



United States Department of Agriculture

Verde Trails and Access Plan Environmental Assessment



Yavapai
COLLEGE



For More Information Contact:

Tom Palmer
Verde Ranger District
300 E Hwy 260.
Camp Verde, AZ 86322
tpalmer01@fs.fed.us
928-567-1114

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at http://www.ascr.usda.gov/complaint_filing_cust.html and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.

Contents

Introduction	1
Location of the Proposed Project Area	1
Need for the Proposal.....	2
Public Involvement and Tribal Consultation	2
Proposed Action.....	3
Environmental Impacts.....	22
Trails and Recreation	22
Scenery Management.....	28
Soils and Hydrology.....	33
Wildlife	39
Cultural Resources	41
Range	43
Minerals and Geology.....	44
Agencies and Persons Consulted	45
List of Preparers	47
References	48
Appendix A. Resource Protection Measures and Best Management Practices	49
Cultural Resources	49
Wildlife	49
Soils.....	49
Hydrology	51
Range	51
Trails	52
Noxious Weeds	53
Sensitive Plant Species.....	54

List of Tables

Table 1. Proposed New Trail Construction	8
Table 2. Proposed Existing Trail Decommissions.....	13
Table 3. Proposed Forest Road Decommission / Status Change.....	16
Table 4. Proposed Dispersed Staging Areas (DSAs)	18
Table 5. SIO Levels of Proposed Trails	30
Table 6. 6 th field HUC watersheds found within the VTAP project area.....	33

List of Figures

Figure 1. Verde Trails and Access Plan (VTAP) project area map.....	1
Figure 2. 6 th Level Sub-Watersheds associated with the VTAP Project	35
Figure 3. Signage example 1	53
Figure 4. Signage example 2	53

Introduction

The Verde Ranger District (Verde RD) of the Prescott National Forest (Prescott NF) is proposing to improve non-motorized trail opportunities in the Verde Valley by constructing new trails and dispersed staging areas, and decommissioning some existing trails and forest system roads. We prepared this environmental assessment to inform the public of this proposal and to determine whether effects of the proposed activities may be significant enough to prepare an environmental impact statement. By preparing this environmental assessment, we are fulfilling agency policy and direction to comply with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations.

Location of the Proposed Project Area

The project is located on the Verde RD, with projects grouped into one of six areas, as shown below in Figure 1.

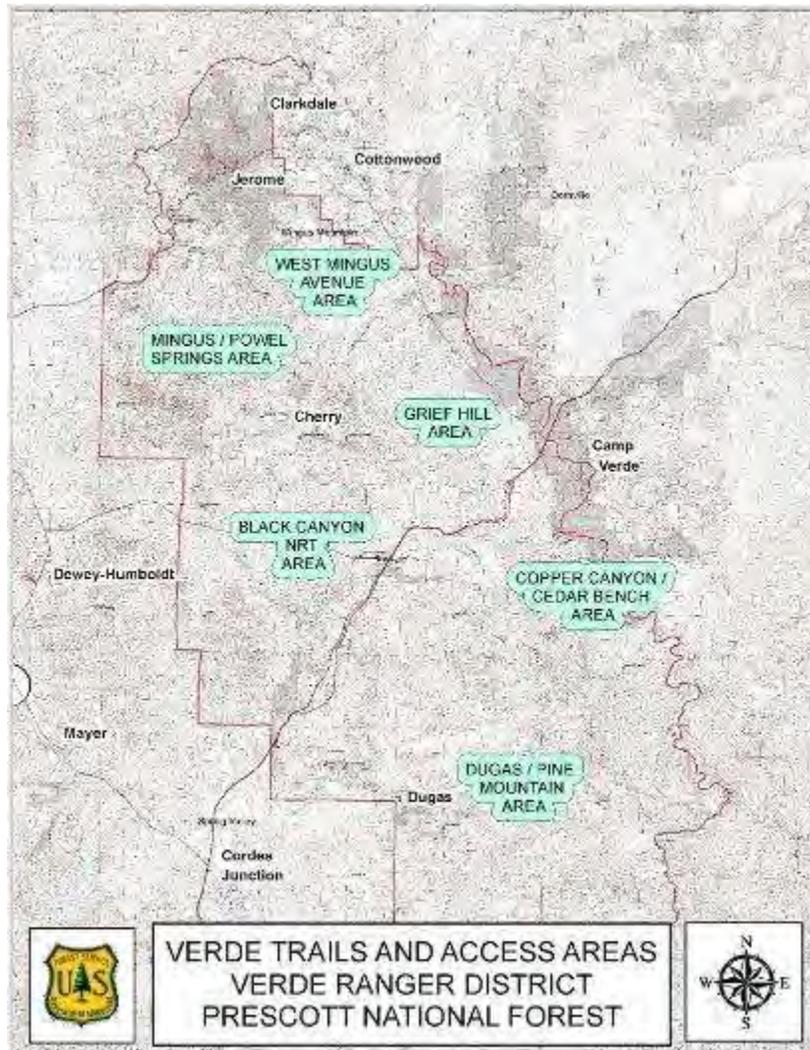


Figure 1. Verde Trails and Access Plan (VTAP) project area map

Need for the Proposal

Starting in 2008 the Prescott NF engaged individuals, local trail user groups, and various local governments in developing a recreation strategy for Central Arizona that focuses efforts on building and maintaining sustainable recreation infrastructure. The need for additional non-motorized trails and access was identified by the local communities in 2010. Beginning in 2010, the Verde Front Trails Committee worked collaboratively with the Forest Service to further develop sustainable trail proposals to meet the needs identified. The cities of Camp Verde, Cottonwood, and Clarkdale as well as the Black Canyon Trail Coalition also submitted specific sustainable trail proposals. In addition, the Prescott NF identified trail additions, decommissions, and adoptions in an effort to address existing trail and general forest area access deficiencies, resource impacts, and non-motorized and motorized trail connectivity.

The Prescott NF must consider this proposal in relation to our overarching 2015 Land and Resource Management Plan for the Prescott National Forest (hereinafter referred to as the Forest Plan), as this plan was developed in collaboration with the public to provide a framework for forest management over a 10 to 15 year period. This project fits with that plan in the following ways: Both motorized and non-motorized trail systems consist of interconnecting loops, as well as trails that connect communities or other non-Prescott NF destinations. Motorized and non-motorized opportunities are generally separated. Visitors and citizen use of trails that provide opportunities for their desired experiences, and “unofficial” trails are not evident. Trailheads provide parking and access to trails where there is a critical need. (Forest Plan, pg. 115).

Objectives intended to move the forest toward providing sustainable recreation objectives opportunities include: construct or improve facilities at 5 to 20 trailheads; protect, relocate, or rehabilitate 2 to 5 recreation areas or locations (including trails) that show evidence of resource damage; implement 5 to 10 management actions on trails to meet desired conditions. (Forest Plan, pgs. 62-63)

Sustainable recreation evaluates the social, economic, and environmental implications of a project, and favors proposals that create resiliency in these three core areas. This project fits within the Prescott National Forest’s sustainable recreation goals by providing improved access and opportunities for trail users on the forest while addressing social, economic, and environmental factors. It is economically sustainable because we anticipate construction and maintenance to be completed primarily by volunteers and grant funding. Additionally, creating more access points and trail loop opportunities will enhance the draw to this community and facilitate potential event opportunities. Creation of a well-designed trail system makes this project environmentally sustainable by significantly reducing soil erosion and providing for more effective and efficient long-term management of trail use on the Verde Ranger District while restoring the natural ecosystem. This project is socially sustainable as it is the culmination of a collaborative process developed and supported by diverse recreation user groups; is intended to reduce trail user conflicts by providing more opportunity and spreading out use across a larger, more connected trail system, thus improving the quality of life for local residents and other visitors.

Public Involvement and Tribal Consultation

The proposal was listed in the Schedule of Proposed Actions beginning in January 2017. The proposed action was provided to the public and other agencies for comment during scoping that began on May 5, 2017. The schedule of proposed actions is available on the Prescott NF website at <http://www.fs.fed.us/sopa/forest-level.php?110309>. Information and documents for this project may be viewed at <https://www.fs.usda.gov/project/?project=51507>

The Verde RD hosted two open meetings on May 24 and 25 2017 to discuss the project. Fifteen responses were received during the scoping period for this project and helped inform the development of the proposed action. Some comments and suggestions were incorporated into the Environmental Assessment (EA) as project design features or mitigations. No comments on the proposed action were received from Native American groups during the scoping period.

Proposed Action

This proposal would approve the creation of 132 miles of new trails, 30 dispersed staging areas, and two designated dispersed recreation areas totaling 7,127 acres. The proposal would decommission 21 miles of existing trails, 9.6 miles of National Forest System (NFS) roads and 2 user created staging areas. Roads and trails may be decommissioned using several methods; physical barriers (boulders/gates), ripping, seeding, brushing, or, if appropriate, left as is and signed closed. The trail projects include new construction, reroutes, adoption of sustainable user created routes, and decommissions.

The majority of the proposed 128 miles of multi-use non-motorized trails will be designed for pack and saddle (equestrian) use but will also be open to hikers and bikers. Thoughtful design and signing is expected to minimize user conflicts.

Although this analysis focuses on non-motorized opportunities, 4.3 miles of trail designed for 50-inch and less motorized travel were identified to address trail connectivity, public safety and resource conditions. The primary purpose for action is to provide additional trail opportunities, (motorized events in the Hayfield Draw Area and general riding access in the Ryal Canyon / Box T trail network near Copper Canyon), improve trail connectivity, reduce or limit resource damage and mitigate public safety concerns.

Trail construction will be completed by a combination of volunteers, partner organizations, and Forest Service personnel. Construction methods could include hand tools or mechanized equipment to create a 12 to 36-inch wide trail tread for non-motorized trails and 50-inch wide trails for motorized use. Easy open and close equestrian and personnel gates will be placed at fence intersections on non-motorized trails. Equestrian or personnel gates and all-terrain vehicle (ATV) cattle guards will be placed at fence intersections on multi-use trails. Thoughtful trail design coupled with easy open and close gates and ATV cattle guards will minimize the number of fence / trail intersections and minimize conflicts with livestock management.

Trail segments will be designed by using sustainable design and construction methods to follow the natural contour of the terrain and use reversals in grade (undulation of the trail surface) to achieve drainage for water. Using the natural terrain contours create a more moderate incline for the user, significantly reduces and or limits resource damage or erosion on trails and reduces long-term maintenance costs. Obliteration of sections of unsustainable trail and restoration of gullies on fall line trails will be achieved through covering the disturbed area with brush, rocks, and logs and water bars to prevent further erosion.

These actions will allow for more natural hydrologic conditions. Signs indicating “restoration in progress” will be installed to ensure old trail segments are not used. It is expected that maintenance of proposed trails will be completed through a combination of volunteers, partners, grants, and Forest Service trail crews. Trail maintenance costs will range from \$200 to \$2,000 per mile depending on sustainability of design and brush component on the individual trails.

Trails not currently part of the authorized trail system are considered non-system or social trails and are unauthorized. These trails were developed as a result of frequent visitor use, unsanctioned construction, or historical mining and ranching activities.

The unauthorized trails being considered for inclusion in the authorized system in no way sanctions new unauthorized construction of trails by individuals or groups. No person should infer from this proposal that future unauthorized trails will be considered for inclusion in the authorized trail system. Constructing unauthorized trails is punishable as a Class B Misdemeanor under Title 36 Code of Federal Regulations 261.10(a) with a maximum penalty of \$5,000 or six months imprisonment.

Approximately 43 miles of non-motorized trails are proposed in three inventoried roadless areas (IRA): Black Canyon, 8 miles; Ash Creek, 10 miles; and Grief Hill, 25 miles. Inventoried roadless areas refer to those areas identified and mapped in accordance with the Roadless Area Conservation Final Rule (2001 Roadless Rule). Reference 36 Code of Federal Regulations, Part 294 and 66 Federal Register 3244-3272 (Jan. 12, 2001).

The definition of a roadless area for the 2001 Roadless Rule includes undeveloped areas, typically exceeding 5,000 acres, that met the minimum criteria for wilderness consideration under the Wilderness Act and that were inventoried during the Forest Service's Roadless Area Review and Evaluation (RARE II) process, subsequent assessments, or forest planning efforts. It prohibits road construction, reconstruction, and timber harvest. Inventoried roadless areas provide many things including large undisturbed landscapes that are important for clean water, biological strongholds and diversity, as well as opportunities for dispersed recreation such as hiking, camping, wildlife viewing, and hunting.

Several IRAs, including the ones previously mentioned, were evaluated for recommendation as wilderness during the Forest Plan revision process, however, Black Canyon, Ash Creek, and Grief Hill were not carried forward in the final version as recommended wilderness. Although the Forest Service management of IRAs is similar to designated Wilderness and must maintain the values or features for which they were originally considered for inclusion to the National Wilderness Preservation System, current roadless policy allows for greater management flexibility to include the construction of both non-motorized and motorized trails when analyzed at the local level. This proposal does not include the development of motorized trails but it does not preclude it. Trails proposed in the above mentioned IRAs will be designed to accommodate hiking, biking and equestrian users. Signing and engineering controls will be implemented to restrict and prohibit motorized uses.

