AMENDMENT #4

GEORGE WASHINGTON NATIONAL FOREST
REVISED LAND AND RESOURCE MANAGEMENT PLAN

January 1997

The following changes are made to the Forest Plan through this amendment.

1. ***Forest Plan table 2-7 (page 2-33) is updated to show the following acres unavailable for oil and gas leasing due to administrative action.***

Table 2-7.
Thousands of Acres Available for Leasable Energy (Oil and Gas) Minerals[1]

Leasing with Standard *Stipulations*	Leasing with Controlled Use/Timing *Stipulations*	Leasing with No Surface Occupancy *Stipulations*	Unavailable due to Congressional *Action*	Unavailable due to Administrative *Action*
145	832	42	32	10

[1]The above acreage figures do not distinguish between Federal and private mineral rights. Approximately 19 percent of the Forest contains private mineral holdings.

2. ***The general description of Laurel Fork (Plan page 3-109) is updated to reflect the status of oil and gas leases in the SMA.*** The first, fourth, and fifth paragraphs on Plan page 3-109 are replaced with the following:

LAUREL FORK

The 10,000-acre Laurel Fork Special Management Area on the Warm Springs Ranger District contains all of the Laurel Fork Roadless Area. (The roadless area is described in greater detail in Appendix C of the FEIS.) A narrow corridor west of Forest Development Road (FDR) 106 on the western edge of the area, and the Locust Springs Picnic Area are in management areas 7 and 12 and not part of this management area. This area encompasses significant biological and recreational values that can be managed harmoniously to provide special benefits to the public.

The Laurel Fork Special Management Area is also valuable because of its subsurface natural resources. The western part of Laurel Fork contains part of the Thornwood-Horton Gas Field. Gas reserves were discovered at a depth of roughly 5,200 feet. On neighboring Monongahela National Forest in West Virginia, drilling began in 1961 and ceased in 1964; five gas wells were drilled in this geologic structure. In 1995, the Monongahela National Forest prepared the "Thornwood Gas Pipeline Environmental Assessment" on a natural gas pipeline proposal to access these wells. On March 29, 1996, the acting Forest Supervisor of the Monongahela National Forest decided to authorize Thornwood Gas, Inc. to construct, operate, and maintain a buried natural gas pipeline system and install well site production equipment at these existing gas wells. Most of the Thornwood-Horton field, as presently defined, lies in West Virginia, but part of the field is within the Laurel Fork area. To avoid future conflicts over management of surface (biologic and recreation) and subsurface (oil and natural gas) resources, Laurel Fork is unavailable for future oil and gas leasing.

At one time, a total of six leases were authorized on the SMA. In 1990, about 94 percent of the SMA was leased. Since 1991, five existing leases have been relinquished by their lessees (Thornwood Gas Company and Columbia Natural Resources, Inc.). In fact, four existing leases were relinquished in 1995. The amount of the Laurel Fork SMA under lease has now been reduced to the one BLM lease. Likewise, a small

strip of Laurel Fork within the Thornwood-Horton gas field has never been leased, despite the fact that it was available. Currently, 81 percent (about 8,264 acres) of the SMA is available for leasing.

Federal oil and gas lease BLM-A-0022918 (containing 2,168 acres in the western portion of Laurel Fork) is within the known geologic structure of the field. This BLM lease is being held under a communitization agreement (CA) with the Bureau of Land Management (BLM) of the U.S. Department of Interior for as long as a well is considered capable of producing in paying quantities. This communitization agreement supersedes the original lease and determines the rules for the production of natural gas. The CA does not have an expiration date. Since this lease is already issued, its administration will be governed by post-lease procedures, specifically the Application for Permit to Drill (APD). If the BLM lease were ever relinquished by the lessee, the subsurface area would then be unavailable for future oil and gas leasing.

3. ***The Desired Future for Laurel Fork (Plan pages 3-110 and 3-111) is modified to better focus management on its biological and recreational values.*** All paragraphs on Plan page 3-110 are replaced with the following:

The Desired Future for Laurel Fork

The Laurel Fork Special Management Area is managed in a manner that maintains and enhances its unique biological values not commonly found elsewhere in Virginia. These biological features make visiting the area a unique recreational experience.

