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BOARD OF COUNTY COMMISSIONERS

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December 8, 2017

Grand Mesa, Uncompangre and Gunnison National Forests Attn: Plan Revision Team 2250 South Main Street Delta, CO 81416

Submitted Via email: gmugforestplan@fs.fed.us; and Via online comment form with attachment: https://cara.ecosystem-management.org/Public//CommentInput?Project=51806

RE: Grand Mesa, Uncompangre and Gunnison Forest Plan Revision #51806 Draft Forest Assessments

Dear Plan Revision Team:

In 2015, the Ouray County Board of County Commissioners adopted Resolution 2015-014, "Publicly stating the value of public lands to the County's economy, recreation, heritage, and quality of life; and strongly supporting continued federal land ownership and management in Ouray County, and the irreplaceable value these public lands bring our county's economy, recreation, heritage, and quality of life."

Therefore, Ouray County appreciates the opportunity to provide comments for the draft assessment as part of the GMUG Forest Plan revision. This will be the first full forest plan revision in over 30 years. Forty-six percent of Ouray County is federal public land, with a significant portion being lands managed by the Ouray Ranger District of the GMUG National Forest. We value having a good relationship with the GMUG and our Ouray Ranger District, and working together in partnership as this plan will have significant effects on the county and its economy during the next several decades.

We are grateful to the GMUG staff for holding a well-attended and successful public outreach meeting and poster presentation session in Ouray County at the Ouray County 4H Event Center on August 1, 2017 to introduce the planning process, assessment topics and get early public input. We appreciate the ambitious timeline the GMUG is under to get a Record of Decision signed on the final plan in the fall of 2020. However, it is difficult for a small county to thoroughly review, digest and comment on such an important and relatively large volume of technical framing material within a 30-day period, that includes weekends and the Thanksgiving Holiday week, as well as our budgeting timeline, our annual Commissioners' conference, and the 2017 election process. Therefore, for these initial comments, we will not address all sections of the revision plan documents.

One of our Commissioners sits on both the State of Colorado Forest Health Advisory Council as well as the State of Colorado Emergency Fire Fund Committee. He is one of two Commissioners in the entire state to do so. That, together with the extremely visible forest health / beetle epidemic in Ouray

County, compels us to comment more specifically on Forest Health and Vegetation Management aspects of the Revision Plan Documents.

COMMENTS BY DRAFT GMUG ASSESSMENT TOPIC AND DOCUMENT:

- 1. Planning Topic: Terrestrial ecosystems, aquatic ecosystems, and watersheds
 - a. Specific Comments on Draft Assessment: Terrestrial Ecosystems: Integrity and System Drivers and Stressors and Maps
 - Comment "Preliminary Agreements" documents produced by the Colorado Forest
 Health Advisory Council (attached to these comments as Appendix A), strongly
 encourage the recognition of a strong link between a) Forest Health, and b) Water
 Quantity and Quality. We would encourage that the Forest Plan Revision include
 analysis of this relationship. Further, the Colorado Water Plan also ties together the
 relationship between Forest Health and Water Quality and Quantity.
 - Comment "Barriers and Opportunities" documents produced by the Colorado Forest
 Health Advisory Council (attached to these comments as Appendix B) contains many
 points of discussion relevant to the Forest Plan Revision, which will be identified
 throughout these comments. Particularly relevant to Terrestrial ecosystems is the
 identification of an opportunity to increase the use of prescribed fire where possible.
 - Comment Table 48, Summary of potential future trends in climate-related variables for the GMUG appears to be accurate, based on observed temperature and precipitation conditions as of the date of these comments.
 - Comment The terrestrial ecosystems and forest assessment forming the basis for the revised plan will need to acquire and incorporate post-beetle and other disease outbreak data – the Nov. 2017 assessment states that no post-beetle outbreak data is available.
 - Comment Ouray County agrees and appreciates that the revised plan should be formed on new and relevant understanding of seedling recruitment and regeneration from areas recently disturbed by beetle-kill and other diseases, and areas outside of current post-harvest regeneration.
 - Comment Ouray County appreciates that climate change is considered to be a significant factor in several draft assessments. This is relevant to the plan and the new information and changes to the forest since the mid-1980s warrants a plan revision.
 - Comment recognition of recreation, including illegal/unmanaged and dispersed
 camping, associated OHV and trail use, especially above tree line in the alpine
 ecosystems is warranted. The plan should include management strategies such as
 increased recreational and law enforcement officers, strategic trailheads and sanitation
 facilities to reduce impacts.
 - Comment We appreciate the acknowledgement that the warming trend (increased mean annual temperature of 2 degrees F over the past 30 years and 2.5 degrees F over the past 50 years) being experienced in Colorado (pdf pg 118) and that the temperature warming trend of climate change is connected to emissions and future emissions scenarios (pdf pg 130).

