

FINDINGS, RECOMMENDATIONS, AND ACTIONS

Table 4-1 contains the summary, by core topic, of significant findings and recommendations documented within this watershed assessment. The table has been separated into the resource issues and areas addressed in the assessment. Detailed information to support the recommendations can be found in Chapter 3. The action(s) required to implement the recommendations are included in the third column of the table.

Table 4-1. Significant Findings, Recommendations, and Actions Needed

Soil and Erosion Processes

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
An estimated 81 percent of the watershed has been mapped as having severe erosion potential, and 66 percent of the watershed has been mapped as sensitive soils. Soil areas of concern have been mapped at the broad scale. These soils may have an inherently increased risk for mass movement, detrimental soil disturbance, or other soil-related impacts.	Verify and adjust mapped areas of severe erosion potential and soil sensitivity at the project level as needed. Use maps in project planning and analysis to help protect soils in future ground-disturbing projects.	Coordinate with Forest Soil Scientist in planning for ground-disturbing projects in the watershed to ensure that high-risk and sensitive soils are avoided or that potential effects are mitigated to reduce the risk of mass movement or detrimental soil disturbance.

Hydrology and Stream Channels

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
Stream channels are degraded by historic and present day uses and facilities. Channels receive accelerated upland sediment and storm runoff. Within channel sediment relations are out of balance. Some stream segments tend toward less stable channel types.	Reduce sedimentation and storm runoff from land uses and facilities. Restore channel stability by treating sediment and storm runoff source areas. Improve riparian conditions to help move channels toward stability. Use natural channel design/Rosgen structures as appropriate. Project sites determined through site-specific analysis.	Identify project opportunities through established and on-going inventory process. Complete NEPA on appropriate projects with the highest likelihood of success. Coordinate with WVDOH/Forest Engineer on maintenance projects.

Water Quality

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
Forest classified and unclassified (woods) roads contribute substantial sediment and accelerated runoff to many streams. Sediment loads and channel bank erosion are elevated. Refer to project list in Chapter 3.	Correct sediment source areas and runoff problems on priority roads. Improve road maintenance and drainage, revegetate and stabilize soil where needed. Decommission or obliterate roads not needed in near or long term.	Identify project opportunities through watershed assessment, erosion inventory, and NEPA analysis. Implement in conjunction with NEPA projects, or routine maintenance.
Various watershed and stream channel	Foster forested riparian conditions that	Identify specific treatments

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
conditions likely contribute to increased daily stream temperature fluctuations as well as increased extent and duration of summer maximum stream temperatures and winter minimum stream temperatures.	can provide shading from solar radiation; facilitate lateral and vertical stream stability to encourage quality pool habitat formation; reduce road densities to decrease the effect of roads on hillslope hydrologic processes.	that address the items discussed under recommendations; prioritize and target these areas for project development and implementation.

