

CHAPTER 4. SOCIAL AND ECONOMIC CONDITIONS AND TRENDS

Introduction

The 1993 Revision of the GW Plan focused on a number of significant issues. These issues were developed through an extensive public involvement effort. The issues were used to 1) develop the environmental analysis; 2) evaluate the alternatives considered; and 3) help define the desired condition of the Forest. Due to the importance of the issues in defining the current George Washington Forest Plan, the issues were used as a starting point to evaluate how well the plan has been implemented and where changes may be needed. New issues, information from our public collaborative efforts and additional analysis of science were used to refine and expand the issues.

Issue Timber Program

A. Efficiency of Timber Sale Program

The below cost issue centered on concerns that the cost of the Forest's timber management program was greater than the revenues generated from the sale of timber. At the time of the Plan revision, the Forest Service was working through a number of ways to calculate the cost and benefits from the timber sale program. The Timber Sale Program Information Reporting System (TSPIRS) was used for several years. The magnitude of this issue diminished sharply through the years. The timber program on this Forest is used as one of the primary tools to manage wildlife habitat. The achievement of the wildlife habitat goals along with the benefits of producing timber from the Forest has program costs. While the sale of timber offsets some of these costs, it does not generally offset all of the costs. It is not a goal of the Forest that this revenue offset the total costs. The overall benefits in wildlife management, forest health and timber production require the expenditure of funds just as the management of other resources like recreation and watershed.

Since TSPIRS was abandoned we have no longer specifically tracked the costs and benefits of the timber management program in a formal manner. The following chart identifies the costs and revenues of the Forest's revenue generating programs over the past 15 years:

Annual Expenditure and Revenues for George Washington and Jefferson National Forests

	1993	1994	1995	1996*	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
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Annual Expenditures (Thousand dollars)

Recreation	\$3,012	\$1,887	\$2,096	\$3,583	\$4,885	\$4,392	\$4,577	\$5,336	\$5,573	\$4,987	\$3,406	\$4,780	\$3,730	\$4,029	\$4,327
Range	\$19	\$23	\$10	\$111	\$248	\$165	\$186	\$56	\$75	\$56	\$43	\$74	\$52	\$45	\$41
Timber	\$2,003	\$1,291	\$1,482	\$2,816	\$2,866	\$2,434	\$3,858	\$3,429	\$3,419	\$3,253	\$2,330	\$3,481	\$1,691	\$1,575	\$1,672
Minerals	\$72	\$36	\$32	\$159	\$141	\$150	\$359	\$331	\$467	\$581	\$425	\$653	\$475	\$385	\$379
Lands	\$801	\$570	\$419	\$1,177	\$817	\$864	\$989	\$980	\$978	\$849	\$992	\$1,062	\$510	\$611	\$572

Annual Revenue (Thousand dollars)

Recreation	\$327	\$270	\$298	\$319	\$444	\$219	\$124	\$7		\$18	\$17	\$22	\$9	\$0	\$0
Range	\$0	\$8	\$4	\$5	\$19	\$20	\$3	\$0		\$17	\$15	\$21	\$9	\$5	\$5
Timber	\$1,292	\$2,112	\$2,275	\$1,838	\$2,832	\$2,980	\$1,493	\$1,193		\$1,390	\$1,247	\$1,618	\$1,971	\$1,191	\$1,581
Minerals	\$1	\$1	\$1	\$1	\$3	\$3	\$2	\$2		\$3	\$3	\$3	\$3	\$3	\$4
Lands	\$53	\$55	\$73	\$56	\$107	\$112	\$63	\$58		\$128	\$123	\$135	\$148	\$137	\$115

Revenue as % of Expenditure

Recreation	11%	14%	14%	9%	9%	5%	3%	0%		0%	0%	0%	0%	0%	0%
Range	0%	32%	41%	4%	8%	12%	2%	0%		31%	35%	28%	18%	12%	11%
Timber	64%	164%	153%	65%	99%	122%	39%	35%		43%	54%	46%	117%	76%	95%
Minerals	2%	3%	4%	1%	2%	2%	1%	1%		1%	1%	0%	1%	1%	1%
Lands	7%	10%	17%	5%	13%	13%	6%	6%		15%	12%	13%	29%	22%	20%