Approximately 7,127 acres are proposed as designated dispersed recreation areas (DDRA); West Mingus Avenue Project (1,888 acres) and Grief Hill Project (5,239 acres). DDRA's are designed to prescribe the appropriate uses for a given area so as to reduce user conflicts, mitigate health and safety risks and resource impacts. The DDRA's are proposed as part of this project to ensure public health and safety of the projected concentrated hiking, biking and equestrian use within the West Mingus Avenue and Grief Hill project areas. A Forest Order would be required to implement the each of the DDRA's and associated prohibitions. If both DDRA's are approved in the final decision, it is expected that the West Mingus Avenue DDRA would be implemented in 2018 and the Grief Hill DDRA would be implemented a few years later. Prior to implementing the Grief Hill DDRA, a functional trail system will need to be constructed and available for public use.

West Mingus Avenue Area

The proposed action for this project area includes the construction of 23 miles of new non-motorized trails including connections to Yavapai College, adjacent housing developments, and to the existing Black Canyon Trail #114. Adoption of a small number of sustainable social trails and new construction using mechanized equipment and hand crews is proposed.

Yavapai College is interested in hosting a public trailhead at their Verde Valley Campus but can only allow access to hikers and bikers. This trailhead would have paved access and parking, trail information, and possibly restrooms. The trailhead and associated trails on Yavapai College property and adjacent housing development are not part of this decision.

Trails within the project area will accommodate non-motorized uses and include design features to limit user conflicts. A stacked loop system of trails is proposed that will offer trail opportunities of varying lengths and difficulty.

Minor improvements to the existing staging area that was created during the Compensation and Liability Act (CERCLA) action are proposed. These include the installation of one or more information kiosks, trail access gates that restrict motorized use, and trail signage. Additional amenities may include an accessible ramadas, vault toilet and picnic tables.

A 1,888 acre DDRA is proposed to mitigate safety and resource concerns. Within the DDRA boundary recreational shooting, camping, and campfires will be prohibited. Hunting will be allowed in accordance with Arizona State Game and Fish Department (AZGFD) regulations. Trailhead facilities within the DDRA will be restricted to day use only.

Anticipated or potential partnerships include City of Cottonwood, Yavapai College, Town of Clarkdale, Arizona Hang Gliders and Paragliders Association, Verde Valley Cyclist, and Back Country Horseman of Central Arizona. These entities may support joint maintenance of the trailhead facilities and funding for construction and maintenance of the trail system as well as law enforcement patrols.

Grief Hill Area

The proposed trail actions for this area includes the development of a non-motorized trail network based out of and adjacent to the existing Grief Hill Trailhead. This trail system will accommodate hikers, bikers, and equestrian users. Trails within the project area will accommodate non-motorized uses and include design features to limit user conflicts.

The Grief Hill Trailhead will continue to support opportunities for off-highway vehicle (OHV) users but will be modified to provide defined areas within the trailhead that separate OHV and equestrian staging.

Trail actions include construction of approximately 15 miles of non-motorized trails (including a segment of the BCNRT). Redesign of the existing trailhead to remove access to Forest Road 9650C (FR 9650C) from the trailhead and creation of an access point for FR 9650C in close proximity to the current location. Forest Road 9650B will be closed to the general public. FR 9650B will be reclassified as an administrative use road that will provide access for grazing permittee and forest service personnel. Additional modifications to the trailhead may

include enlarging the site to separate equestrian and OHV staging, replacing wood perimeter posts with steel pipe fencing and installing accessible information kiosks, ramadas, BBQ grills, and vault toilet.

The proposed trail system will anchor into the proposed Black Canyon National Recreation Trail on the north and east sides of the project area. It will consist of a stacked loop design offering various lengths and levels of difficulty. Adoption of a small number of sustainable social trails and new construction using mechanized equipment and hand crews is proposed.

A 5,239 acre Grief Hill DDRA is proposed to mitigate safety and resource concerns. Within the DDRA boundary recreational shooting, camping and campfires will be prohibited. Hunting will be allowed in accordance with Arizona State Game and Fish Department regulations. Trailhead facilities within the DDRA will be restricted to day use only.

Anticipated or potential partnerships include Town of Camp Verde and Black Canyon Trail Coalition, Back Country Horseman of Central Arizona, Arizona Off-road Tours, and Verde Valley Cyclist. These entities may support joint maintenance of the trailhead facilities and provide funding or volunteer labor for construction and maintenance of the trail system as well as law enforcement patrols

Black Canyon National Recreation Trail Area

The proposed trail actions for Black Canyon National Recreation Trail (BCNRT) area includes extending the BCNRT 37 miles through the Prescott National Forest from Russian Well (near Mayer, AZ) to the Verde River. The non-motorized trail for equestrians, hikers and mountain bikers will follow portions of the Historic Stock Driveway and use existing segments of the General Crook National Recreation Trail (GCNRT).

The BCNRT will pass through the existing General Crook Trailhead approximately one mile south of State Highway 169 on County Road 168 (CR 168) and the Grief Hill Trailhead on CR 75 (Cherry Road). It will cross under State Highway 260 via box culverts near the existing Hayfield Draw OHV trailhead and will terminate at the Verde River. Adoption of a small number of sustainable social trails and new construction using mechanized equipment and hand crews is proposed.

Proposed Dispersed Staging Area (DSA) actions in the area include the development of Orme, Johnson Wash, Mistake Tank, East Crook and West Crook DSAs. Orme DSA is located at the intersection with CR 169 (Orme Road) and Forest Road 9602W. Johnson Wash and Mistake Tank DSAs are located adjacent to, and north of, State Highway 169 on the east side of Interstate 17. West Crook DSA is located at the western terminus of the General Crook NRT near Whitehorse subdivision and East Crook DSA is located east of Interstate 17 on Forest Road 732 (Squaw Peak Road). These DSAs will provide access to both the BCNRT and the GCNRT.

Anticipated or potential partnerships include Town of Camp Verde, Black Canyon Trail Coalition, Back Country Horseman, and Verde Valley Cyclist. These entities may support joint maintenance of the trailhead facilities and funding or volunteer labor for construction and maintenance of the trail system as well as law enforcement patrols.

Mingus / Powell Springs Area

The proposed trail actions for Mingus and Powell Springs Area includes 41 miles of non-motorized trails. Mingus Mountain has a number of existing trails currently but lack overall connectivity to each other and good trail

information and access. Mingus is a popular summer time destination for campers. There are two developed campgrounds (Potato Patch and Mingus) that host 65 RV and Tent campsites as well as a reservation group site that can support up to 100 people. When these campgrounds are full there is potential to have over 500 campers on the mountain. There are also several day use facilities for site seeing, picnicking, and hiking or mountain biking. In addition to sites there is a nationally known hang-glider and paraglider launch site and exclusive use campground with over 20 camping sites.

The existing Summit Day-Use and Picnic Area is proposed to serve at a connection point for Mingus Mountain Trails and will replace several user created access points (Bug Hollow, Upper Mescal, Butterfly). New proposed trail additions will connect existing trail opportunities directly to the day use area.

The developed campgrounds (Mingus Tent and RV, Potato Patch, Playground Group site) and day use sites (Mingus Picnic, Summit, Trail 105 trailhead) will have direct connections to the Mingus and Woodchute Wilderness trail systems to improve overall connectivity and access.

Powel Spring Campground will provide access to a six mile loop opportunity and access to Ash Canyon Trail and Mingus Mountain trail system.

Copper Canyon / Cedar Bench Area

The proposed trail actions for Copper Canyon and Cedar Bench include a ½ mile reroute of the Oxbow trail to mitigate private land access conflicts and 2.87 miles of multi-use (50-inch and under ATVs) trails to improve connection to the Squaw Peak Mine area, the Great Western Trail, Copper Canyon Trailhead, and TR 545 (Camp Verde Trail) access to Hayfield Draw OHV area. Decommission of the 3.9 miles of TR 513 (Tomkins Trail) is proposed to mitigate an unsustainable section of trail and public safety concerns. The proposed TR 568 will provide sustainable access to TR 511 and connectivity to Squaw Peak, the Dugas Area, and the Great Western Trail.

Dugas / Pine Mountain Area

The proposed trail actions for the Dugas / Pine Mountain Area is limited to a .77 mile extension of TR 071 (Salt Flat Trail) to TR 161 (Verde Rim Trail) which will provide a new loop opportunity and overall connectivity to the Pine Mountain trail system. Decommission of 1.9 miles of TR 072 (Double T Trail) is proposed to mitigate private land access conflicts and resource impacts due to unsustainable steep grades.

Details on the individual trail proposals and trailhead proposals are listed by area in the tables below (mileage is rounded to the nearest tenth)

Table 1. Proposed New Trail Construction

Trail Number	Name	Project Map Reference	Managed Uses	Trail Class	Description	Length (miles)
0028	Yeager Canyon	Mingus / Powell Springs	Horse, Hike, Bike	3	Extension of Yeager Canyon Trail to FR 151	1.66
0029	Yeager Down 1	Mingus / Powell Springs	Bike	3	Proposed route by PGTC / PMBA	5.80
0064	General Crook	Black Canyon NRT	Horse, Hike, Bike	2	Reroute of General Crook Trail to avoid private land	3.18
0071	Salt Flat	Dugas /Pine Mountain	Horse, Hike, Bike	1	Extend trail and prohibit motorized travel past tank	0.77
0105	North Mingus	Mingus / Powell Springs	Horse, Hike, Bike	2	Extension of North Mingus Trail to make loop with Powerline Trail	1.02
0110	Gaddes	Mingus / Powell Springs	Horse, Hike, Bike	2	Extension to connect to Ash Canyon Trail	1.59
0110	Gaddes	Mingus / Powell Springs	Horse, Hike, Bike	3	Extension of Gaddes Trail	0.40
0163	Oxbow	Copper Canyon / Cedar Bench	Horse, Hike, Bike	2	Reroute of Oxbow Trail to avoid private land	0.56
0500	Yeager Down 2	Mingus / Powell Springs	Bike	3	Proposed route by PGTC / PMBA	2.10
0505	Oasis	Copper Canyon / Cedar Bench	Hike, Bike	2	Connection to Copper Canyon Trailhead and TR 545 from community /owned maintained trailhead /info center	1.88
0507	Alan Canyon	Copper Canyon / Cedar Bench	Multi-use	2	Connection from Squaw Peak Mine system roads	0.68
0515	Dry Lakes	Mingus / Powell Springs	Horse, Hike, Bike	2	Connection from Mingus View Trailhead to Coleman & Gaddes Canyon	2.22
0519	Kendall Peak	Mingus / Powell Springs	Horse, Hike, Bike	2	Connection from Grapevine Gulch to Ash Canyon Trail	3.35

Trail Number	Name	Project Map Reference	Managed Uses	Trail Class	Description	Length (miles)
0520	Strawberry Spring	Mingus / Powell Springs	Horse, Hike, Bike	2	Connection to Ash Canyon Trail	3.54
0529	Geronimo Butte	Mingus / Powell Springs	Horse, Hike, Bike	3	New trail to top of butte	3.99
0531	Potato Patch	Mingus / Powell Springs	Hike & Bike	2	Campground connection to Woodchute Trail	0.59
0533	Little Yeager Canyon	Mingus/ Powell Springs	Horse, Hike, Bike	2	Reroute of Little Yeager Canyon Trail to avoid poor soils and reduce unnecessary mileage	0.65
0534	Quail Springs	West Mingus Avenue	Horse, Hike, Bike	2	Makes a loop back to Black Canyon Trailhead	5.17
0535	Copper Chief	West Mingus Avenue	Horse, Hike, Bike	2	West Mingus connection to Black Canyon	7.09
0536	Butterfly	Mingus / Powell Springs	Horse, Hike, Bike	3	New extension of Butterfly Trail to Summit Trailhead	1.76
0538	West Rim	Mingus / Powell Springs	Horse, Hike, Bike	2	Extension of West Rim Trail to connect with Powerline Trail	1.19
0539	Ash Canyon	Mingus /Powell Springs	Horse, Hike, Bike	2	Powell Springs Campground connection to Ash Canyon Trail	5.64
0550	Upper Mescal	Mingus / Powell Springs	Horse, Hike, Bike	2	Connection from campground to Mingus trail system	0.60
0551	Blowout	West Mingus Avenue	Horse, Hike, Bike	3	West Mingus trail system	3.68
0552	Higher Learning	West Mingus Avenue	Horse, Hike, Bike	2	West Mingus trail system	3.29
0553	Frontside	West Mingus Avenue	Hike Only	3	West Mingus trail system	0.42

Trail Number	Name	Project Map Reference	Managed Uses	Trail Class	Description	Length (miles)
0554	Mesquite Hills	West Mingus Avenue	Hike & Bike	3	West Mingus trail system	0.38
0555	Mingus Rim 1	Mingus / Powell Springs	Horse, Hike, Bike	3	1 st section of new Mingus Rim Trail	0.80
0555	Mingus Rim 2	Mingus / Powell Springs	Horse, Hike, Bike	3	2 nd section of new Mingus Rim Trail	1.73
0555	Mingus Rim 3	Mingus / Powell Springs	Horse, Hike, Bike	3	3 rd section of new Mingus Rim Trail	1.16
0555	Mingus Rim 4	Mingus / Powell Springs	Horse, Hike, Bike	3	4 th section of new Mingus Rim Trail	2.52
0556	Blowout Butte	West Mingus Avenue	Hike Only	3	West Mingus trail system	0.74
0557	Bullseye	West Mingus Avenue	Horse, Hike, Bike	3	West Mingus trail system	1.37
0558	Flowing Well	West Mingus Avenue	Hike & Bike	3	West Mingus trail system	0.26
0559	Campus	West Mingus Avenue	Hike & Bike	3	West Mingus trail system	0.38
0560	Wilbur	Grief Hill	Multi-use	2	Critical motorized trail connection to Cottonwood loop	1.44
0561	Black Canyon NRT	Black Canyon NRT	Horse, Hike, Bike	2	Black Canyon Trail extension onto National Forest	37.54
0562	Oxtail	Black Canyon NRT	Horse, Hike, Bike	2	General Crook connector	0.46
0563	Hull Hill	Grief Hill	Horse, Hike, Bike	2	Grief Hill trail system	5.19
0564	Basalt	Grief Hill	Horse, Hike, Bike	2	Grief Hill trail system	1.65
0565	Good Grief	Grief Hill	Horse, Hike, Bike	2	Grief Hill trail system	1.03

