

**RECREATION SPECIALIST REPORT
for
Forsythe II Fuels Treatment Project**

USDA - FOREST SERVICE REGION 2

ARAPAHO ROOSEVELT NATIONAL FORESTS
AND PAWNEE NATIONAL GRASSLAND
BOULDER RANGER DISTRICT

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 11/14/16

INTRODUCTION

The purpose of this report is to identify the project actions and disclose affects that may impact the trails transportation system, recreation use dynamics and check to see that such actions are consistent with the Forest Plan (1997) direction, and provide trail and recreation related recommendations for the project. This report is based on a field review and recorded knowledge of roads, trails and recreation use dynamics in the Project Area. The report includes references to other resource information (engineering, scenery and special uses) as needed to help clarify recreation resource analysis determination. The proposed action is as provided by the Project Lead.

BACKGROUND

The Forsythe II is located primarily in Boulder County, with a small portion in Gilpin County, and is located west of Gross Reservoir, approximately six miles west of the City of Boulder, Colorado. The project area is bounded by Colorado State Highway 119 on the north, Peak to Peak Highway, Black Gulch Road and South Beaver Creek on the west, and the Boulder Ranger District boundary on the east and south. The Forsythe Project Area contains numerous full time residences and summer cabins. Legal motorized and non-motorized access is dependent public road and trail connectivity.

The project overlaps the Winiger Ridge (2000) and Lump Gulch Fuels Reduction (2009) projects administered by the Forest Service, and the Gross Reservoir Hydroelectric and Moffat Collections System project (2000) administered by Denver Water Board. The project is in-directly connected with Reynolds Ranch Open Space administered by Boulder County Parks and Open Space, Nederland Trail System administered by the Nederland Parks & Recreation and Open Space Advisory Board (PROSAB), Golden Gate State Park administered by Colorado State Parks, and the newly created Coal Creek Recreation District. In addition, this project overlaps with the Magnolia Non-motorized Trails Environmental Analysis (anticipated 2016).

RECREATION-RELATED ISSUES

The Forest Service uses an interdisciplinary process to separate issues brought up during scoping into groups of key comments (issues) and/or concerns that are irrelevant or that are already required to be addressed by Forest Service policy or federal law. Comments received during the scoping process were reviewed and grouped together into issues. The following is a summary of the recreation-related key issues identified during scoping.

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Recreation use in the project area occurs to varying degrees on all NFS lands. The area is open year-round, with most use occurring between spring and late fall. Ninety-five percent of all recreation uses are non-motorized and mechanized dispersed recreation activities that include hiking, mountain biking, hunting, fishing, camping and horseback riding, and incidental winter sport activities

Issue 1: Effects on Recreational Opportunities

Many commented that treatments would negatively affect the recreational opportunities used by local residents, while others commented that the recreational opportunities were important economic drivers to the local community, and that negative effects would occur due to treatments. Most of the comments revolved around aesthetics and effects to roads and trails within the project area.

PROPOSED ACTION

The Boulder Ranger District of the Arapaho and Roosevelt National Forest and Pawnee National Grassland proposes multiple treatments, creating a landscape more adaptable to fire and resistant to insects, promoting healthier forests and watersheds. The proposed project area boundary encompasses approximately 18,954 acres, of which, approximately 9,930 acres are National Forest Service lands. The remaining acres are private, state, county, or other ownerships, including Denver Water, and are intermixed throughout the project area.

The proposed action includes 2,483 acres of mechanical/hand treatment and 968 acres of broadcast burning. A combination of mechanical/hand treatment and broadcast burning would occur on approximately 291 acres. Additionally, 2,032 acres are analyzed for defensible space to provide permitted homeowners adjacent to NFS lands the ability to treat on NFS lands. Proposed management activities include thinning 1,449 acres of mixed conifer stands, patchcutting/clearcutting 741 acres of lodgepole pine stands, thinning 17 acres of regenerated lodgepole pine stands, cutting 276 acres of conifers within aspen and meadow/shrubland areas, and broadcast burning 968 acres. Reforestation treatments (tree planting of mixed conifer species) would occur in patchcuts/clearcuts. Timber stand improvement would occur in the future in areas patchcut/clearcut under this decision. Approximately 7 miles of temporary roads would be constructed to facilitate the vegetation management activities and would be decommissioned after the completion of treatment activities.

Slash created by these treatments could be removed offsite, piled and burned, chipped, and/or masticated. Where mechanized equipment is used, forest products would most likely be removed in the form of logs, chips, or firewood. After work is completed, firewood may be removed from the hand treatment units. Design criteria were developed and provide additional detail to the management activities described below.

AFFECTED ENVIRONMENT (RECREATION)

The Forsythe II Fuels Project Area has a high density of roads, mining impacts, and a very fragmented landownership pattern with a significant amount of private land intermixed with public land. The area contains numerous Forest System roads and trails that cross both National Forest land and private land. The area is in close proximity to Denver, and consequently receives a large number of recreational visitors during summer months. The project area is accessible from Hwy 119, Hwy 72 and several well-maintained county roads that provide opportunities for viewing scenery and driving for pleasure.

General Forest Plan Direction

The Forest Plan provides guidance to minimize the impacts of roads and trails on natural resources such as soil, water, and wildlife. This includes proper maintenance, using best management practices (BMP's) during and after construction, design and location of roads to minimize resource impacts, and decommissioning unneeded roads. In addition, it specifies that specific travel management strategies for system roads will be determined at the project level planning stage and states that decisions about which roads to stay open or be closed will be implemented under formalized travel management plans. Use of temporary roads for fuels reduction is noted, with the requirement that these roads are decommissioned once the activity is completed. The Forest Plan also recommends that roads and trails causing resource damage (such as to aquatic and riparian ecosystems), or that are in excess of management needs be considered for decommissioning. Please refer to Appendix C for Forest Plan standards, guidelines and information applicable to the recreation resource.

Geographic and Management Area Direction

The project area is located in four Geographic Areas as described in the Forest Plan: Caribou, Lump Gulch, Sugarloaf, and Thorodin. Table 1 shows the total acres of project area within each of these Geographic Areas and the acres of Forest Service Land.