- b. Specific Comments on Draft Assessment: Aquatic and Riparian Ecosystems
- Comment Cleaning up abandoned mine lands that are having documented negative impacts to riparian or wetland vegetation and water quality should be prioritized for clean-up.
- 2. Planning Topic: Air, soil, and water resources and quality
 - a. Specific Comments on Draft Assessment: Watersheds, Water, and Soil Resources
 - Comment Water use and Development, (pages 20 and 21): We are pleased to see
 thorough discussion of the existing and potential demands on the Upper Gunnison
 watershed, especially potential future demands to divert waters to areas East of the
 Continental Divide. We would encourage actions in this Plan Revision that would
 prevent any future of cross-mountain diversions, including development of in-stream
 flow rights within the upper watersheds. We would also discourage more highelevation storage that would trend towards the development of cross-mountain
 diversions.
 - Comment Agree with the discussion of changes in temperature and precipitation timing.
 - Comment Agree that water from the headwaters areas on the GMUG is valuable for drinking water and agriculture; but additional prominent values include recreation (boating and fishing); support of functional native terrestrial, aquatic, wetland and riparian ecosystems (pdf pg 14). These should be added.
- 3. Planning Topic: System drivers, including dominant ecological processes, disturbance regimes, and stressors, such as natural succession, wildland fire, invasive species, and climate change; and the ability of terrestrial and aquatic ecosystems on the plan area to adapt to change.
 - a. Specific Comments on Draft Assessment: Invasive Plants Risk Assessment and Maps
 - Comment Controlling and preventing spread of invasive species, especially those that
 are flammable and/or typically result in additional invasive species post-fire is extremely
 important. However, the USFS GMUG does not have enough resources for this priority.
 - Comment USFS GMUG should look for ways to increase invasive weed mapping and treatment resources.
- 4. Planning Topic: Baseline assessment of carbon stocks
 - a. Specific Comments on Draft Assessment: Baseline assessment of carbon stocks
 The 2012 Planning Rule requires the carbon assessment, but the Responsible Official determines
 the scope and scale of the assessments. The carbon baseline attempts to use available
 information to determine carbon sequestered in "forest based carbon pools" on public lands
 managed by the USFS in the GMUG only from the Forest Inventory and Analysis National
 Program.
 - Comment The assessment does not address <u>geologically</u> sourced carbon that would be present in coal or other energy minerals. This should be included and guide management directions.

- Comment Quantifiable carbon in harvested wood products is also not included in the assessment. Carbon in harvested wood products should be included and guide management directions.
- Comment PDF page 6 of 10, 1st paragraph of Chapter 3 of this assessment, suggests rewording to make this first paragraph clearer that the GMUG contains the most sequestered terrestrial forest carbon of any National Forest in the Rocky Mountain Region, as expected due to it being the largest national forest in the region.
- 6-8. Planning Topics: Social, cultural, and economic conditions; benefits people obtain from the NFS planning area (ecosystem services); & multiple uses and their contributions to local, regional, and national economies
 - a. Specific Comments on Draft Assessment: Benefits to People: Multiple Uses, Ecosystem Services, and Socioeconomic Sustainability

Under the 2012 Planning Rule, forest plans will guide management of the USFS lands so they are ecologically sustainable and contribute to social and economic sustainability.

