

Notice of Proposed Action

White River Aspen Management Project

White River National Forest
Eagle, Garfield, Pitkin, Rio Blanco, Summit, Moffatt, Routt, Mesa, and Gunnison Counties,
Colorado

Comments Welcome

The White River National Forest (WRNF) welcomes your comments on its proposal to conduct vegetation management activities designed to sustain and expand aspen (*Populus tremuloides*) forests on National Forest System (NFS) lands. Your comments will help us further develop the proposed action, potential alternatives, and complete an environmental assessment. The assessment will be used to determine whether to prepare an environmental impact statement or a finding of no significant impact. Instructions for submitting comments are described on the last page. Additional project information is available here:

<https://www.fs.usda.gov/project/?project=59419>

This Notice of Proposed Action (NOPA) is also requesting your comments under Section 106 of the National Historic Preservation Act, as amended (NHPA). Consultation under the NHPA seeks to consider the views about an undertaking and its effects on historic properties for the agency official to consider in decision making (36 CFR 800).

Introduction

The WRNF is proposing to conduct vegetation management activities (mechanical and prescribed fire) within forest stands¹ that contain aspen. Management activities would be designed to improve the resiliency of aspen forests to disturbance agents, improve wildlife habitat, increase the distribution of aspen on NFS lands, manage aspen along scenic corridors, and contribute to the Forest's allowable sale quantity. Mechanical operations would use existing roads where possible and would also include the use of temporary roads to access treatment areas. Management activities and locations would be selected based on the applicable Forest Plan Management Area direction, project objectives, stand conditions, and constraints.

Background

Aspen forests are valued for a variety of reasons. High productivity of understory plants in aspen stands provide excellent wildlife habitat and livestock range. Aspen forests are known to support more plant and animal diversity than any other cover type in the western United States (Kitchen et al. 2019). The aesthetic value of aspen and associated tourism can provide local communities with tourism-based revenue (Morelli and Carr, 2011). Aspen trees

¹ A contiguous group of trees sufficiently uniform in age-class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.

transpire less water than conifers, providing a greater amount of ground water recharge and surface water flow. During wildfire events, barring extreme weather, these relatively wet conditions can often help to slow the spread of fire, which can be an important factor when managing wildfire potential and forest fuels near at-risk communities.

While aspen is generally regarded as a valued cover type, many of these forests have experienced decline locally and regionally. Decline has been attributed to different factors, depending on site and environmental conditions. On lower elevation sites and on southern aspects, a combination of factors including drought, having landscapes comprised of relatively old trees, and insects and disease, have resulted in widespread aspen mortality across Colorado. On higher elevation sites and on northern aspects, conifer establishment has resulted in the gradual conversion of aspen forests to conifer forests. Under natural conditions, wildfire would play an important role in reinitiating aspen forests on these sites. However, fire suppression over the past few decades has likely resulted in a greater amount of conifer and a lesser amount of aspen across the WRNF.

Stand Conditions on the White River National Forest

The WRNF contains nearly 600,000 acres of forest stands that contain aspen as a component of their species composition. The local and environmental conditions where these forests occur is relatively diverse. On the White River National Forest, aspen forests vary in terms of their species composition, stand structure, age, natural disturbance regimes, and resiliency.

Stand Composition

On the WRNF, aspen forests can be categorized as ‘Stable – Elevation and Aspect Limited’ and ‘Seral – Montane’ (Rogers, et. al. 2014). Hereafter, these will be referred to as ‘stable or ‘seral’. According to this functional classification, stable stands retain aspen dominance with little or no encroachment by conifers, whereas seral stands are replaced by conifers over time. Local factors influence the speed in which seral stands are converted to conifer, although some studies have found that conifers overtop and shade out aspen after about 80 - 150 years (Mueggler, 1985, Rogers, 2002). Aspen functional types are largely based on the sites they occupy, with lower and dryer sites typically less suitable for conifer establishment and higher and wetter sites providing conditions for conifer establishment. Other factors, such as soil characteristics, also play a role in site suitability for certain tree species.

Within these functional classifications there is still a high degree of variability. Within both stable and seral aspen stands, conditions can range from relatively dry to wet. This range in water availability has an important influence on plant associations, habitat, and natural disturbance regimes. On the WRNF, five habitat types have been identified for stable aspen stands. These habitat types include aspen/mountain snowberry (*Symphoricarpos oreophilus*), aspen/Fendler’s meadow-rue (*Thalictrum fendleri*), aspen/elk sedge (*Carex geyeri*), aspen/eagle fern (*Pteridium aquilinum*), and aspen/cow parsnip (*Heracleum sphondylium*) (Hoffman and Alexander, 1983). Within seral stands, conditions range from ponderosa pine and Douglas-fir on drier sites, transitioning to lodgepole pine, and then to Engelmann spruce and subalpine fir as sites become wetter or cooler. These plant associations can be important

indicators of potential fuel model, stand vulnerability to disturbance, and other management considerations.

Stand Structure

Habitat structural stage is typically used to describe structural conditions across landscapes. Most of the aspen stands on the WRNF are currently in a sapling or mature (5"+ DBH) size class with moderate to full (40%+) crown cover (Table 1). Overall, there are fewer stable stands in a large tree size class compared to seral stands, which would be expected given larger tree sizes obtained by conifer species. Stands in a seedling size class (2T) or newly regenerated stands (1M) are poorly represented. Some studies have found older aspen stands to be at greater risk to climate related mortality (Shepperd and Guyon, 2006). Maintaining young forest on landscapes is an important strategy to build resilience to a variety of disturbance agents. According to an article published in Forest Science, "proactive management that diversifies landscape-scale age class structure by introducing vigorous new populations of aspen in areas that have been lightly affected by recent SAD [Sudden Aspen Decline], and/or areas that are projected to be unsuitable future habitat may help these forests be resilient to climate change and enable aspen persistence into the future" (Shepperd et al. 2015).

Table 1 – Aspen Habitat Structural Stage on the White River National Forest.

Functional Type	1M	2T	3A	3B	3C	4A	4B	4C	Total Acres	~ Percent
Stable	0	3,556	26,685	94,323	111,584	2,214	22,577	35,947	296,886	50
Seral	0	3,503	20,692	66,917	85,515	9,098	43,177	66,727	295,629	50
Total Acres	0	7,059	47,377	161,240	197,099	11,312	65,754	102,674	592,515	-----
~ Percent	0	1	8	27	33	2	11	17	-----	100

1M – Grass Forb (established seedlings 0.0 – 0.9" drc)

2T – Seedlings (1.0" – 4.9" DBH)

3A – Sapling-Pole (5"-8.9" DBH) < 40% crown cover

3B – Sapling-Pole (5"-8.9" DBH) ≥ 40% and < 70% crown

3C – Sapling-Pole (5"-8.9" DBH) ≥ 70% crown

4A – Mature (9"+ DBH) < 40% crown

4B – Mature (9"+ DBH) ≥ 40% and < 70% crown

4C – Mature (9"+ DBH) ≥ 70% crown cover

Disturbance

Aspen forests are dynamic and subject to an array of disturbance agents. Some of the primary disturbances that influence aspen forests include drought, insects, disease, herbivory, and wildfire. These disturbance agents sometimes influence one another and can be influenced by local site and stand conditions. Understanding how disturbance agents affect different aspen functional types is important when developing management prescriptions.

Historically, stable aspen is thought to have undergone minor disturbance events that led to sprouting of new suckers, which would allow stands to self-perpetuate over long periods of time. During drought, large old trees that were stressed would be susceptible to mortality from insects and disease. Some of the more prevalent insects and disease affecting aspen include cytospora canker, bronze poplar borer, and aspen bark beetles (Marchetti et al. 2011). Mortality of overstory trees caused by the combination of drought and insects or disease

would trigger a suckering response and new aspen shoots would fill the gap left behind by the dead aspen. This process would lead to the development of two-aged, or multi-aged, aspen stands that would self-perpetuate over hundreds of years.

In recent years, unprecedented die-off of many aspen stands throughout Colorado has been linked to extreme drought and subsequent mortality from insects and disease (Marchetti et al. 2011). Stable aspen stands at lower elevations, stands on southern aspects, and older stands of trees are most predisposed to drought and climate-related mortality. This die-off has been defined as Sudden Aspen Decline (SAD). In contrast to the gradual replacement of individual trees and groups of trees that had been typical for stable aspen forests, SAD was sudden in nature and affected entire clones. While some areas that experienced SAD were able to successfully regenerate, other clones that were likely hundreds of years old did not regenerate. This lack of regeneration is concerning because aspen rarely germinates through seed, so the loss of a clone can be considered permanent (Kitchen et al. 2019).