Aquatic Resources

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
Aquatic habitat fragmentation is likely contributing to impaired health of aquatic populations and possibly extirpated segments of isolated aquatic populations by reducing the availability of aquatic habitats. Aquatic organism passage is adversely impacted by numerous USFS and State roads. Passage barriers create isolated populations and reduce available aquatic habitat and connectivity.	Eliminate barriers to aquatic organism passage where they pose a greater threat to native and desired non-native aquatic species than they help protect (as in the case of restricting encroachment of non-native invasive species).	Identify and prioritize road crossings and other artificial structures that are passage barriers to aquatic organisms. Plan and implement corrective actions needed to provide aquatic access. Coordinate actions with WVDOH and Forest Engineers.
Aquatic habitat composition is highly skewed toward simplistic shallow habitats that are typically characterized as riffles. Deeper water habitats such as pools are largely under-represented and of poor quality and complexity.	See Recommendations discussed for Hydrology/Stream Channels.	See Actions Needed for Hydrology/Stream Channels.
Though relatively scarce in streams, large woody debris is a primary pool formative feature for the infrequent pools in the upper Greenbrier River Watershed.	Foster forested riparian conditions that can provide for increased large woody debris recruitment, and pursue other efforts that may help increase the abundance of in-stream large woody debris.	Identify specific treatments that address the items discussed under recommendations; prioritize and target these areas for project development and implementation.
The proportion and persistence of special status aquatic species within the upper Greenbrier River Watershed suggests an elevated ecological importance for this aquatic ecosystem..	Facilitate aquatic resource conditions that enable the upper Greenbrier River Watershed to continue to serve an important ecological role in the conservation of special status species.	Pursue studies of special status species to identify conservation needs; incorporate findings into species conservation strategies and resource management practices.
Substantial riparian area acreage is degraded well below its potential, due to roads, grazing, historic use impacts, etc. Effects include reduced riparian and aquatic habitat quality, warmer water temperatures, decreased channel stability and increased channel bank erosion.	Restore riparian areas to a condition that trends toward healthy and fully functioning riparian systems over time. Do this through a combination of natural process and project work, such as woody vegetation planting, road obliteration, allotment fencing and planting, etc.	Identify project opportunities through established and on-going inventory process. Complete NEPA on appropriate projects with the highest likelihood of success. Project sites determined through site-specific analysis. Coordinate with partners such as Trout Unlimited.

Vegetation – Age Class Diversity, Species Composition, and TES Plants

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
Age Class Diversity and Species Composition		
Age classes for hardwood stands in MP 3.0 areas are dominantly in the mid-late successional stage, whereas the desired age classes for this MP are more evenly distributed among all stages.	Regenerate hardwood stands in this MP to begin moving age class distribution toward desired conditions. It is estimated there are roughly 3,600 to 7,200 acres available for harvest.	Develop a silvicultural prescription for the stands, complete NEPA (EA), and implement prescription.
Age classes for hardwood stands in MP 4.1 areas are dominantly in the mid and mid-late successional stages, whereas the desired age classes for this MP are more evenly distributed among all stages.	Regenerate hardwood stands in this MP to begin moving age class distribution toward desired conditions. It is estimated there are roughly 1,500 to 2,300 acres available for harvest.	Develop a silvicultural prescription for the stands, complete NEPA (EA), and implement prescription.
Age classes for hardwood stands in MP 6.1 areas are dominantly in the mid-late successional stage, whereas the desired age classes for this MP are more evenly distributed among all stages.	Regenerate hardwood stands in this MP to begin moving age class distribution toward desired conditions. It is estimated there are roughly 600 to 900 acres available for harvest.	Develop a silvicultural prescription for the stands, complete NEPA (EA), and implement prescription.
The range of spruce and spruce-hardwood communities is substantially less than it was prior to extensive logging that occurred 80-120 years ago. This has affected the biodiversity of vegetation and dependent wildlife species in the area.	In MP 4.1 areas, identify opportunities to expand or establish a spruce component in existing hardwood stands to help expand the range and connectivity of spruce and spruce-hardwood communities in MP 4.1.	Identify specific treatments that address the items discussed under recommendations; prioritize and target these areas for project development and implementation.
Timber Stand Improvement		
Stands that were harvested within the last 30 years are overcrowded and need timber stand improvement to increase growth and vigor and to enhance species composition.	Do timber stand improvement and crop tree release on stands <30 years old. It is estimated that up to 2,700 acres on suited timberlands qualify for treatments	Develop a silvicultural prescription for the stands, complete NEPA (CE), and implement prescription.
Threatened, Endangered, and Sensitive Plants		
Projects may be proposed in areas with TES plants, and those projects may have the potential to affect the plants and their habitats.	Project areas that may receive ground disturbance or canopy removal need to be surveyed for TES plants.	Identify proposed project areas and coordinate with Forest Ecologist for TES plant surveys.