Recreation Use (General)

Recreation use in the project area occurs to varying degrees on all National Forest System (NFS) lands. The area is open year-round, with most use occurring between spring and late fall. Ninety-five percent of all recreation uses are non-motorized and mechanized dispersed recreation activities that include hiking, mountain biking, hunting, fishing, camping and horseback riding, and incidental winter sport activities. Motorized access is centric to private landowner ingress/egress, except on weekends when recreation enthusiasts visiting from outside the local area park along roads where public land is legally accessible. Areas known to have the highest use include: NFS lands just south and east of the Town of Nederland and popular destination sites within and around the Gross Reservoir Recreation Area. Areas within the project area with the lowest use are generally found in the Beaver Creek community, the southernmost section of the planning area. NFS trails and roads are recognized as important recreational infrastructure as they either provide the primary access to recreational opportunities or serve as the recreational opportunity. Unauthorized trails that are not on the NFS system, known as "social trails, are not actively managed and therefore not recognized recreational opportunities.

Historic Perspective

Long before the Roosevelt National Forest was designated in 1917, the fractured land ownership pattern facilitated regulatory confusion, initiated conflicts between user groups, private landowners, and land management agencies. Years of respectful collaboration has helped reduce this confusion but recreational access constraints and a wide variety of incompatible land use regulations remain.

Recreation resource success stories within the planning area include multi-jurisdictional road and trail connectivity, and recreation facilities that consolidate use for sustainability purposes. Examples include trailheads, developed parking areas and other formally designated recreation sites. Recreation use impacts continue to be addressed, related issues mitigated, and uses such as hiking, mountain biking, hunting, fishing, camping, and equestrian recreation continue in a sustainable manner.

Regulatory Compliance

Generally, users have been observed recreating in what appears to be a safe and compliant manner. The issuance of recreation-related violation notices (citations) is low compared to other areas on the Boulder Ranger District that have similar recreation use dynamics. However, it is widely known that user safety is compromised and compliance issues escalate when large scale projects such as described in the proposed action are implemented. The BRD has been successful minimizing these issues by effectively planning implementation contingencies and communicating project work with the local community. This has provided users and local landowners alike an opportunity to establish expectations well in advance, this typically results in users opting to engage in a different recreation activity during their leisure time. Temporary recreation activity displacement has become a common norm in the project area. Nonetheless, a small percentage of users and/or private landowners remain that ignore or act defiantly in response to project work on public lands making recreation displacement appear to be a larger issue than perceived.

Common problems include but are not limited to dumping residential trash, vegetation removal, motor vehicles off-road and/or parked in undisturbed areas, soil compaction, randomly placed campfire rings, creation of unauthorized social trails, entering a closed area, and undesirable trespass through private property with intent to access NFS or other public lands managed in the project area. In particular, fuels treatment burn piles and areas that have not been reforested after fuels treatment and located along roads and trails become an attractive nuisance that further exacerbate these issues and perpetuate problems associated with target shooting.

Travel management projects (roads and trails) implemented throughout the project area have been successful in achieving regulatory compliance. Fencing, route obliteration and signing projects implemented over the past decade have minimized issues associated with illegal motor vehicle use and trail building. In the vicinity of Nederland and Gross Reservoir these project have been much less effective, compliance is less than desirable. Forest Service employees continuously replace "No Motor Vehicle" signs and repair wood barriers that are damaged, vandalized and/or stolen. This problem is not uncommon in urban forests, nor is it solely the result of any one user group desiring access to engage in any number of recreation opportunities.

Similar to other areas across the front-range, there is a lack of regulatory/operational consistency between land management agencies, public utilities and private landowners which creates confusion among recreation enthusiasts and perpetuates a number of unresolved access issues. These problems are more evident when large scale projects are conducted on public land.

General Concentrated Use Areas

The following concentrated use areas have been summarized to further describe the recreation resource. .

- Nederland and Front Range Trails Areas
- Porter Ranch and Magnolia Hill Areas
- Twin Sisters and Forsythe Areas
- Gross Reservoir Recreation Area
- Pinecliff and Tungsten Mountain Areas
- South Beaver Creek and Thorodin Mountain Areas

Other Recreation Destinations

This section identifies other publicly managed lands/areas/sites in the vicinity that may interact in some manner with the recreation resource on NFS lands within the project area. Interaction generally comes in the form of multi-jurisdictional and/or transportation connectivity. While outside the scope of this analysis, they are identified for cumulative effects analysis purposes. Please refer to Table 1.

Table 1: Other Designated Recreation-Related Lands/Areas/Sites

Other Recreation Sites/Areas	Management Emphasis	Related Recreation Activities	Primary Concern Related to Proposed Action
Town of Nederland Trail System	Intermodal transportation within town limits, road and trail connectivity to adjacent public lands, town identity and tourism marketing.	Mountain biking, hiking, running, walking domesticated animals, fishing access, and commuting to work. Provides trail connectivity and sense of open space.	Retain, sustain and/or improve road and trail structures, connectivity, emergency ingress and egress, and limit temporary closures that may impact local residents.
Reynolds Ranch Open Space (Boulder County)	Boulder County Parks and Open Space. Non-motorized uses managed to protect natural values and sense of open space.	Mountain biking, hiking, running, walking domesticated animals. Provides public land connectivity and a sense of open space.	Retain, sustain and/or improve road and trail structures, connectivity, and limit temporary closures that may impact local residents.
Barker Reservoir (City of Boulder)	Water storage intended for domestic use. Provides opportunities for rural town parks, recreation, and community events.	Barker Reservoir activities include fishing, hiking, scenic viewing, running, walking domesticated animals. Provides public land connectivity.	Retain, sustain, and/or improve road and trail structures, connectivity, emergency ingress and egress, and limit temporary closures that may impact local residents.
Barker Feed Line, aka. Aqueduct (City of Boulder)	Buried pipeline from Barker Reservoir for domestic use. Surface access on NFS lands, is managed for non-motorized recreation.	The aqueduct facilitates connectivity to a variety of recreation opportunities. Recreation: hiking, mountain biking, climbing and hunting.	Ensure public access remains available during fuels treatment operations and retain, sustain, and/or improve road and trail structures and connectivity.
Gross Reservoir Recreation Area (Denver Water)	Water storage for domestic use. Day use facilities managed from Memorial Day weekend to Labor Day. Overnight camping on East Winiger ridge.	Fishing, dispersed camping, hiking, mountain biking, backcountry motorized travel (limited).	Retain or improve road and trail structures, connectivity, emergency ingress and egress, and limit temporary closures that may impact local residents.