The historic role of wildfire in the distribution and condition of aspen stands varies based on site and environmental conditions. Some literature indicates that fire did not play a crucial role in the development of aspen, which is often attributed to stable aspen having a lush understory (Shinneman et al. 2013; Morelli and Carr, 2011). However, others have suggested that wildfire may have played a role in influencing the growth and development of stable aspen during periods of drought (Rogers et al. 2017; Kitchen et al. 2019). Stable aspen on drier sites, such as those stands with a mountain snowberry or elk sedge plant association, would have been more predisposed to wildfire than stands growing on cooler and wetter sites. Therefore, in these drier sites wildfire and prescribed fire could play an important role reinitiating young, thrifty clones of aspen. Many of these drier sites, however, occur in areas that provide winter range for elk, where mild suckering may be more vulnerable to heavy browse.

In seral aspen stands, wildfire has historically played a fundamental role in aspen maintenance and expansion. This is particularly true for conifer forests with stand-replacing fire regimes, including lodgepole pine, Engelmann spruce, and subalpine fir. As seral stands develop and conifer trees become more dominant, a fuel profile that includes ladder fuels and interlocking crowns creates the potential for sustained crown fires. These stand replacing disturbances create environments where aspen can sprout through root suckering and once again dominate the site. Aspen dominance continues until a time when conifer is once again able to become established and the cycle repeats. Depending on site-conditions, weather, fuels, proximity to a seed source, and other factors, this cycle may take decades to centuries.

On the WRNF, large-scale stand replacing disturbance has been documented in the 1800s. Since that time, seral stands have transitioned from aspen dominated to conifer dominated. It is likely that fire suppression over the past few decades has prevented some mixed conifer forests from being re-initiated as aspen.

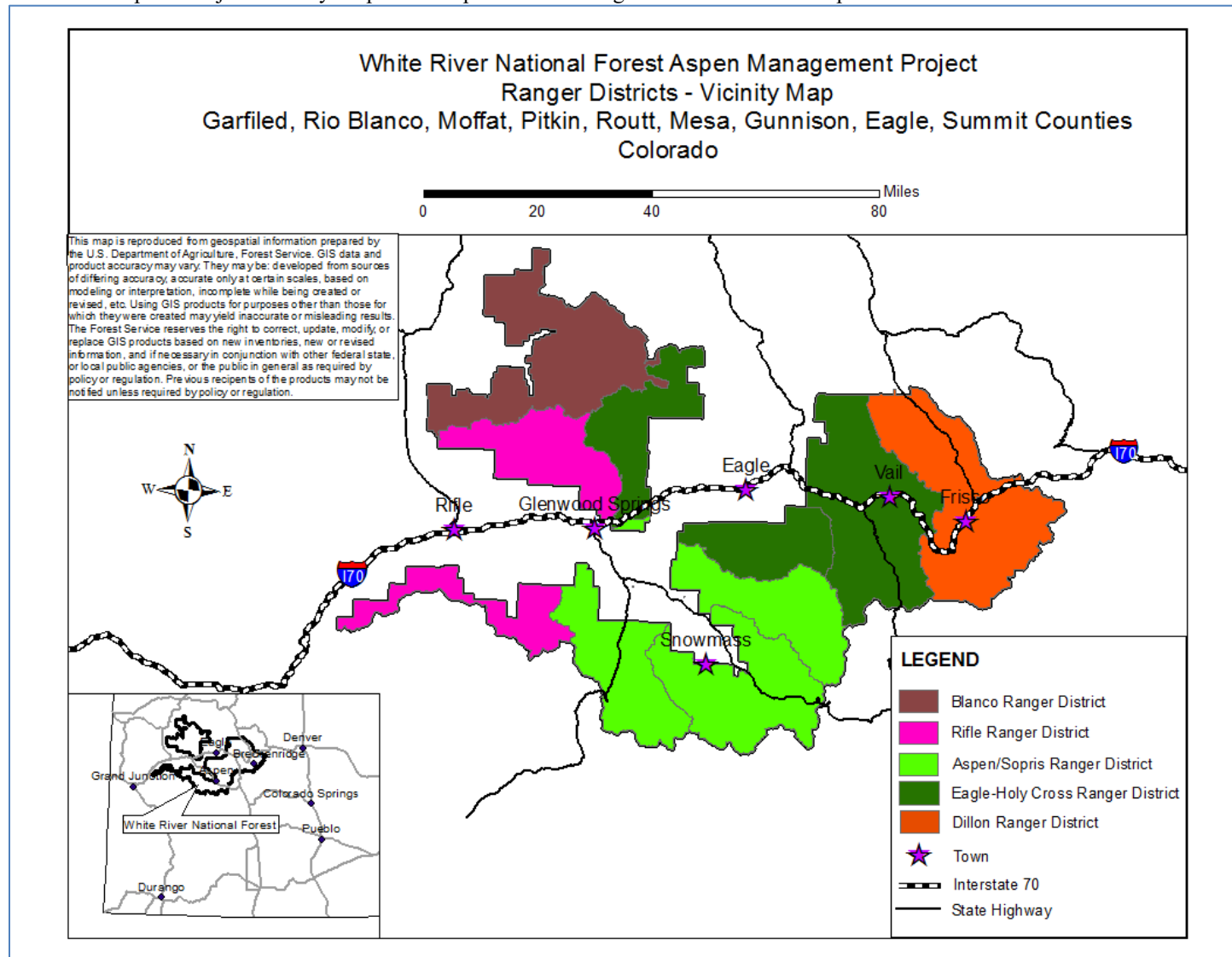
Compounding the effects of aspen mortality from drought, insects, disease, and succession, are high levels of sustained herbivory. Browse from ungulates on aspen suckers, including elk and domestic livestock, can lead to significant reductions in tree growth rates and even

the complete loss of aspen clones. Historically, apex predators such as wolves would have pushed elk across landscapes. With the extirpation of wolves from Colorado, elk will often congregate in aspen clones and eat nearly all the new aspen suckers. Excessive browse by elk appears most prevalent in stable aspen growing in winter range, where elk are concentrated and minimize their movement to save energy.