Vegetation – Openings and Range Allotments

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
Openings		
The amount of permanent openings in MPs 3.0 and 6.1 are well below the desired condition ranges for these features.	Increase the amount of opening in MP 6.1 by roughly 100 acres and in MP 3.0 up to 800 acres.	Develop a silvicultural prescription for the stands, complete NEPA (EA), and implement prescription. Coordinate with Wildlife Biologist to incorporate wildlife needs.
Some openings in MPs 3.0, 4.1, 6.1, and 6.2 are being affected by woody tree encroachment and the loss of native grasses.	Manage selected openings in MP 3.0, 4.1, 6.1, and 6.2 to reduce tree encroachment and increase native grasses. Consider fire as a management	Develop a silvicultural prescription for the areas, complete NEPA (CE), and implement prescription.

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
	tool in these areas.	
Allegheny Battlefield Range Allotment		
Structural improvements (such as fences and livestock watering facilities) have deteriorated over years of use, exposure to the elements, and low intensity of maintenance. There is a need to make major repairs to, or to reconstruct, some of these structural improvements.	Good fences are needed to contain livestock within the allotment, to reduce impacts from grazing to sensitive areas such as riparian areas and wetlands, and to prevent trespass of livestock to adjacent National Forest and private lands. See watering facility recommendations below.	Survey allotment fences and continue to work with the permittee to make needed improvements over time. Note: NEPA for this allotment was completed in 2004 and should cover all the allotment actions described in this assessment.
Currently the allotment only has one developed livestock watering facility. The allotment is relatively long and narrow. Usually, the farther the distance from a livestock watering source the less grazing occurs. The addition of a livestock watering facility on the western third of the allotment and another watering facility on the eastern third of the allotment would improve livestock distribution and forage utilization over the entire allotment.	Develop two new livestock watering facilities, one in the western portion of the allotment around a constructed pond, and one in the eastern portion around existing springs.	Construct a small pond in the western third of the allotment, in a no-channel ephemeral drain. Fence the pond and provide a graveled lane to it to allow livestock to drink. Develop one of the springs in the eastern third with either a spring box or headwall. Run water lines from the spring to a new trough and back to the riparian area. Harden the area around the trough with gravel and fence out the nearby springs.
Development of livestock water on the western third of the allotment would allow implementation of a rotational grazing system on the allotment.	After a reliable water source is developed in the western third of the allotment, convert the allotment to a two pasture rotational grazing system.	Construct a short amount of new interior fence and a gate near the present main entrance gate and cattle guard.
Fencing may be needed to reduce impacts from grazing to sensitive areas such as riparian areas and wetlands.	After installing the spring development on the east side of the allotment, monitor stream channel and riparian area conditions of the wooded drain in the eastern portion of the allotment.	If livestock grazing causes adverse effects to the channel and riparian area, fence this area to prohibit livestock access.
Portions of the roads leading to and within the allotment are open to the public and are rutted or contain mud holes. Water runs down these ruts causing soil movement and damage to the roads.	Repair portions of the road system leading to and within the allotment.	Grade the roads for better drainage, spot gravel and water bar as needed. NEPA was completed for all of these actions in 2004.
The allotment is relatively long and narrow. Usually, the farther the distance from a livestock watering source, the less grazing occurs. The addition of a livestock watering facility on the western one third of the allotment and another on the eastern one third of the allotment would improve livestock distribution and forage utilization over the allotment.	Change the season of use and adjust over time as management practices, such as rotational grazing, liming, fertilizing, and reseeding are implemented, and as grazing capacity increases.	Initially, permit the grazing of 20 animal units from around May 15th to October 1 st . Exact put on and take off dates can be adjusted depending on readiness or condition of the vegetation.
Several species of desirable grasses and legumes have declined over time. Just as residential lawns need reseeding at	Legumes, such as clovers, are high in protein and are especially nutritious to wildlife and livestock for general health,	Reseed the area to desirable legume and grass forage species. Use native species