Walker Ranch Open Space (Boulder County)	Boulder County Parks and Open Space. Non-motorized uses managed to protect natural values and sense of open space.	Mountain biking, hiking, and group environmental education. Provides public land connectivity and a sense of open space.	Retain, sustain and/ or improve road and trail structures, connectivity, and limit temporary closures that may impact local residents.
Golden Gate State Park (Colorado State Parks)	Colorado State Park, managed destination for outdoor recreation.	Hiking, equestrian, and camping. Provides a sense of open space adjacent to metropolitan Denver and an opportunity for environmental education.	Retain, sustain and/ or improve road and trail structures, connectivity, and limit temporary closures that may impact local residents.
Hunting Unit # 29 north of Coal Creek Canyon, Hunt Unit #38 south of Coal Creek Canyon – (CO. Div. of Wildlife)	Wildlife conservation and sustainable wildlife populations for wildlife observation.	Hunting, family mentoring and wildlife observation, year-round.	Temporary closures within highly fractured public lands may concentrate hunting in other areas within the hunt unit.

ENVIRONMENTAL CONSEQUENCES (RECREATION)

This section describes environmental consequences of the alternatives on the recreation resource as they relate to the key issues, including the direct, indirect, and cumulative effects associated with the implementation of each alternative.

No Action - Alternative

Direct and Indirect Impacts of Alternative A (Recreation)

Short-term effects on the recreation resource will continue as observed in the past at the same frequency and intensity.

Direct and Indirect Impacts of No Action Alternative on Key Issues (Recreation)

Effects on Recreational Opportunities

Short term temporary impacts to the recreation resources will continue as in the past.

Cumulative Impacts of No Action Alternative (Recreation)

Recreational displacement and general recreation use dynamics have already adapted to the existing situation (fuels treatment projects). Predictable displacement norms would remain the same. It is unlikely cumulative effects would be measureable within or beyond the project area.

Direct and Indirect Impacts Common to Alternatives 1-4 on Key Issues (Recreation)

Effects on Recreational Opportunities

The direct and indirect effects of fuels treatment on the recreation resource would vary depending on the type of activity proposed, and would vary in temporal and size/space. While vegetation treatment units identified in the proposed action may take years to initiate, project work is expected take only months to complete considering unit layout, treatment type and annual funding. Therefore, only short-term direct effects to recreation users are expected when temporary closures of roads, trails, dispersed areas and developed parking areas are determined necessary, particularly in the vicinity of Nederland and the Gross Reservoir Recreation Area where recreation use is highly concentrated. Displacement is not measurable, and short-term impacts to the recreation resource are considered insignificant. In the event that a National Forest System trail (or proposed trail) is to be used as a skid road for treatment activities, then the effects would be minimized through use of the design criteria.

Any effects would be noticed from primarily from National Forest System trails and roads. While many enjoy recreational opportunities on non-National Forest System trails, known as social trails, these unauthorized trails are not actively managed, nor are the effects measureable. Therefore, effects from non-National Forest System trails are not analyzed. A summary of the National Forest System trails that could be affected can be found in Appendix B.

Due to the fragmented ownership and landscape within the project boundary, the forest setting changes across the project boundary. The sensitivities that recreationists would experience to vegetation treatment activities from forest visitors is difficult to measure, particularly when these treated areas evolve over time.

Sensitivities will vary by treatment activity, as well as by past visitor experience. For example, a patch cut of a lodgepole pine treatment may be offensive to a visitor whom had frequented the area before, whereas a new visitor may appreciate the opened viewshed of mountains and natural features that would otherwise be blocked from the forested view. These sensitivities are temporal as well; for the first few years after the treatment, visitors may see cut stumps and slash piles, evidence of a vegetation management activity. However, over time successional habitat would evolve and visitors may be attracted to wildflowers in the area and cover the cut stumps.

Sensitivities will vary by user type as well. A hiker along a trail would be move more slowly through or by a lodgepole pine treatment and therefore be more sensitive to the changed setting, whereas equestrian users would move more quickly, yet would notice the changed setting. Mountain bikers, generally speaking, would be more quickly and be focused on the trail and not taking in the surroundings.

Other treatment activities would allow for a range of trail enhancement opportunities. Denser stands would create a "tight and twisty" trail experience, whereas treatments in old growth stands would create a "park-like" setting for "open and flowy trails. This range would change as visitors traveled across the landscape within the project boundary.

Cumulative Impacts Common to Alternatives 1-4 on Key Issues (Recreation)

Implementation of actions as stated in the Magnolia Non-Motorized Trails Environmental Analysis in the East Magnolia area is planned to happen after Forsythe II vegetation treatments have occurred. Therefore, the Forsythe II project will not add cumulatively to the effects from the Magnolia Trails Non-Motorized Trails. The adaptive management portions of the Magnolia Non-Motorized Trails proposed actions allows Forsythe II Fuels Treatment Project, Recreation Specialist Report – Matt Henry

trails to be adjusted after the vegetation treatments to least impact recreation experience. Depending on the timing of the Gross Reservoir expansion and Boulder County's Reynolds Ranch fuels and trails projects, recreation users' experience and access in the Forsythe II project area could be negatively cumulatively compounded.

MITIGATION MEASURES AND PROJECT DESIGN CRITERIA

The following mitigation measures and project design criteria have been developed for recreation related resources during the planning process and are suggested for consolidation with other specialist recommendations to be incorporated into the Forsythe Fuels Project. Although briefly described in the proposed action, mitigation measures specific to this planning effort are identified here to provide clarity and ensure that implementation of the selected alternative complies with plan objectives, applicable laws, and USDA Forest Service policy. USDA, Forest Service Manuals and Handbooks cover the balance of mitigation measures, design criteria and monitoring activities not mentioned below and are hereby incorporated by reference. Adaptive management actions that address emerging health and safety issues will be implemented on a case-by-case basis.

MITIGATION MEASURES

No Action Alternative

Adaptive management actions would be used to mitigate health and safety issues will continue as they have in the past.

Alternatives 1-4

Adaptive management actions would be used to mitigate health and safety issues will continue as they have in the past. Mitigation measures are not necessary to the proposed action.

DESIGN CRITERIA

Design criteria are specific project design features/activities that are deemed necessary by program specialists, as required by Forest Service policy. This includes but is not limited to design criteria found in various Forest Service Manuals (FSM), directives, and related regulations. Additional recreation resource design criteria are provided below for emphasis.

Alternatives 1-4

1. All treatment areas would be reviewed by a U.S. Forest Service Landscape Architect prior to final unit layout. Units shall mimic the scale of natural openings where feasible and achieve a natural appearing shape. Unit boundaries shall be natural edges whenever possible and

prevent the appearance of uniform tree spacing and straight line unit boundaries. Straight line boundaries shall be treated by ‘feathering¹’ and ‘scalloping²’.