Trail Number	Name	Project Map Reference	Managed Uses	Trail Class	Description	Length (miles)
0566	Powell Springs	Mingus /Powel Springs	Horse, Hike, Bike	2	Powell Springs Campground trail system	3.21
0567	Grapevine Gulch	Mingus / Powell Springs	Horse, Hike, Bike	2	Existing pack trail; bring onto system	2.85
0567	Grapevine Gulch	Mingus / Powell Springs	Horse, Hike, Bike	2	Extension of existing trail along old road bed and new construction	2.31
0568	Lucky Canyon	Copper Canyon / Cedar Bench	Multi-use	2	Motorized trail reroute to avoid unsustainable grades on TR 513	2.19
0569	Table Mountain	Grief Hill	Horse, Hike, Bike	2	New trail to connect to Camp Verde Trail TR 545, creates additional loop opportunity	2.27

Proposed Trail Decommissions

Trail Decommission actions include 15 trails totaling 20.43 miles including 12.0 miles of non-motorized and 8.43 miles of motorized routes. Several factors including current trail use, trail sustainability, soils / wildlife concerns, private land access conflicts, public safety and proposed new trails influenced the decision to propose these trails for decommission. The decommissioning of following trails is initial attempt to balance out the addition of new desired trails, long term maintenance costs and resource protection with an ultimate goal of providing economically and environmentally sustainable and relevant access to public lands. Table 2 below provides descriptions of these factors for each trail.

Table 2. Proposed Existing Trail Decommissions

Trail Number	Name	Project Map Reference	Managed Uses	Trail Class	Description	Length (miles)
0064	General Crook	Black Canyon NRT	Pack and Saddle	2	Decommission and reroute north of Hwy 169 in alignment with BCNRT and to avoid private land issues near Interstate 17.	3.34
0072	Double T	Dugas /Pine Mountain	Pack and Saddle	2	Decommission -Unsustainable grade, low public use and private lands access conflict.	1.89
0105	North Mingus	Mingus / Powell Springs	Pack and Saddle	2	Decommission – private land access conflicts, new trail connection makes this trail unnecessary.	0.12
0163	Oxbow	Copper Canyon / Cedar Bench	Pack and Saddle	2	Decommission and Reroute necessary to avoid private land access conflicts.	0.18
0501	Yeager Mine	Mingus / Powell Springs	Pack and Saddle	2	Decommission – Old mining road, unsustainable grades.	1.01
0502	Mingus View	Mingus / Powell Springs	Pack and Saddle	2	Decommission – Dead end trail, unsustainable location on old road bed.	1.01
0512	Quail Spring Ranch	West Mingus Avenue	All-Terrain Vehicle	2	Decommission -Unsustainable Grades, High Risk Soils, trail use not evident.	2.15
0513	Tomkins	Copper Canyon / Cedar Bench	All-Terrain Vehicle	2	Decommission - Unsustainable Grades, high risk soils and public safety.	3.94
0516	Silver	West Mingus	Pack and Saddle	2	Decommission - Old Mining access no longer needed	0.91
0530	Old Dump	Mingus / Powell Springs	Pack and Saddle	2	Decommission - Duplicate Route that is no longer necessary	0.28
0532	Sheep	Mingus / Powell Springs	Pack and Saddle	2	Decommission - Unsustainable grades, in stream management zone, private land access conflict.	2.37
0533	Little Yeager Canyon	Mingus / Powell Springs	Pack and Saddle	2	Decommission - Not necessary, leads to wrong location for combined trailhead.	0.38
0536	Butterfly	Mingus/ Powell Springs	Pack and Saddle	2	Decommission - Mitigate sensitive species concerns and unsafe parking along FR 104.	0.18

Trail Number	Name	Project Map Reference	Managed Uses	Trail Class	Description	Length (miles)
0550	Upper Mescal	Mingus / Powell Springs	Pack and Saddle	2	Decommission -Poor access along busy state Hwy 89A	0.32
9601	Marlow	Dugas / Pine Mountain	All-Terrain Vehicle	2	Decommission – no legal access / does not occur on the ground	0.71
9706	Medlar Springs	Mingus / Powell Springs	Motorcycle	2	Decommission - Trail barely exists and not used, in stream management zone and private land access conflicts.	2.34

Road Decommissions

Road Decommission actions include 12 roads totaling 9.58 miles of level 2 high clearance motorized routes. Several factors including current road use, road sustainability and watershed health influenced the decision to propose these routes for decommission.

From 1987 through 1989, the Prescott NF engaged in a Resource Access / Travel Management (RATM) process that included a site-specific inventory of many existing roads and trails on the forest. This process captured many non-system roads and travel routes that were subsequently included in the Forest Service database (INFRA) but have not been part of the actual National Forest Service Road system (NFSR). They are not, nor have they ever been on the Motor Vehicle Use Map (MVUM). FR 9603D falls into this category, and is among the roads identified for closure on the Verde RD in the Decision Memo for Amendment Four to the 1987 Prescott Forest Plan. It is included in this analysis as part of the mitigation efforts to improve watershed conditions

Table 3 below provides the proposed action and a rationale for each route.

Table 3. Proposed Forest Road Decommission / Status Change

Road Number	Project Map Reference	Operational Maintenance Level	Action	Description	Length (miles)
0338	Mingus / Powell Springs	2 - High Clearance Vehicles	Decommission	Close and obliterate to improve watershed health Road converted to trail (TR 105) at mile post 1.8	0.35
0359	West Mingus Avenue	2 - High Clearance Vehicles	Status Change	Close to public (administrative use only - FS / grazing permittee)	0.11
9002S	Mingus / Powell Springs	2 - High Clearance Vehicles	Decommission	Close road to improve watershed health and to address private land issues	0.28
9003P	Mingus / Powell Springs	1 - Basic Custodial Care (Closed)	Decommission	Close and obliterate to improve watershed health	1.03
9603D	Copper Canyon / Cedar Bench	2 - High Clearance Vehicles	Decommission	RATM Road authorized for removal from NFSR System.	1.23
9604C	Grief Hill	2 - High Clearance Vehicles	Decommission	Road closed at Goddard Tank to improve watershed health	2.21
9710J	West Mingus Avenue	2 - High Clearance Vehicles	Decommission	Road is unnecessary; close to improve watershed health	1.15
9603X	Grief Hill	2 - High Clearance Vehicles	Status Change	Close to public (administrative use only - FS / grazing permittee)	0.34
9605P	West Mingus Avenue	2 - High Clearance Vehicles	Decommission	Close and obliterate to improve watershed health	0.58
9650B	Grief Hill	2 - High Clearance Vehicles	Status Change	Close to public (administrative use only - FS / grazing permittee)	1.20
9710E	West Mingus Avenue	2 - High Clearance Vehicles	Decommission	Oak Wash Priority Watershed – close to improve watershed health	0.60
9710F	West Mingus Avenue	2 - High Clearance Vehicles	Decommission	Close and obliterate to improve watershed health	0.50

Dispersed Staging Areas

Staging area and trailhead actions include the adoption, improvement, new construction, and decommission of dispersed staging areas. Staging area improvement and new construction may include defining each staging area boundary with boulders, adding surfacing materials, improving drainage to ensure all season use and installation of information kiosks that would display recreational opportunities, travel management information and other critical forest notices. At some locations ATV cattle guards and person/equestrian gates may be installed to ensure appropriate uses of the trails. Although basic development is planned initially, this decision will allow management flexibility to address changing social or environmental conditions.

Additional amenities such as ramadas, picnic tables, BBQ grills, and vault toilets may be added at key staging areas based on changing public use and resource needs. Staging area decommissions may include site rehabilitation, signing and barriers to restrict motorized access.

Table 4. Proposed Dispersed Staging Areas (DSAs)

Name	New or Existing	Project Map Reference	Size	Action	Description
Box T	Existing / User Created	Copper Canyon / Cedar Bench	1 acre	Adopt / Improve	This DSA is adjacent to Salt Mine Road and portal to Box T Multi use trail.
Brush Basin	Existing / User Created	Dugas / Pine Mountain	1 acre	Adopt / Improve	This DSA is adjacent to FR 68D (Reimer Road). This DSA is at the southern terminus of the Box T Trail.
Bug Hollow	Existing / User Created	Mingus /Powell Springs	1 acre	Decommission	This DSA is adjacent to Hwy 89A near Mingus Summit Day Use.
Chasm Creek	New	Copper Canyon / Cedar Bench	1 acre	Construct	This DSA is adjacent to FR 574 and would provide access to Cedar Bench Wilderness.
Cherry North	Existing / User Created	Black Canyon NRT	1 acre	Adopt / Improve	This DSA is adjacent to CR 75 (Cherry Road) and FR 361.
Cherry South	New	Black Canyon NRT	1 acre	Construct	This DSA is adjacent to CR 75 and FR 132. This DSA would serve as a mid-district portal for the Great Western Trail as well as general recreation opportunities in the area.
Cold Water	New	Dugas / Pine Mountain	1 acre	Construct	This DSA is adjacent to FR 68 and serves as a portal to Cedar Bench Wilderness.
Crook East	New	Black Canyon NRT	1 acre	Construct	This DSA is adjacent to FR 732 (Squaw Peak Road) and would provide access to the general Crook and proposed Black Canyon NRT.
Crook West	New	Black Canyon NRT	1 acre	Construct	This DSA is adjacent to FR 323 (Old Cherry Road) and lies at the western terminus of the General Crook NRT (on the Prescott Forest)
Dry Lake	Existing	Mingus /Powell Springs	1 acre	Improve / Enlarge	This DSA is adjacent to FR 104A and provides access to the Coleman Trail. Parking is limited to 1 or 2 small cars.

Name	New or Existing	Project Map Reference	Size	Action	Description
Dugas	Existing / User Created	Dugas / Pine Mountain	1 acre	Adopt / Improve	This DSA is adjacent to CR 171 (Dugas Road) and would serve as a portal to the south-eastern portion of the Verde RD.
Estler East	Existing / User Created	Dugas / Pine Mountain	1 acre	Adopt / Improve	This DSA is adjacent to CR 171 and Intersects with FR 9650R.
Estler West	Existing / User Created	Dugas / Pine Mountain	1 acre	Adopt / Improve	This DSA is currently a popular camping area. This DSA would provide staging and information for all forest users.
Gaddes	New	Mingus / Powell Springs	1 acre	Construct	This DSA is located below the Mingus Tower. Parking is limited. This action will move the DSA closer to FR 104 to improve user access.
Gap Creek	Existing	Copper Canyon / Cedar Bench	1 acre	Improve	This existing DSA at the end of FR 574 serves as portal to Cedar Bench Wilderness and the Verde River. Trailhead and boat launch / take out site.
Grapevine	New	Mingus / Powell Springs	1 acre	Construct	This DSA is at the terminus of FR 9002V on the western boundary of the Verde RD.
Johnson Wash	Existing / User Created	Black Canyon NRT	1 acre	Adopt / Improve	This DSA is adjacent to Hwy 169 and portal to Black Canyon and General Crook NRT as well as FS road system.
Medlar Spring	Existing / User Created	Mingus / Powell Springs	1 acre	Adopt / Improve	This DSA is at the terminus for FR 9004A and would serve the proposed Ash Canyon Trail and access to Mingus Mountain / Powell Springs Trails.
Mescal	Existing / User Created	Mingus / Powell Springs	1 acre	Adopt / Improve	This DSA is adjacent to Hwy 89A just west of Jerome. This DSA would provide close access to towns of Jerome, Clarkdale and Cottonwood to Mingus Trail System and recreation area.

