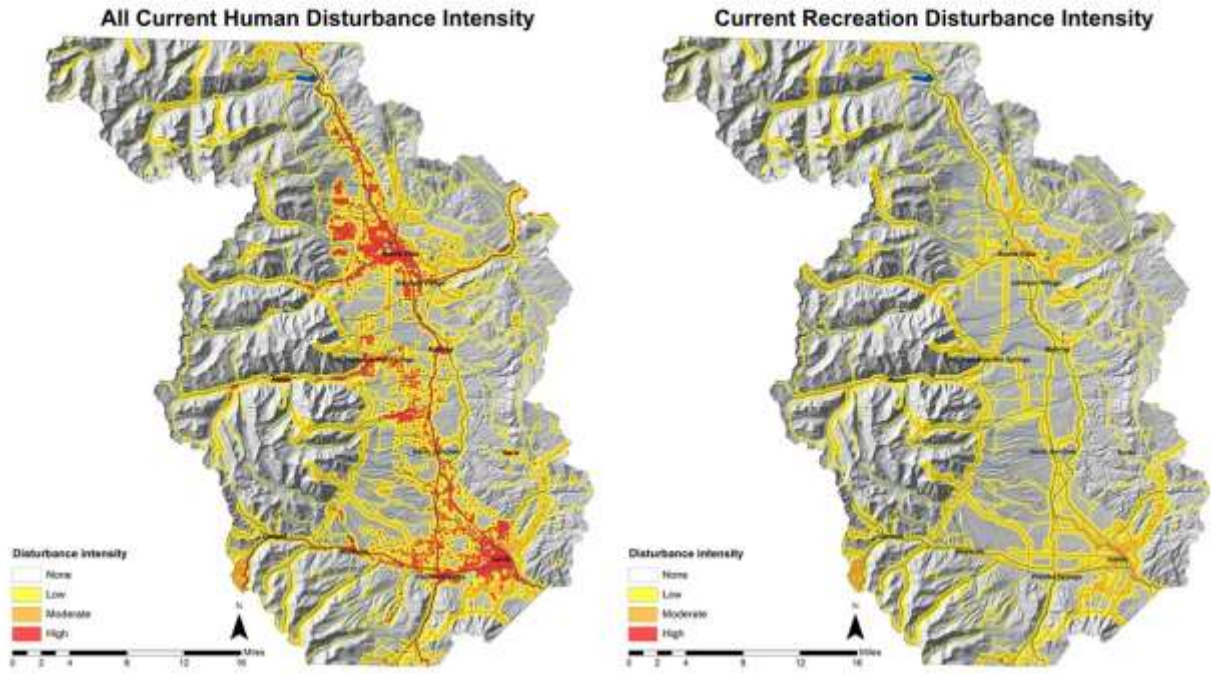


Figure 11: Estimates of disturbance intensity for all current human disturbance (LEFT) and current recreation disturbance (RIGHT).