2. All recreation facilities (NFS roads, NFS trails, recreation sites) and infrastructure (such as gates, fences, sign kiosks, picnic tables) shall be protected from damage from all treatment activities. Any damaged facilities or infrastructure shall be repaired, replaced, or reconditioned to the level of the existing condition, or greater, to provide safe public access, as needed.
3. High use public access portals (such as trailheads and highly traveled trail corridors) would not be used for fuels treatment project work or long-term operations unless no other alternative exists. If used, safe public access on weekends would be provided. Fuels treatment work sites would be designed in a manner to allow safe public access even when occupied. Where this is not feasible, short-term forest orders closing fuels treatment areas to public access would be implemented, as needed, to ensure public safety, protect natural resources and improve effectiveness of project area objectives. Involve the Recreation Staff and/or Specialist through planning, implementation, and monitoring as needed.
4. Public outreach and notification shall occur prior to major project activities to raise public awareness. Local agency cooperators would be notified about the duration, intensity, and potential issues for the project work.
5. All temporary road construction, including skid trails, shall be obliterated within one year of completion of use. Project implementation, watershed, soil, and engineering personnel shall cooperate to determine appropriate obliteration methods.
 - a. Temporary road surfaces, including skid trails and landings, shall be decompacted along the entire road/skid trail length or landing area unless waived by Soil Scientist. Roads that were constructed with cut and fill shall be partially or fully recontoured or pitted. Roads that were constructed on the natural ground contour shall be pitted, subsoiled, or ripped.
 - Partial recontouring of the road prisms shall be utilized in areas where it is not feasible or beneficial to disturb soils previously unaffected by construction operations to stabilize a decommissioned temporary road. Factors such as steep slopes, large amounts of rock, or vegetation may impact a decision to utilize partial recontouring. Partial recontouring shall use available fill material from original construction. Fills shall be returned to, and compacted into, the cut removal area. No further ground disturbance involving cutting material shall occur. Handle soil to ensure that minimal segregation of materials occurs. Compaction may be by machine track or bucket. The recontoured surface shall be outsloped a minimum of 5% for the entire road prism width and no berms shall remain. Finished grades shall minimize drainage following the contour of the road, where necessary grade dips shall

¹ To ‘feather’ would be to go from a clearcut or maximum thinned density to existing stand density in 50 to 200 feet in a gradual progression.

² To ‘scallop’ would be to cut curvilinear edges of varying wavelength and amplitude for example, a short one followed by two long ones, and then a medium one, etc.

be installed along the grade to direct drainage off the disturbed area. Where high cut slopes are present, continue pulling up fill material and backfilling cut removal areas until no cut slope remains greater than 1:1 H:V in slope and two feet in height.

- Full recontouring of the road prisms shall be utilized in decommissioning temporary road segments where it is both feasible and advantageous to disturb soil previously unaffected by construction operations to completely recontour the road. Full recontouring shall include pull up of all fill material and place/compact into the cut removal area. Very little disturbance of the natural ground under the fill shall occur. The final slope area, over the entire width of the road prism, shall reproduce the pre-road natural slope. It shall blend in with the surrounding slope and no berms or windrows of any material shall remain.
6. Existing road conditions shall be assessed prior to implementation for all roads to be used for the project including County and private roads used to access National Forest lands. Roads shall be maintained in their existing condition through-out the project, if any widening or other improvements are required for the project these improvements shall be assessed at the completion of the project to determine if they are acceptable or need to be removed.
 7. Coordinate with road users, who would be impacted by the work, obtain access as necessary and contact information for any temporary closures or other coordination.
 8. Treatment units that already have off-road impacts and/or the potential for new and increased off-road vehicular use impacts are generally in areas that have a moderate or low slope angle (35% or less), and enough terrain to use the vehicle (four-wheel drive or all-terrain vehicles included). These areas would be protected from further encroachment of motorized vehicles by creating a buffer zone of no treatment or modification of treatment between the road, open for motorized travel, and the treatment area by installing fencing or other barriers made from natural materials (rock or wood). Buffer zones should be wide enough (minimum of 100 feet from edge of road) to discourage attempts at creating new routes. These areas would be identified with input from recreation staff and unit layout personnel prior to final unit boundary designation.

MONITORING

Forest Service interdisciplinary specialists would assist in design, monitor implementation and conduct long-term assessments to ensure success of the project. Refer to Table 4.

No Action Alternative— Monitoring activities and requirements remain unchanged.

Alternatives 1-4— Ensure that all fuels treatment project components are monitored consistent with Forest Service standards and guidelines (Forest Service Manual, Forest Service Handbook, Best Management Practices, etc.) as applicable to minimizing impact to the recreation resource.

Coordinate routine monitoring and compliance patrols with other local agencies and neighborhood watch volunteers.

Emphasize monitoring and compliance patrols during the interim start up period for fuels treatment projects and/or related forest orders intended for public health and safety or resource protection. Please refer to Table 2 for more information.

Table 2: Recommended Monitoring Activities

Item to be Monitored	Responsibility¹	Timing of Monitoring	Objective for Monitoring
Fuels Project Design, Layout and Implementation	FS Engineer, Recreation Planner, Landscape Architect, Implementation Crews, Contracting Officer	Before and During Project Implementation	To Ensure Compliance with Best Management Practices, Mitigation and Special Use Permit Requirements, and Contractual Agreements
Temporary Road Const. and Rehab work using existing Roads, Trails, and Recreation Sites.	FS Engineer, Recreation Staff, Contract Officer	Before During and After Project Implementation	To Retain, Sustain, and/or Improve NFS Road, Trail and Recreation Site Infrastructure.
Regulatory Compliance, Dispersed Parking and Area Closures	FS Recreation Staff, Law Enforcement Rangers, And Implementation Crews	During and After Project Implementation	To Ensure Compliance With Mitigation Requirements
Response To Education and Information	FS Recreation Staff And Implementation Crews	Before, During and After Project Implementation	To Evaluate The Success In Achieving Management Plan Objectives
General Visitor Use Statistics, Demo-Graphics and User Satisfaction	FS Recreation Staff, Visitor Use Monitoring Studies, Site Manager	Every Three Years as a By-Product Of Visitor Monitoring Study, Annual Counter Info.	To Evaluate Success In Achieving Management Plan Objectives

Forest Plan Consistency

All alternatives are consistent with the 1997 Revised Forest Plan for Recreation. Forest Plan goals, objectives, standards and guidelines. See Forest Plan references in preceding sections; FOREST PLAN pages 7-8, 34-37, 40-41, 62-65, 80-83, 100-104, and 106-108.

PROJECT RECORD SUPPORT DOCUMENTATION

Recreation Specialist Report For Forsythe Fuels Treatment. Perault, January 2012.