- Comment USFS engages in permitting activities of power, gas, and other utilities lines.
 Where fiber-optic cable is often possible to include in these utilities planning, USFS should
 make efforts to include fiber-optic cables that provide for public broadband infrastructure
 within the communities that are proximate to USFS lands. The forest plan direction should
 include direction to allow for environmentally appropriate expansion of broadband
 infrastructure across GMUG lands.
- **Comment** The assessment appears to capture outdoor recreation for residents as an elevator of the quality of life and important to retain/attract residents. The assessment captures the importance of outdoor recreational tourism as an economic engine.
- Comment Sustainable Timber harvesting, with Adaptive Management strategies, provides both an economic means of removing dead and dying timber stands, as well as employment opportunities. We recognize the value of the timber industry to our local economies and forest health objectives. (page 25)
- Comment Where 46% of the land area of Ouray County is Federal public lands, and the
 majority of this is USFS Lands, the continuation of Payment In Lieu of Taxes (PILT) and
 Secure Rural Schools (if re-authorized) is very important to the viability of local
 communities. While not on par with revenues from taxable private lands, these payments
 are essential for socioeconomic sustainability and resiliency.
- Comment Motorized recreation on USFS roads does contribute to local economic activity.
 However, the cost-benefit of increased OHV use is contributing over-proportionately (as
 compared to traditional motorized use) to degradation of road conditions and should be
 flagged as an area for study within the Forest Plan.
- Comment The majority of the communities/counties are greatly challenged with trying to have affordable housing for workers. The unaffordability of housing is related to a relative scarcity of suitable private land, the affluence of the retirees and non-resident speculators and part-time residents. There will be pressure on the GMUG and federal land agencies to

assist in transferring land for public benefit projects like affordable housing. Situations and locations of lands that could be swapped or transferred for the public benefit of affordable housing projects in WUI areas should be contemplated in the assessment and the revised forest plan.

b. Specific Comments on Draft Assessment: Rangeland Management and Maps

- Comment We generally agree with the rationale that the revised plan should incorporate the following components: identification of rest periods following disturbances like fire, drought, seeding, etc.; using stubble height standards to measure forage utilization; managing for a range of seral stages; providing standards to improve or maintain rangeland; and emphasizing adaptive management strategies.
- **Comment** Providing standards to improve or maintain rangeland health should be targeted to improve/maintain rangeland for livestock and wildlife, including big game.
- **Comment** Integrated Pest Management that includes herbicide treatments must be conducted very carefully to not harm pollinators, wildlife, or water resources.
- Comment With climate change impacts likely to be variable and frequency of drought or
 hot years to increase, adaptive management strategies are necessary in the revised plan,
 and should also take into account the needs of big game and wildlife during stressed
 conditions.

c. Specific Comments on Draft Assessment: Timber and Vegetation Management

- Comment The majority of the planned timber harvest volume will be conducted through the GMUG Spruce Beetle Epidemic and Aspen Decline Management Response (SBEADMR).
 This project is in response to the significant outbreaks of disease and insect infestation within the forest.
- **Comment** The revised plan should emphasize forest health treatments that prioritize safety in WUI and recreational trail areas and designed to improve ecosystem functions and not degrade visual resources, which are important to our economy.
- **Comment** The revised plan should also emphasize treatments with a priority on evacuation routes in the event of large-scale wildfire.
- Comment The revised plan should incorporate the adaptive management plan being implemented for SBEADMR and to allow for local direction the from collaborative partnerships
- **Comment** The revised plan should minimize creating new roads, which fragment habitat and provide vectors for invasive species.
- Comment We support close collaboration between USFS, Colorado State Forest Service, through the Good Neighbor Authority. This allows needed flexibility where cross-border treatments are available between USFS and private lands.