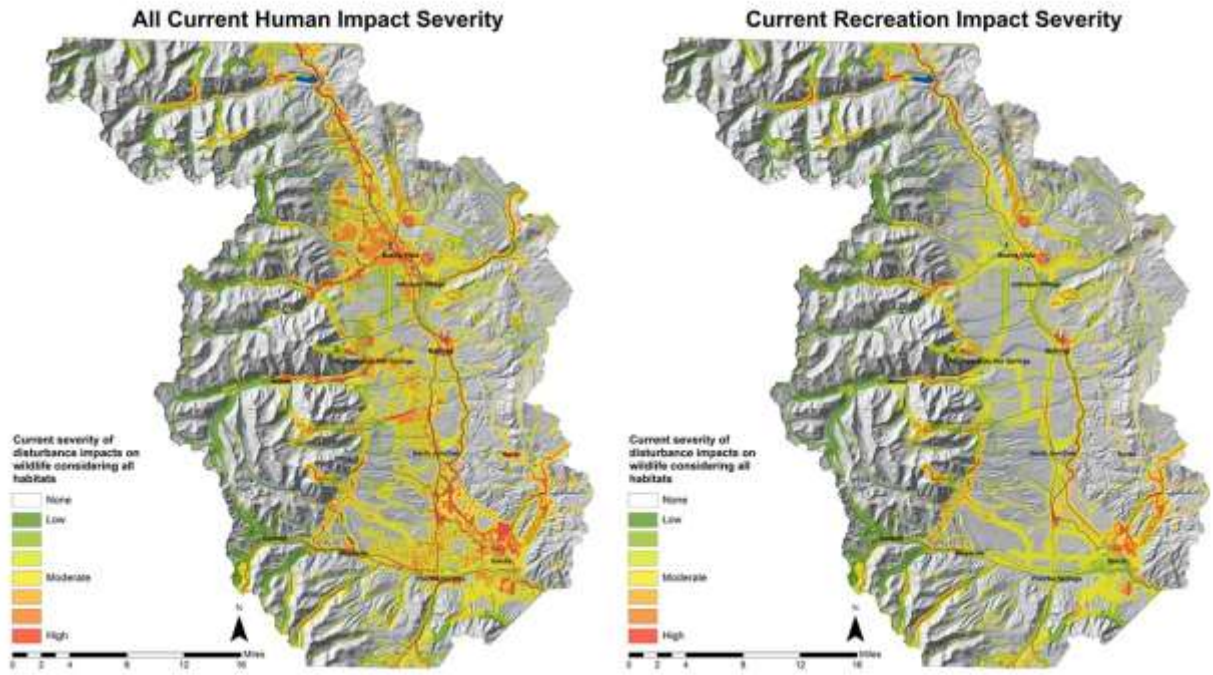


Figure 12: Estimates of disturbance impact severity on wildlife for all current human disturbance (LEFT) and current recreation disturbance (RIGHT).

The current maps of habitat impact (Figure 12) illustrate that large areas of Chaffee County are still relatively undisturbed by recreation and development, while some areas are already highly disturbed, especially in and around the larger communities of Salida and Buena Vista. The RIB wildlife team discussed several strategies that could be employed to mitigate current and future recreation impacts to wildlife (Figure 13). Undisturbed areas of sensitive habitat are conservation priorities that may warrant limiting or excluding recreation development. The group's suggestions are to strongly avoid new recreation development in undisturbed areas of the most sensitive 40% of habitat and to avoid new recreation development in undisturbed areas with moderate potential severity of recreation impacts to wildlife (20-60th percentiles). Undisturbed and sensitive habitat on private lands could be targeted for protection with Conservation Easements or potential purchase for new parks or wildlife areas.

Sensitive habitats that are already disturbed by recreation and development may require special management and careful consideration of new recreation development. The suggestion is to consider management actions to support wildlife in disturbed areas of the most sensitive 40% of habitat. This could include consideration of seasonal strategic closures, policies for dogs, and similar measures.

The group concluded that the wildlife impact analysis should not be used alone to recommend areas that are suitable for recreation development. Site specific impact assessments in accordance with agency policy are recommended for all remaining areas and for all management decisions.

The strategy map also identifies disturbed areas of the least sensitive 20% of habitat as locations with lower potential recreation impact. It was also recognized that human pressures are likely to dominate near the major population centers of Buena Vista, Salida, and Poncha Springs. These “community concentration zones” were approximated by buffering the US Census (2019) urban areas by one mile. These areas may be used to help inform strategies to focus new recreation development in areas where it has the least impact, and also in areas where it may have maximum financial benefit and connectivity to the local business community. Other land ownership and management designations that are relevant to consider as part of a holistic management plan are presented in Figure 14.

Taken together, the models and maps in this report provide a science-based set of tools that will help the community achieve the vision of sustaining natural resources, maintaining exceptional experiences and retaining the economic benefits of outdoor recreation as use increases.