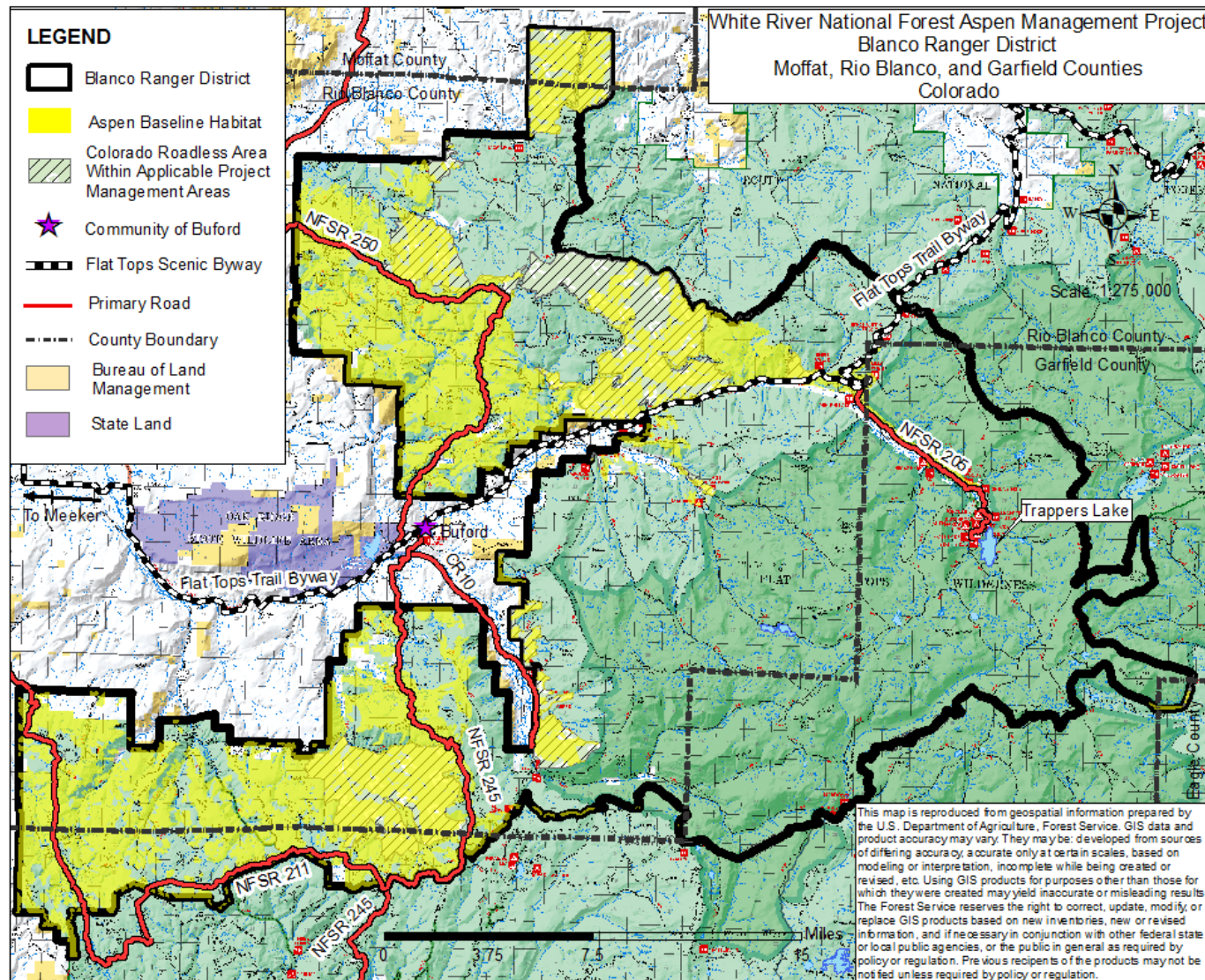
Location and Setting

The proposed White River Aspen Management Project is located on National Forest System (NFS) lands administered by the WRNF. Treatment areas would not occur in designated Wilderness Areas and some Forest Plan Management Areas would be avoided. Treatments could occur within Forest Plan Management Areas 4.2, 4.23, 4.3, 4.32, 5.12, 5.13, 5.4, 5.41, 5.42, 5.43, 5.5, 7.1, 8.21, 8.25, and 8.32. These management areas constitute the project's assessment area. Of the nearly 600,000 acres of aspen on the WRNF, there are approximately 375,000 acres of aspen within these management areas. These 375,000 acres represent the White River's aspen baseline habitat (see Maps 2-9) where management activities could occur, within the parameters set forth in this project, and provide a baseline for measuring the degree of effects associated with proposed activities.

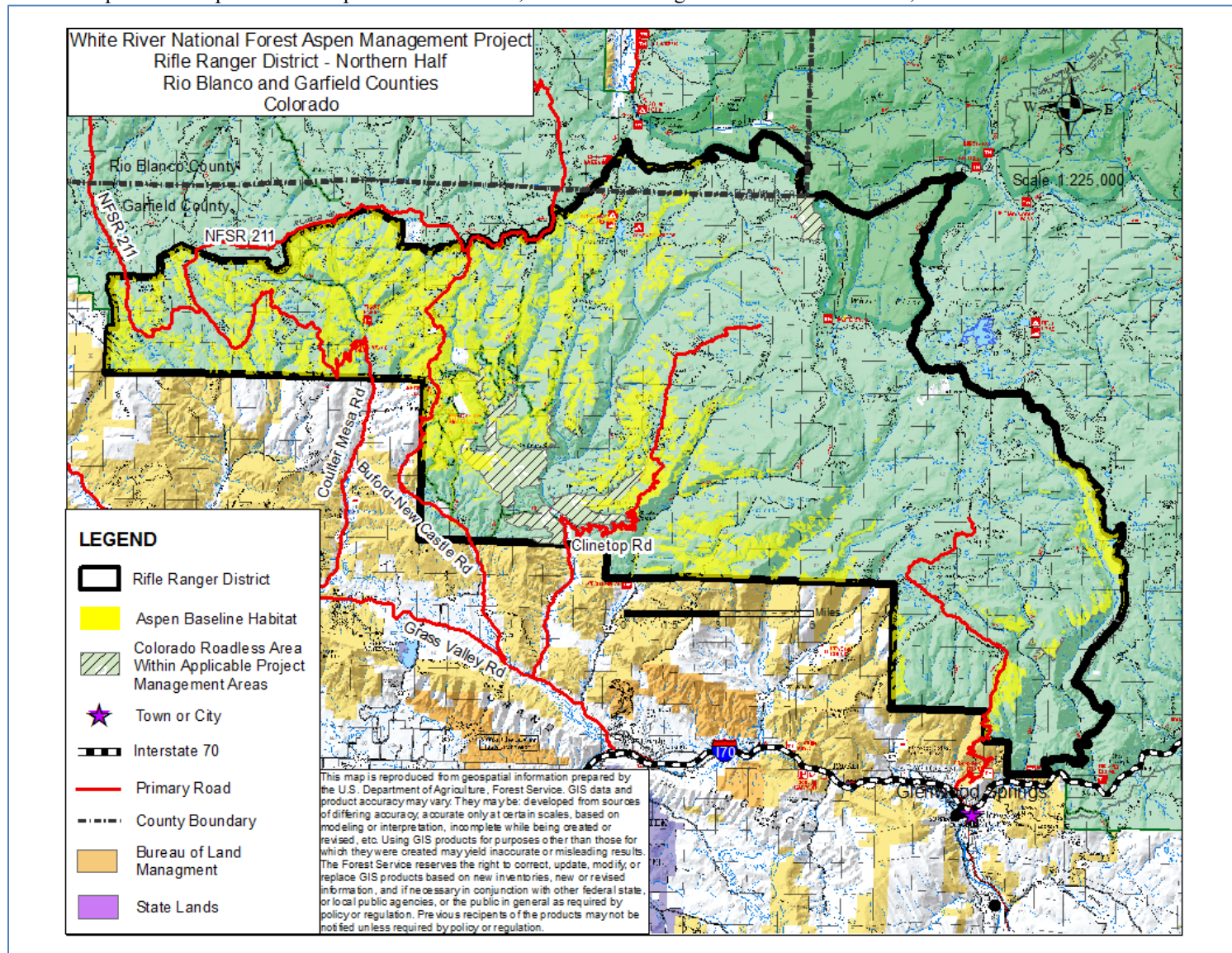
Map 1 – Project Vicinity Map. This map shows the Ranger Districts that make up the White River National Forest.



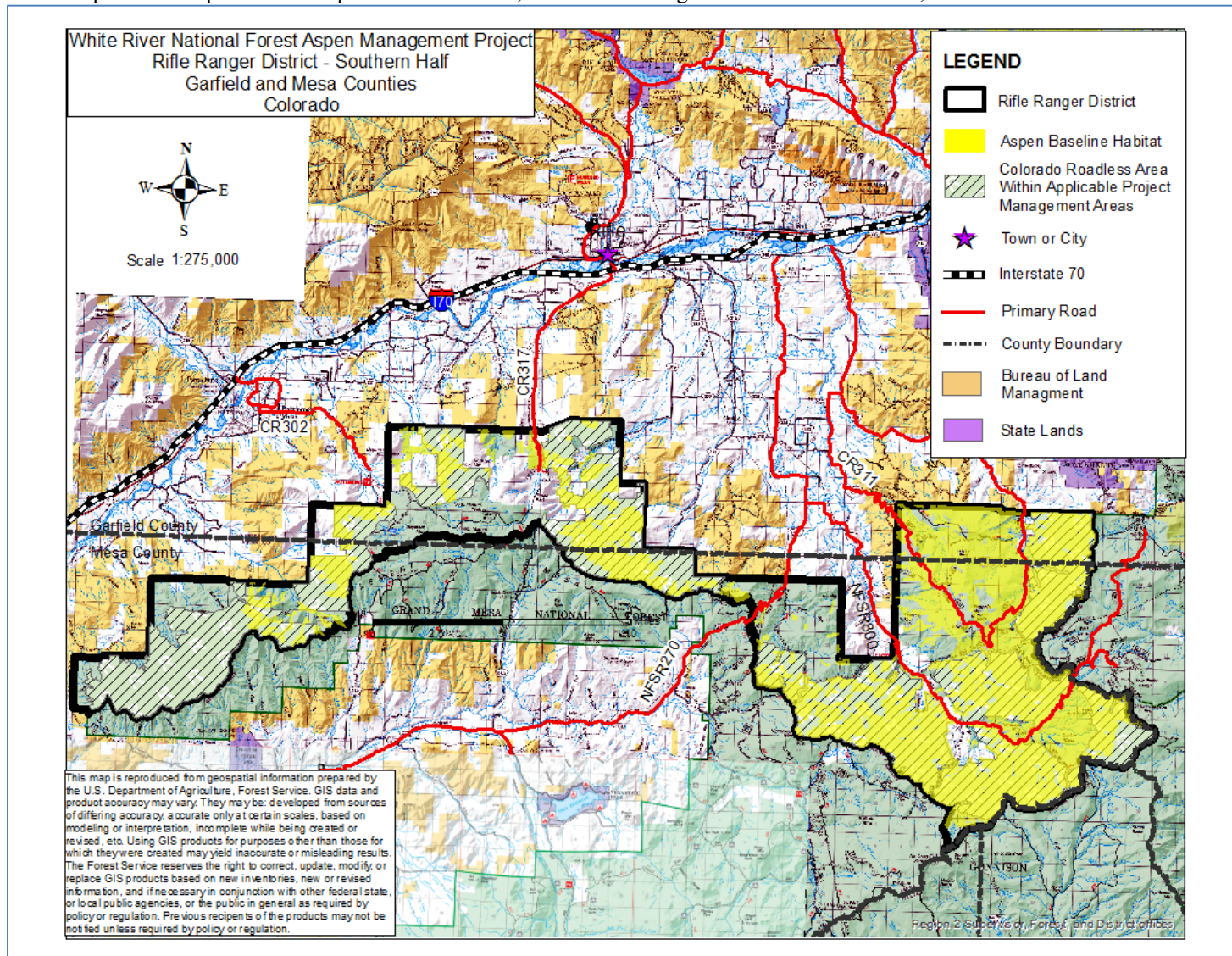
Map 2. Blanco Ranger District Map. This map shows the aspen baseline habitat where activities could occur.