- **Comment** Pre and post-project monitoring should be incorporated into all timber management activities as outlined in SBEADMR.
- **Comment** Projects should balance benefits to site specific forest resiliency and species migration projected by climate change models.

9. Planning Topics: Recreation settings, opportunities and access, and scenic character

- a. Specific Comments on Draft Assessment: Recreation
 - Comment Outdoor recreation is extremely important to the economy and quality of
 life in Ouray County. We appreciate the identification of local recreation plans as an
 information gap for the revised plan. We encourage GMUG to compile such plans, meet
 with local governments, and local/regional trails groups to understand specific desires
 for recreational amenities and impact mitigation ideas. Winter and non-winter
 recreation is equally important in Ouray County.
 - Comment We agree with local trails groups and the assessment in that there are
 currently challenges in our forest with respect to trail overuse or overcrowding,
 inadequate trail design resulting in resource damage or ecosystem degradation, poor or
 lacking trail signage, unauthorized user-created trails, motorized vs. non-motorized
 conflicts, and lack of adequate sanitation. Local trails groups are a valuable resource for
 knowledge, volunteers, and outreach. We encourage the GMUG to continue meeting
 with local trails groups to establish partnership opportunities that would result in
 enhanced, environmentally sensitive trail systems.
 - **Comment** We support the addition of strategically located message boards or kiosks to provide tread lightly and trail information, including the common preference of direction of travel, to reduce conflicts and resource damage.
 - Comment User-created trails tend to indicate a local desire for additional trails, but depending on the location and construction can have some impacts on soil, watershed and ecosystem health. We encourage the GMUG to work with local trails groups to plan trail systems that are sensitively located and designed to provide recreational benefits without impairing slope stability, highly functional ecosystems, water quality, or sensitive wildlife habitat. Trails that are proximal to existing infrastructure such as trailheads, roads, or sanitation should be prioritized for review.
 - Comment Plan revision should take into account changes in winter and summer recreational patterns, and changes in motorized and non-motorized travel. For example, side-by-side UHVs and snow-biking were not contemplated in the current plan.
 - Comment We agree that increased trailhead parking and sanitation is needed in some areas of the GMUG within Ouray County.
 - Comment Organized trail races are important to local participants and support services. We encourage the GMUG to anticipate demand for trail races and permits.
 - Comment The assessment might mention that popular recreation activities in the Telluride area include hiking, rock climbing and the Via Ferrata, winter sports, mountain biking.

- Comment It is clear that the USFS needs more financial resources to deal with the
 decades-long deferred maintenance of existing campgrounds and trails, and to monitor
 dispersed recreation and associated impacts. All local contributions should be leveraged
 to obtain additional short-term and long-term funding from grants or conservation
 corps hours to perform deferred maintenance and mitigate recreation impacts.
- Comment Ouray County has partnered with adjacent counties, USFS, and BLM to fund an "Alpine Ranger" program, to augment the lack of patrols on extremely popular OHV/UHV/4-WD alpine roads. The counties worked to initiate this program in response to safety concerns from inexperienced and non-licensed OHV operators and drivers of motor vehicles, speeding, and resource damage along the greater "Alpine Loop" which includes Black Bear and Imogene Passes. This program was also created in response to the number of serious accidents, some involving unlicensed youth. Ouray County, similar to Hinsdale, San Juan and San Miguel Counties requires OHV operators to have valid driver's licenses and current liability insurance. It is clear that USFS needs additional Law Enforcement Officers assigned to the GMUG. Ouray County provided funds toward this program in 2016 and is supporting a grant application to bring in additional funds in 2017. Local contributions should be leveraged to obtain additional short-term and long-term funding such as from grants or conservation corps hours to perform deferred maintenance and mitigate recreation impacts.