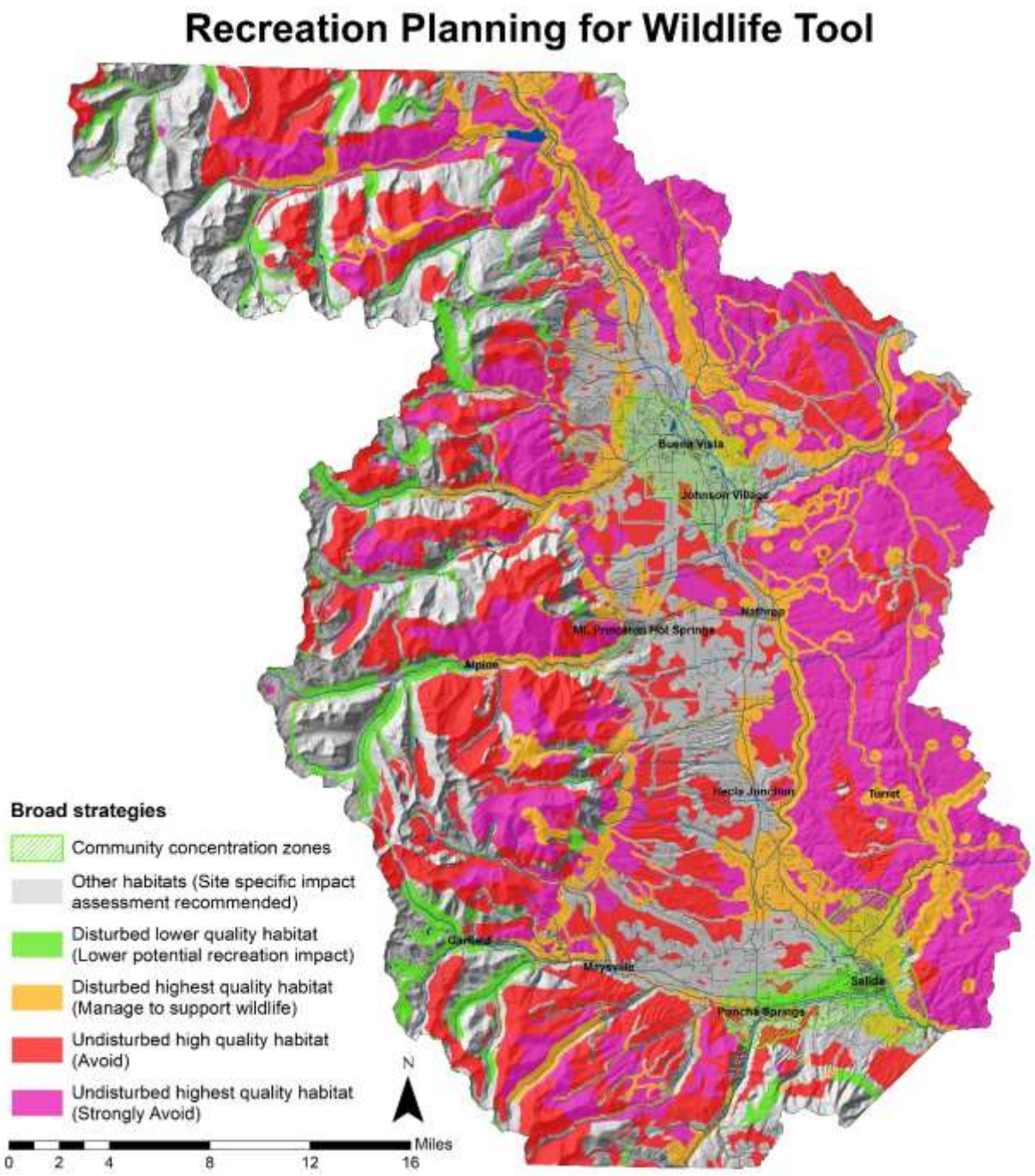


Figure 13: Broad recreation management strategies. Highest quality = 60-100 percentiles (top 40%) of potential severity of impacts to wildlife from Figure 12. High quality = 20-60 percentiles of potential severity of impacts to wildlife from Figure 7. Lower quality = 0-20 percentiles (lowest 20%) of potential severity of impacts to wildlife from Figure 7. [Un]disturbed from Figure 11. Community concentration zones include a 1-mile buffer around US Census (2019) urban areas.