Botanical and Zoological Features

This area contains one of the finest examples of northern boreal natural community complexes in Virginia and is the only representative of the Alleghany Plateau Ecoregion within the Commonwealth. The area contains at least 25 species of plants and animals have their only known occurrence in Virginia as the flora and fauna represented are distinctly northern in affinity with many species at or near their southern distributional limits.

Fertile soil, adequate year-round water, and moderate topography present exceptional habitat for threatened, endangered, and sensitive species. A mosaic of community types provides habitat for several state (Virginia) and federally-listed species including the Virginia northern flying squirrel, snowshoe hare, and water shrew. The special botanical and zoological features west of Laurel Fork stream are managed to maintain and, where appropriate, enhance habitat for these unique species.

Fifty snowshoe hare were introduced into this area in 1961. The existing snowshoe population decreases considerably because of lack of sprout growth and cover. Continued shortage of browse brings about further decline in the hare populations until they stabilize at some lower level.

The most noteworthy furbearing animal seen is the beaver. They are responsible for the picturesque meadow-pond environment. Active colonies vary in location over the years, but the dams generally remain in good condition.

A variety of bird life exists. Most unusual seen or heard are cedar waxwings, red crossbills, and blackburnian warblers; which are attracted by the northern hardwood forest and are not normally resident in other parts of the Forest. Species composition within the area varies with the time of year and status of migrations.

Laurel Fork stream and the beaver ponds contain trout. Stream headwaters are in northern hardwood/red spruce forests and flow through extensive beaver ponds and meadows.

Old growth characteristics develop. Old growth northern hardwoods, principally birch, cherry, maple, beech, and a scattering of red spruce occupy on moist sites at the higher elevations. Remnants of the original northern hardwood forest occur as isolated trees. The existing even-aged vegetative cover (almost entirely second growth of 50-70 years old) becomes uneven-aged over time.

Recreation

Most of the Laurel Fork Special Management Area continues to offer opportunities for primitive, non-motorized recreation use in a fairly remote setting.

The area receives continual, light use and sporadic heavy use. Heavy use occurs on holiday weekends and during hunting seasons. The best chance for solitude is during mid-week. The area is generally quiet.

The area is easily accessible from the west and north. Access from the east and south is over private lands. The old tram roads form the basis for an extensive trail network. A good system of interlinking foot trails exists. The extensive trail network provides opportunities for nature study, hunting, fishing, hiking and camping in a remote and primitive setting.

The resources for environmental education and scientific study are plentiful. The area can provide an opportunity for challenge.

Scenery

A dominant attribute continues to be the scenery associated with beaver dams in the drainages along the eastern slope of Alleghany Mountain. The mixture of spruce, hardwoods, and meadows, framing the impoundments created by beavers, provide a scenic background for tranquil visits.

The beaver ponds, meadows, and spruce provide pleasing areas for enjoyment of solitude, natural beauty, and wildlife viewing. They are present in Owl Knob, Buck Run, Locust Springs Run, Lost Run, Slabcamp and Bearwallow.

One of the most pleasing visual features is the clean, sinuous stream (Laurel Fork), with its changing character. Small cascades over shelf rock and deep pools framed by rhododendron complement broad shallows and small rills. Many places along Laurel Fork and other streams afford pleasing but short-distance views of vegetation and water combinations.

A seasonal variety of color contrasts is afforded by flowering understory plants, and the birch, maple, and cherry forests differing significantly from the oak-hickory forests found elsewhere in Virginia. Rhododendron are found in full bloom in mid-July along Laurel Fork and the lower reaches of the tributary streams. Many people travel to the area in the fall to see the brilliant orange and red hues of the sugar maples, which overshadow the more subdued colors in the oak-hickory forests.

Visual impact of the existing logging railroad tram becomes subdued, but is never completely eliminated since most were constructed on side slopes, with gentle grades, and straight alignment which required cuts and fills. The cuts and fills are well stabilized, but when combined with the long straight tangents, they reflect significant evidence of the work of man, even to a person unaware of their origin. The existing visual appearance of the trams naturally decreases over time. Otherwise, man's intrusions are not dominant to an experienced viewer. The evidence of man is not readily apparent.