10. Planning Topics: Renewable and nonrenewable energy and mineral resources a. Specific Comments on Draft Assessment: Renewable and Nonrenewable Energy Resources, Mineral Resources, and Geologic Hazards and Maps

- Comment Avalanches are a significant geologic hazard, and while they are mentioned in
 Table 4, the mapped acres seem low. Has the Colorado Avalanche Information Center and
 active mining operations around the GMUG been consulted? Outfitters such as Helitrax
 may have updated information on avalanches they monitor for their operations. This
 geologic hazard is important to inventory and assess, as avalanches have significant
 economic impacts when transportation and telecommunications infrastructure is
 interrupted; off-forest property is damaged; and loss of life or injuries are incurred. It is
 important to understand spatially with respect to winter recreation and trails. The County
 and partner agencies provide emergency management, search and rescue and first response
 for incidents.
- Comment Ouray County Board of County Commissioners has passed resolutions in full support of passage of the San Juan Wilderness Act which has been introduced in multiple sessions of Congress. If it is reintroduced, the Ouray County Board of County Commissioners should be consulted to confirm their support, which is expected.

11. Planning Topics: Infrastructure, such as recreational facilities and transportation and utility corridors

a. Specific Comments on Draft Assessment: Infrastructure

• **Comment** – We generally agree with the key issues, but recommend splitting out the deferred maintenance for facilities such as campgrounds, kiosks, bathrooms, etc. and deferred

- maintenance for roads and trails (rights-of-way or routes). Also, we are unsure that fiber optic lines should be described as a "special use" unless telephone, power, and water utility transmission infrastructure is also a "special use."
- Comment In regard to public comment received that four-wheel drive vehicles are damaging roads and creating more maintenance needs, it is our experience and public opinion that the explosion of OHVs and UTVs using traditional "jeep" roads has led to different and more extreme wear on these roads. The lighter vehicles tend to try to travel much faster, creating the need for speed limits, where 4-wheel drive motor vehicles like jeeps, FJs, and SUVs were self-moderating from their weight, gearing, suspension vibrations, and turning radii. The lighter and faster OHVs and UHVs tend to try to "burn" through the terrain and spin the fines out of the road bed, leaving a much more cobbled and boulder-ridden road bed that is much tougher to navigate with stock jeeps and 4-wheel drives. The need to crush rock and replace fines in these alpine road beds has increased greatly since the 1990s/early 2000s. Ouray County has Schedule A Agreements with the USFS, but the deferred maintenance and newer wear patterns now lead to a greater cost and need for "reconstruction" in the scope for repairs.
- Comment The Assessment and Revised Forest Plan should carefully differentiate between
 OHVs and UHVs, which in Colorado are not classified as motor vehicles for the purpose of
 operator credentials, accidents and liability; and 4-wheel drive motor vehicles, which include
 jeeps, FJs, and SUVs, and which the state's motor vehicle laws apply to. The speeds and wear
 patterns on roads and trails are much different for these vehicles.
- Comment Broadband infrastructure such as fiber optic, should be allowed to be co-located in
 any designated utility corridor utility where the plan enables expedited environmental review of
 reconstruction or additional construction under a categorical exclusion where appropriate. We
 agree the plan should encourage colocation of new lines. The Plan should also anticipate that
 where there are aerial or buried copper telephone lines and not yet fiber optic; that there is a
 present and apparent need for broadband infrastructure by the communities and should be
 factored into the Plan.
- Comment With respect to the information gap for municipal and irrigation water supply plans and projected needs (pdf pg. 14), the GMUG should consult with the relevant water conservation districts and water users' associations and the Colorado Water Conservation Board, which has needs assessments that have been created in part with the relevant basin roundtable groups.
- Comment Please add County boundaries to Map 1 (pdf pg. 21). We appreciate that they are shown on Map 2.