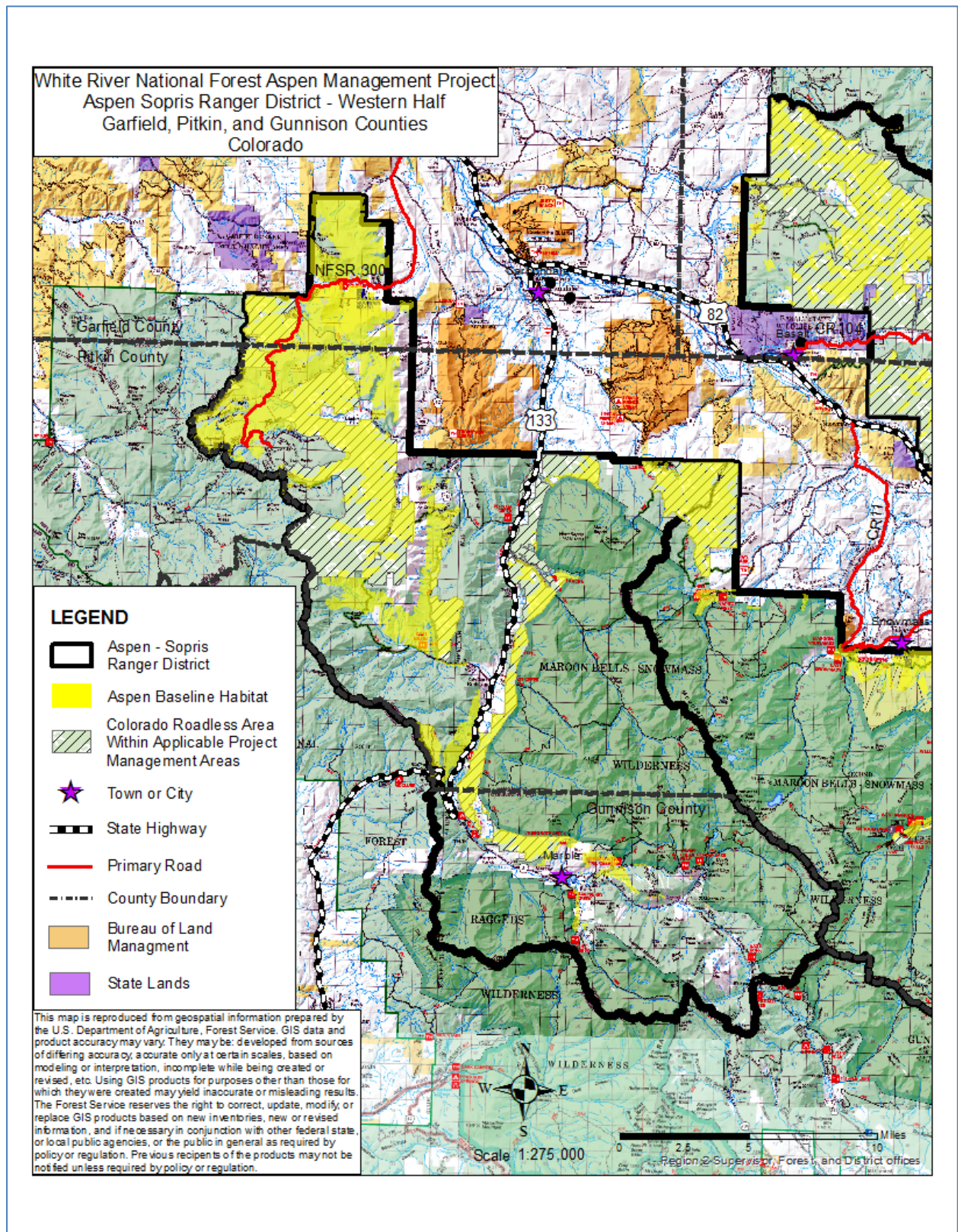
Map 3. This map shows the aspen baseline habitat, on the Rifle Ranger District's northern half, where activities could occur.



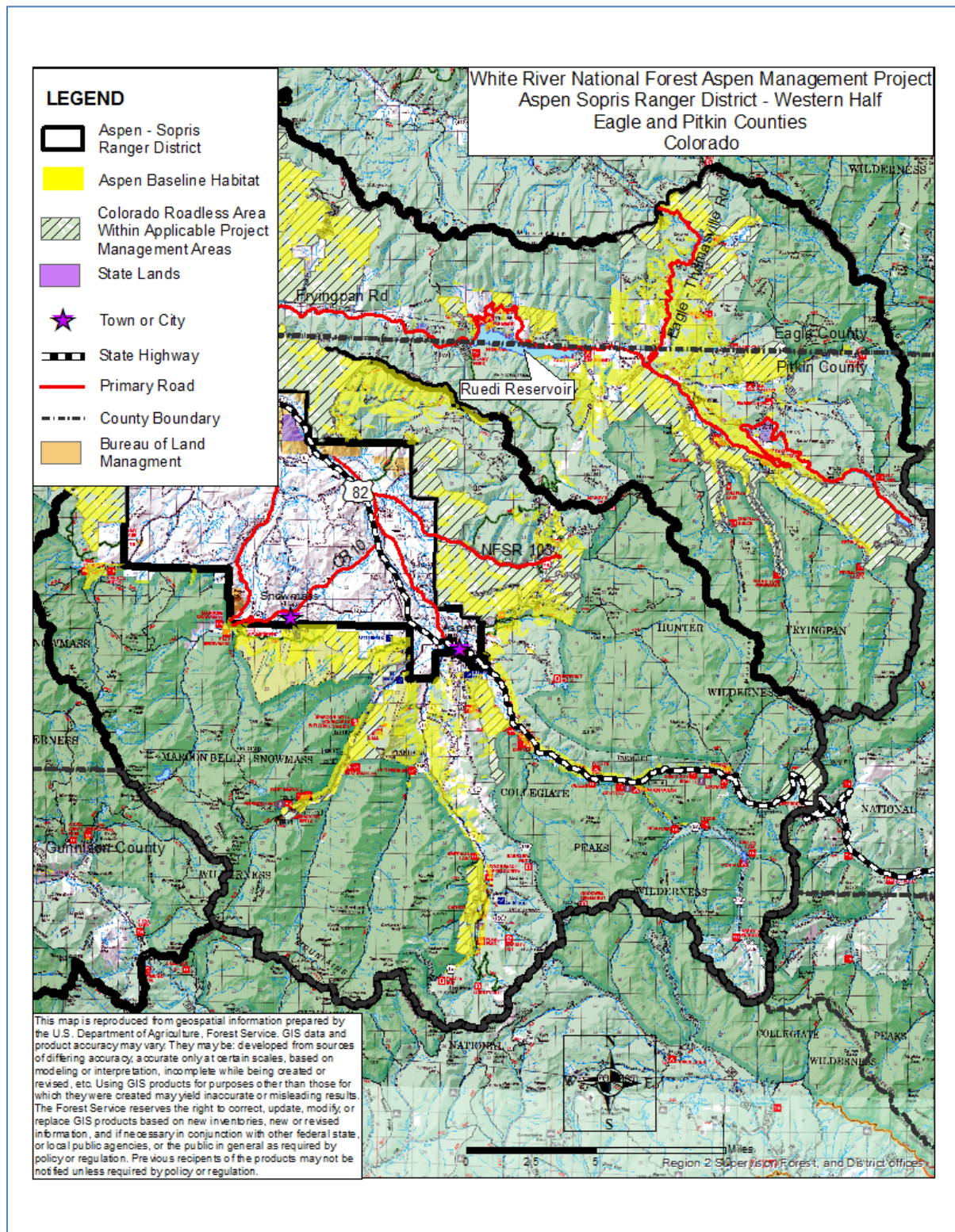
Map 4. This map shows the aspen baseline habitat, on the Rifle Ranger District's southern half, where activities could occur.