U.S. Department of Agriculture, Forest Service, 2010. *Motorized Vehicle Use Map*. Arapaho and Roosevelt National Forest and Pawnee National Grassland. Boulder Ranger District.

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Code of Federal Regulations, 2010. *Code of Federal Regulations, Title 36 Parks, Forests and Public Property, (Part 1 to End of Parts) as of December 31, 2011.*

Colorado State Parks, 2005 (as amended). *Colorado Statewide Outdoor Recreation Comprehensive Plan.*

Tourism and Recreation Program of Boulder County, 1998. *Peak to Peak Scenic and Historic Byway Corridor Management Plan.*

Tourism and Recreation Program, Nederland Colorado, 2002. *Peak to Peak Scenic and Historic Byway Visual Intrusion Reduction Plan*

APPENDIX A – Developed Recreation Sites and Non-USFS Related Recreation Use Sites

Recreation-Related Areas and Sites	Location	Maintenance Level/Jurisdiction/Comments
Forsythe Canyon Trailhead (Newly Const. Facility)	CR68/NFSR359	Facility Maintenance Level 3, USFS, open year-round.
Forsythe Canyon Trailhead (Obliterate Old Facility)	NFSR359/MM .19	Facility Maintenance Level 2, USFS, obliterated in 2012.
East Winiger Ridge Trailhead (New Facility)	NFSR359/End Terminus	Facility Maintenance Level 2, (DWB) seasonal closure 11/15 - 5/21.
Winiger Designated Dispersed Sites (1-26)	NFSR359, various locations	Designated Dispersed Campsites 1-14 (USFS), 15-26 (DWB), seasonal closure 11/15 – 5/21.
Front Range Trailhead (aka. Dot System/Boy Scout TH)	NRSR357.1/NFSR359.2	Facility Maintenance Level 2, (USFS) open year-round.
Osprey Trailhead/Car Top Boat Launch Facility	NFSR201.1A/Gross Res. HWM End Term.	Facility Maintenance Level 3, (DWB) open Memorial Day weekend through Labor Day weekend.
Reynolds Ranch/Platt Rogers Open Space	Northwest section of planning area	Boulder County Open Space, (Boulder County) trail connectivity and administrative access issues.
Walker Ranch Open Space	Northeast section of planning area	Boulder County Open Space, (Boulder County) trail connectivity/public and admin access to aqueduct.
Town of Nederland Trail System and Trailheads	Northwest section of planning area	Trail Maintenance Levels vary, (Town of Nederland) destination hub for trail and motorized connectivity.
West Magnolia – Trail System and Trailheads	West of planning area	Facility Maintenance Level 1 for Trailheads (5 ea.) and Trail Maintenance Level 3 for Trails, trail connectivity.
Peak to Peak St. Scenic Natl. Historic Byway	West of planning area	Preserve scenery and promote sustainable recreation opportunities that tie into driving for pleasure.
Barker Reservoir Trail System TH/Day Use Area	Northwest section of planning area	Facility ML 3 for facilities, and ML 4 for trails, (City of Boulder), trail connectivity, fishing.
Aqueduct-Barker Feed Line, Trail Use Issues	Northeast section of planning area	Aqueduct alignment, (City of Boulder), some segments provide trail connectivity, legal access
Golden Gate State Park	South of planning area	Maintenance Level 5-facilities, Maintenance Level 3-trails (State Parks)
Gross Reservoir Recreation Area Day Use/Trail System	Southern planning area	ML 4 for facilities, ML 3 for trails (Denver Water Board), FERC Boundary.

APPENDIX B – Project Area Trails within Treatment Units

Alternative 1 – Proposed Action

FORSYTHE FUELS TREATMENT PROJECT

The Boulder Ranger District of the Arapaho and Roosevelt National Forest and Pawnee National Grassland developed Alternative 1, Alternative 1, the proposed action, to address the purpose and need for this project as described in Chapter 1 of this document.

Alternative 1 would treat approximately 3,151 acres of the 9,930 acres of NFS lands within the project area. The proposed action includes 2,483 acres of mechanical/hand treatment and 968 acres of broadcast burning. A combination of mechanical/hand treatment and broadcast burning would occur on 300 acres. Additionally, 2,032 acres are analyzed for defensible space to provide permitted homeowners adjacent to NFS lands the ability to treat on NFS lands. Proposed management activities include thinning 1,449 acres of mixed conifer stands, patchcutting/clearcutting 741 acres of lodgepole pine stands, thinning 17 acres of regenerated lodgepole pine stands, cutting 276 acres of conifers within aspen and meadow/shrubland areas, and broadcast burning 968 acres). Reforestation treatments (tree planting of mixed conifer species) would occur in patchcuts/clearcuts. Timber stand improvement would occur in the future in areas patchcut/clearcut under this decision. Approximately 7 miles of temporary roads would be constructed to facilitate the vegetation management activities and would be decommissioned after the completion of treatment activities.

Slash created by these treatments could be removed offsite, piled and burned, chipped, and/or masticated. Where mechanized equipment is used, forest products would most likely be removed in the form of logs, chips, or firewood. After work is completed, firewood may be removed from the hand treatment units. Design criteria were developed and provide additional detail to the management activities described in Table 1 below.

Effects by Alternative

The following tables represent NFS trails, and associated mileages, within vegetation treatment units that could be impacted by treatment activities. Impacts include using these trails as skid roads and changing the recreational experience. Implementing the design criteria would alleviate effects to these trails.

Table 1. NFS trails within Alternative 1 treatment units.

Trail Number	Trail Name	Mileage	Treatment Unit	Vegetation Treatment	Treatment Method	Slash Treatment
357.2A	Yellow Dot	0.16	15	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.09	16	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.23	17	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.23	59	Douglas-fir Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
357.2B	Red Dot	0.12	104	Ponderosa Pine Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.03	15	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.07	16	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.11	17	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
357.2C	Blue Dot	<0.01	59	Douglas-fir Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.12	60	Douglas-fir Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.03	104	Ponderosa Pine Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.02	15	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
606.1D		0.21	67	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.06	15	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
RBRD 359.1M	Winiger Spur	0.07	67	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.16	38	Broadcast Burn		

Trail Number	Trail Name	Mileage	Treatment Unit	Vegetation Treatment	Treatment Method	Slash Treatment
RBRD 606.1D	Blue Dot	<0.01	11	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.06	14	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		<0.01	20	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.08	67	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
RBRD 606.1E	Tungsten Spur	0.07	7	Aspen Restoration	Manual	Chip and/or pile & burn
		0.28	9	Douglas-fir Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853	Reynolds Ranch	0.02	3	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.25	4	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853.1A	Reynolds Ranch Spur	0.04	4	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853.1B	Doe Tr.	0.07	2	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853.1C	Reynolds Ranch Spur	0.15	2	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.21	3	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853.1D	Star Wars (name from Magnolia Trails project)	0.22	4	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		TOTAL		3.2 miles		

Alternative 2

FORSYTHE II FUELS TREATMENT PROJECT Alternative 2

The Boulder Ranger District of the Arapaho and Roosevelt National Forest and Pawnee National Grassland developed Alternative 2 to address wildlife, soils, and hydrology concerns while still meeting the purpose and need for this project as described in Chapter 1 of this document.