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
intervals, pasture reseeding helps to maintain important forage species for use by livestock and wildlife.	growth, milk production for nursing young, and for healthier offspring.	where possible.
Liming of soils increases soil pH, or reduces soil acidity. This favors the growth of legumes and other beneficial vegetation. Increasing soil pH also allows the release of existing nutrients within the soil for uptake by plants and indirectly acts to increase fertility of the limed area. Plants grow more vigorously and are more nutritious when growing in more fertile and near neutral soils.	Soils in the areas and their resulting vegetation would benefit from reseeding and from the addition of soil amendments/supplements, such as lime and/or fertilizer.	Determine schedule and means to fertilize the soil with lime and/or other soil supplements in conjunction with reseeding.
Weeds and brush compete with other more preferred vegetation for limited soil moisture, sunlight, and nutrients. They shade out herbaceous vegetation and spread to adjacent areas. Some of these weeds are poisonous, noxious, non-native, and/or invasive.	Weeds and woody vegetation have invaded this allotment and require selective control. There is a need to identify and prioritize treatment based on risks to native and desirable forage vegetation.	Prioritize treatment and then treat weeds and woody vegetation with a combination of cutting, mowing, and herbicide application.
Elk Mountain Range Allotment		
The AMP and NEPA documentation for this allotment are well over 10 years old, and allotment conditions and needs have changed considerably in the interim.	There is a need and opportunity to update both the AMP and NEPA documentation for this allotment.	Complete Range EA for allotment, identify needs, update AMP, and implement improvements.
Hawthorn has been encroaching on this allotment for many years. Many clumps were recently cut, but they are already starting to come back.	Continue to mow the hawthorn in this area for a couple of years to keep it under control. Herbicide may be needed in areas too steep for a mower.	Complete Range NEPA and incorporate need for treating hawthorn. Treat hawthorn by force account or contract.
Widney Range Allotment		
The AMP and NEPA documentation for this allotment are well over 10 years old, and allotment conditions and needs have changed considerably in the interim.	There is a need and opportunity to update both the AMP and NEPA documentation for this allotment.	Complete Range EA for allotment, identify needs, update AMP, and implement improvements.
Hawthorn has been encroaching on this allotment for many years, reducing the amount of land available for grazing.	The hawthorn should be treated to reclaim open grazing land on the allotment.	Incorporate the need to treat hawthorn into Range NEPA and AMP.

Vegetation – Ecological Areas

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
The Max Rothkugel Plantation has not received any treatments in decades, and it is becoming an old forest with little or no spruce or larch regeneration. The management goal is to emphasize plantation protection and development.	The area should be treated to promote spruce and larch regeneration, and to reduce the risk of fire, disease, and insect infestation. Treatments would likely be some combination of thinning and prescribed fire.	Develop a silvicultural prescription for the area, complete NEPA (CE/EA), and implement prescription, or change the management goal for the area.
The Appalachian Forest Heritage Area has recently expressed interest in researching and documenting the area as it exists today, and developing an interpretive trail and informational materials for the area.	Coordinate with the Appalachian Forest Heritage Area to explore interpretive and informational opportunities.	If coordination is successful, pursue opportunities with AFHA for partnerships or grants to enhance site interpretation.