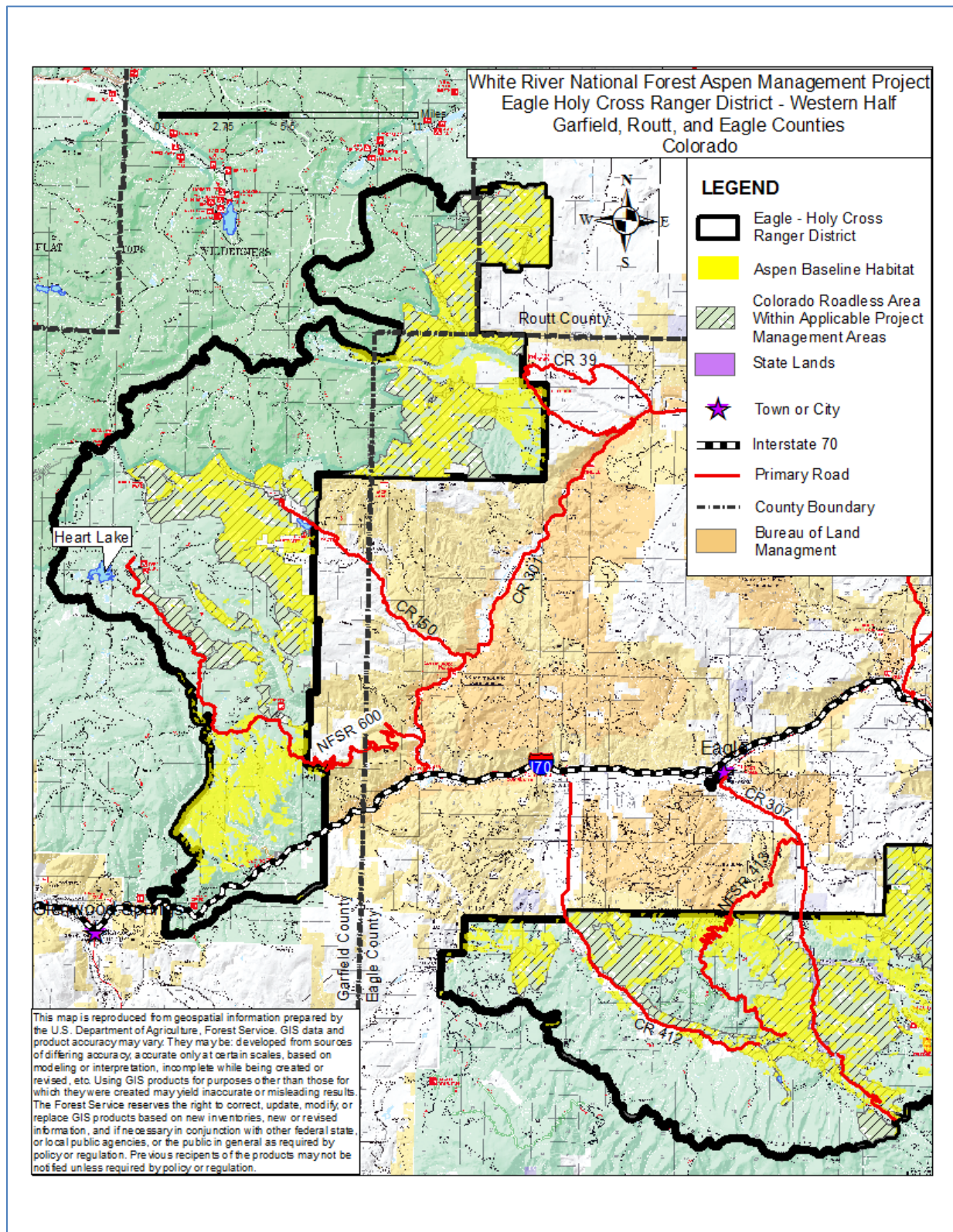
Map 5. This map shows the aspen baseline habitat, on the Aspen-Sopris Ranger District's western half, where activities could occur.



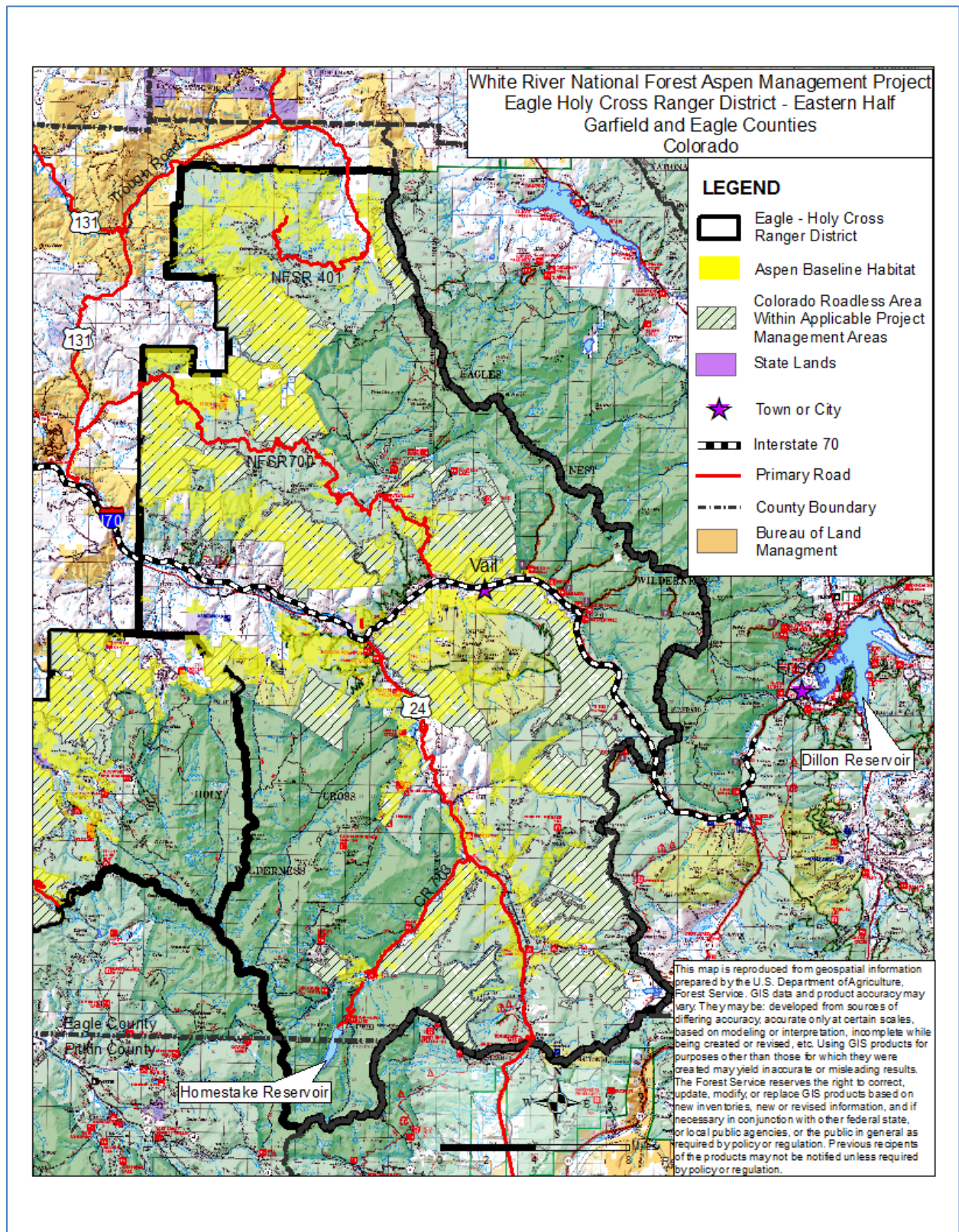
Map 6. This map shows the aspen baseline habitat, on the Aspen-Sopris Ranger District's eastern half, where activities could occur.