Alternative 2 would treat approximately 2,325 acres of the 9,930 acres of NFS lands within the project area. The proposed action includes 1,657 acres of mechanical/hand treatment and 968 acres of broadcast burning. A combination of mechanical/hand treatment and broadcast burning would occur on 291 acres. Additionally, 2,862 acres are analyzed for defensible space to provide permitted homeowners adjacent to NFS lands the ability to treat on NFS lands. Proposed management activities include thinning 1,141 acres of mixed conifer stands, patchcutting/clearcutting 308 acres of lodgepole pine stands, thinning 8 acres of regenerated lodgepole pine stands, cutting 200 acres of mixed conifer stands, and meadow/shrubland areas, and broadcast burning 968 acres. Reforestation treatments (tree planting of mixed conifer species) would occur in patchcuts/clearcuts. Timber stand improvement would occur in the future in areas patchcut/clearcut under this decision. Approximately 7 miles of temporary roads would be constructed to facilitate the vegetation management activities and would be decommissioned after the completion of treatment activities.

Slash created by these treatments could be removed offsite, piled and burned, chipped, and/or masticated. Where mechanized equipment is used, forest products would most likely be removed in the form of logs, chips, or firewood. After work is completed, firewood may be removed from the hand treatment units. Design criteria were developed and provide additional detail to the management activities described in Table 2 below.

Effects by Alternative

The following tables represent NFS trails, and associated mileages, within vegetation treatment units that could be impacted by treatment activities. Impacts include using these trails as skid roads and changing the recreational experience. Implementing the design criteria would alleviate effects to these trails.

Table 2. NFS trails within Alternative 2 treatment units.

Trail Number	Trail Name	Mileage	Treatment Unit	Vegetation Treatment	Treatment Method	Slash Treatment
357.2A	Yellow Dot	0.16	15	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.09	16	Douglas-fir Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.17	17	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.23	59	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
357.2B	Red Dot	0.12	104	Ponderosa Pine Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.04	15	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.07	16	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.11	17	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
357.2C	Blue Dot	<0.01	59	Douglas-fir Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.03	104	Ponderosa Pine Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.02	15	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.21	67	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
606.1D		0.07	15	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.07	67	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
RBRD 359.1M	Winger Spur	0.16	38	Broadcast Burn		
RBRD 606.1D	Blue Dot	<0.01	11	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.06	14	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		<0.01	20	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site

Trail Number	Trail Name	Mileage	Treatment Unit	Vegetation Treatment	Treatment Method	Slash Treatment
		0.08	67	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
RBRD 606.1E	Tungsten Spur	0.07	7	Aspen Restoration	Manual	Chip and/or pile & burn
		0.09	9	Douglas-fir Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853	Reynolds Ranch	0.15	4	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853.1C	Reynolds Ranch Spur	0.03	2	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.15	3	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853.1D	Star Wars (name from Magnolia Trails project)	0.22	4	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
TOTAL		2.4 miles				

Alternative 3

FORSYTHE II FUELS TREATMENT PROJECT

The Boulder Ranger District of the Arapaho and Roosevelt National Forest and Pawnee National Grassland developed Alternative 3 to address wildlife, soils, and hydrology concerns while still meeting the purpose and need for this project as described in Chapter 1 of this document.

Alternative 3 would treat approximately 2,713 acres of the 9,930 acres of NFS lands within the project area. The proposed action includes 2,045 acres of mechanical/hand treatment and 968 acres of broadcast burning. A combination of mechanical/hand treatment and broadcast burning would occur on 296 acres. Additionally, 2,200 acres are analyzed for defensible space to provide permitted homeowners adjacent to NFS lands the ability to treat on NFS lands. Proposed management activities include thinning 1,358 acres of mixed conifer stands, patchcutting/clearcutting 383 acres of lodgepole pine stands, thinning 17 acres of regenerated lodgepole pine stands, cutting 287 acres of conifers within aspen and meadow/shrubland areas, and broadcast burning 968 acres. Reforestation treatments (tree planting of mixed conifer species) would occur in patchcuts/clearcuts. Timber stand improvement would occur in the future in areas patchcut/clearcut under this decision. Approximately 5 miles of temporary roads would be constructed to facilitate the vegetation management activities and would be decommissioned after the completion of treatment activities.

Slash created by these treatments could be removed onsite, piled and burned, chipped, and/or masticated. Where mechanized equipment is used, forest products would most likely be removed in the form of logs, chips, or firewood. After work is completed, firewood may be removed from the hand treatment units. Design criteria were developed and provide additional detail to the management activities described in Table 3 below.

Effects by Alternative

The following tables represent NFS trails, and associated mileages, within vegetation treatment units that could be impacted by treatment activities. Impacts include using these trails as skid roads and changing the recreational experience. Implementing the design criteria would alleviate effects to these trails.

Table 3. NFS trails within Alternative 3 treatment units.

Trail Number	Trail Name	Mileage	Treatment Unit	Vegetation Treatment	Treatment Method	Slash Treatment
357.2A	Yellow Dot	0.16	15	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.09	16	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.12	104	Ponderosa Pine Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
357.2B	Red Dot	0.03	15	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.07	16	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
357.2C	Blue Dot	0.03	104	Ponderosa Pine Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.02	15	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.21	67	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
606.1D		0.06	15	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.07	67	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
RBRD 359.1M	Wimiger Spur	0.16	38	Broadcast Burn		
RBRD 606.1D	Blue Dot	0.06	14	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		< 0.01	20	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.08	67	Aspen Restoration	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
RBRD 606.1E	Tungsten Spur	0.07	7	Aspen Restoration	Manual	Chip and/or pile & burn
		0.28	9	Douglas-fir Mixed Conifer Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853	Reynolds Ranch	0.02	3	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.18	4	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853.1B	Doe Tr.	0.07	2	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site

Trail Number	Trail Name	Mileage	Treatment Unit	Vegetation Treatment	Treatment Method	Slash Treatment
853.1C	Reynolds Ranch Spur	0.15	2	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853.1D	Star Wars (name from Magnolia Trails project)	0.21	3	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.20	4	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site

TOTAL 2.3 miles

Alternative 4

FORSYTHE FUELS TREATMENT PROJECT

The Boulder Ranger District of the Arapaho and Roosevelt National Forest and Pawnee National Grassland developed Alternative 4 to address wildlife, soils, and hydrology concerns while still meeting the purpose and need for this project as described in Chapter 1 of this document.