Minerals

Mineral rights are owned by the United States of America on all National Forest System lands. There are no mineral leases.

4. ***Management Area 21 standard 21-4 (page 3-115) is amended with the following to withdraw oil and gas leasing within the SMA, including its associated riparian areas, while at the same time making no changes to the mineral standard for the other SMA's.*** Standard 21-4 on Plan page 3-115 now reads:

> 21-4. The Laurel Fork SMA, including its associated riparian areas, is administratively unavailable for oil and gas leasing. The other SMA's are available for oil and gas leasing with surface occupancy highly restricted by using controlled surface use stipulations.

5. ***The implementation monitoring program (page 5-33) associated with oil and gas leasing within Laurel Fork is now deleted, since the area would no longer be available for future oil and gas leasing.***

6. ***The list of threatened, endangered, and sensitive species in Plan Appendix L (pages L-1 to L-19) is appended to include new findings of these and state-rare species at Laurel Fork.*** The following table appends Plan Appendix L:

VASCULAR PLANTS

SCIENTIFIC NAME - COMMON NAME	RANK: GLOBAL	RANK: VANHP/ WVNHP	STATUS STATE/ FEDERAL		KNOWN OCCURRENCES BY DISTRICT LOCATION(S)							HABITAT	MGMT. AREAS
			VA	FED	LTO*	DF	DR	JR	LE	PD	WS		
Aralia hispida - bristly sasparilla	G5	S2/S?							X		X	MT RO	20,21
Blephilia hirsuta - hairy woodmint	G4?	S2									X	RI MW	21
Carex arctata - black sedge	G5?	S1/NA									X	MW	21
Cuscuta rostrata - beaked dodder	G4	S2									X	MW	21
Epilobium leptophyllum - linear-leaf willow-herb	G5	S2/S4									X	WL	21
Glyceria grandis - American manna-grass	G5	S1/S1									X	WL	21
Gnaphalium uliginosum - low cud-weed	G5	S1									X	MT OF	21
Gnaphalium viscosum - winged cudweed	G5	S1									X	MT OF	21
Hypericum mitchellianum - Blue Ridge St. John's-Wort	G3	S2									X	MT MW	21
Juglans cinerea - butternut	G4	S3?		C2		X	X	X	X	X	X	DW RO	21
Juncus brevicaudatus - narrow-panicled rush	G5	S2									X	WL	21
Milium effusum - tall millet-grass	G5	S1/S4				X	X	X	X		X	MT MW	4,21
Panax quinquefoilius - American ginseng	G4	S4/S4	T			X	X	X	X	X	X	MW	21
Poa palaustris - fowl bluegrass	G5	S1S2/S4									X	WL	21
Pyrola elliptica - elliptical shineleaf	G5	S2/S3S4									X	DW	21
Schizachne purpurascens - purple oat-grass	G5	S1/S1									X	MW	21
Solidago uliginosa var. uliginosa - bog goldenrod	G4G5	S2/S4									X	WL	21
Sparganium chlorocarpum - narrow-leaf burreed	G5	S1									X	WL	21

*Likely To Occur

ANIMALS
INVERTEBRATES

SCIENTIFIC NAME - COMMON NAME	RANK: GLOBAL	RANK: VANHP/ WVNHP	STATUS STATE/ FEDERAL		KNOWN OCCURRENCES BY DISTRICT LOCATION(S)							HABITAT	MGMT. AREAS
			VA	FED	LTO*	DF	DR	JR	LE	PD	WS		
Aeshna canadensis - Canada darner	G5	S1									X	WL	21
Aeshna mutata - Spring blue darner	G3G4	S1/SU									X	WL RI	21
Aeshna tuberculifera - Black-tipped darner	G4	S2									X	WL	21
Aeshna verticalis - Green-striped darner	G5	S1									X	WL	21
Arigiomphus furcifer - Lilypad clubtail	G5	S1									X	WL	21
Boloria selene myrina - silver bordered fritillary	G5T5	S2/SU									X	GL	4,21
Calopterix amata - Superb jewelwing	G3G4	S1									X	MW	21
Colias interior - pink-edged sulphur	G5	S1/S2/S3									X	WL GL	21
Cordulegaster diastatops - Delta-spotted spiketail	G5	S1									X	WL MW	21
Cordulia shurtleffi - American emerald	G5	S2									X	WL	21
Enallagma cyathigerum - Northern bluet	G5	S1									X	WL	21
Enallagma hageni - Hagen's bluet	G5	S2									X	WL	21
Epitheca canis - Beaverpond basket-tail	G5	S1									X	WL	21
Gomphus borealis - Beaverpond clubtail	G4	S1									X	WL	21