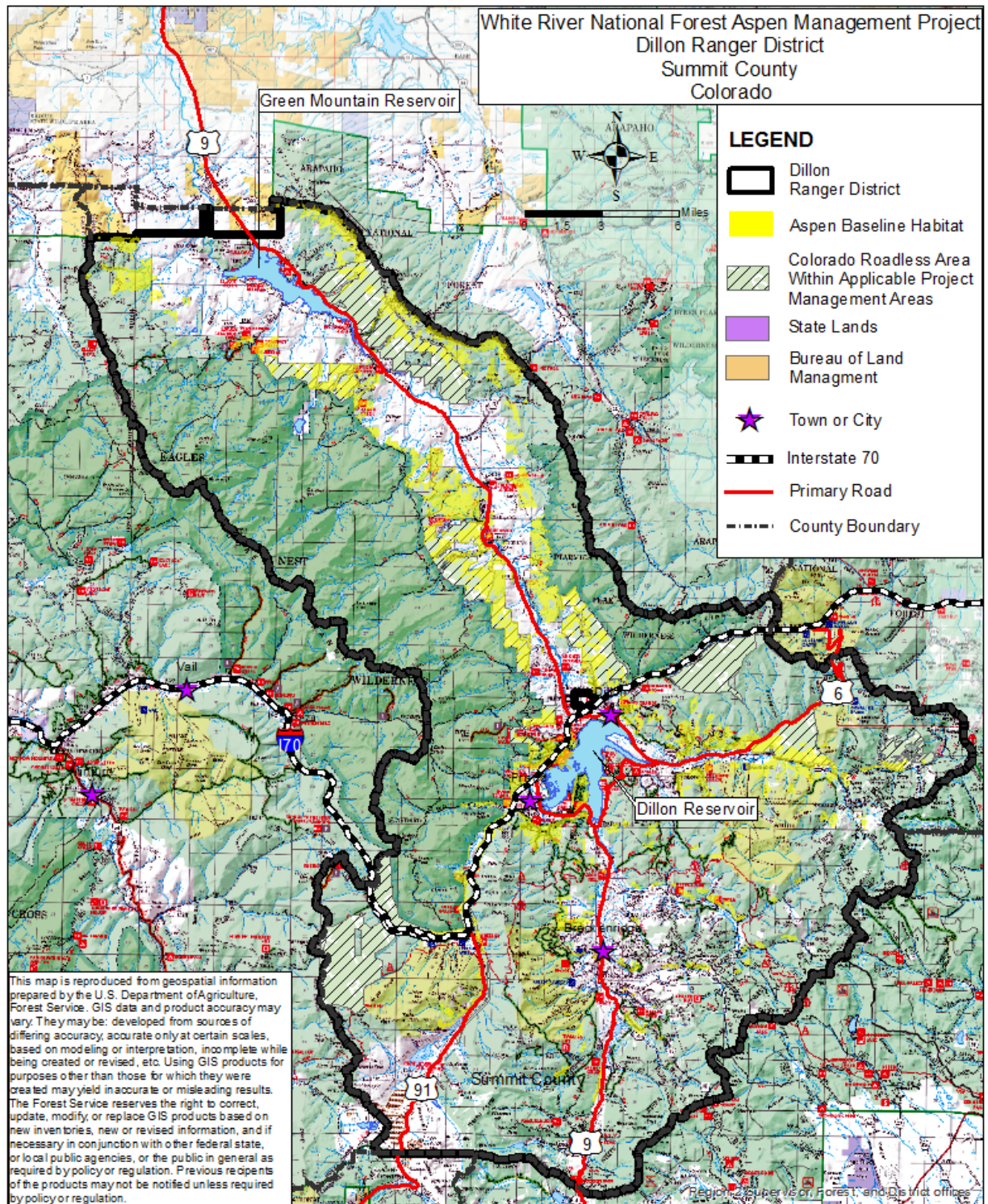
Map 7. This map shows the aspen baseline habitat, on the Eagle-Holy Cross Ranger District's western half, where activities could occur.



Map 8. This map shows the aspen baseline habitat, on the Eagle-Holy Cross Ranger District's eastern half, where activities could occur.



Map 9. This map shows the aspen baseline habitat, on the Dillon Ranger District, where activities could occur.



Management Direction

This project is tiered to the White River National Forest Land and Resource Management Plan, as amended 2002 (Forest Plan) (LRMP, 2002). The proposed treatments are designed to respond to goals, objectives, and strategies outlined in Chapter 1 of the Forest Plan.

Specifically, the proposed action would meet the following goals, objectives, and strategies:

Goal 1 Ecosystem Health – Promote ecosystem health and conservation using a collaborative approach to sustain the nation’s forests, grasslands, and watersheds.

Objective 1d – Increase the amount of forest and rangelands restored to or maintained in a health condition with reduced risk and damage from fires, insects, disease, and invasive species.

Strategy 1d.6 – Place high priority on fuel reduction activities in urban/wildland interface areas.

Strategy 1d.7 – Implement management practices, including prescribed fire, that will move landscapes towards desired vegetation composition and structure as described in the management area description and the Historic Range of Variability.

Strategy 1d.9 – Over the life of the plan, management practices that mimic ecological processes, such as fire, insect and disease, and other disturbances, will operate on forest and grassland landscapes in a manner consistent with desired conditions and management area direction.

Goal 2 Multiple Benefits to People – Provide a variety of uses, products, and services for present and future generations by managing within the capability of sustainable ecosystems.

Objective 2c – Improve the capability of national forests and rangelands to sustain desired uses, values, products, and services.

Strategy 2c.1 – By the end of the plan period, offer for sale the allowable timber sale quantity.

Goal 5 Public Collaboration – Engage the American public, interested organizations, private landowners, state and local governments, federal agencies, and others in the stewardship of National Forest System lands.

Objective 5a – Work cooperatively with individuals and organizations, local, state, tribal, and federal governments to promote ecological, economic, and social health and sustainability across landscapes.

Strategy 5a.1 – Provide opportunities for local governmental jurisdictions and other interested parties to participate in planning and management of National Forest System lands, especially where local governmental jurisdictions or other landowners are contiguous to or may be affected by the management of these lands.

Strategy 5a.2 – Cooperatively work with local governments to address issues of common concern and to the extent possible maintain consistency with locally adopted master plans.

The White River Aspen Management Project would authorize silvicultural activities and associated project work in Management Areas 4.2, 4.23, 4.3, 4.32, 5.12, 5.13, 5.4, 5.41, 5.42, 5.43, 5.5, 7.1, 8.21, 8.25, and 8.32 (Forest Plan, pg. 3-40 – 3-89). Proposed silvicultural

activities would be available for application based on management themes, management area descriptions, and desired condition described for these Management Areas.

- 4.2 – Scenery
- 4.23 – Scenic Byways, Scenic Areas, Vistas, and Travel Corridors
- 4.3 – Dispersed Recreation
- 4.32 – Dispersed Recreation, High Use
- 5.12 – General Forest and Rangelands – Range Vegetation Emphasis
- 5.13 – Resource Production – Forest Products
- 5.4 – Forested Flora and Fauna Habitats
- 5.41 – Deer and Elk Winter Range
- 5.42 – Bighorn Sheep Habitat
- 5.43 – Elk Habitat
- 5.5 – Forested Landscape Linkages
- 7.1 – Intermix
- 8.21 – Developed Recreation Complexes
- 8.25 – Ski areas – Existing and Potential
- 8.32 – Designated Utility Corridors – Existing and Potential

Purpose and Need for Action

The proposed and need for action includes:

1. Improve the resiliency of aspen forests to disturbance agents.
 - a. Many aspen stands across the White River National Forest have reached maturity; many having been regenerated during periods of drought and wildfire during the 1800s. Many of these mature stands are predisposed to a variety of disturbance agents, including insects, disease, browse, and drought related mortality. Maintaining young aspen stands can create resistance and resilience to disturbance agents and climate related mortality.
 - b. There is a scarcity of young aspen forests on the White River National Forest (Table 1).
2. Maintain and increase the spatial occurrence of aspen on the White River National Forest.
 - a. Many aspen stands on the White River National Forest have been overtaken by conifer. As wildfires continue to be suppressed, natural processes that would favor the establishment of aspen are being prevented. Therefore, without intervention aspen would likely continue to decrease across the Forest.
 - b. Browse has the potential to further reduce the extent of aspen on the White River National Forest. Heavy browse from elk can impede aspen regeneration, which is influenced by the change in historic predation. In addition, cattle and sheep browse can cause extensive damage to aspen sprouts. Natural regeneration following small disturbances is often not adequate to withstand high levels of browse, leading to weakened or complete loss of aspen clones. Maximizing suckering through management can overwhelm browse and provide an opportunity for aspen clones to be re-invigorated.