Wildlife – Threatened and Endangered Species

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
West Virginia northern flying squirrel (WVNFS) is present within the watershed. WVNFS habitat is arterial in nature with extensive opportunities to increase the red spruce composition and vertical structure of the forest to reconnect existing areas of red spruce forest and improve existing habitat.	Identify areas in close proximity to existing optimal WVNFS habitat to expand the red spruce composition and improve forest structure through snag retention/creation and/or cavity creation and under planting of red spruce. Similar planting opportunities exist to expand the balsam fir composition in Blister Swamp in the East Fork Greenbrier drainage.	Work with the Northeastern Research Station to develop and implement a comprehensive red spruce restoration plan for the watershed. This would include receipt of a research permit from the USFWS and include a wide range of activities and appropriate monitoring to achieve adaptive management.
As a result of scattered plantings roughly 70-80 years ago, red pine plantations currently exist in and adjacent to suitable WVNFS habitat within the watershed. The pine plantations are even-aged, and a number contain a red spruce component.	Treat red pine plantations to improve habitat structure and increase red spruce overstory composition.	Conduct 100-150 acres of red spruce restoration in the Research Loop Areas (MP 8.0). Treat an estimated 45 acres (1/2 of the existing red pine) in MP 3.0 and 200 acres (1/2 of the existing red pine) in MP 4.1 under a research permit from FWS. Improve habitat structure through snag/cavity creation on approximately 200 acres (1/2 of the existing red pine) in MP 4.1.
The northwestern portion of the watershed is within 5 miles of a known Indiana bat hibernacula. Also, radio-telemetry work indicates that male Indiana bats are using the southern portion of the watershed for roosting habitat. Forest management could be used to enhance the suitability of existing forested areas as both foraging and roosting habitat.	Deciduous forest stands with a dense forest canopy could be thinned through selective harvest to reach the optimal 60-80% overhead cover preferred by the species. The focus should be on stands with an oak-hickory component, leaving large-diameter trees with exfoliating bark, and creating snags and water sources (often a critical habitat component for these bats.)	Identify suitable stands within the watershed for thinning and snag/pond creation, and take steps to implement Indiana bat habitat enhancement. Also, create snags and/or provide bat boxes at the interface between suitable forest habitat and adjacent open (e.g., field) habitats to promote roost tree use
The Cheat Mountain salamander is a habitat specialist, restricted to moist, high elevation forested habitat, much of which was lost as a result of a history of heavy logging and fire on the Forest. The species is known to occur along Cheat Mountain at the western boundary of the Watershed, with additional potential habitat the northeast.	All potential habitat should be surveyed for CMS to determine the distribution of the species within the Watershed, and the potential for habitat restoration between isolated populations. Any proposed project areas in potential CMS habitat that may receive ground disturbance or canopy removal need to follow Forest Plan direction for this species (Forest Plan, p. II-26)	Conduct surveys in potential habitat and consider habitat restoration or connectivity where appropriate (see spruce restoration actions above). Identify proposed project areas and coordinate with District Biologist to review for potential effects to CMS and avoid any areas of occupied habitat.

Wildlife – Regional Forester’s Sensitive Species

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
The historic loss of spruce and mature northern hardwood habitat in upper elevations likely had an adverse affect on populations of several species that are now on the RFSS list, including the northern goshawk, southern rock vole, Allegheny woodrat, and olive-sided flycatcher. While spruce and northern hardwood forests appear to be gradually recovering within the watershed, populations of these species are still vulnerable to the effects of local disturbance associated with management activities and special uses in the Forest, particularly during the breeding season.	Identify and protect known breeding locations of the northern goshawk and other sensitive species in spruce and northern hardwood habitats within the watershed. Project areas in potential goshawk habitat should be rigorously surveyed for goshawk presence, and disturbance avoided during the breeding and fledgling period near known nest sites. Look for opportunities to provide connectivity or expand spruce and northern hardwood habitats as noted above.	Identify proposed project areas and coordinate with District Biologist to review for potential effects to northern goshawk and other sensitive species.
Several RFSS species on the Forest are associated with ledges and rocky outcrops within forested habitats, including the small-footed bat, timber rattlesnake, Allegheny woodrat, and green salamander. Because these habitats are limited in size and are often relatively isolated, fragmentation of forested habitat connecting local rocky habitat patches can adversely affect the species both through direct mortality (e.g., road kill and intentional killing of rattlesnakes) and through a loss of gene flow across local populations (i.e., metapopulations).	A better knowledge of the abundance and distribution of ledge and rocky outcrop habitats within the watershed is critical to maintaining viable populations of these species in the area. Projects in the vicinity of these habitats should avoid direct impacts to the outcrop areas and provide for suitable forested habitat surrounding these outcrops; where rattlesnake dens are found, minor forest management in the immediate vicinity of outcrops may be beneficial if the canopy has begun to completely close.	Imagery analysis and field surveys should be conducted throughout the watershed to identify rocky outcrop and ledge habitats. Once identified and digitized as a permanent spatial Forest layer, these sites should be surveyed for RFSS species during appropriate periods (e.g., spring and fall for rattlesnakes and green salamanders).