*Combined Forests in 1996

B. Rural Development

1. What was the Plan Striving For?

The 1993 George Washington National Forest Plan continued the Forest contributions to the economic and social vitality of its neighbors (Plan page 2-13). The Forest was to work with neighboring people and communities in developing natural-resource-based opportunities and enterprises within the capabilities of the resource. Rural Development considerations were to be included in Forest decisions to assist communities in achieving long-term economic development. The Forest was to actively seek partnerships that promote development activities (Plan page 2-3).

The 1993 Forest Plan did not address or focus on bio-fuels. The economic and social conditions have changed with respect to energy. There is a national desire to move toward energy independence which includes many sources of energy, including bio-fuels.

2. Where is the Plan Now?

See economic and social sustainability analysis in an appendix to this report.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes, insofar as those conditions were described.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes. In terms of the Rural Development as discussed in the current plan, we are just changing the focus.

b. Why? Rural Development was a focus item for the Agency with the implementation of the 1990 Farm Bill and grants associated with it to communities. The grants focused communities to find alternative ways to sustain their economies and to become less natural-resource dependent. This program has ceased.

The current focus for the Agency in relationship to communities is on developing partnerships. There is a national partnership taskforce and legislation has been written to assist the Forest Service in managing partnerships more efficiently. The partnership program provides the framework for the Forest Service to work with communities on projects that jointly benefit both entities separate from direction in a Forest Plan. This partnership direction is currently in place and does not need to be in the Forest Plan.

In terms of bio-fuels we believe we need to include a Desired Condition as it relates to bio-fuels which may include biomass for burning to generate power and/or heat, biomass for the distillation of various combustible compounds, or any as yet unknown technology whereby biomass can be utilized to create an energy source.

C. Tentative Options for Proposed Actions or Change:

C-1 Develop a forestwide Desired Condition statement such as: The Forest contributes to the production of desired social and economic goods and services. People depend on the GWNF directly and indirectly to provide goods and services generated by natural, built, and human capital. These goods and services are provided

in many forms. In the vegetation arena they may include timber of a range of qualities from low quality tie logs and posts to high quality furniture and flooring, pulpwood for all grades of paper manufacturing, fuel ranging from firewood for the individual household to large scale biomass fuels. The forest also provides mineral related goods and services which may range from oil and gas leasing to small scale hardrock permits for gathering building materials. The forest provides services related to myriad forms of recreation and tourism that range from dispersed recreation activities such as driving, hiking, birding, horse-back riding, hunting and fishing, to developed recreation facilities and these services provide secondary economic benefits to local communities. A sufficient mix of resource uses to meet the demand for most users is provided

The Forest produces renewable goods and services as a sustainable flow within the regenerative capabilities of the ecosystem. The flow of wood-products in general has been decreasing since 1993 from about 30 MMBF to 12 MMBF and is far below the long term sustained yield. Many members of local communities have expressed a desire that the forest provide more wood products than has occurred in recent history, while others believe the Forest should refrain from providing wood products and focus on goods and service not provided on private lands such as recreation and tourism. In the spirit of multiple-use and balancing the “sufficient mix” of the demands for goods and services, the forest may produce from 20 to 30 MMBF of wood products and still allow for ample supply of the minerals, recreation, and tourism related goods and services.

C. Suitability (Review)

Forest Plan Appendix A defines “Lands Blocked by Physical Barriers” as “...lands which cannot be logged even with cable logging equipment. Timber harvest and access are blocked by rock ledges, cliffs and other physical barriers.” Based on a literal interpretation of the NFMA Regulations, these lands were eliminated from suitability in 1993 (within the category “Irreversible Damage Likely to Occur” when they should not have been because technology existed then in the form of helicopters to successfully manage timber. (1993 Process Paper first identified this error).