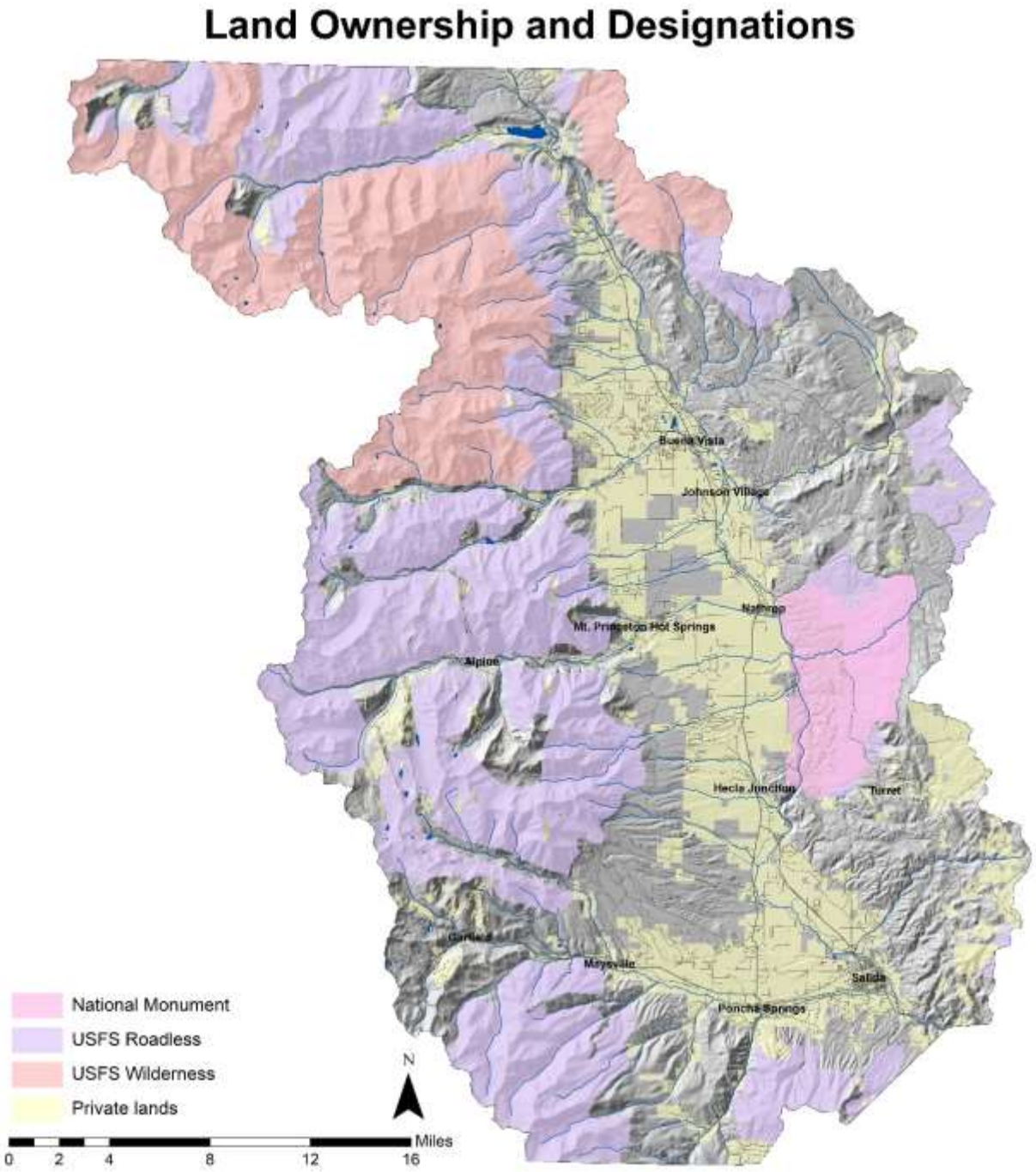


Figure 14: Coarse land ownership and management designations relevant for recreation management and development.

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Layer	CPWData
25	YES
26	YES
1	YES
9	YES
18	YES
28	YES
30	YES
2	YES
8	YES
11	YES
21	YES
27	YES
33	YES
34	YES
35	YES
12	YES
5	YES
6	YES
24	YES
29	YES
	NO - Received Layer from Dan Neubaum
17	YES
	YES
	NO - USFWS Designated Critical Habitat
	YES - Using areas of known occurance; CE help by CPW due to plants presence at site.
10	YES
13	YES
19	YES
23	YES
22	YES
20	YES
	Not sure if will be able to get Layer from Liza
	Not sure if will be able to get Layer from Liza