Alternative 4 would treat approximately 2,855 acres of the 9,930 acres of NFS lands within the project area. The proposed action includes 2,187 acres of mechanical/hand treatment and 968 acres of broadcast burning. A combination of mechanical/hand treatment and broadcast burning would occur on 300 acres. Additionally, 878 acres are analyzed for defensible space to provide permitted homeowners adjacent to NFS lands the ability to treat on NFS lands. Proposed management activities include thinning 1,449 acres of mixed conifer stands, patchcutting/clearcutting 445 acres of lodgepole pine stands, thinning 17 acres of regenerated lodgepole pine stands, cutting 276 acres of mixed conifers within aspen and meadow/shrubland areas, and broadcast burning 968 acres. Reforestation treatments (tree planting of mixed conifer species) would occur in patchcuts/clearcuts. Timber stand improvement would occur in the future in areas patchcut/clearcut under this decision. Approximately 7 miles of temporary roads would be constructed to facilitate the vegetation management activities and would be decommissioned after the completion of treatment activities.

Slash created by these treatments could be removed onsite, piled and burned, chipped, and/or masticated. Where mechanized equipment is used, forest products would most likely be removed in the form of logs, chips, or firewood. After work is completed, firewood may be removed from the hand treatment units. Design criteria were developed and provide additional detail to the management activities described in Table 4 below.

Effects by Alternative

The following tables represent NFS trails, and associated mileages, within vegetation treatment units that could be impacted by treatment activities. Impacts include using these trails as skid roads and changing the recreational experience. Implementing the design criteria would alleviate effects to these trails.

Table 4. NFS trails within Alternative 4 treatment units.

Trail/Number	Trail/Name	Mileage	Treatment Unit	Vegetation Treatment	Treatment Method	Slash Treatment
357.2A	Yellow Dot	0.16	15	Aspen Restoration	Manual	Chip and/or pile & burn
		0.09	16	Lodgepole Pine Treatment	Manual	Chip and/or pile & burn
		0.23	17	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.23	59	Douglas-fir Mixed Conifer Treatment	Manual	Chip and/or pile & burn

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Trail Number	Trail Name	Mileage	Treatment Unit	Vegetation Treatment	Treatment Method	Slash Treatment
357.2B	Red Dot	0.12	104	Ponderosa Pine Mixed Conifer Treatment	Manual	Chip and/or pile & burn
		0.03	15	Aspen Restoration	Manual	Chip and/or pile & burn
		0.07	16	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.11	17	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
357.2C	Blue Dot	< 0.01	59	Douglas-fir Mixed Conifer Treatment	Manual	Chip and/or pile & burn
		0.12	60	Douglas-fir Mixed Conifer Treatment	Manual	Chip and/or pile & burn
		0.03	104	Ponderosa Pine Mixed Conifer Treatment	Manual	Chip and/or pile & burn
		0.02	15	Aspen Restoration	Manual	Chip and/or pile & burn
606.1D		0.21	67	Aspen Restoration	Manual	Chip and/or pile & burn
		0.06	15	Aspen Restoration	Manual	Chip and/or pile & burn
RBRD 359.1M	Winiger Spur	0.07	67	Aspen Restoration	Manual	Chip and/or pile & burn
		0.16	38	Broadcast Burn		
RBRD 606.1D	Blue Dot	< 0.01	11	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.06	14	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		< 0.01	20	Aspen Restoration	Manual	Chip and/or pile & burn
		0.08	67	Aspen Restoration	Manual	Chip and/or pile & burn
RBRD 606.1E	Tungsten Spur	0.07	7	Aspen Restoration	Manual	Chip and/or pile & burn
		0.28	9	Douglas-fir Mixed Conifer Treatment	Manual	Chip and/or pile & burn
853	Reynolds Ranch	0.02	3	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.25	4	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853.1A	Reynolds Ranch Spur	0.04	4	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853.1B	Doe Tr.	0.07	2	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
853.1C	Reynolds Ranch Spur	0.15	2	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site

Trail Number	Trail Name	Mileage	Treatment Unit	Vegetation Treatment	Treatment Method	Slash Treatment
853.1D	Star Wars (name from Magnolia Trails project)	0.21	3	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site
		0.22	4	Lodgepole Pine Treatment	Mechanical/Manual	Pile & burn and/or chip and/or masticate and/or remove off-site

TOTAL 3.2 miles

APPENDIX C – Forest Plan Direction

RECREATION-RELATED FOREST PLAN DIRECTION

MANAGING FOR RECREATIONAL USERS

Goal (GO) 133 - Ensure that all management activities are consistent with the adopted Recreation Opportunity Spectrum (ROS) class as shown on *ROS decision map* enclosed with this document.

GO 134 - Encourage outfitters and guides to provide desired recreational experiences within the resource capacity of the area.

Guideline (GL) 139 - Manage vegetation in high-use recreational areas to provide for public safety and to improve forest health, as needed to maintain or improve the desired recreational settings(s).

Dispersed Recreation

GO 140. Manage trail development at a broad scale to coordinate with trail systems developed by municipalities, counties, states, other federal agencies and partners.

GO 141. Consider loop trails where appropriate for all trail networks.

Standard (ST) 142. Make facilities provided at trailheads consistent with the recreational setting and provide for parking, trail information, and appropriate sanitation facilities.

GL 143. For trail-system analyses and decisions, include consideration of universal design for all new construction or rehabilitation proposals.

GL 144. Close, rehabilitate, or otherwise mitigate dispersed sites when:

- a. campsite condition reaches Frissell class 4 (heavy) or 5 (severe)
- b. site occupancy exceeds the adopted visual quality objective
- c. there are social use conflicts
- d. unacceptable environmental damage is occurring

GL 145. If use exceeds the area's capacity for a given recreation opportunity spectrum (ROS) class, employ the following management actions, in order of priority, to address the impacts or effects on the recreational setting:

- a. inform the public and restore or rehabilitate the site
- b. regulate use
- c. restrict the number of users
- d. close the site

Developed Recreation

ST 147. Develop and implement vegetative management plans for all developed sites to enhance the natural setting and maintain or develop the desired vegetation.

ST 148. Camping stay limits may be set to meet management objectives.