*Likely To Occur

ANIMALS
INVERTEBRATES

SCIENTIFIC NAME - COMMON NAME	RANK: GLOBAL	RANK: VANHP/ WVNHP	STATUS STATE/ FEDERAL		KNOWN OCCURRENCES BY DISTRICT LOCATION(S)							HABITAT	MGMT. AREAS
			VA	FED	LTO*	DF	DR	JR	LE	PD	WS		
Lanthus parvulus - speckled trout clubtail	G3G4	S2/SU									X	WL MW	21
Lestes disjunctus disjunctus - Northern common spreadwing	G5T5	S1									X	WL	21
Leucorrhinia frigida - Frosted whiteface	G5	S1									X	WL	21
Leucorrhinia hudsonica - Hudsonian whiteface	G5	S1									X	WL	21
Leucorrhinia intacta - Dot-tailed whiteface	G5	S2S3									X	WL	21
Libellula julia - Chalk-fronted skimmer	G5	S1									X	WL	21
Nehalennia irene - Sedge sprite	G5	S1									X	WL	21
Nemotaulius hostilis - a caddisfly	G5	S1									X	WL	21
Somatochlora elongata - Slender emerald	G5	S1S2									X	WL	21
Somatochlora williamsonia - Williamson's emerald	G5	S1									X	WL	21
Speyeria atlantis - atlantis fritillary	G5	S2									X	GL	21
Sympetrum obtrusum - White-faced meadowfly	G5	S1									X	WL	21

*Likely To Occur

MAMMALS

SCIENTIFIC NAME - COMMON NAME	RANK: GLOBAL	RANK: VANHP/ WVNHP	STATUS STATE/ FEDERAL		KNOWN OCCURRENCES BY DISTRICT LOCATION(S)							HABITAT	MGMT. AREAS
			VA	FED	LTO*	DF	DR	JR	LE	PD	WS		
Glaucomys sabrinus fuscus - Va. n. flying squirrel	G5T2	S1/S2	E	E							X	MW	21
Lepus americanus virginianus - snowshoe hare	G5	S1/S4	E								X	MW	21
Martes pennanti - fisher	G5	S1/S3									X	MW	21
Sorex palustris punctulatus - southern water shrew	G5T3	S1/S2	E	C2							X	MT WL	18 (4,21)

BIRDS[1]

SCIENTIFIC NAME - COMMON NAME	RANK: GLOBAL	RANK: VANHP/ WVNHP	STATUS STATE/ FEDERAL		KNOWN OCCURRENCES BY DISTRICT LOCATION(S)							HABITAT	MGMT. AREAS
			VA	FED	LTO*	DF	DR	JR	LE	PD	WS		
Aegolius acadius - northern saw-whet owl	G5	S1	SC								X	MW	21
Carpodacus purpurpeus - purple finch	G5	S1/S4	SC								X	MW	21
Catharus guttatus - hermit thrush	G5	S1/S3S4	SC								X	MW	21
Certhia americana - brown creeper	G5	S2S3									X	MT	21
Dendroica fusca - blackburnian warbler	G5	S2/S4					X				X	MW	4,21
Dendroica magnolia - magnolia warbler	G5	S2/S4	SC				X				X	MW	4,21
Loxia curvirostra - red crossbill	G5	S1/S1	SC			X	X				X	MW	4,21
Oporornis philadelphia - mourning warbler	G5	S1/S3	SC								X	WL MW	4,21
Resulus satrapa - golden-crowned kinglet	G5	S2/S4	SC				X				X	MW	4,21
Sitta canadensis - red-breasted nuthatch	G5	S2/S4	SC				X				X	MW	4,21
Sphyrapicus varius - yellow-bellied sapsucker	G5	S1/S1S2									X	MW	4,21