Name	New or Existing	Project Map Reference	Size	Action	Description
Mingus	Existing / User Created	Mingus /Powell Springs	1 acre	Adopt / Improve	This DSA is adjacent to FR 104 and at the intersection with FR 413. Would serve as portal to the Dispersed Camping area outside the Mingus Recreation Area and provide info for trails and other opportunities in the area.
Mistake Tank	Existing / User Created	Black Canyon NRT	1 acre	Adopt / Improve	This DSA is adjacent to Hwy 169 and portal to Black Canyon and General Crook NRT as well as FS road system.
Orme	Existing / User Created	Black Canyon NRT	1 acre	Adopt / Improve	This DSA is at the intersection of FR 9602W and FR 9709U in the SW corner of the District. This DSA would provide staging for the Black Canyon NRT and motorized opportunities in the area.
Oxbow	New	Dugas / Pine Mountain	1 acre	Construct	This DSA is adjacent to FR 68 and serves as a portal to Cedar Bench Wilderness.
Reimer	Existing / User Created	Dugas / Pine Mountain	1 acre	Adopt / Improve	This DSA is adjacent to FR 68D just north of CR 171. This DSA would provide general info for recreation opportunities.
Ryal Canyon	Existing / User Created	Copper Canyon / Cedar Bench	1 acre	Adopt / Improve	This DSA is on land that is currently in private ownership. The Town of Camp Verde is pursuing an acquisition and development OHV Grant from AZ State parks to purchase and develop this trailhead in partnership with the Prescott NF (This trailhead is not part of this decision.)
Salt Cedar	New	Copper Canyon / Cedar Bench	1 acre	Construct	This DSA area is on FR 574 just east of the intersection with Salt Mine Road and the turn off to Beasley Flats Day Use Area.
Squaw Peak East	New	Copper Canyon / Cedar Bench	1 acre	Construct	This DSA is adjacent to Salt Mine Road and FR 138. This DSA would provide access to the Squaw Peak Trail and Squaw Peak Mine roads in the area

Name	New or Existing	Project Map Reference	Size	Action	Description
Squaw Peak West	Existing / User Created	Copper Canyon / Cedar Bench	1 acre	Adopt / Improve	This DSA provides direct access to the Squaw Peak Trail.
Sycamore	Existing / User Created	Dugas / Pine Mountain	1 acre	Adopt / Improve	This DSA is adjacent to FR 677 and south of FR 68E. This DSA would serve as the portal for the Great Western Trail.
Upper Mescal	Existing / User Created	Mingus /Powell Springs	1 acre	Decommission	This DSA is adjacent to Hwy 89A near Mingus Summit Day Use Area.
Wilbur Canyon	Existing / User Created	West Mingus Avenue	1 acre	Adopt / Improve	This DSA is adjacent FR 360 and just south of Hwy 260.
Yeager	New	Mingus /Powell Springs	1 acre	Construct	This DSA is adjacent to FR 151 just south of Hwy 89A on the Western edge of the Verde RD. This DSA would serve the Prescott area for access to Mingus Mountain Trail System.

Maps of all trail proposals and trailhead proposals are depicted on the overview and area maps listed below. Maps may be viewed at http://data.ecosystem-management.org/nepaweb/nepa_project_exp.php?project=51507 on the Analysis tab under Project Documents. These maps reflect only general trail locations because GPS field verification is incomplete. These maps are meant to facilitate analysis of potential resource concerns, assist with issue identification, and to reflect the intended recreation experience. Potential reroutes of many unauthorized trails are reflected in these maps.

Map 1. VTAP Overview

Map 2. Area A - West Mingus Avenue DDRA

Map 3. Area B - Grief Hill DDRA

Map 4. Area C - Mingus /Powell Springs

Map 5. Area D - Black Canyon NRT

Map 6. Area E - Copper Canyon / Cedar Bench

Map 7. Area F - Dugas / Pine Mountain

Environmental Impacts

This section summarizes the potential impacts of the proposed action for each associated resource. Resources that were not associated and therefore not further analyzed include Vegetation and Fuels Management, Lands, Minerals, and Special Uses.

Each of the specialists conducted an analysis of cumulative effects on their resource resulting from this project. The cumulative effects analysis in this environmental assessment focuses on those past, ongoing, and reasonably foreseeable actions and activities that may have effects that overlap in both time and space with the direct and indirect effects of the proposed action or alternatives. Such a relationship defines relevancy for the cumulative effects analysis.

Trails and Recreation

This section summarizes the potential impacts of the proposed action on recreational trail opportunities within the project analysis area.

Background

Plan Components

Desired conditions for the Verde Valley Management Area include: abundant and varied recreation opportunities, including developed campgrounds, designated dispersed camping, day-use areas, and both motorized and non-motorized trail use. Evidence of overuse should be minimal at all recreation sites. Trails are well maintained and trailheads have space to safely handle parking demand. Information on recreation opportunities is available at obvious and convenient locations. Trail systems consist of interconnecting loops, as well as trails that connect communities or other non-Prescott NF destinations, motorized and non-motorized opportunities are generally separated, and “unofficial” trails are not evident. (Forest Plan, DC-VV MA 3-6).

Objectives intended to move the forest toward providing sustainable recreation opportunities which fulfill desired conditions include: construct or improve facilities at 5 to 20 trailheads; protect, relocate, or rehabilitate 2-5 recreation areas or locations (including trails) that show evidence of resource damage; implement 5-10 management actions on trails to meet desired conditions. (Forest Plan: Obj-11, 16, and 17; DC-Rec-1 and DC-Rec-2 Trails; DC-Transportation and Facilities-1)

Recreation Opportunity Spectrum

The Recreation Opportunity Spectrum (ROS) is a classification system that identifies a continuum of settings, activities, and recreation experiences. It is used to inventory and classify large areas based on national criteria involving physical, social, and managerial attributes, mostly classifying recreation opportunities as they exist. (Forest Plan, Chapter 1 pg. 11- ROS)

New Trail Construction / adoption activities proposed within this project area are within three primary ROS designations; Semi Primitive Motorized (SPM) 55 miles, Roaded Natural (RN), 36 miles and Semi primitive Non-

Motorized (SPNM), 34 miles. The remainder (7 miles) occurs in Roaded Modified (RM) and Rural (R) designation, 5 miles and 2 miles respectively.

Both SPM and SPNM offer some isolation from man-made sights, sounds, and management controls, a predominately unmodified environment, and few visitors. Roaded Natural areas offer about equal opportunities for isolated experiences and opportunities to interact with other groups with generally natural landscapes and subtle managerial controls.

Dispersed Staging Areas both new construction and adoption / improvements occur within RN designation (20 DSA's) and the remainder are split equally between SPM and RM with four DSA's in each designation. The existing Grief Hill Trailhead is also located in the RN designation.

Community Landscape Vision – Cottonwood/Verde Valley

The community vision for recreation in Cottonwood and the Verde Valley, as described in Appendix C of the Forest Plan, includes the following statements:

All recreationists—including anglers, birders, hunters, hikers, bicyclists, equestrians, gun enthusiasts, river runners, hang gliders and off-highway vehicle drivers—respect and utilize the forest in harmony with each other and the environment.

A system of non-motorized multiuse trails connects communities, allows access to public lands and encourages people to improve health and vitality by exploring the outdoors. Roads and selected areas are managed for responsible use of off-highway vehicles, while other areas are set aside for protection or managed for non-motorized uses.

Existing Conditions

Trails and Trailheads

The Verde RD has a total of 178 miles of trails with 55 miles designed for 50-inch and less motorized travel and 123 miles of non-motorized trails primarily designed for pack and saddle use, many of which lack connectivity with other trail systems and developed access / staging areas to accommodate parking for a variety of users.

There are two moderately developed trailheads that have restrooms, ramadas and barbeque grills with parking lot surfacing and defined by steel pipe rail fencing (Copper Canyon and Hayfield Draw), and three low development sites that have modified parking surface (Gravel) with a defined site boulder boundaries and Information Kiosk, and twelve low development sites that may have gravel surfacing with or without defined site boulder boundaries and no information kiosks.

Roughly 67 trails, both motorized and non-motorized, exist on the Verde RD with only 22 of these that have a defined access point many of which are not designed or of adequate size to support the variety of users, particularly equestrian users. A majority of the remainder of trails that can be accessed by the current road systems have undeveloped user created parking areas.

General Dispersed Access

The Verde RD contains approximately 110 miles of state and county maintained roads that provide general access to approximately 400 miles of forest roads. A good portion of these roads are high clearance roads not accessible by passenger cars. At junctions with county roads particularly user created pullouts / staging areas have been created over time that allow forest users places to park and hikes / ride horses and or unload Off highway vehicles. These user created staging areas are effective but lack definition and appropriate drainage and surfacing. Erosion and expansion continue to occur.

Wilderness, Roadless Areas and Verde Wild and Scenic River Access

The Verde RD has three designated Wilderness Areas (Cedar Bench, Pine Mountain and Woodchute) totaling roughly 25,000 acres and six inventoried roadless areas (Arnold Mesa, Ash Creek, Black Canyon, Grief Hill, Hackberry and Pine Mountain Contiguous) totaling over 47,000 acres.

The Verde River begins on the Chino RD near Sullivan Lake and flows through the towns of Clarkdale, Cottonwood and Camp Verde on the Verde RD. The Scenic portion of the designated Wild and Scenic River begins near Beasley Flats Day Use and terminates near Childs on the Coconino NF.

Developed Recreation

The Verde RD provides primarily dispersed recreation opportunities but has a small number of developed sites designed for camping, fishing and boating access. Mingus Mountain recreation area contains two developed campgrounds hosting 65 tent and RV sites and is open seasonally from May 1 to October 31. Mingus Lake - a small fishing pond, and Playground Group campground, offer additional opportunities within the area. These sites are moderately developed with vault toilets, trash service, and limited electric and water amenities.

Powel Springs Campground, a historic campground built by the Civilian Conservation Corps, provides eleven campsites and is the only non-fee developed campground on the Verde RD. This campground is popular with hunters and Great Western Trail users.

Seven boating, fishing, and picnic sites (Skidmore Lane, Black Canyon, Bignotti, Sheep Crossing, White Bridge, Clear Creek, and Beasley Flats) provide multiple day-use opportunities along the Verde River.

The district also manages one rental cabin (Sycamore) in the Dugas area that is open year round and is about one mile from the Great Western Trail.

Environmental Consequences

Trail Opportunities

The proposal to construct, reroute, and adopt 132 miles of new and user-created trails and obliterate 20 miles of existing trails on the Verde RD will primarily have positive benefits to the social, economic, and environmental resources of the forest and the surrounding communities. The proposal works to meet the following points for DC-Rec-2 Trails from Chapter 2; Forest-wide Desired Conditions in the Forest Plan.

Trail opportunities are available in a variety of settings that provide differing levels of challenge and seclusion.

This proposal spans the entire Verde RD and proposes new trails in a variety of recreation settings from highly developed urban areas (e.g. Oasis Trail and West Mingus Area Trails) to remote primitive type wilderness settings (Oxbow Trail in Cedar Bench Wilderness, trails in Black Canyon, Grief Hill, and Ash Creek Inventoried Roadless Areas (IRA)).

Trail routes include both point-to-point trails that connect communities and interconnected loops of varying lengths.

The proposal to extend the Black Canyon National Recreation Trail exemplifies meeting the point to point connections as this trail will connect the north side of Phoenix to the Verde Valley. The proposal also works to meet the desired condition to have trail loop opportunities of varying lengths by the proposed additions on top of Mingus Mountain, West Mingus Ave, Grief Hill, and the proposals that connect campgrounds and other developed recreation sites to the existing trail system.

On designated maintenance level 2 NFS roads, motorized vehicles and their operators comply with State motor vehicle regulations.

The addition of the motorized Wilbur Trail connects existing motorized trail systems associated with Hayfield Draw through the use of FS level 2 roads.

Trails and trailheads meet the needs of the intended recreation use.

The proposal to authorize 29 dispersed staging areas works to provide appropriate facilities for the designed recreation use at various trailheads.

Trail systems meet the diverse needs of a growing population.

The proposal attempts to link the existing system of trails to provide for more diversity of opportunities from the short work out hike or ride to multiday backcountry adventures for both motorized and non-motorized users.

Conflicts between various types of trail activities are addressed and resolved.

The proposal works to mitigate potential conflicts before they occur by establishing trails of a variety of allowed uses. The proposal to establish two Mountain Bike specific trails for downhill use will provide opportunities for this growing use and make this type of use on shared trails less prevalent. There are also a few trails located in the West Mingus area that do not allow equestrian use as it is incompatible with the access to the neighborhoods and the desired recreation experience for some of these trails.

Resource impacts due to trail location and use are identified and mitigated.

The 20 miles of trail decommissioning works to address the existing impacts to resources as well as the 8 miles of trail identified for reroutes are proposed to mitigate resource and access related issues. All new trails construction will use modern sustainable design standards using reverses in grade instead of constructed water bars. Water bars generally result in reduced or failing drainage function if not maintained regularly or properly, whereas reverses in grade are designed into the trail and do not require maintenance to facilitate drainage.

Alternate access is available where changes in land ownership or increased development have eliminated historic access to the national forest.

Verde Trails and Access Plan

The West Mingus Trail System provides excellent access to forest from a variety of ownerships. The Oasis Trail also provides access from private land to the forest. Additionally many of the trails proposed are part of a system of trails that do not interact with other ownerships and will remain open to public use for perpetuity.

Use of trails and trailheads are consistent with the desired recreation opportunities identified for the trail or area.

This proposal seeks to balance the needs for the recreating public to provide for continued motorized trail access improved with a few critical connections. The non-motorized opportunities for a variety of recreation experiences is greatly enhanced across the district.

The proposed action will have a positive impact to soil, wildlife, cultural, and recreation resources as eroding sections of trail will be rerouted or maintained and managed for continued use. These trails will be mapped, signed, and managed for the designed use as prescribed in the proposed action, allowing trail managers to properly assess conditions to protect resources and provide the community with additional trail recreation opportunities.

Implementation of the proposed action will meet the needs of the public for more diverse trail opportunities as understood from the numerous Verde Front Planning meetings held in previous years. This in turn will allow the trails program to more easily close unauthorized trails with the support of the trail user groups and individuals. When the proposed action is implemented the remaining non-system trails in the planning area will be closed and obliterated, further protecting forest resources and providing for a well-managed trail system. New illegal/unauthorized trails in the planning area in the future will be signed as closed and obliterated using volunteers and forest employees. The creation of 132 miles of new trail within the planning area is expected to dramatically decrease the need for additional unauthorized trails and will allow recreation needs to be met.