ST 149. Make facilities provided at trailheads consistent with the recreational setting and provide for parking, trailhead panels for trail information, and appropriate sanitation facilities.

ST 150. At all new or reconstructed developed recreational sites, provide a range of universally-accessible opportunities within the limits of the site characteristics.

GL 151. Provide readily available off-site and on-site information on recreational opportunities for developed sites.

GL 152. When campground occupancy in peak season is less than 20 percent, conduct analysis to decide whether to close the campground.

GL 153. Each Ranger District should document backlogged maintenance and rehabilitation needs and associated costs, and update at intervals not exceeding two years.

Infrastructure

ST 175. Protect or enhance trails to be retained as part of the designated travelway system during other resource projects, but relocate, reconstruct, or otherwise keep functional and maintain the ROS experience of those disrupted by other management activities. Give special consideration to nationally-designated trails.

ST 176. Designated travelways displayed on the *forest visitor map*, and newly constructed travelways, are open to motorized-vehicle use unless a documented decision shows that:

- a. motorized use conflicts with *Forest Plan* objectives
- b. motorized use is incompatible with the Recreation Opportunity Spectrum class
- c. travelways are located in areas closed to motorized use and are not "designated routes"
- d. motorized use creates user conflicts that result in unsafe conditions unrelated to weather conditions
- e. physical characteristics of travelways are hazardous for motorized use
- f. travelways do not serve an existing or identified future public need
- g. financing is not available for maintenance necessary to protect resources

On all lands outside of designated travelways, motorized use with wheeled vehicles is restricted unless the *forest visitor map* or a Forest Order indicates that use is specifically allowed. Snow machine use on snow is allowed unless specifically restricted.

GL 182. Develop new trail systems to expand the range of recreational opportunities, provide for user safety, and disperse existing use into different areas.

APPENDIX D – Additional Road and Trail Guidance

As stated in the Forest Plan (page vii), applicable laws, regulations and policies are part of management direction even though they may not be restated in the Forest Plan. The following is a brief summary of relevant management direction not necessarily included in the Forest Plan.

1. Adding roads to the system

FSM 7703.12 requires that the addition of new roads to the system should occur only where resource management objectives and benefits are clearly demonstrated and where long-term funding obligations have been carefully considered. FSM 7703.12, 7703.26 requires that addition of new roads to the forest transportation system must be informed by a travel analysis conducted at an appropriate scale, as well as appropriate site-specific environmental analysis and public involvement. FSM 7703.26 requires that long-term road funding opportunities and obligations must be considered in the decision to add roads to the system.

2. Decommissioning of temporary and other roads

FSM 7703.24 states that temporary roads are to be maintained as provided in the contract, permit, lease, or other written authorization for those roads and must be decommissioned at the conclusion of the authorized activity. FSM 7703.25 states that unauthorized roads, temporary roads, and any NFS roads no longer needed for the use and management of NFS lands should be decommissioned. FSM 7734.01 states that vegetative cover be reestablished on the road within 10 years after it is determined that a road is no longer needed.

3. Travel Analysis

36 CFR 212.5(b) requires the responsible official to identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands. In determining the minimum road system, the responsible official must incorporate a science-based roads analysis at the appropriate scale and, to the degree practicable, involve a broad spectrum of interested and affected citizens, other state and federal agencies, and tribal governments

FSM 7712 states to use travel analysis (FSH 7709.55, ch. 20) to inform decisions related to identification of the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of NFS lands per 36 CFR 212.5(b)(1) and to inform decisions related to the designation of roads, trails, and areas for motor vehicle use per 36 CFR 212.51, provided that travel analysis is not required to inform decisions related to the designation of roads, trails, and areas for those administrative units and ranger districts that have issued a proposed action as of January 8, 2009. A roads analysis conducted at the scale of an administrative unit that was completed in accordance with Publication FS-643, "Roads Analysis: Informing Decisions About Managing the National Forest Transportation System," satisfies the requirement to use travel analysis relative to roads.

FSM 7712.3 states that travel analysis is not a decision-making process. Travel management decisions are site-specific decisions. FSM 7715 states that travel management decisions include adding a route to or removing a route from the forest transportation system, constructing an NFS road or NFS trail, acquiring an NFS route through a land purchase or exchange, decommissioning a route, approving an area for motor vehicle use, or changing allowed motor vehicle classes or time of year for motor vehicle use (FSM 7715). FSM 7712.3 states that Travel analysis is not required to advise decisions to decommission unauthorized routes, including those discovered through monitoring.

4. Transportation atlas and Road Management Objectives

36CFR 212.2 requires that for each administrative unit of the National Forest System, the responsible official must develop and maintain a travel management atlas, which is to be available to the public at the headquarters of that administrative unit. A forest transportation atlas does not contain inventories of temporary roads

According to FSM 7714, road management objectives (RMOs) and trail management objectives (TMOs) document the intended purpose, design criteria (FSM 2353.26 and 7720), and operation and maintenance criteria (FSM 2353.25 and 7730.3) for each NFS road and NFS trail. RMOs and TMOs require written approval by the responsible official and are included in the applicable forest transportation atlas (FSM 7711.2, para. 2a).

5. Highway Safety Act

Roads open to travel for passenger cars (low clearance vehicles) are subject to the Highway Safety Act. These are objective maintenance Level 3-5 roads. Signs on roads subject to the Highway Safety Act must comply with the Manual for Uniform Traffic Control Devices (MUTCD). For the safety of the public, contractors, and Forest Service employees, and to reduce Forest Service liability, the latest MUTCD guidelines for permanent and temporary signing and use of certified flaggers on all roads in the project should be followed. According to Forest Service policy, all signs shall comply with the latest version of EM-7100-15.

Roads

- Temporary roads are to be closed and rehabilitated. The closure may include tillage with a winged subsoiler or tillage implement, use of waterbars or reverse waterbars, covered with slash, and/or provided a sufficient barrier to prevent trespass. Reverse waterbars are used in tillage operations on steeper slopes and involve angling the tractor away from the skid and lifting the shanks out of ground, moving ahead about a foot, and beginning the tillage operation again in line with the route being treated. These reverse water bars should be spaced appropriately based on slopes at similar distances to regular waterbars.
- Obliterate temporary roads at conclusion of project implementation. Reclamation work to include as needed on specific temporary roads would include the following actions:
 - Pulling culverts and restoring stream crossings to natural grade.
 - Re-establishing natural drainage patterns with waterbar placement.
 - Seeding or planting along the ripped or recontoured sections with native vegetation.
 - Recontouring the road prism to the original land contours for the entire disturbed length.