Category	SpeciesGroup	Habitat
Aquatic & riparian	Fish	CPW Conservation Rivers
Aquatic & riparian	Fish	CPW Conservation Lakes
Big game	Bighorn sheep	Bighorn sheep production areas
Big game	Bighorn sheep	Bighorn sheep winter range
Big game	Bighorn sheep	Bighorn sheep migration corridors
Big game	Bighorn sheep	Bighorn sheep habitat (generic)
Big game	Black bear	Black Bear Fall Concentration
Big game	Elk	Elk production areas
Big game	Elk	Elk severe winter range
Big game	Elk	Elk winter concentration areas
Big game	Elk	Elk migration corridors
Big game	Elk	Elk winter range
Big game	Lynx	Lynx habitat (generic)
Big game	Lynx	Lynx corridors
Big Game	Moose	Moose Concentration Areas (SAM)
Big game	Mountain goat	Mountain goat production areas
Big game	Mule deer	Mule deer severe winter range
Big game	Mule deer	Mule deer winter concentration areas
Big game	Mule deer	Mule deer migration corridors
Big game	Mule deer	Mule deer winter range
Other sensitive	Bats	Karst Layer as Potential Roost Sites
Other sensitive	Ptarmigan	Ptarmigan winter range
Other sensitive	Ptarmigan	Ptarmigan summer range
Other sensitive	NM Meadow Jumping Mouse	USFWS Designated Critical Habitat
Plants	Sensitive Plants	Pagosa Skyrocket
Raptors	Bald eagle	Bald eagle nests
Raptors	Golden eagle	Golden eagle nests
Raptors	Northern goshawk	Northern goshawk nests
Raptors	Osprey	Osprey nests
Raptors	Peregrine falcon	Peregrine falcon nests
Raptors	Prairie falcon	Prairie falcon nests
Other sensitive	Yellow-billed Cuckoo	
Other sensitive	SW Willow Flycatcher	
Other sensitive	Wolverine	
Other sensitive	Brown-capped Rosy Finch	
Other sensitive	Pinyon Jay	

FeatureClass	Type	Buffer_m	Include	Season_Production
	Polyline	100	1	1
	Polygon	100	1	1
BighornProductionArea10072019	Polygon	0	1	1
BighornWinterRange10072019	Polygon	0	1	0
BighornMigrationCorridors10072019	Polygon	0	1	1
BighornOverallRange10072019	Polygon	0	1	0
BlackBearFallConcentration10072019	Polygon	0	1	0
ElkProductionArea10072019	Polygon	0	1	1
ElkSevereWinterRange10072019	Polygon	0	1	0
ElkWinterConcentrationArea10072019	Polygon	0	1	0
ElkMigrationCorridors10072019	Polygon	0	1	1
ElkWinterRange10072019	Polygon	0	1	0
LynxPotentialHabitat10072019	Polygon	0	1	1
PSI_lynx_new_linkages_111015	Polygon	0	1	1
	Polygon	0	1	1
MtnGoatProductionArea10072019	Polygon	0	1	1
MuleDeerSevereWinterRange10072019	Polygon	0	1	0
MuleDeerWinterConcentrationArea10072019	Polygon	0	1	0
MuleDeerMigrationCorridors10072019	Polygon	0	1	1
MuleDeerWinterRange10072019	Polygon	0	1	0
	Polygon	0	1	1
PtarmiganWinterRange10072019	Polygon	0	1	0
	Polygon	0	1	1
	Polygon	0	1	0
	Polygon	0	1	0
BaldEagleNestSites10072019	Polygon	0	1	1
golden_eagle_nests	Point	800	1	1
nogo_nests	Point	800	1	1
OspreyNestsites10072019	Polygon	0	1	1
peregrine_nests	Point	800	1	1
prairie_falcon_nests	Point	800	1	1
	Polygon	0	1	1
	Polygon	0	1	
	Polygon	0	1	

Season_Winter	PopTrend	Econ	Rarity	Specificity	SensEvidence	TotalScore	Low	Mod	High
0	2	5	1	4	2	14	0	25	50
0	2	5	1	4	2	14	0	25	50
0	5	2	3	5	5	20	50	100	100
1	5	2	3	3	3	16	25	50	100
1	5	2	3	3	2	15	20	50	100
0	5	2	3	1	1	12	20	50	100
0	2	2	1	4	3	12	20	50	100
0	4	5	1	5	5	20	50	100	100
1	4	5	1	5	2	17	25	50	100
1	4	5	1	4	2	16	20	50	100
1	4	5	1	3	2	15	20	50	100
1	4	5	1	1	2	13	30	70	100
1	2	1	5	1	1	10	25	25	50
1	2	1	5	3	1	12	25	25	50
1	2	2	2	3	2	11	25	25	50
0	5	2	2	3	4	16	50	100	100
1	3	4	2	5	5	19	50	75	100
1	3	4	2	4	5	18	50	75	100
1	3	4	2	3	2	14	20	70	100
1	3	4	1	1	3	12	30	70	100
0	5	1	5	4	4	19	25	50	100
1	3	2	4	4	3	16	25	50	100
0	3	2	4	4	3	16	25	50	100
0	5	1	5	2	2	15	25	50	50
0	5	1	5	5	2	18	25	50	100
1	2	1	5	5	4	17	50	75	100
1	2	1	3	5	5	16	50	75	100
0	2	1	4	5	4	16	50	75	100
0	2	1	3	5	4	15	50	75	100
0	2	1	3	5	4	15	100	100	100
0	2	1	4	5	4	16	100	100	100
	5	1	5	2	4	17	25	75	100
	5	1	5	2	4	17	25	75	100
1	5	1	5	2	3	16	25	50	100
	5	1	5	3	3	17	25	50	100
	5	1	5	3	3	17	25	50	100

