Big Creek Watershed Assessment

Opportunities for Biological Resources Management

2004 Revised Plan Goals & Objectives	Existing Condition	Opportunities	Possible Management Practices	NEPA Path
GOAL 11-1 Riparian ecosystems, wetlands, and aquatic systems are managed (and where necessary restored) to protect and maintain their soil, water, vegetation, fish and wildlife-associated resources. GOAL 11-3 Aquatic habitat conditions are suitable to maintain viable populations of aquatic species native to the planning area, and to support desirable levels of selected species.	Culverts on the following streams are not currently passable some fish. Rattlesnake Branch - CR107 & FS3249 Brown Gap Creek - FS2251-3 Deep Gap Creek – abandoned road	Improve fish passage where barriers are present for adult trout.	Replace culverts as funding becomes available.	Admin.
GOAL 11-3 See Above.	Many streams in the Big Creek watershed are lined with dense stands of rhododendron (rhodo) that block out light, reduce productivity, and interfere with sediment flows.	Improve stream habitat and productivity in streams.	Thin rhodo along Brown Gap, Deep Gap, Trail Fork Creeks, & Lemon Prong & Rattlesnake Br.	Stream Improvement DM
GOAL 11-2 Streams are managed in a manner that results in a minimum of 200 pieces of large woody debris (LWD) per stream mile (4 feet x 4 inches).	Many streams in the Big Creek watershed have less than 200 pieces of LWD per mile and little potential for future recruitment. Others are lacking substantially large wood to influence habitat on a long-term basis.	Increase amount of large woody debris in streams.	Drop large trees into streams in areas where wood is lacking, avoiding areas near roads.	Stream Improvement DM

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GOAL 11-4 Survey habitats and work with TWRA to re-introduce native aquatic species into suitable habitats.	4 of the 13 trout streams in the Big Creek watershed have native brook trout. Dry Fork has had restoration efforts and is now 100% brook trout.	Expand distribution and abundance of native brook trout populations in the watershed.	Remove rainbow trout and replace with brook trout in Trail Fork & tributaries above Boomer.	CE
OBJECTIVE 14.02 Provide upland water sources approximately every 0.5 miles, to provide an important habitat element for wildlife, including the endangered Indiana bat. Water sources are comprised of both permanent ponds and ephemeral pools and are often located in openings or near road corridors that allow access by bats.	Water sources are plentiful in the lower slopes of the watershed, but along ridge tops, water sources are often scarce. Indiana Bat is not known from area, but Eastern small-footed bats are.	Provide water sources in dry areas for amphibians, bats, and other wildlife. Maintain and monitor existing waterholes.	Create vernal ponds along ridges. Maintain existing waterholes.	DM, Big Creek EA CE
OBJECTIVE 9.F-1.05 To maintain table-mountain pine forests, prescribe burn an average of 160 acres of this type each year.	A Table Mountain pine forests occur on Round Mountain.	Protect, manage and maintain this rare community.	Use prescribed burning to maintain if feasible and monitor.	DM Admin.
OBJECTIVE 15.02 Control nonnative and unwanted native species, where they threaten TES elements, ecological integrity of communities, or habitats created for demand species. OBJECTIVE 17.09 Convert fescue fields (140 acres) to native grasses within a 10-year period where practical.	Kudzu is prevalent in Spicewood Flats and Tom Creek. Invasive species, particularly fescue, are present in all of the open areas of the watershed.	Increase the diversity and productivity of open areas and reduce the amount of non-native species.	Treat invasive species, especially kudzu. Treat fescue in open areas with herbicides, if appropriate and plant native grasses.	Forest-wide invasive EA (all). Veg. Mgmt. Existing EA.

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OBJECTIVE 12.01 Maintain at least 1000 acres above 3000 feet elevation in habitats characterized by grassy/ herbaceous ground cover. (Open woodlands, savannas, grasslands, old fields, forests 0-10 years old).	An old field (>1 acre) at Max Patch is growing up with trees, and soon much of the shrubby habitats will be gone. Another opening (2 acres) at the snowbird VOR site is maintained in a grassy condition.	Maintain Max Patch old field in shrubby condition to provide high elevation shrubby habitats. Maintain Snowbird VOR site in open condition. Create additional high elevation shrubby habitat through vegetation management, and land acquisition	Burn regularly, harvest, slash down trees and/or treat with herbicides. Acquire land from willing sellers and create/maintain openings. Work with ATC to create additional openings within the AT corridor Create openings within the Gulf tract within sapling/shrub and previously disturbed habitat.	Veg. Mgmt. Existing EA. Existing DM Big Creek EA DM EA or DM Big Creek EA

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OBJECTIVE 12.01 See Above GOAL 31 Where financially and environmentally feasible, enhance the following opportunities: water-based activities, sightseeing, camping, hunting, fishing, driving for pleasure, wildlife viewing/nature study, day-use and group facilities, non-motorized trail systems for hiking, biking, and equestrian use, designated OHV routes, special interest areas, interpretation and conservation education.	Wildlife openings in the watershed intersect many forest types providing travel corridors and foraging areas. Hunters, berry pickers, and other forest visitors use these areas. Higher operating costs and declining budgets are making maintenance of these areas difficult. Some openings are becoming overgrown.	Improve efficiency of managing and quality of the wildlife opening system in the watershed.	Discontinue maintenance on difficult or unproductive openings. Plant abandoned openings in mast producing species. Add new openings where feasible and efficient. Mow and maintain openings on a regular basis.	Admin. CE, DM or Big Creek EA

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OBJECTIVE 12.01 See Above GOAL 31 See Above	Wildlife improvements such as gates, signs, mast plantings, nest boxes are scattered throughout the watershed.	Improvements are in need of periodic, monitoring, maintenance or replacement.	Monitor and maintain gates, signs, and nest boxes as needed. Release mast plantings from competing vegetation. Prune apple trees to increase production. Add additional wildlife improvements in an efficient manner.	Monitoring – Admin. Maintainance – CE. Veg. Mgmt. existing EA Veg. Mgmt. existing EA DM, Big Creek EA

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OBJECTIVE 18.01 Encourage reintroduction of extirpated or declining native species when technologically feasible. These species include, but are not limited to, American chestnut, butternut, hemlock, dogwood, Fraser fir, and red spruce. Develop partnerships with universities, groups and other agencies to facilitate reintroduction of native species.	Chestnut is missing. Hemlock is currently dying out as a result of hemlock wooly adelgid. One site is designated as a hemlock conservation reserve. Dogwood and Butternut declining due to disease.	Reintroduce Blight-resistant Chestnut as if becomes available when planting stock is required. Continue release of predator beetles and insecticide applications to combat Adelgid. Reintroduce or supplement current populations of other extirpated or declining species.	Plant blight-resistant chestnut in abandoned wildlife openings with appropriate herbicide site-preparation and release. Utilize dogwood and butternut during wildlife tree/shrub plantings.	Big Creek EA Big Creek EA