14. Planning Topics: Land status and ownership, use, and access patterns a. Specific Comments on Draft Assessment: Land Status, Ownership, Use and Access Patterns

Comment – The Red Mountain Project, which used LWCF for the USFS to acquire high elevation
patented mining claims from willing sellers has greatly reduced potential conflicts for the forest,
public, and counties, and should be pursued in the future. Some remaining claims are receiving
development pressure to allow for lodges, plowed roads, utilities and infrastructure which can
alter snowmelt patterns, affect headwaters ecosystems and wildlife use patterns, and affect
demand for public safety and emergency response. Residential or commercial development in

- the alpine ecosystems and even tundra reduces the quality of the public lands experience for the public and can be visible from wilderness areas.
- Comment Ouray County has worked with willing private land owners, land trusts and other
 agencies to help facilitate conservation easements or purchase of development rights. We
 would appreciate being able to partner on developing strategies and relationships to accomplish
 conservation easements that benefit the missions of the USFS GMUG and the County's
 continued work on this front.
- Comment We agree that there is likely to be residential development pressures that affect adjacent USFS GMUG lands in the future. We support a potential mitigation mechanism to perform forest land adjustments or land exchanges to allow high conflict lands adjacent to populated areas to be used for public benefits such as affordable housing, in exchange for assistance in acquisition of inholdings. Land exchanges may not always be feasible. Due to the lack of realty specialists and staff capacity, GMUG should work with communities having an affordable housing crisis to identify priority areas to focus on. These areas should be proximal and accessible to population centers, services, existing infrastructure, and transit.
- **Comment** It would be beneficial for the revised plan to request a temporary detail or increase in realty specialists to accommodate some backlog of transactions.
- 15. Planning Topics: Existing designated areas located in the plan area including wilderness and wild and scenic rivers and potential need and opportunity for additional designated areas a. Specific Comments on Draft Assessment: Designated Areas
 - Comment The Revised Plan should provide careful management direction to protect the vistas
 and scenic integrity of the forest as viewed from the San Juan Skyway and the Scenic Byway
 corridors within Ouray County.
 - Comment The Alpine Loop is described in this assessment (pdf pg. 20) as a high clearance 4-wheel drive route that travels between Lake City and Ouray. These are largely BLM lands. The local communities consider the greater Alpine Loop to connect Telluride, Silverton, Ouray, and Lake City areas via additional 4-wheel drive passes that include Imogene Pass and Black Bear Pass. These areas are largely USFS lands. The greater Alpine Loop should be recognized in this assessment and in the revised plan.
 - Comment Ouray County Board of County Commissioners has passed resolutions in full support of passage of the San Juan Wilderness Act which has been introduced in multiple sessions of Congress. If it is reintroduced, the Ouray County Board of County Commissioners should be consulted to confirm their support, which is expected.
 - Comment The Assessment states that there will a process separate from this assessment "to inventory and evaluate potential wilderness (pdf pg. 38). Ouray County wants to be heavily involved in this process.

APPENDIX A to Ouray County Comments: Forest Health Advisory Council "Preliminary Agreements"

Forest Health Advisory Council (FHAC) Preliminary Agreements

- 1. As a result of changes in fire frequency, change in social values, recent draught and disease, and lack of active management, Colorado's forests are unhealthy. Precious human values such as water and wildlife resources, recreation opportunities, and forested communities around the State are in jeopardy due to high-severity fire, insect infestations, and other transitional disturbances.
- 2. Colorado's forests are at high risk of immediate and catastrophic fire. Loss of human life and community structures and infrastructure are the top concerns, and for good reason; however, rural, suburban, and urban communities and residents will see significant adverse impacts to the following values should there be a high-severity fire in the State:
 - Watershed health
 - Water quality (municipal, industrial, and environmental)
 - Recreation opportunities and economy
 - Stream level stability (post-fire flooding)
 - Timber production and markets
 - Irrigated agriculture
 - Wildlife habitat
 - Statewide power grid reliability
 - Homeowner's insurance premiums
 - State and federal financial resources
 - Quality of life and Colorado values
 - Economic resiliency
- 3. Recreational opportunities are dependent on healthy forests. Colorado's forests accommodate multiple uses and bring in roughly \$28 billion annually. As these forests transition to a healthy ecosystem, there may be some tension between recreation and forest health; however, these two critical values can and should be complementary and not in competition with one another.
- 4. Current funding for forest health action is not adequate to treat Colorado's forests at a pace and scale that will effectively manage and mitigate the negative effects of high-severity

wildfire. More money is needed from the local, State, and federal levels for active and proactive management. While the current levels of funding are not sufficient, opportunities exist to leverage these available sources and create shared solutions through collaborative efforts, partnerships, and private industry at all levels of government. Additionally, current resources can be allocated in a more effective and efficient way.