Trail Safety

The proposed trails primarily allow all non-motorized uses of hikers, equestrians, and mountain bikers. The Prescott NF has experience with managing and mitigating trail conflicts between users. The primary conflict that could result from this proposal is unsafe interactions between mountain bikers traveling at high speeds and encountering equestrians and hikers. Accidents could occur from collisions or from users trying to avoid collisions. This is most likely to occur on steep windy trail segments that have blind corners and travel through the chaparral brush vegetation type. These negative interactions could change the character of the recreation experience on popular trail segments, displacing hikers and equestrian users to trails less favored by mountain bikers. It is also expected that by adding more miles of trail in a variety of areas and providing for mountain bike specific directional trails that the potential for these conflicts will be reduced.

It is expected that the creation of 132 miles of new trails and the construction or improvement of 27 dispersed staging areas will have a positive economic impact on the community as trail recreation and public land access demands continue to grow. The numerous trails added across the district in the plan will allow for additional recreation events in the community further increasing tourism in the local area. Additionally it is expected that increasing trail opportunities will enhance the communities draw for full time residents that value easy access to public lands for recreation.

Cost of construction

The current average cost to construct 1 mile of new trail 30 inches wide using traditional hand crews is about \$11,000. This is based on the assumption of 10 ft./hour/person production rate. This does not include planning and design costs. The average cost of maintaining the same trail can range from \$200 to \$2,000, if there is no maintenance backlog and the trail only requires basic maintenance to keep it to standard. In recent years many new trails are constructed using a combination of paid trail crews or supervisors, volunteers, and mechanized equipment. These costs are difficult to calculate as they change depending on location, popularity of trail project, and difficulty of construction. Generally, constructing the standard 30 inch trail with all volunteer hand labor is about \$2,500 per mile. It can be assumed that using equipment ahead of volunteers will increase production, but does not reduce the cost as the equipment and labor costs increase as on a good day an operator can construct about ½ mile of trail using mechanized trail equipment.

Designated Wilderness

Cedar Bench

This proposal only has one trail proposed for construction in Cedar Bench Wilderness, Oxbow Trail #163, and it is a ½ mile reroute of an existing wilderness access trail. The effect of taking this action on the elements of wilderness character will be minimal as currently the trail crosses private land and is still accessible to the public so use patterns would not be changed. The potential long-term result of not taking action to reroute this trail could be the loss of access to the wilderness trail system from the Gap Springs area. Construction methods would be all non-motorized and non-mechanized.

Pine Mountain Wilderness

The Double T Trail #72 is proposed for decommissioning that enters the wilderness for less than 100 feet. This trail currently does not have legitimate access across private land and is extremely difficult to follow. Segments of this trail that do exist are extremely steep and eroded. Decommissioning of this trail will have no effect on the elements of wilderness character as the public has had limited access to it for about 10 years. Not taking action will not affect the wilderness character, but will result in negative experiences for users wanting to use this trail and not having access to where it starts.

Woodchute Wilderness

There are no trails proposed for construction inside this wilderness. There is one trail that is proposed to provide access to the Woodchute Trail #102 from Potato Patch Campground. This trail is not anticipated to significantly increase visitation in the wilderness as where it junctions with the 102 trail is still about 1.5 miles from the wilderness boundary.

Cumulative Effects

Taking into account other past, present, and reasonably foreseeable future projects, the cumulative effects to recreation resources are expected to provide a small benefit. This accounts for past and present efforts that contribute to current conditions. These include the 1994 Verde Recreation and Travel Management process and the implementation of the Travel Management Rule, including the adoption of the Motor Vehicle Use Map

(MVUM). Future expected actions include a dispersed camping analysis on the Verde RD and improvements and modifications to existing river access points along the Verde River corridor.

Scenery Management

This section summarizes the potential impacts of the proposed action on visual quality within the Greater Prescott Trails Planning Mid-term Project analysis area.

Background

Scenery Management and Scenic Integrity Objective

The Scenery Management System (SMS) provides a systematic approach for determining the relative value and importance of scenery on National Forest System lands. It analyzes a landscape's attractiveness, visibility, intactness, and value to the public to determine the scenic integrity objective (SIO) across the forest. On the high end, natural landscapes dominate. At the moderate level, human activities are subordinate to the natural landscape. Existing scenic integrity (ESI) is a measure of the intactness of the landscape character. The higher the number of disruptions, the lower the ESI rating.

Visibility

Landscape visibility is an important aspect of the SIO rating. The Forest road and trail system and use areas have been ranked and divided up into three categories or Concern Levels (CLs), measuring the importance the public places on landscapes as viewed from these routes or areas. The lower the number, the higher the concern. Views from all concern level 1 (CL1) and 2 (CL2) roads have been mapped and figured into the SIO ranking. Concern level 1 includes all trails and developed recreation sites and the most heavily traveled roads. Level 2 includes slightly less important roads and level 3 are all remaining roads. The foreground (0 to ½ mile), middleground (½ to 4 miles) and background (4 miles to horizon) views from all concern level 1 and 2 roads have been mapped and figured into the SIO ranking.

Desired conditions include natural landscapes unaltered by human activity on the majority of the forest (Forest Plan, DC-Scenic-1). Improvements (including permanent structures), vegetation manipulation, and ground disturbing activities and/or construction are designed to complement the character of the surrounding natural landscape (Forest Plan Guide-Scenic-1 and Guide-Scenic-2).

Existing Conditions

Landscape character creates a "sense of place," and describes the image of an area. The Landscape Character Description gives a geographic area its visual and cultural image, and consists of the combination of physical, biological and cultural attributes that make each landscape identifiable or unique. The project is divided into six zones, the landscape character of each is described below.

Area A - West Mingus Ave DDRA

The West Mingus designated dispersed recreation area (DDRA) has gently rolling hills with a backdrop of the steeper slopes of Mingus Mountain. The vegetation is predominantly a deciduous shrub mix with some juniper. To the west it becomes mixed deciduous-evergreen shrub then piñon, piñon-juniper. A predominant negative feature is the old dump and shooting area at the base of the new trail system. This contributes to the area's Moderate SIO rating.

Area B - Grief Hill DDRA

The Grief Hill DDRA has steeper slopes rising above the Verde Valley. Vegetation consists of mixed deciduous-evergreen shrub and juniper. There is little human impact except for the existing Grief Hill trailhead.

Area C - Mingus Mountain / Powell Springs

Although grouped together for analysis, the Mingus Mountain / Powell Springs area has three distinct Landscape Characters.

Mingus Mountain, with higher elevation and cooler temperatures, has numerous scenic views from the scenic Highway 89A as well as FR104 and other CL 1 roads and trails in the area. Ponderosa pine and deciduous-evergreen tree mix are the major vegetation types.

Yeager Canyon has unique steep, winding canyon walls dotted with manzanita, piñon-juniper, mountain mahogany, and scrub oak.

At Powell Springs the topography goes from steep slopes to gently rolling terrain with predominantly mixed deciduous-evergreen shrub and some juniper.

Area D – Black Canyon NRT

Black Canyon National Recreation Trail (NRT) traverses the Verde District west to east. The west section is predominantly deciduous shrub mix, changing to juniper in the eastern part. The terrain of all of the trail is primarily rolling hills.

Area E – Copper Canyon - Cedar Bench

The Copper Canyon - Cedar Bench area is also diverse in landscape character.

Copper Canyon area near the existing trailhead and proposed Allen Canyon trail are in the Verde Valley while the others are at higher elevation above the Black Hills. The terrain of both areas is gently rolling. Piñon, piñon-juniper dominate the Lucky Canyon area and deciduous shrub mix and mixed deciduous-evergreen shrub area predominant in the Copper Canyon and Allen Canyon areas.

The Cedar Bench Wilderness has a pristine undisturbed character and the area of the new trail has rolling topography covered in mixed deciduous-evergreen shrub.

Area F- Dugas / Pine Mountain

The Dugas / Pine Mountain area has mostly rolling hills and washes with steeper slopes in Pine Mountain Wilderness. The proposed trail is in juniper vegetation and a more remote area of the forest. The Dugas area is predominantly shrub vegetation (deciduous and mixed evergreen) and the Dugas Road (CL1) is fairly well travelled to access the wilderness areas.

Environmental Consequences

Proposed New Trails

The table below shows the number of miles of each type of trail (of the total 132.3 miles of proposed trail) that fall in the different SIO’s.

Table 5. SIO Levels of Proposed Trails

Trail Type	Very High SIO	High SIO	Moderate SIO	Low SIO
Hike only		1.16		
Bike only		7.32	0.58	
Hike & Bike		0.59	2.90	
Horse & Hike	0.56			
Horse, Hike, & Bike		73.28	41.61	3.75
Multi-use		2.33	1.98	
Total miles	.56	84.68	47.06	3.75

In general single track trails, even up to 50 inches in width, have a relatively minor scenic impact on the landscape. The steeper the terrain, the more visual impact a trail will have on the landscape due to increased disturbance from cut and fill slopes. The type of vegetation and if there is canopy or shrub and the density of the vegetation, will also have an effect on the visibility of a trail and can influence the distance from which it can be seen.

A positive to the scenic resource for all new trails is that they provide opportunities for users to view parts of the Prescott NF they might not have been able to see previously.

The only area of concern for negative scenic impact would be in the Yeager Canyon area. There are a number of trails fairly close together and because of the proximity to US Highway 89A, they may be highly visible from the Scenic Highway. Piñon -juniper evergreen shrub vegetation may help to lessen the visual effect.

The .56 miles of new trail in Cedar Bench Wilderness (TR 0163 – Oxbow Trail) is acceptable since it is a reroute and is necessary to connect trails. Also, since it is a reroute, there will be .176 miles of decommissioned trail in the vicinity which will return the area to a natural state.

Proposed Decommissioned Trails

Similar to new trails there are advantages and disadvantages to the scenic resource from decommissioning trails. Removing a trail restores a naturalness to the area yet may limit the visitor from being able to access the view. However, most decommissioned trails in the area have proposed trails nearby that will allow visibility into a similar landscape.

Proposed Decommissioned Roads

8.71 miles of the roads to be decommissioned are in areas of High SIO and 2.91 miles are in Moderate SIO. Roads are a larger negative impact on the land compared to trails due to their width. Because of wider clearing of vegetation and often imported surfacing, a road can often be seen from great distances and can often detract from view. Therefore, decommissioning a road is a positive thing for the scenic resource.

Dispersed Staging Areas

Dispersed staging areas (DSAs) have a much larger impact on scenic quality than trails due to their size. While clearings are naturally occurring in the forest, gravel surfacing and parked vehicles are an intrusion into the natural landscape.

Mitigation measures to consider during the design phase would be to minimize the size of the parking area or leave pockets of native vegetation in islands. Minimizing the removal of vegetation around the parking area or siting it in a way to minimize the view from the road are also critical for sensitive locations.

The staging areas in the High SIO will need more attention in the design phase in order to meet the SIO requirements, so only those are addressed below.

Gap Creek

Gap Creek DSA is in High SIO but adjacent to the Cedar Bench Wilderness and a designated Wild and Scenic River segment of the Verde River, both of which have SIO's of Very High. Extra care shall be made in the design of this staging area. The staging area while non-motorized will need to accommodate boat trailers. Design should be sensitive to naturalness of the area and minimizing the size of the footprint. Deciduous-evergreen tree mix vegetation type may help in making less dominant in the landscape.

Medlar Spring

Medlar Spring DSA is a new staging area in a High SIO along FR 9004A, which is a CL3 road. Due to distance and terrain, it should not be visible from FR 132, the nearest CL1 road. It will be located in mixed deciduous - evergreen shrub vegetation but close to piñon-juniper, which should help to screen it.

Mingus

Mingus is an existing user created area located in ponderosa pine-oak vegetation. It is at the intersection of a CL 1 road (FR 104) and a CL 2 road (FR 413), making it highly visible to a large number of visitors. It is in a relatively flat area of ponderosa pine-oak which may give some screening.

Dry Lake

Dry Lake is the enlargement of an existing parking area on FR 104A which is a CL 2 road. It is in a fairly level low lying area surrounded by rising topography so visibility of it is limited. Located in alligator juniper-ponderosa pine, the visual impact of the parking should be reduced.

Cherry North, Cherry South, and Crook West

Cherry South and Crook West DSAs are along CR 75 (Cherry Road), which is a CL1 road. Cherry North DSA is adjacent to the intersection of CR 75 and FR 132, which is another CL1 road. All three are open for both motorized and non-motorized use, and so will have a larger footprint on the land. The mixed deciduous - evergreen shrub vegetation, relatively flat terrain, and traffic volume on CR 75 will make these highly visible in the High SIO areas. However, the area between the Cherry North and Cherry South staging areas along CR 75 has a low SIO, due to a lot of private land.

Wilber Canyon

Wilber Canyon DSA is in a High SIO and is highly visible from two CL1 roads, State Highway 260 and FR 360. Since the area is in deciduous shrub mix, there is little screening. Moving this staging area further west or north along FR 360 would help to mitigate the visual impact.

Johnson Wash, Mistake Tank, and Crook East

Johnson Wash, Mistake Tank, and Crook East DSAs are in the High SIO area near FR 732 (Squaw Peak Road). Johnson Wash is further off FR 732, but on another CL1 road, CR 96. All are located in relatively flat terrain and deciduous shrub mix vegetation type so there is little screening potential.

Chasm Creek

Chasm Creek DSA, along FR 574 (Brown Springs Road), is not as high of concern since FR 574 is a CL2 road and the vegetation is primarily juniper.