Evidence
Low
Low
High
High
Moderate
Moderate
High
High
Moderate
Moderate
Moderate
Moderate
Moderate
Moderate
Moderate
Moderate
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High
High
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Moderate
Moderate
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High
Moderate
Low-Moderate
Moderate
Moderate
High
High
High
High
High

Notes
Spatial extent defined using NHD moderate resolution flowlines. Ephemeral streams, pipeline, and orphaned seg
Spatial extent defined using NHD moderate resolution waterbodies. Swamp/marsh feature type was removed.
Not in CPW guidance, but discussed during CWPP
Using CPW habitat. USFS habitat layer has similar, but slightly smaller extent.
USFS linkage areas provided by Stephanie Shively. These are more important than general habitat.
[CPW layer already has 0.5 mile buffer]
Restrictions from raptor buffer document
Restrictions from raptor buffer document
[CPW layer already has a 0.5 mile buffer]
Restrictions from raptor buffer document
Restrictions from raptor buffer document

New trail placement
Concern is sediment from dispersed camping immediately adjacent to aquatic habitat. These riparian zones also s
Concern is sediment from dispersed camping immediately adjacent to aquatic habitat. These riparian zones also s
Avoid
Avoid
Avoid
Avoid to the maximum extent possible
Avoid to the maximum extent possible
Avoid to the maximum extent possible
Avoid to the maximum extent possible
Avoid to the maximum extent possible
Avoid to the maximum extent possible
Avoid to the maximum extent possible
No Surface Occupancy (NSO) beyond that which historically occurred, within ¼ mile (1320 feet, 400 meters) radius
No surface occupancy (beyond that which historically occurred in the area) within ¼ mile (1320 feet, 400 meters)
No surface occupancy (beyond that which historically occurred in the area) within ½ mile (2640 feet, 800 meters)
No surface occupancy (beyond that which historically occurred in the area) within 1/4 mile radius of active nests.
No surface occupancy (beyond that which historically occurred in the area) within ½ mile (2640 feet, 800 meters)
No surface occupancy (beyond that which historically occurred in the area) within ½ mile (2640 feet, 800 meters)

Density
upport multiple other wildlif
upport multiple other wildlif
Limit trails to 1 mi/sq mi
Limit trails to 1 mi/sq mi
Limit trails to 1 mi/sq mi
Limit trails to 1 mi/sq mi
Limit trails to 1 mi/sq mi
Limit trails to 1 mi/sq mi
Limit trails to 1 mi/sq mi
Limit trails to 1 mi/sq mi
Limit trails to 1 mi/sq mi
Limit trails to 1 mi/sq mi
Limit trails to 1 mi/sq mi
s of active nests.
radius of active nests.
radius of active nests.
radius of active nests.
radius of active nests.

Seasonal
e species.
e species.
Restrict use April 15-June 30
Restrict use November 1-April 30
Restrict use May 15-June 30
Restrict use December 1-April 30
Restrict use May 15-June 30
Restrict use December 1-April 30
No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of activ
No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of activ
No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of activ
No permitted, authorized, or human encroachment activities within 1/4 mile of active nests between March 15 ar
No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) mile of the ne
No permitted, authorized, or human encroachment activities within ½ mile (2640 feet, 800 meters) radius of activ

Dogs
Year-round dog-on-leash
Year-round dog-on-leash
Year-round dog-on-leash

e nest sites from December 1

e nests from December 15 th

e nests from March 1 through

d August 15.

st cliff(s) from March 15 to Ju

e nests from March 15 throug

Other
Avoid/limit tree thinning and removal of trees and/or woody debris. Discourage the introduction and expansion o
through July 31.
rough July 15.
ı September 15.
Due to propensity to relocate nest sites, sometimes up to ½ mile (2640 feet, 800 meters) along cliff faces, it is mo
ɜh July 15.

Buffer size	

f snow compaction activities within lynx habitat. Locate winter trailheads, parking areas and access roa

800 m	
800 m	
400 m	
800 m	
800 m	

ds outside of lynx habitat. Concentrate activities in existing developed areas, rather than developing nev

v areas in lynx habitat.