[1] Species with known or likely nesting sites on Forest

*Likely To Occur

DEFINITIONS OF ABBREVIATIONS USED

RANGER DISTRICTS

DF = DEERFIELD
DR = DRY RIVER
JR = JAMES RIVER
LE = LEE
PD = PEDLAR
WS = WARM SPRINGS

VANHP/WVNHP = VIRGINIA/WEST VIRGINIA NATURAL HERITAGE PROGRAM RANKINGS G = GLOBAL RANKING, AND S = STATE RANKING

G1 = EXTREMELY RARE THROUGHOUT ENTIRE RANGE OF SPECIES (OCCURRENCES 1-5)
S1 = EXTREMELY RARE THROUGHOUT THE STATE (OCCURRENCES 1-5)
G2 = VERY RARE THROUGHOUT ENTIRE RANGE OF SPECIES (OCCURRENCES 6-20)
S2 = VERY RARE THROUGHOUT THE STATE (OCCURRENCES 6-20)
G3 = RARE OR UNCOMMON THROUGHOUT THE ENTIRE RANGE OF SPECIES (OCCURRENCES 21-100)
S3 = RARE OR UNCOMMON IN THE STATE (OCCURRENCES 21-100)
G4 = COMMON AND APPARENTLY SECURE THROUGHOUT RANGE
S4 = COMMON AND APPARENTLY SECURE THROUGHOUT STATE
G5 = VERY COMMON AND DEMONSTRABLY SECURE THROUGHOUT RANGE
S5 = VERY COMMON AND DEMONSTRABLY SECURE THROUGHOUT STATE
GX = BELIEVED EXTINCT WITH NO LIKELIHOOD OF REDISCOVERY
SX = BELIEVED EXTRIPATED FROM STATE
GH = HISTORICALLY KNOWN GLOBALLY, NOT RECENTLY VERIFIED (WITHIN PAST 15 YEARS)
SH = HISTORICALLY KNOWN FROM STATE, NOT RECENTLY VERIFIED (WITHIN PAST 15 YEARS)
GU = POSSIBLY RARE, STATUS UNCERTAIN, MORE DATA NEEDED
SU = POSSIBLY RARE, STATUS UNCERTAIN, MORE DATA NEEDED
Q = TAXANOMIC QUESTION
T = SIGNIFIES THE RANK OF A SUBSPECIES OR VARIETY
? = RANK UNCERTAIN
NA = NOT KNOWN TO OCCUR IN STATE

STATE STATUS (LEGAL)

E = LISTED ENDANGERED IN VIRGINIA
T = LISTED THREATENED IN VIRGINIA
SC = SPECIAL CONCERN IN VIRGINIA

FEDERAL STATUS (LEGAL)

C1 = CATEGORY 1 = CANDIDATE FOR LISTING AS THREATENED OR ENDANGERED BY THE USFWS-(ENOUGH INFORMATION AVAILABLE TO LIST AS T OR E)
C2 = CATEGORY 2 = CANDIDATE FOR LISTING AS THREATENED OR ENDANGERED BY THE USFWS-(SEEKING MORE INFORMATION ON THE SPECIES)
3C = FORMER CANDIDATE, BUT MORE COMMON THAN ORIGINALLY THOUGHT
E = LISTED ENDANGERED
T = LISTED THREATENED
PE = PROPOSED ENDANGERED
PT = PROPOSED THREATENED

HABITAT ABBREVIATIONS

AQ = AQUATIC
CV = CAVE
DW = DRY WOODLANDS
MP = MOUNTAIN PONDS
GL = GRASSLANDS (INCLUDES PRAIRIE-LIKE OPENINGS AND GLADES)
MT = MOUNTAIN TOP, HIGH ELEVATION AREAS
MW = MESIC WOODLANDS
OF = OLD FIELD, SHRUBBY VEGETATION
RO = ROCK OUTCROPS (ACIDIC & CALCAREOUS)
SB = SHALE BARRENS
SP = SEASONALLY DRY SINKHOLE PONDS
RI = RIPARIAN AREAS
WL = WETLANDS (INCLUDES: BOGS, SEEPS, WET MEADOWS)