Dugas, Estler West, Estler East, Reimer, and Sycamore

Dugas, Estler West, Estler East, Reimer, and Sycamore DSAs are all along CR 171 (Dugas Road). Dugas Road is a CL1 road in a High SIO area. Reimer is farther off of CR 171, on another CL1 road, FR 68D (Reimer Road). The terrain is relatively flat in the area; at the Dugas DSA the vegetation type is mixed deciduous-evergreen shrub, and at the Reimer DSA it is a deciduous shrub mix which may give minimal screening. At the Estler West, Estler East, and Sycamore DSAs, the perennial grass mix vegetation will make it difficult to blend in to the existing landscape.

Oxbow and Cold Water

Oxbow and Cold Water DSAs are located near where CR 171 becomes FR 68, but where it is still a CL1 road. The proximity of both to Cedar Bench Wilderness makes them a concern for development, but the juniper vegetation could provide more opportunity for screening.

Cumulative Effects

Taking into account other past, present, and reasonably foreseeable future projects, the cumulative effects to the scenic resource are expected to be minimal, as the added impacts from the proposed actions are relatively small.

Soils and Hydrology

This section summarizes the potential impacts of the proposed action on soils and watershed conditions within the Verde Trails and Access Plan analysis area. The full analysis can be found in the Verde Trails and Access Plan Hydrology and Soils Specialist Report.

It is assumed all applicable Forest Plan Standards and Guidelines, guidelines from the Forest Service Manual (FSM), regional directives, and Forest Service Standard Trail Plan and Specification guidelines will be applied and adhered to throughout this project.

Existing Conditions

Watersheds

Throughout this resource report for hydrology, the term “6th field HUC” or “6th level sub-watershed” is used. These interchangeable terms refer to watersheds of a specific size, which, on average, are 40 square miles or approximately 25,600 acres. They generally contain one or more smaller drainages.

Project area watershed boundaries were identified from the Prescott National Forest GIS data. For hydrological analyses purposes, watershed effects were evaluated and presented for each 6th level sub-watershed involved with the project area. Watersheds were considered to be associated with the VTAP Project if any portion of their land base was located in the defined project area boundary. The project area lies within portions of twenty 6th field HUC watersheds, listed in Table 6 and displayed in Figure 2.

Table 6. 6th field HUC watersheds found within the VTAP project area

6th Level Sub-Watershed Name (HUC Code)	Total Acres
Black Canyon (150602020703)	15,455
Chasm Creek-Lower Verde River (150602030303)	25,722
Cherry Creek (150602020705)	15,957
Cienega Creek (150701020101)	30,304
Cooper Canyon-Lower Verde River (150602030301)	19,417
Dry Creek (150701020104)	9,523
Gap Creek-Lower Verde River (150602030308)	39,261
Grapevine Gulch (150701020203)	10,322
Grief Hill Wash-Upper Verde River (150602020707)	23,567
Hayfield Draw-Upper Verde River (150602020706)	20,060

Verde Trails and Access Plan

6 th Level Sub-Watershed Name (HUC Code)	Total Acres
Little Ash Creek (150701020105)	30,694
Little Sycamore Creek (150701020401)	10,417
Lower Ash Creek (150701020106)	18,899
Mescal Gulch-Upper Verde River (150602020702)	28,462
Oak Wash-Upper Verde River (150602020704)	30,700
Osbourne Spring Wash (150701020103)	7,962
Sycamore Creek (150701020402)	31,581
Upper Ash Creek (150701020102)	27,301
Yaeger Canyon (150701020202)	9,298
Yarber Wash (150701020207)	19,073



Figure 2. 6th Level Sub-Watersheds associated with the VTAP Project

Data from the watershed classification and assessment tracking (WCAT) protocol was used to determine the Watershed Condition Classes (WCC) for each of the 6th level sub-watersheds within the project area. Results indicate that all project area analysis watersheds are currently “functioning at-risk” except the Hayfield Draw-Upper Verde River and Oak Wash-Upper Verde Rivers watersheds, which have “impaired function”, and Little Ash Creek watershed which is “functioning properly”. Since the 2011 WCAT ratings were compiled, there have

been no major fires or other disturbance within VTAP Project Area watersheds. Therefore, it is believed that the 2011 ratings are still accurate for all project area watersheds.

Soil Condition

The WCAT data for the 20 project area watersheds shows that soil conditions are poor in ten watersheds, fair in nine watersheds, and good in one watershed. Where assessed, ground cover was good. Soils have been impacted in the past by fire suppression and wildfire, roads, trails, vegetation management, grazing, and recreation to name a few.

Perennial and Intermittent Streams

For the purposes of this analysis, perennial streams are defined as permanent flowing drainage features and intermittent streams are defined as any non-permanent flowing drainage feature having a definable channel and evidence of annual scour or deposition. The Verde River is the only major perennial stream on the Prescott NF with continuous flow from headwaters to mouth.

The Gap Creek-Lower Verde River 6th level sub-watershed has the most total perennial stream miles in the project area at 21.5 miles (associated with the Verde River), while the Oak Wash-Upper Verde River 6th level sub-watershed has the most intermittent stream channels at 130.4 miles. There is a total of 91 miles of perennial streams and 1,454 miles of intermittent stream channel within the project area.

Riparian Areas and Wetlands

Riparian areas generally consist of intermittent or perennial streams, ponds, lakes, wetlands and adjacent lands with soils, vegetation, and landform indicative of high soil moisture or frequent flooding. Wetlands are an ecosystem that sustains a variety of plant and animal species and is generally found where groundwater emerges at the land surface.

Although no formal riparian surveys have been conducted within the project area, the WCC ratings indicate that riparian area conditions “Fair” to “Good” in all but one of the watersheds; the Hayfield Draw-Upper Verde River watershed was rated “Poor” for this factor. The most riparian acreage in the project area is in the Gap Creek-Lower Verde River watershed (346 acres), while twelve of the twenty watersheds have no recorded riparian acres.

The National Wetlands Inventory developed by the U.S. Fish and Wildlife Service (USFWS) was used to determine the wetland acreage (5,677 acres) within the project area. The most, 919 acres, was located within the Mescal Gulch-Upper Verde River watershed; the least (11 acres) was within the aptly named Dry Creek watershed.

Water Quality

Under the requirements of the Clean Water Act, the Arizona Department of Environmental Quality (ADEQ) conducts a comprehensive of water quality analysis every two years. This is done to determine whether State surface water quality standards are being met and designated uses are being supported. The ADEQ 2016 water quality assessment report only lists one stream segment within the project area, the Verde River from Sycamore Creek to Oak Creek. It is listed for a lack of dissolved oxygen and the presence of E. coli bacteria. A Total Maximum Daily Load (TMDL) is currently being developed for the Verde River to help address these problems.

A TMDL is a regulatory term in the U.S. Clean Water Act, describing a plan for restoring impaired waters that identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

Environmental Consequences

Trails, Roads, and Staging Areas

As noted above in the Proposed Action section, this project would construct approximately 132 miles of new trails and 30 dispersed staging areas, and decommission 21 miles of existing trails, 10 miles of forest system roads, and 2 user created staging areas. The majority of the dispersed staging area proposals address existing user created areas currently in use.

Spatial analysis shows that up to 13.8 miles of trail and between 5.7 and 40 miles of road are currently located within 300 feet of streams within the twenty watersheds in the project area. The trails proposals (new construction and decommissioning) would result in a net gain in official trail miles adjacent to streams in thirteen of the project watersheds; four watersheds would see no change and three watersheds would see a net decrease. The largest increase in trail mileage within 300 feet of streams (5.6 miles) would occur in the Mescal Gulch-Upper Verde River watershed and the largest decrease (1.3 miles) would be within the Cienega Creek watershed.

Localized short-term effects from sedimentation due to these activities is likely, but not to the point where the overall good water quality related to sediment in the area would be impacted. With the proper implementation of the appropriate BMPs (BMP Rec-4, see Appendix A) it can be reasonably expected that soil and water quality, as it relates to trail construction and maintenance, would be protected outside of the localized short-term effects.

The road decommissioning actions would result in a net decrease in road miles adjacent to streams (within 300 feet) for five of the twenty watersheds. The largest reduction would occur in the Oak Wash-Upper Verde River watershed where 0.8 miles would be decommissioned. As there is no new road construction proposed, the remaining fifteen watersheds would see no net change. As with the trails actions, localized short-term effects from sedimentation are anticipated. However, with the proper implementation of the appropriate BMPs (BMP Road-6, see Appendix A), it can be reasonably expected that the overall benefit from removing these roads would outweigh the short-term impacts.

The thirty-two proposed recreation staging areas would have an average size of approximately 1 acre each. Currently, Forest users have created unauthorized staging areas that have negatively impacted the soil and water resources through off-road travel and impaired water quality due to the lack of sanitary facilities. It is expected that the establishment of official staging areas will protect soil and water resources and allow for better management of recreation use. BMP Road-9 (see Appendix A) will be used to ensure protection of soil and water resources.

Designated Dispersed Recreation Areas

Currently, dispersed recreation is permitted across the entire the Verde Ranger District. The designation of the West Mingus and Grief Hill Dispersed Recreation Areas would prohibit motorized travel off of designated roads and trails in these areas. Therefore, designation would reduce the potential for soil and water impacts from motorized off road travel. Reductions in the potential for motorized impacts to lands within 300 feet of streams in

Verde Trails and Access Plan

the Cherry Creek, Mescal Gulch-Upper Verde River, and Oak Wash-Upper Verde River watersheds would occur. No changes would occur in the other seventeen project area watersheds. It can be reasonably expected that the establishment of these dispersed recreation areas would maintain or slightly improve the watershed conditions with the project area.

Riparian Areas and Wetlands

Spatial analysis shows that none of the proposed trail, road or staging area actions will occur with identified riparian areas. There would be approximately 14 acres of identified wetlands within the Cherry Creek watershed that would be included in the Designated Dispersed Recreation Areas. The primary effect would be to prohibit motorized activity within the wetland, which can be reasonably expected to benefit this ecosystem.

Water Quality

There is potential for oil and gas spills into project area streams during the construction phase of the project. Implementation of BMP-Road 10 (see Appendix A) would protect water quality during project implementation. It can be reasonably expected that these measures would ensure the projects compliance with the Clean Water Act and protect overall chemical water quality within the project area.

Cumulative Effects

This cumulative effects analysis looks at whether the project would impact the resource indicators involved in determining the current watershed function ratings, when added to other past, present, and reasonably foreseeable future projects. This includes impacts to soils, water quality, riparian and wetland function from trail and staging area construction as well as road and trail decommissioning and adoption of the Grief Hill and West Mingus Dispersed Recreation Areas.

Direct and indirect effects for all resource indicators for the proposed action for the VTAP Project show that minor to negligible effects to soils, water quality and riparian/wetland resources would occur. These effects are expected to be localized in nature and theoretically monitoring, both pre- and post- implementation, would not show a discernable change in the resource conditions of these indicators (potential sedimentation and impacts to stream morphology, riparian and wetlands,) should appropriate Forest Plan standards and guidelines and BMPs be implemented.

In looking at the proposed projects that are on-going or will be implemented in project area watersheds in the coming years, the projects that could impact surface water resources would be vegetation management projects (prescribed fire), road-related maintenance, livestock grazing, and mining. Resource protection measures and BMPs specific to those projects would protect water quality, riparian and wetland resources and road conditions.

It can be reasonably expected that the current watershed condition class for the twenty project area watersheds would remain stable or improve over the planning cycle.

Wildlife

This section summarizes the potential impacts of the proposed action on wildlife and its associated habitats within the Verde Ranger District Project analysis area. The full analysis can be found in the Verde Trails and Access Project Wildlife Specialist Report.

Background

The existing wildlife and plant habitat on the Verde Ranger District includes grasslands, chaparral, woodlands, and ponderosa pine vegetation types that are dispersed throughout the project area. Recreational use is high based on proximately to urban centers and recreational facilities in the area.

Existing Conditions

Endangered Species

The Mexican spotted owl (MSO) is known within the project area with two PACs (Protected Activity Center) occurring in the Mingus Mountain area that could be affected by the proposed action. There is no designated MSO critical habitat within the project area.

Regional Forester Sensitive Species

Out of 30 Regional Forester Sensitive species on the Prescott NF list, nine species are known to occur within the project area that could be affected by the proposed action. These include the Northern goshawk with two PFAs (Post-fledging Family Area) in the Mingus Mountain area, the Arizona phlox, Broadleaf lupine, Eastwood alum root, Flagstaff beardtongue, and Mt. Dellenbaugh sandwort in the Mingus Mountain area, and the Hualapai milkwort, Mearns sage, and Ripley wild buckwheat in the Verde Valley area on Verde Formation soils.

Bald and golden eagles

Existing bald eagle breeding areas occur along the Verde River on the boundary of the project area. Closure orders are in place to restrict recreational access to breeding areas annually based on occupancy. No proposed actions are identified within the closure order boundaries. Golden eagles are known in the Mingus Mountain area. No proposed actions are identified near nest locations.

Migratory birds

Based on proposed actions in the grasslands, chaparral, woodlands, and ponderosa pine vegetation types within the project area, 24 species of migratory birds might be expected to occur within the project area. The nearest Important Bird Area to the project area is the Willow and Watson Lake IBA.

Environmental Consequences

Endangered Species

New non-motorized trail construction is proposed within the two Mexican spotted owl PACs in the Mingus Mountain area. Trail locations would be outside of identified nest core areas. There would be no direct effects from trail construction as it would occur outside of the MSO breeding season to reduce disturbance. There would be no loss of key habitat features for MSO in the PACs. Long-term, new trails within or adjacent the PACs are expected to increase human presence but are not expected to affect MSO nesting success with mitigations to avoid trails within key nesting areas.