Wildlife – Management Indicator Species and Birds of Conservation Concern

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
Cerulean warblers have experienced a long-term population decline, at a rate of ~3% per year over the last 40 years, with a concurrent restriction of its breeding range; it is now common only in its core habitat in the central Appalachians. Loss and fragmentation of mature deciduous forests and the structural components characteristic of those forests continue to threaten viability of the species, as do threats to their wintering habitats.	Maintain extensive patches of deciduous habitat in late successional stages (e.g., within 6.2 and 8.0 MP areas). Enhance habitat for the species through forest management, particularly on ridgetops and north or easterly slopes, providing gap openings and additional vertical habitat structure and canopy complexity through selective harvest techniques. These management recommendations will also favor maintenance or increase in populations of other declining forest-interior species.	Identify suitable stands for habitat enhancement and work with timber program managers and other resource areas to implement harvest opportunities to provide mature and old-growth structural characteristics.
Wild turkey need herbaceous openings and steady supply of oak mast. Beech bark disease has devastated the supply of mast for wild turkey in the large portion of the watershed.	Create and/or maintain herbaceous openings and steady supply of oak mast.	Favor oak in young stands through crop tree release. Develop and maintain herbaceous openings. Identify and protect existing stands of healthy beech.

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
Although the amount of permanent openings in MPs 3.0 and 6.1 are well below the desired condition ranges for these features, the Forest and WVDNR are having logistical difficulty maintaining the small openings that are developed with most projects. Also, the value of these openings, from a broad wildlife population standpoint is questionable, especially if they are only maintained on a “short-term” basis. Many RFSS and BCC species could benefit from creation and long-term maintenance of grassland/early successional habitats, including the golden-winged warbler, Henslow’s and vesper sparrow, prairie warbler, sedge wren, Columbine duskywing, and Cobweb skipper, as well as the endangered Virginia big-eared bat.	Develop a watershed-based plan for development and maintenance of early successional habitat that considers the practicability of maintaining these forest openings over a long time scale as well as site and landscape-level patch metrics (e.g., patch size and specific vegetative characteristics, spatial configuration, interpatch distance, fragmentation affects, etc.) Openings should be designed based on the specific life history needs of multiple species and should be large enough and configured on the landscape to maximize support for viable populations of multiple species.	Establish and implement a landscape-level early successional habitat management plan for the watershed. Determine which existing openings should be allowed to revegetate (i.e., return to forest) and where new openings should be created to maximize benefits to wildlife across the watershed. Work with all resource groups to design new grassland/early successional habitat openings.

Human Uses - Recreation

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
Island Campground		
The outdated vault toilets are difficult to maintain and they are not fully accessible to the public.	Replace two toilets with one pre-cast concrete vault toilet that would be easier to maintain and that is fully accessible.	NEPA analysis/decision, procure funding source, and implementation.
Two wooden bridges in the campground are functionally deficient and present a growing hazard to the public.	To reduce/eliminate this hazard, replace the bridges or close the access road to vehicle traffic beyond the bridges.	NEPA analysis/decision, procure funding source, and implementation.
More site definition and better vehicle control in campsites is needed.	Provide additional vehicle barriers around campsites.	NEPA analysis/decision, procure funding source, and implementation.
Trash cans are not accessible nor are they bear proof.	Replace trash cans with those that are accessible and bear proof.	Procure funding for cans and replace as maintenance.
Lake Buffalo		
The accessible pathways need upgrades. The boat ramp is not meeting current needs of the public and drops off sharply. The trail around the lake needs to be improved and have bridges and a boardwalk over wet areas. An accessible fishing pier is needed.	Improve handicap accessible pathway to the lake, lengthen the boat ramp, improve the trail around the lake, including a reroute, boardwalk, build 3 new bridges, replace 2 bridges, and build an accessible fishing pier.	NEPA analysis/decision, procure funding source, and implementation.
The earthen dam is currently used for hiking and fishing access to the lake.	To continue these uses, maintenance needs to include liming, fertilizing and mowing the dam embankments to maintain a grassy surface.	Maintenance.
The lower valve in the lake dam can drain the entire lake, but the valve is old and has not been used in a long time (20+ years). There is concern that it may break if used.	The lower drain valve needs to be inspected and possibly repaired.	Maintenance.
Old House Run Picnic Area		
The outdated vault toilets are difficult to	Replace toilets with one pre-cast	NEPA analysis/decision,