- 5. The USFS owns and manages roughly 10,179,000 forested acres within Colorado. The USFS processes and procedures for developing and implementing treatments (any activity that achieves a management goal) make their ability to address forest health issues difficult and expensive. Collaboration and institutional support are paramount to help USFS staff be as effective as possible.
- 6. More effort is needed to educate and engage the public and elected officials about forest health and modern methods of forest health management. Outreach should include the importance of forest treatments of all kinds, the role of fire in the ecosystem, modern silviculture practices, best management practices, and the positive relationship between management activities and improved forest health.
- 7. Prescribed fire is an important tool that works in conjunction with other tools to actively manage Colorado's forests. Actively managing the forests using a combination of tools will reduce the effects of wildfire. Active management of our forests with prescribed fire is especially important in Colorado's fire-prone landscapes where years of unnatural fuel accumulation have created a situation ripe for catastrophic wildfire.
- 8. Prescribed and natural fire is important tools that need to be utilized to achieve good forest health. In some, but not all cases, fire may be the most cost-effective tool available, but it is not the only tool that is needed to address forest health. Active management of our forests with a combination of tools is typically the most effective management approach. Important tools to achieve and maintain a healthy forest that must also be available to use in conjunction with or independently of fire include:
 - Education and outreach
 - Invasive species management
 - Timber harvesting
 - Insect management
 - Stewardship contracts
 - Grazing
 - Prescribed fire

9. Planning, implementation, assessment, and maintenance of all types of forest treatments benefit from data and research. While Colorado has a great resource in the Colorado Forest Restoration Institute (CFRI) at Colorado State University (CSU) and the Rocky Mountain Research Station (RMRS) through the US Forest Service, CFRI and RMRS lack the capacity to meet all of our research needs. Additional support and capacity for research is critical.

Burned Area Emergency Response (BAER) assessments should look at hydrologic impacts beyond National Forest boundaries to pour points that will be impacted by

Identification of Barriers to and Opportunities for Forest Health Forest Health Advisory Council

PROBLEM STATEMENT

As a result of changes in fire frequency, change in social values, recent draught and disease, and lack of active management, Colorado's forests are unhealthy. Precious human values such as water and wildlife resources, recreation opportunities, and forested communities around the State are in jeopardy due to high-severity fire, insect infestations, and other transitional disturbances.

CHALLENGES, BARRIERS, AND OPPORTUNITIES

While the health of Colorado's forests is impaired and requires urgent attention, there are many viable solutions to improving the situation. While no single action will effectively address the many challenges facing elected officials, land managers, and private citizens, there are many opportunities to make significant strides toward healthier conditions and more resilient communities.

Challenge	Barriers	Opportunities
Wildfire	 Suppression costs are very high. High-severity wildfires devastate human values and the ecosystem. There is currently inadequate support for managers to utilize unplanned ignitions (lightning strikes, human-started fires) as a management tool. Post-wildfire Burned Area Emergency Response (BAER) team values-at-risk (VAR) assessment legally allows only USFS land assessment of risk and not for non-USFS lands. VAR analysis also only 	 Increase and shift funding to active management in an attempt to decrease suppression costs. Reintroduce the presence of low- and mid-severity fire on the landscape. Identify a suitable planning process that allows land managers to utilize unplanned ignitions under the proper conditions. Develop a collaborative approach to expanding post-wildfire so that VAR analysis done by the BAER Team crosses jurisdictional boundaries and the timeline is expanded (15 to 20