With no trail/staging area and trail/road decommissioning actions in the No Action alternative, there would not be any effects to Mexican spotted owls.

Regional Forester Sensitive Species

New non-motorized trail construction is proposed within the two Northern goshawk PFAs in the Mingus Mountain area. Trail locations would be outside of identified nest core areas. There would be no direct effects from trail construction as it would occur outside of the goshawk breeding season to reduce disturbance. There would be no loss of key habitat features for goshawk in the PFAs. Long-term, new trails in the PFAs would increase human presence and related disturbance to the goshawk but are not expected to affect nesting success in the PFAs with mitigations to avoid key nesting areas.

New trail actions within in the Mingus Mountain area and Verde Formation soils would be located outside of areas with sensitive plant populations or medium or high potential habitat. There may be impacts to individual plant species but sensitive plant populations would not be affected.

With no trail/staging area and trail/road decommissioning actions in the No Action alternative, there would not be any effects to Northern goshawk and sensitive plant populations.

Bald and golden eagles

There are no proposed trail actions near known bald eagle and golden eagle nest locations in the project area.

For the No Action Alternative, the existing conditions are not known to be having any discernible impacts to bald and golden eagle breeding areas.

Migratory birds

Based on proposed actions in the grasslands, chaparral, woodlands, and ponderosa pine vegetation types within the project area, 24 species of migratory birds might be expected to occur within the project area. Impacts to migratory bird habitat include a net loss of 16 acres of habitat from new trail construction and trail/road decommissioning. Staging areas are located at roadside and do not provide suitable habitat for migratory birds. Snag retention would be compliant with the forest plan direction in this project and snags would only be removed as they pertain to safety. Removal and/or destruction of vegetation used by migratory birds is NOT a taking under the MBTA.

Short-term impacts to migratory birds include temporary disturbance during new trail construction and trail/road decommissioning. Long-term, trails through migratory bird habitat would increase human related disturbance to nesting birds. Overall, the project would not have a measurable negative effect on migratory bird populations in the project area.

There are no proposed trail actions within identified IBAs (Important Bird Area). The nearest Important Bird Area to the project area are the Tuzigoot National Monument and Agua Fria National Monument IBAs.

Cumulative Effects

Ongoing and reasonably foreseeable activities occurring within and adjacent MSO habitat within the project area include livestock grazing and vegetation treatment using prescribed fire and mechanical/hand thinning. Allotments are managed under allotment management plans that aim to restore or maintain functioning ecological conditions. Vegetation treatments have mitigation measures to protect listed species. The incremental impact of the Proposed Action would not have any discernible cumulative effects to MSO and their habitat in the project area.

Cultural Resources

Background

Prehistoric and historic sites in the project area have the potential to increase the knowledge and interpretation of human activities (habitation, trade, and movement). Sites that are deemed unevaluated for the National Register of Historic Places (NRHP), sites that are eligible for the NRHP, and sites that are on the NRHP are of particular importance.

Heritage evaluation is based on record searches conducted in the heritage archives of the Prescott NF from previous survey projects conducted between the 1970's and 2017. Site summaries (dimensions, culture, content, etc.) were also noted. Project surveys completed prior to 1987 are considered invalid by the Arizona State Historic Preservation Office (AZSHPO) and will require a new, 100 percent survey of the area(s) involved. This is due to stipulations specified in a lawsuit settlement in 1986 pertaining to Forest Service survey and recording standards for heritage projects and sites.

Existing Conditions

The Prescott National Forest's prehistoric cultural chronology begins with the Archaic Period and continues through the Prescott and Chino Focus of the Prescott Culture or Prescott Tradition. Prehistoric cultural manifestations on the Verde Ranger District include the Archaic (Breternitz 1960; Fish and Fish; Motsinger et al. 2000), Hohokam, Sinagua, and Prescott Culture (Breternitz 1960; Downum 1992; Fish and Fish 1977; Pilles 1981), and proto-historic and historic period Yavapai (Gifford 1936:262-263; Schroeder 1974; 63). Historic period sites consist of Euro-American mining, logging, homesteading, and livestock raising sites beginning in the mid 1860's and extending through the depression era in the 1930's (Macnider et al. 1989:36, 56, 92-93; Trimble 1986). All heritage resource sites in the project area have the potential through research and recording to increase the knowledge and interpretation of human activities on the Verde RD and Prescott NF.

Environmental Consequences

The proposed trails and access points occur primarily on the west side of the Verde Valley, between Camp Verde and Cottonwood and the Mingus Mountain/Black Hills area of the Verde RD. These areas have a generally moderate density of prehistoric and to a lesser extent historic sites. The known sites are either in close proximity to proposed trails or access points or they are located directly on the proposed or existing trail alignment. The VTAP spread sheet lists proposed and existing trails and access points, trails and roads proposed for decommissioning, and previously recorded heritage sites that could be affected by construction or improvement of the proposed new trail alignments, rerouting of existing user-created trails, or access point development.

All previously recorded heritage sites within 50 meters (165 feet) of a proposed trail or trail realignment, or a proposed access point were identified and listed in the comments section of the VTAP spread sheet. A total of four sites were identified for field inspection/avoidance within the 15 trails proposed for decommissioning, three sites within the 13 roads identified for decommissioning, three sites within the 30 access points proposed for development, and 10 sites within the 46 proposed trails examined for development or adoption. These sites include prehistoric habitation structures, prehistoric resource procurement and processing areas, and historic livestock raising, mining, logging, and possibly wood cutting camps.

Management and clearance recommendations for heritage properties identified for projects generated from the Verde Trails Access Plan (VTAP) will be based upon applicable provisions of the National Historic Preservation Act (NHPA) and the Southwest Region (R-3) Programmatic Agreement with the Arizona State Historic Preservation Office (AZSHPO). Project surveys, evaluations and management recommendations for heritage properties will be conducted prior to proposed project implementation.

The objectives for heritage resource management within the VTAP is, with AZSHPO consultation and concurrence, to avoid impacts or disturbance to NRHP eligible or unevaluated heritage properties from trail development and construction activities. Management recommendations will be based on achieving a “No Effect or “No Adverse Effect” determination for heritage properties in or adjacent to project(s) generated from the VTAP.

PNF consultation with AZSHPO on management of heritage properties in the VTAP will be guided by several appendices in the R-3 Programmatic Agreement for heritage resources. These include Appendix A, Section I, on SHPO consultation, Appendix E, Section VI, providing guidance for road and trail closure, decommissioning, and phased project implementation, and Appendix I, addressing standard consultation protocols for travel management.

Currently known heritage sites and new heritage properties located during subsequent project surveys will be avoided by marking the site boundaries with flagging ribbon prior project implementation. Rerouting of proposed or existing trail routes, or deletion or relocation of proposed or existing trail routes will also be used to avoid heritage properties.

Cumulative Effects

Cumulative effects to cultural resources are expected to be minimal, achieving a “No Effect or “No Adverse Effect” determination, provided that the appropriate procedures for consultation and clearance are followed. There

will not be any discernible cumulative effects from this project when accounting for effects from other past, present, and reasonably foreseeable future projects.

Range

This project will have minimal effect to existing grazing operations that are permitted on the Prescott NF, provided that gates be installed that allow for recreation access and do not permit livestock to trail back through the fence.

Existing Conditions

Affected Range Resources

Active grazing allotments that have been analyzed for management implications include the V-Bar, Ash Creek, Cienega, Verde, Grapevine, and Bottle allotments. In addition, effects to the Sheep Driveway were also considered.

Environmental Consequences

Potential issues identified include conflicts between livestock and users on trails, an increased opportunity for vandalism to range improvements due to increased traffic and greater access for cattle to the wrong pastures through trail / fence crossings if gates are left open.

Portions of the Black Canyon NRT (TR561) are on or close to the Grief Hill Sheep Driveway. The Sheep Driveway is used annually every May by two bands of 2,000 head of sheep.

Constructing trails and trailheads can remove existing vegetation that serves as forage for cattle. The amount of forage removed would be negligible to the grazing operation as a whole and would not affect the carrying capacity of the allotment.

The greatest concern to grazing operations would be that as trails pass through fences that separate pastures on allotments, there could be gates left open. Grazing allotments are managed so that forage plants are grazed for only a small portion of the year, typically three months or less, then cattle are removed to allow the plants to regrow. If gates are left open, cattle can access pastures not scheduled for grazing. This has consequences for both proper use of the forage resource and for the time and effort needed for the rancher to manage the cattle. When there are reports of cattle in the incorrect pasture, the Forest Service grazing permit administrator will contact the grazing permit holder and instruct that person to remove the cattle by a certain date. Repeated occurrences of cattle in the wrong pasture can lead to suspension or cancellation of the term grazing permit.

Cumulative Effects

If appropriate design features are employed to keep livestock within the proper areas, no cumulative effects to range are expected from this project proposal. This accounts for prior use patterns of overgrazing that contribute to the current condition and reasonably expects a continuation of current livestock operations into the foreseeable future.

Minerals and Geology

Existing Conditions

The locations for the proposed roads and trails actions were used to identify any active mining claims. The Bureau of Land Management's (BLM) LR2000 database was used to generate these reports. There are many active mining claims on or near FR 338 (Mescal) along the Powerline Trail. In 2012 and 2014, Copper One USA approached the Prescott NF Minerals Team about a drilling proposal west of FR 338. The location for the drilling project is just above the Mingus Recreation Area. The Minerals Team reviewed their Plan of Operation, but no further communication has come from the proponent since.

Environmental Consequences

Forest Service corporate data in the AZMILLS GIS layers were reviewed for abandoned mines; many appeared within the project area. No mining is currently proposed through the Prescott NF's Minerals Department within or near the project's roads and trails proposals. There are popular "rock hounding" sites in the Mingus Recreation Area that are identified in publications related to Arizona gems and minerals. Access to two of these sites use established roads and trails displayed on the Prescott NF Motorized Vehicle Use Map (MVUM).

There are trails in the proposal that run within one to two miles from several abandoned mines near Cherry, AZ. Some of these mines are currently being investigated for the presence of heavy metals and contaminants related to acid rock drainage under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The six mines being investigated under CERCLA are:

- The Bunker Mine
- Golden Idol Mine
- Black Hawk Mine
- Gold Eagle Mine
- Uncle Sam Mine
- Logan Mine

These mines are currently being analyzed by a third-party contractor under an Engineering Evaluation/Cost Analysis (EE/CA). The EE/CA Draft document identifies lead and arsenic as the primary contaminants of concern. Upon future funding, these sites will be subject to reclamation to minimize risk to human health and/or the environment. However, activities related to future CERCLA action will have no effect on the VTAP project.

Cumulative Effects

As with historic grazing within the project area, prior use patterns such as the accumulation of tailings piles from old mines and the associated heavy metals, contribute to the current condition. The cumulative effect of this project on the minerals and geology resources is expected to be minimal when considered in the context of past, other present, and reasonably foreseeable future projects. Current mining activity is mostly smaller operations, with panning and sluice boxes in old tailings being the most common approach. Although some abandoned mines are slated for mitigation under CERCLA, future projects are not expected to include any new mines.

Agencies and Persons Consulted

The Forest Service consulted the following individuals, Federal, State, tribal, and local agencies during the development of this environmental assessment:

Tribes

The following tribes were consulted: Fort McDowell Yavapai Nation, Hopi Nation, Hualapai Tribe, Yavapai-Apache Nation, and Yavapai-Prescott Indian Tribe.

Federal, State, County, and Local Agencies and Organizations

Numerous Federal, State, county, and local agencies and organizations have been consulted in development this EA. Complete mailing lists for the scoping periods are available in the planning record. Some of the agencies consulted include:

Federal

U.S. Department of the Interior Fish and Wildlife Service

State

Arizona Game and Fish Department

Arizona State Parks

Arizona OHV Ambassador Program

County

Yavapai County

Board of Supervisors

Regional Trails Planning

Trails Committee

Roads Department

Local Municipalities

City of Prescott

Town of Jerome

City of Cottonwood

Town of Camp Verde

Town of Cherry (add residents)

City of Sedona

Others

Numerous groups and individuals participated in the process through written comments and by attending public meetings. Groups consulted include:

Arizona Conservation Experience
Back Country Horsemen of Central Arizona
Center for Biological Diversity
Coconino Trail Riders
Friends of Arizona Trails
International Mountain Bicycling Association
National Wild Turkey Federation
Open Space Alliance
Prescott College
Prescott Hiking Club
Prescott Mountain Bike Alliance
Prescott Nature Walkers
Prescott Outings Club
Prescott Open Trails Association
Prescott Saddle Club
Prescott Trail Riders
Prescott Mountain Biking Alliance
Prescott Gravity Trail Riders
Prescott Trail Safety Coalition
Sierra Club, Grand Canyon Chapter
Mingus Area Preservation Society (MAPS)
Verde Valley Cyclists
Yavapai College
Yavapai Trails Association
Verde Grazing Permittees

List of Preparers

Name	Title
Frances Alvarado	Geologist
Christopher J. Brown	NEPA
Rick Eis	Roads & Engineering
Chad Hermandorfer	Soils and Watershed
Ann May	Landscape Architect
Bruce Nellans	Heritage and Cultural Resources
Tom Palmer	Recreation & Project Lead
Albert Sillas	Wildlife and Fisheries
Kelli Spleiss	Range
Jason Williams	Trails and Wilderness

References

- Breternitz, David A. 1960. Excavations at Three Sites in the Verde Valley, Arizona. Museum of Northern Arizona Bulletin No. 34, Flagstaff.
- Downum, Christian E. 1992. The Sinagua. Plateau 63(1).
- Fish, Paul R., and Suzanne K. Fish. 1977. Verde Valley Archaeology: Review and Prospective. Museum of Northern Arizona Research Paper No. 8, Flagstaff.
- Forest Service, U.S. Department of Agriculture. (2008). Forest Service Handbook 2309.18 Trails Management Handbook
- Forest Service, U.S. Department of Agriculture. (2015). *Prescott National Forest Land and Resource Management Plan*. Prescott, AZ: Prescott National Forest.
- Gifford, Edward W. 1936. Northeastern and Western Yavapai. University of California Publications in American Archaeology and Ethnology 34:247-354.
- Macnider, Barbara S., Richard W. Effland, Jr., and George Ford. 1989. Cultural Resources Overview: The Prescott National Forest. Prescott National Forest Cultural Resources Inventory Report No. 89-062. Prescott.
- Motsinger, Thomas N., Douglas R. Mitchell, and James M. Mckie. 2000. A Prescott Primer: Introduction to the Archaeology and Conference. In *Archaeology in West-Central Arizona*. Edited by Thomas N. Motsinger, Douglas R. Mitchell, and James M. Mckie, pp. 1-11. Sharlot Hall Museum Press, Prescott.
- Northern Arizona University, the W.A. Franke College of Business (2015). 2014-2015 Prescott Visitor Survey.
- Pilles, Peter J., Jr. 1981. The Southern Sinagua. In *People of the Verde Valley*. Plateau 53(1):6-17.
- Schroeder, Albert H. 1974. A Study of Yavapai History. In *Yavapai Indians*, edited by David A Horr, pp. 23-254. Garland Publishing Inc., New York.
- Trimble, Marshall. 1986. *Roadside History of Arizona*. Mountain Press Publishing Company, Missoula.