3. Maintain and improve ungulate wildlife habitat, including winter range for elk and deer.
4. Manage aspen along scenic corridors
5. Maintain and expand the aspen cover type adjacent to at-risk communities and within the Wildland Urban Interface.
 - a. Promoting aspen over conifer can be an effective strategy for reducing wildfire hazard.
6. Provide forest products to local businesses and industries.

Proposed Action

The White River National Forest proposes to conduct vegetation management activities to promote the maintenance and expansion of aspen, through a combination of harvesting and broadcast burning. Harvesting activities, including coppice cut, improvement cut, and weeding, would be implemented on up to 10,000 acres per decade. Broadcast burning, with incidental tree cutting to prepare fire lines, fuel beds, and address hazard trees, would be implemented on up to an additional 10,000 acres per decade. When combined, harvesting and burning could occur on up to 20,000 acres per decade. Other projects on the White River National Forest currently allow harvesting and burning of aspen, or are planning additional aspen regeneration activities. The acres proposed under the White River Aspen Management Project would be in addition to those other projects and would not be substituted by activities authorized under different decisions. Management activities and locations would be selected based on the applicable Forest Plan Management Area direction and stand conditions.

Treatment Area Selection

Following a decision to implement the proposed action, Forest Service resource specialists would evaluate landscapes and sites to identify areas to conduct management activities. Generally, a Level 6 HUC² (Hydrologic Unit Code) landscape would be used when developing individual projects. However, individual sites, such as campgrounds or viewpoints, could be evaluated at a smaller scale. These areas would be evaluated to determine if a need exists to conduct vegetation management activities and if so, which prescriptions would be applied where to achieve desired conditions. Project parameters would be used to limit the scope of activities during project design.

When developing treatment areas, management activities would be selected from the proposed action to meet Forest Plan Management Area themes, management area descriptions, or desired conditions. Priority would be placed on 1) maintaining aspen and converting conifer to aspen in areas adjacent to at-risk communities and within the wildland urban interface³ 2) Harvesting or burning seral aspen stands to increase the spatial extent of

² The United States is divided and sub-divided into successively smaller hydrologic units. The hydrologic unit code is a system for identifying each of these hydrologic units.

³ An area within or adjacent to an “at-risk community” that is identified in recommendations to the Secretary of Agriculture in a Community Wildfire Protection Plan, or any area for which a Community Wildfire Protection Plan is not in effect, but is within ½ mile of the boundary of an “at risk community”. Also, any area that is within

aspen across the landscape 3) Improving winter range for elk and mule deer 4) Regenerating persistent aspen that lacks natural recruitment 5) Maintaining aspen in areas with high recreation use, such as scenic byways and travel corridors. Individual projects may accomplish one, some, or all priorities.

After an initial treatment area is developed by Forest Service staff, other district and forest level specialists would be provided an opportunity to adjust treatment area location and design. In addition, surveys for Threatened, Endangered, and Forest Service Sensitive species and archaeological sites would be conducted to ensure compliance with the National Heritage Preservation Act of 1966, the Endangered Species Act of 1973, the National Forest Management Act of 1976, and other pertinent laws and regulations. Resource specialists would also be given an opportunity to include additional site-specific design features.

After site-specific treatment areas are identified, public notification would be conducted. The Forest Service would accept public input appropriate for the size and complexity of a given treatment area. Based on this input, the treatment area could be modified based on line officer discretion. Once this process is completed the Forest Service line officer could approve implementation.

Parameters

Project parameters are incorporated into this project to limit the scope, context, and intensity of potential undertakings. These parameters have been designed with consultation of resource specialists to create a framework for treatment area selection and design. Parameters are like project design features, in that they limit potential effects associated with project activities, but are used during project design rather than implementation. For this project, the following parameters have been included as a part of the proposed action. These parameters may be modified, or additional parameters may be included, based on comments received during public scoping.

1. Cumulatively, all created openings will be limited to less than 25% of the area within a given Level 6 HUC watershed, or a 3rd Order stream. These openings include coppice cuts and broadcast burns. This parameter is intended to limit potential effects associated with hydrology and runoff.
2. Forest Plan Standards and Guidelines related to the Southern Rockies Lynx Amendment (SRLA) will be met. Prior to implementation, treatment areas would be evaluated to ensure compliance with the SRLA.
3. Ground based mechanized treatments will not be implemented within Colorado Roadless Areas. Broadcast burning, within incidental tree cutting, can be applied within Colorado Roadless Areas, subject to other restrictions included in the proposed action and project design features (exemptions 36 CFR 294.43 (b)(1) and 36 CFR 294.43 (c)(a)(ii)(3)(5)(6).
4. Temporary roads will not be established within Colorado Roadless Areas.
5. This project will not authorize any activities within designated wilderness.

1 ½ miles of an “at risk community” and has sustained steep slopes that may affect wildfire behavior, or has a geographic feature that aids in creating an effective fuel break, or is in fuel condition class 3.

This approach to treatment area selection allows the Forest Service to be responsive to local needs, changing conditions, and new information. In addition, project design features and restrictions built into the proposed action limit the extent and location of treatments, providing a context for meaningful analysis.

Vegetation Management

Vegetation management would include coppice cuts, improvement cuts, weeding, and broadcast burns to accomplish resource objectives. Table 2 provides a summary of where different prescriptions could be applied within different stand types. More detailed descriptions of prescriptions are provided in the sections that follow.

Table 2. Summary of potential vegetation management options.

Management Area	Forest Plan and Project Objectives	Stand Condition	Prescription Options
4.2, 4.23, 4.3, 4.32	Maintain scenic values by managing healthy stands of aspen and converting some conifer stands to aspen.	Stable	Broadcast Burn Coppice
	Convert decadent and over-mature stands to young stands. Maintain and improve wildlife habitat. Fuels Reduction	Seral	Broadcast Burn Coppice Improvement Cut Weeding
5.12, 5.13, 5.4, 5.41, 5.42, 5.43	Maintain a variety of structural stages within forest landscapes to increase aspen resistance and resilience to insects, disease, browse, and drought related mortality.	Stable	Broadcast Burn Coppice Improvement Cut Weeding
	Convert decadent and over-mature stands to young stands. Maintain and improve wildlife habitat. Fuels Reduction	Seral	Broadcast Burn Coppice Improvement Cut Weeding
5.5	Natural processes generally predominate; however, vegetation may be managed to enhance denning or foraging habitat characteristics for target species, such as lynx, marten, or wolverine. Prescribed fire is used where appropriate to create or renew desirable habitat conditions and may be used to mimic natural disturbance regimes.	Stable	Broadcast Burn Coppice
7.1	Convert decadent and over-mature stands to young stands. Maintain and improve wildlife habitat.	Stable	Broadcast Burn Coppice

Management Area	Forest Plan and Project Objectives	Stand Condition	Prescription Options
	Fuels Reduction		Improvement Cut Weeding
		Seral	Broadcast Burn Coppice Improvement Cut Weeding
8.21, 8.25, 8.32	Maintain scenic values by managing healthy stands of aspen and converting some conifer stands to aspen.	Stable	Coppice
	Convert decadent and over-mature stands to young stands. Maintain and improve wildlife habitat. Fuels Reduction	Seral	Coppice Improvement Cut Weeding

Broadcast Burn

Broadcast burning would be used to regenerate stands of aspen. The size, location, and arrangement of burn areas would be developed to meet Forest Plan Management Area direction. Individual broadcast burn units may exceed 40 acres in size. Most broadcast burn units would be designed to improve wildlife habitat, with a focus on improving forage conditions within elk and deer winter range. Some broadcast burning could also be conducted to maintain aspen for scenery or other recreation objectives.

Broadcast burning could be applied in Colorado Roadless Areas. Incidental cutting of trees, to prepare fire lines, mitigate hazard trees, or create favorable fuel profiles, could be conducted. All incidental cutting within Colorado Roadless Areas would be conducted with hand-crews. Temporary roads would not be created within Colorado Roadless Areas.