Prescribed Fire	 Prescribed fire, although managed, still has inherent risk. There are often not enough financial and staff resources to implement a prescribed fire. Air-quality and other permitting processes and the associated limited burn windows discourage the use of prescribed fire. 	 Increase the use of prescribed fire as a matter of risk management when compared to wildfire. Shift funding to active management. Make air-quality and other permitting processes more flexible so that managers can use prescribed fire in a timely manner. Share resources across agencies and non-governmental organizations to address capacity issues.
Challenge	Barriers	Opportunities
Recreation	 Colorado citizens use the forest for many different recreation activities, which are sometimes viewed as conflicting with management needs. Unhealthy forests can discourage recreation, which is a main driver of C olorado's economy. 	 Increase the health of Colorado's forests to accommodate a variety of recreation activities. Educate recreational forest users about the importance of forest health and the presence of fire in the places where they recreate. Encourage a robust recreation economy. Better plan recreation use to maintain resource values while ensuring quality
Limited Financial Resources	 There is not enough money available to drastically improve the health of Colorado's forests at the local, State, and federal levels. Current resources are not being spent on proactive treatments and management tools. Government processes, procedures, and staffing can slow or impede forest treatments. 	 Develop sources of revenue such as voluntary fees or self-imposed use taxes similar to the Pitman-Robertson Act or the Colorado lottery. Use local government policy and regulations to mandate forest management before development in urban-interface acres, thus shifting fiscal responsibilities to those who will benefit from the development and sale of the properties. Streamline governmental processes to maximum amount of money spent on the ground for management activities and minimize administrative costs.

USFS Permitting and Culture	 The USFS permitting system for treatment is arduous and time consuming. The USFS permitting system discourages timely action. The USFS permitting system is internally and externally 	 Encourage the USFS to improve agency culture and make policy changes that support a more realistic permitting process. Encourage collaboration as a way to streamline the treatment process. Encourage landscape-scale permitting
Outreach and Education	 Many public officials do not adequately understand the issue and urgency of forest health. The public is not often aware of the unhealthy state of Colorado's forests, and they misunderstand the necessary actions that must be taken to move closer to historical conditions. 	 Provide continuous and interactive education opportunities, rather than static resources, particularly for newly elected officials at all levels. Educate the public in the forested areas that they most often use for various recreation activities. Foster a more complete understanding of the role of fire in the ecosystem.
Challenge	Barriers	Opportunities
	• There is no consistent approach to fuel mitigation and forest restoration	Encourage agencies to prioritize creating a consistent, long-term timber
Timber Industry	 harvesting to meet the needs of timber companies. The cost of biomass removal or utilization per acre is very high due to market inefficiencies and access challenges, particularly in Colorado's more rural and remote areas and in wilderness and roadless areas. 	 Utilize and incentivize the timber industry as part of the solution to decreasing the cost of treatment, rather than the cause. Improve and expand use of Good Neighbor Authority to facilitate forest treatments.

Water Quality	 Forest health and watershed health are directly related to water quality. Water quality, snowpack and snowmelt, and timing of water release are negatively affected by poor forest health. Many headwaters are in remote areas with poor access and low-value timber. 	 Incentivize and fund forest management activities that are necessary to alter landscape-level forest health improvement in valuable headwaters and watersheds of Colorado. Apply existing watershed protection best management practices to implement sound forest health and restoration projects. Focus treatments on highly-erodible soils.
Residential Development in the Wildland Urban Interface (WUI)	 Homeownership in the WUI comes with inherent risk, but WUI developers and homeowners do not directly bear the cost associated with this risk. The cost of fire response is born by all taxpayers, even those who do not live in the WUI. A commitment to local control impedes the development of building codes to minimize fire risk. 	 Work with the Department of Local Affairs (DOLA) to ensure that the draft/proposed resiliency code sufficiently addresses wildfire risk mitigation. Work with local governments to develop local codes based on other resiliency models. Develop educational program with realtors for realtors to ensure that WUI homeowners are making informed choices.