Appendix A. Resource Protection Measures and Best Management Practices

Cultural Resources

To ensure avoidance of heritage resources, trails may need to be realigned or closed off completely. As GIS maps and the proposed trail system are updated, heritage resource site plot locations may increase or decrease in number.

All known sites will be managed and protected as recommended by the Forest Archaeologist in consultation with the AZSHPO and documented in an archaeological clearance report.

Prior to implementation, all sites flagged for avoidance will be re-checked to make sure all flagging remains in place. This is especially important if there has been a lapse in time between site flagging and project implementation.

If new sites are found during project layout or implementation, project activities will cease in the area of the site until a Forest Service archeologist can assess the discovery.

Wildlife

Trail alignments that are located in habitat for a Federally-listed Threatened and Endangered (T&E) or Regionally Sensitive species that have final alignments different from this proposal will require final approval from the Prescott NF's wildlife specialist.

New trail construction is not recommended in Mexican spotted owl protected activity centers (PAC). Seek to reroute any trails around existing PACs, or at minimum avoid core nesting/roosting areas, to reduce disturbance to breeding Mexican spotted owls. Trail proposals within or adjacent to PACs will be coordinated with the U.S. Fish and Wildlife Service.

Minimize or defer road and trail management activities within Mexican spotted owl protected activity centers (PAC) during the breeding season of March 1 to August 31 except when non-breeding is confirmed or inferred that year per the accepted survey protocol.

New trail construction is not recommended in Northern goshawk post-fledging family area (PFA). Seek to reroute any trails around existing PFAs, or at minimum avoid key nesting areas, to reduce disturbance to breeding Northern goshawks.

Minimize or defer road and trail management activities within Northern goshawk post-fledging family area (PFA) during the breeding season of March 1 to September 31 except when non-breeding is confirmed or inferred that year per the accepted survey protocol.

Soils

BMP Rec-4 requires the following practices:

- Locate or relocate trails to conform to the terrain, provide suitable drainage, provide adequate pollutant filtering between the trail and nearby waterbodies, and reduce potential adverse effects to soil, water quality, or riparian resources.
- Avoid sensitive areas, such as riparian areas, wetlands, stream crossings, inner gorges, and unstable areas to the extent practicable.
- Use suitable measures to mitigate trail impacts to the extent practicable where sensitive areas are unavoidable.
- Use suitable measures to hydrologically disconnect trails from waterbodies to the extent practicable.
- Design, construct, and maintain trail width, grades, curves, and switchbacks suitable to the terrain and designated use.
- Use applicable practices for control of erosion and stormwater when constructing trails.
- Install and maintain suitable drainage measures to collect and disperse runoff and avoid or minimize erosion of trail surface and adjacent areas.
- Use and maintain surfacing materials suitable to the trail site and use to withstand traffic and minimize runoff and erosion.
- Pay particular attention to areas where high wheel slip (curves, acceleration, and braking) during motorized use generates loose soil material.
- Design stream crossings to use the most cost-efficient structure consistent with resource protection, facility needs, and types of use and safety obligations
- Designate season of use to avoid periods when trail surfaces are particularly prone to unacceptable erosion, rutting, or compaction.
- Designate type of non-motorized uses (e.g., hiking, bicycling, and equestrian uses) suitable for the trail width, location, waterbody crossings, and trail surfaces to avoid or minimize adverse effects to soil, water quality, or riparian resources.
- Monitor trail condition at regular intervals to identify drainage and trail surface maintenance needs to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources.
- Manage designated trails to mitigate adverse effects to soil, water quality, and riparian resources from over-use when closure and rehabilitation is not practicable or desired.

BMP Road-6 requires the following practices:

- Evaluate risks to soil, water quality, and riparian resources and use the most practicable, cost effective treatments to achieve long-term desired conditions and water quality management goals and objectives.
- Implement suitable measures to re-establish stable slope contours and surface and subsurface hydrologic pathways where necessary to the extent practicable to avoid or minimize adverse effects to soil, water quality, and riparian resources.
 1. Remove drainage structures.
 2. Recontour and stabilize cut slopes and fill material.
 3. Reshape the channel and streambanks at crossing sites to pass expected flows without scouring or ponding, minimize potential for undercutting or slumping of streambanks, and maintain continuation of channel dimensions and longitudinal profile through the crossing site.

4. Restore or replace streambed materials to a particle size distribution suitable for the site.
 5. Restore floodplain function.
- Implement suitable measures to promote infiltration of runoff and intercepted flow and desired vegetation growth on the road prism and other compacted areas.
 - Use suitable measures in compliance with local direction to prevent and control invasive species

BMP Road-9 requires the following practices:

- Design and locate parking and staging areas of appropriate size and configuration to accommodate expected vehicles and avoid or minimize adverse effects to adjacent soil, water quality, and riparian resources.
- Consider the number and type of vehicles to determine parking or staging area size.
- Use applicable stormwater management and erosion control when designing, constructing, reconstructing, or maintaining parking or staging areas.
- Use suitable measures to harden and avoid or minimize damage to parking area surfaces that experience heavy use or are used during wet periods.
- When designing the area, take advantage of existing openings, sites away from waterbodies.

BMP Road-10 requires the following practices:

- Designation of a zone away from streams that would ensure no water quality impacts could occur during refueling.
- Requirement that all equipment be free of oil and gas before use.
- Maintenance of spill prevention and containment measures.

Hydrology

Standards which reduce sediment include: out-sloped trails and gradient reversal every 40 feet on trails with a 2-10% gradient and every 20 feet on trails with a gradient greater than 10% will decrease sediment. If a final trail alignment falls in a Streamside Management Zone (SMZ), coordination will occur with the Forest Hydrologist and BMPs will be established to ensure proper mitigation for protection of these areas. Additional mitigations measures, such as hardening, armoring with additional rock and additional rolling dips, will be implemented where trails features lie within SMZ's, on sensitive soils, or deemed pertinent to protect soil and water resources.

Range

At trailheads there should be kiosks that educate forest users about the multiple use nature of Forest Service lands. This should include a discussion regarding livestock in the area to avoid conflicts.

To avoid gates being left open, it is essential to properly design gates so that trail users can easily open and close the gates. For equestrian use the gates should be designed to be opened and closed while on horseback.

The Forest Service will provide walk-through gates where the trail passes through a barbed wire cattle fence. At any breach of the fence the gate or cattle guard will include the proper end panels on each side of the access point in order to maintain the integrity of the fence.

Gates should have easy latching mechanisms. At trailheads there should be either walk-throughs or good quality equestrian gates.

Trail user conflicts with cattle and sheep are possible. Signage about cattle being in the area can educate forest users about the multiple use nature of Forest Service lands.

Trails

All trails authorized through this proposal will be accurately mapped and flagged on the ground before construction. Efforts will be made to follow the proposed alignment as close as possible during layout with the following resource objectives guiding implementation.

During construction tread placement should reduce blind corners where feasible. During construction clear blind corners in the brush of all root balls to assist in the long-term maintenance of keeping these spots open for visibility. Identify locations where signs (“Slow” Limited Sight Distance) or choke points should be installed to reduce speeds.

Work to establish connections and working relationships with users from the Verde Valley and surrounding area to continually adapt to the changing trail system uses and to identify and address trail safety concerns related to user conflicts. This strategy focuses on using education to reduce trail conflicts.

Identify existing or new multi-use trails that could or are heavily used by mountain bikers for downhill riding experiences and discourage this unsafe use if trails are unsuitable for this activity, such as blind corners, thick brush, and steep grades that increase the potential for collisions.

- a. Use signing to alert users to the hazard and the responsible practices (see Figures 3 and 4, below)
- b. Consider recommending uphill travel for mountain bikes on these trails
- c. If conditions warrant consider first *discouraging* use by a certain user type, and second *prohibiting* use by a user type.



Figure 3. Signage example 1



Figure 4. Signage example 2

Noxious Weeds

Measures to control invasive species would be incorporated into project planning, implementation, and monitoring. Use Appendix B: Design Features, Best Management Practices, Required Protection Measures and Mitigation Measures in the Final Environmental Impact Statement for Integrated Treatment of Noxious or Invasive Weeds on the Coconino, Kaibab, and Prescott National Forests within Coconino, Gila, Mohave, and Yavapai Counties, Arizona (2004).

If weeds are identified that require the use of herbicides to manage their populations, treatments would be implemented per the Final Environmental Impact Statement for Integrated Treatment of Noxious or Invasive Weeds (2004).

The following are recommended practices to mitigate the risk of spreading invasive species on new and existing trails (From Guidance for Invasive Species Management in the Southwestern Region):

Best Management Practices (BMPs) that may be implemented to prevent establishment of invasive plants by off-road vehicles and equipment include:

- Map invasive weed-infested areas and establish measures such as no-travel zones to prevent spread from these areas. Ensure that areas designated as open to cross-country travel under the Travel Management Rule (36 CFR 212.51) are actively managed for weeds.
- Locate weed-free areas where project equipment can be staged prior to commencement of project activities.
- Avoid invasive species populations when feasible and minimize spread of invasive species during any soil disturbing activities.

Measures that can be taken to prevent spread of invasive weeds in recreational areas include:

- Post messages on weed awareness and prevention practices at strategic locations such as trailheads, roads, and forest entrances. Messages should discourage picking of unidentified “wildflowers” and discarding them along trails or roadways.
- Promptly post sites if invasive plant species are found and, if feasible, close access until infestation is controlled. In areas susceptible to weed infestations, limit vehicles to designated and maintained travel routes.
- Encourage public land users to inspect and clean motorized and mechanized trail vehicles of weeds and their seeds before recreating on public lands. If practical, provide facilities for cleaning contaminated vehicles and equipment.
- Annually inspect all campgrounds, trailheads, and recreation areas that are open to public vehicle use for weeds and treat new infestations. Chronic weed infestations should be assessed as to why they are occurring, and steps should be taken to mitigate or reduce the risk of infestation. Consider seasonal or full time closure to campgrounds, picnic areas, and other recreation use areas until weeds are reduced to levels that minimize potentials for spread.
- Maintain trailheads, outfitter and public camps, picnic areas, roads leading to trailheads, and other areas of concentrated public use in a weed-free condition.
- Inspect and document travel corridors in recreation sites for weeds and treat well before seed production. In areas susceptible to weed infestation, limit vehicles to designated travel routes.

Sensitive Plant Species

Prior to project implementation, surveys would be conducted if it is determined that highly suitable potential habitat is likely to exist for the Region 3 sensitive plants known to occur in areas proposed for treatment. These species include Mearns sage (*Salvia dorii*), Tonto Basin agave (*Agave delamateri*), heather-leaf wild buckwheat

(*Eriogonum ericifolium*), Ripley wild buckwheat (*Eriogonum ripleyi*), Eastwood alumroot (*Heuchera eastwoodiae*), broadleaf lupine (*Lupinus latifolius*), Flagstaff beardtongue (*Penstemon nudiflorus*), Arizona phlox (*Phlox amabilis*), and Hualapai milkwort (*Polygala rusbyi*).

Prior to project implementation, consult a Forest specialist (e.g. Botanist, Ecologist, Biologist) to ensure target Forest Service Southwestern Region (Region 3) plant species are correctly identified in the project area. If other sensitive plant species are detected (other than those currently known to exist in the project area) follow sensitive plant species resource protection measures to minimize potential negative impacts.

Slash piles should be at least 10 to 20 feet away from known populations of Region 3 sensitive plants. Consider placing slash piles on previously disturbed locations to avoid severe disturbance to additional locations where possible.

Where feasible and practical, avoid or minimize trail construction in locations of known populations of Region 3 sensitive plants.