With this prescription, portions of stands that burn at a higher intensity or for a longer duration would likely experience mortality in the overstory, leading to new aspen sprouting. In areas that burn at a lower intensity mature aspen would likely survive, which would cause less subsequent sprouting of aspen, but shrubs and grasses would be reinvigorated.

Broadcast burning in stable aspen is limited to areas that have been mapped as winter range (Winter Range, Severe Winter Range, Winter Concentration Areas), for elk and mule deer, or focuses primarily on aspen/mountain snowberry or aspen/elk sedge habitat types, as described in Research Paper RM-249 (Hoffman and Alexander, 1983). On the WRNF, an estimated 65,000 acres of stable aspen occurs in winter range. In seral aspen, broadcast burning could occur in areas identified in Table 2. Burning seral aspen is not restricted to winter range or habitat types.

Coppice

Coppice cutting would harvest all merchantable trees ($\geq 5''$ DBH) within an activity unit. In seral aspen, non-merchantable conifer trees (typically those $< 5''$ DBH) not removed during harvesting could be felled by chainsaw crews, utilized as biomass, or broadcast burning could be conducted to remove conifer seedlings and stimulate aspen suckering. The size, location, and arrangement of treatment areas would be based on Forest Plan Management Area direction. Openings created through coppice cutting may exceed 40 acres in size, except within Management Area 5.5. This prescription would create a new age class comprised of young aspen. Coppice cutting would not be applied in Colorado Roadless Areas.

Generally, coppice cutting seral aspen is preferable to harvesting stable aspen. However, there may be cases that harvesting stable aspen is needed to accomplish land management objectives. In stable aspen stands, coppice cutting could be conducted in areas that have fewer than 500 existing aspen recruits (trees 1 to 6 feet tall) that do not show signs of browse or other damage across 75% of a given units area.

Improvement Cut

Improvement Cuts could be conducted in seral aspen stands that have enough of a mature aspen component to allow conifer removal without compromising the integrity of the residual aspen. In these units, subalpine fir, spruce, or lodgepole pine would be harvested where they occur within aspen clones, or within two tree lengths of aspen clones. Incidental amounts of aspen would be harvested when these trees are growing within clumps of conifer trees, or to facilitate harvesting operations. Careful skid trail design and approval would be required to minimize damage to the remaining aspen that is not harvested. This activity would maintain a mature aspen overstory, but aspen sprouting where conifers are removed would create a two aged aspen stand. The size, distribution, and arrangement of the harvest area would be designed to accomplish Management Area direction. Improvement Cuts would not be applied in Colorado Roadless Areas.

Weeding

Weeding would consist of using hand crews (chainsaws) to cut out small diameter, non-merchantable (typically $< 5''$ DBH), conifer trees from aspen stands. This activity would prevent young conifer from overtaking and out-competing aspen. Weeding could be accomplished with Forest Service crews, contract crews, volunteer groups, by setting up designated Christmas tree cutting areas, or other methods. The size, distribution, and arrangement of the harvest area would be designed to accomplish Management Area direction. Weeding would not be applied in Colorado Roadless Areas.

Slash

For all prescriptions, most felled merchantable timber would be removed from the forest. However, there could be cases where harvested trees would be piled and burned to accomplish resource objectives. Pile burning could occur in places where timber and biomass removal is infeasible or cost prohibitive. Non-merchantable material including tree tops, branches and cull material would be lopped and scattered, machine piled and burned, or

removed as biomass. Design features to leave minimum coarse woody debris for soils and wildlife will be met through site specific detailed prescriptions and contract provisions.

Mechanical Felling

Coppice Cuts and Improvement Cuts would use conventional ground-based machinery to harvest trees and remove them from the stand. Conventional logging equipment typically includes harvesters, rubber tired and tracked skidders, stroke de-limbers, chip vans and log trucks. Trees could be processed (limbed and cut to length) in the forest or at a landing, provided all Forest Plan Standards for coarse woody retention are adhered to. However, the Forest Service would encourage the utilization of slash for biomass.

Transportation

Existing National Forest System Roads (NFSR) would be used to access treatment areas and remove forest products. Hauling could occur on any existing NFSR and could occur during any season, unless prohibited by site specific project design features. Road maintenance and reconstruction, including blading, ditch clearing, spot treating with aggregated base or borrow material, road widening, road re-alignment, curve reconstruction, culvert replacement, and clearing brush along the sides of roads would occur where needed in conjunction with hauling activities.

In addition to hauling on NFSR, temporary roads could be used to access aspen stands. Temporary roads would utilize existing road templates when possible. Temporary roads would be decommissioned following harvesting and hauling activities. Access to harvest areas utilizing newly constructed temporary roads would be limited to 1 mile of temporary road per 100 acres of harvested forest within a project area. The location of all temporary roads would require approval by a Forest Service Timber Sale Administrator, Contracting Officers Representative, or Forest Service Representative and would be located based on resource specialist expertise to minimize resource damage while still providing for harvesting feasibility.

Fence installation

Fence installation could be constructed around small clones of aspen that are declining and are not successfully regenerating due to browse. Prior to fence installation, surveys would be completed to ensure avoidance of traditional cultural properties, or threatened or endangered species.

Public Involvement

Through the combined scoping and comment period, the WRNF is seeking input from the public, interested organizations, and local governments. Public input will be used to help identify potential cause and effect issues associated with the proposed action and could be used to modify the proposed action. The range of effects that will be considered is based on the scale of the proposed action in the context of the aspen baseline habitat on White River

National Forest and restrictions placed on management activities. If a decision is made to implement the proposed action, treatment areas would be identified on an annual basis.

Nature of Decision to be Made

For this project, the responsible official is the White River Forest Supervisor. Given the purpose and need, the responsible official will review the environmental analysis of the proposed action, other alternatives, and any public comments to make the following decisions:

1. Whether the proposed action will proceed as proposed, as modified by an alternative, or not at all.
2. If it proceeds:
 - a.) Whether to prepare an Environmental Assessment or an Environmental Impact Statement
 - b.) What design features/mitigation measures and monitoring requirements should be applied to the proposed action
 - c.) Whether the project requires any Forest Plan amendments

Effects and Issues to Consider

The environmental assessment will address the effects of the proposed action and alternatives to key issues identified during internal and external scoping. The assessment will be issue-driven and contain detail commensurate to the degree to which a resource may be affected.

Issues are cause and effect relationships that arise from the proposed action. The Forest Service will use information gathered from this comment period to identify additional issues to be addressed. Issues raised in response to this notice of proposed action will be considered and addressed in the environmental analysis. Some issues may be addressed through modification of the proposed action, development of a new alternative, or inclusion of design features.

Comment Process

The proposed project is an activity implementing a land management plan and subject to the objection process described in 36 CFR 218 Subparts A and B. The Forest Service is combining scoping with the legal notice and opportunity to comment, as described in §218.24. The public is encouraged to provide specific written comments on this proposal, including supporting reasons for the responsible official to consider. Specific written comments should be within the scope of and have a direct relationship to the proposed action.

The proposed action includes openings greater than 40 acres. In accordance with Forest Plan standards, specific written comments on the proposed project will be accepted for 60 calendar days following publication of this notice in the *Glenwood Post Independent*. The publication date in the newspaper of record is the exclusive means for calculating the comment period. The regulations prohibit extending the length of the comment period.

Written comments must be submitted via mail or electronically to: Forest Supervisor, c/o Brett Crary, 900 Grand Ave, Glenwood Springs, CO 81601. Electronic comments including attachments can be submitted here: <https://cara.ecosystem-management.org/Public/CommentInput?Project=59419>

It is the responsibility of persons providing comments to submit them by the close of the comment period. Only those who submit timely and specific written comments will have eligibility to file an objection under §218.8. For objection eligibility, each individual or representative from each entity submitting timely and specific written comments must either sign the comment or verify identity upon request. Individuals and organizations wishing to be eligible to object must meet the information requirements in §218.25(a)(3). Names and contact information submitted with comments will become part of the public record and may be released under the Freedom of Information Act.

If the agency determines there are no significant impacts, that finding along with the EA and a draft decision notice will be published for a 45-day objection period. If no specific written comments are received during the designated opportunity for comment, the project will not be subject to objection. If the EA concludes there is potential for significant impacts, then an environmental impact statement will need to be prepared.

This Notice of Proposed Action is also requesting your comments under Section 106 of the National Historic Preservation Act, as amended (NHPA). Consultation under the NHPA seeks to consider the views about an undertaking and its effects on historic properties for the agency official to consider in decision making (36 CFR 800).

Additional information regarding this action can be obtained from: Brett Crary, brett.crary@usda.gov

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