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
maintain and they are not fully accessible to the public.	concrete vault toilet that would be easier to maintain and that is fully accessible.	procure funding source, and implementation.
Wooden vehicle barriers are deteriorating and need to be replaced to prevent vehicles from leaving the road/parking area.	Replace rotten wood barriers with rock or other form of barrier.	NEPA analysis/decision, procure funding source, and implementation.
The hand pump is an older model with a long handle that has to be cranked up and down. It is difficult or impossible to use by younger children, people in wheelchairs, or people who have problems gripping or holding large metal objects. Newer model pumps exist that make pumping accessible.	The old pump should be replaced with a newer, more accessible model.	Procure funding for pump and replace as maintenance.
Gravel areas, picnic tables, horseshoe pits, large picnic grills, and accessibility need to be upgraded or replaced.	Paint picnic tables; gravel parking areas, improve horseshoe pits, replace grills, and improve accessibility features as funding and personnel are available.	Maintenance.
Gaudineer Knob Picnic Area and Trail		
Tables, grills, and gravel at picnic sites are in need of replacement. Pathways should be widened with additional gravel. There are opportunities to upgrade interpretation at this site.	Replace tables/grill/gravel at picnic sites, widen and improve gravel on all pathways. Replace interpretive signage.	Complete interpretive plan for this site. Maintenance.
Gaudineer Scenic Area Interpretive Trail		
Interpretive signs are old and need updating. Trail needs maintenance.	Replace interpretive signage. Maintain trail.	Complete interpretive plan for this site. Maintenance.
Dispersed Sites		
Dispersed sites along FR 44 are muddy and need hardened. Motor vehicles are also widening sites and creating mud holes. Too many dispersed campers are camping along FR 44, especially during hunting and fishing seasons, creating congestion along the FR 44. Campsites are small and encroach onto the system road.	Upgrade existing dispersed campsites with more vehicle control and harden surfaces with gravel. Plan and develop additional dispersed campsites in three landings along FR 44 south of FR 17 near the West Fork Trail. This would reduce congestion along FR 44 during hunting and fishing seasons and create an estimated 15 additional hardened campsites and parking near the West Fork Rail Trail.	NEPA analysis/decision, procure funding source, and implementation.
Scenic Byway		
Opportunities exist for grants for scenic byway projects for recreation improvements and interpretation projects.	Explore partnering with the Staunton-Parkersburg Turnpike Alliance on potential improvement projects near the Scenic Byway.	Develop partnership and grants.
West Fork Rail Trail		
Passage around several gates is needed to better accommodate bicycle/stroller and horse traffic along this trail. The West Fork Rail Trail could be showcased and serve as a destination. There are several interpretive opportunities for this trail. Benches along the trail would provide additional improvements/amenities for users. Trail is muddy and lacks proper drainage in an area near May.	Create passage around gates for bicycle and horse traffic. Improve trail and market as a destination. Install benches for fisherman/hikers. Install culvert/add stone in wet area near May.	Possible NEPA analysis/decision for ground-disturbing improvements. Some work may be done as maintenance. Work with PAO to develop marketing strategy.

Human Uses – Heritage Resources

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
Prehistoric and historic heritage resource sites provide valuable information of past and reference forest conditions.	Continue to conduct heritage resource surveys to locate prehistoric and historic sites. Seek funding to excavate/evaluate some sites to learn more about past and reference forest conditions.	Prepare NEPA documents and work plans to evaluate sites. Monitor/protect known sites. Consult with representatives of Native American tribes known to have occupied/visited area.

Human Uses - Roads

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
There are likely a number of unclassified roads that have not been identified in the watershed. In addition, the condition of many classified and unclassified roads in the watershed is unknown.	Gather additional information about project area roads during project-level planning and analysis in order to make informed decisions on the Forest road transportation system.	Conduct road inventories during project-level planning and incorporate data into project planning and decision-making.
There were a number of changes to the road transportation system that were not reflected in the transportation system database.	Identify changes at the watershed (see Appendix D) and project levels and ensure that these changes are incorporated in Forest databases.	Project managers coordinate with SO engineering and GIS database managers to incorporate changes.

Human Uses - Facilities

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
Greenbrier Ranger District Administrative Site		
The wastewater treatment system has parts that are old, and much of the system is buried much deeper than it needs to be, which makes maintenance and repair more difficult and costly than it needs to be.	The disinfecting and pumping portions of the system should be replaced, and the Forest should consider relocating the system to a more accessible site and/or depth for maintenance/repair purposes.	Identify as Forest facilities need and apply for funding. Do NEPA if needed.
The CCC-era warehouse is historic but was not built to accommodate the storage needs of today. The restroom facilities are old and in need of an upgrade.	There is a need to maintain the historic character of the site, while constructing more warehouse space and upgrading restrooms, either as improvements to the original site or as separate facilities.	Identify as Forest facilities need and apply for funding. Do NEPA if needed.
The existing residence/bunkhouse built by Job Corps was not constructed to house crews of seasonal employees, and there are problems with the heating, cooling, and plumbing.	There is an opportunity to provide housing for crews, volunteers and others that is accessible, energy efficient, and meets the requirements for a bunkhouse.	Identify as Forest facilities need and apply for funding. Do NEPA if needed.
The current facilities at the administrative site are a hodgepodge of architectural design and appearance.	There is an opportunity to identify an architectural theme and alter siding and/or other building components to comply with the theme.	Identify as Forest facilities need and apply for funding. Do NEPA if needed.
Additional Facilities needs or opportunities can be found in the Recreation section of this chapter.		

Human Uses - Minerals

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
There were no specific needs or opportunities identified. Minerals management must respond to identified needs on a case-by-case basis in order to address legal compliance issues.		

Human Uses – Lands and Special Uses

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
There are roughly 15 miles of landlines that have been identified as a higher priority for survey due to the potential for management activities in the foreseeable future.	Specific needs for landline surveys should be identified as early as possible in project planning in order to complete these often protracted surveys in a timely fashion.	Project managers need to coordinate with Lands program manager to identify and arrange needed surveys 1-2 years prior to project.
There were no specific identified needs or opportunities for special uses. However, there may be existing or potential needs or opportunities related to easements and rights-of-way on roads to be used in future projects.	Opportunities or needs related to rights-of-way or easement special uses should be identified as early as possible in the project planning process to allow time to complete these often protracted transactions.	Project managers need to coordinate with Lands and Special Uses personnel to identify easement or right-of-way needs 1-2 years prior to project implementation.

Human Uses - Research

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
The Loop Road Research Area has two long-term vegetation research projects being conducted by the Fernow Experimental Forest.	Avoid conducting any projects within this area that may affect vegetation, unless they can be coordinated with the Fernow for mutual benefit.	Coordinate with the Fernow before conducting activities that may affect this area and its vegetation.

Human Uses - Other

SIGNIFICANT FINDING	RECOMMENDATION	ACTION NEEDED
Vandalism		
Some sites are vandalized every year. The most frequent vandalism is broken toilet building windows, graffiti, and vehicles destroying vegetation beyond roadways. Locks and pins on the gates of closed roads are often broken. Most of this vandalism occurs during hunting season.	Increase patrols of the area through cooperative agreements and funding with local law enforcement agencies.	Monitor and coordinate with law enforcement.
Illegal ATV Use		
There are no authorized areas for the use of off-road vehicles. Several areas of national forest land, adjacent to private property, show evidence of recent and frequent off-road vehicle use. Most of this use is limited to all-terrain vehicles (ATVs).	Monitor and increase patrols of known areas where illegal use is occurring.	Monitor and coordinate with law enforcement