Therefore, in this initial suitability analysis, these lands have been identified as being in the standard forest land base. Given that the Forest has utilized helicopter logging successfully since 1993, the timber inventory data was reviewed and corrected where high site index stands (Site Index greater than or equal to 70) had previously been identified as inaccessible due to physical barriers, such as rock outcrops are in the way to getting to that stand with a road (Land Class Code = 826) as now being accessible for helicopter logging. High site index was chosen because of the economic value of the timber (high sites = better timber) would justify the expense of

helicopter logging. Therefore, they were coded as standard forest land on steep slopes (Land Class Code = 540).

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes. Lands suitable for timber production may change due to improved technology or due to changes in how the new planning regulations address lands across the Forest, or in how desired conditions might change.

b. Why? The current planning regulations recognize two categories of suitable uses as it relates to timber; suitable for timber production and suitable for timber harvest. It is envisioned at this time that a majority of the acres currently identified as suitable for timber production will become lands suitable for timber harvest in the Revised Forest Plan under the current planning regulations (e.g. those suitable lands in current MA's 14, 15, and 16). As described above, some lands were erroneously identified as unsuitable for timber production in 1993 due to a lack of access and those lands should now be considered for suitability of timber production or harvest. Finally, changes in other allocations (e.g. recommended wilderness areas or Special Biological Areas) may reduce the acres suitable for timber management. However, we caution that loss of land regulated for sustained timber production and/or harvest reduces the areas where timber harvest can be used as a tool to meet wildlife habitat needs efficiently. It also reduces Long-term Sustained Yield and yearly ability to produce timber.

c. Tentative Options or Proposed Actions for Change

C-1. a) Strive to maintain at least the existing amount of forest suitable for timber production or suitable for timber harvest between 350,000 to 370,000 acres so as to maintain some capability to meet wildlife habitat, forest health, and the economic status of local community needs.

b) Identify all of those NFS lands currently within MA 17 (Timber Production) but outside of any other special areas and otherwise consistent with timber suitability requirements as Suitable for Timber Production.

c) Identify all of those NFS lands currently within other MA's but outside of any other special areas and otherwise consistent with timber suitability requirements as Suitable for Timber Harvest.

C-2. Do Nothing.

Proposed Action

Propose Option C1.

5. Recommendations for Plan Revision

Areas identified as suitable for timber production are not all available for harvest. When site specific analysis is done for a project, many factors are evaluated and many areas are found to be unavailable either permanently or for the current proposal. These factors include topography, riparian protection areas, visual concerns, wildlife needs,

current markets for the product and activities on nearby lands. Based on past efforts at assembling project proposals, the acres of forest suitable for timber production should be similar to the acres that have been available under the current plan. This should allow for the needed flexibility to implement the plan and achieve the wildlife and timber objectives of the revised Plan.

D. Allowable Sale Quantity

1. What was the Plan Striving For?

The GW 1993 Revised Plan contained an objective to achieve an allowable sale quantity (ASQ) of 330 million board feet (mmbf) for the first decade (Revised Plan, page 2-15). In essence, the Forest wished to offer or sell an average of about 33 mmbf of timber per year. The ASQ is an estimate of the quantity of timber that may be sold from the area of suitable land covered by the forest plan for a time period specified by the plan (36 CFR 219.3 and FSM 1900, prior to amendment). ASQ is closely related to Long Term Sustained Yield (LTSY), described below and can be thought of as a “ceiling” for timber production (Brown 1993) This ASQ was consistent with achieving an amount of vegetation manipulation to achieve wildlife and other multiple-use objectives. The 2006 planning directives changed the term ASQ to “Timber Sale Program Quantity” (TSPQ).

Likewise, the GW 1993 Revised Plan provided an estimate of the Long-term sustained yield of timber that could be removed annually in perpetuity on a sustained yield basis from lands suitable for timber production once the forest was entirely regulated. LTSY was estimated at 93 mmbf annually for the GW 1993 Revised Plan.

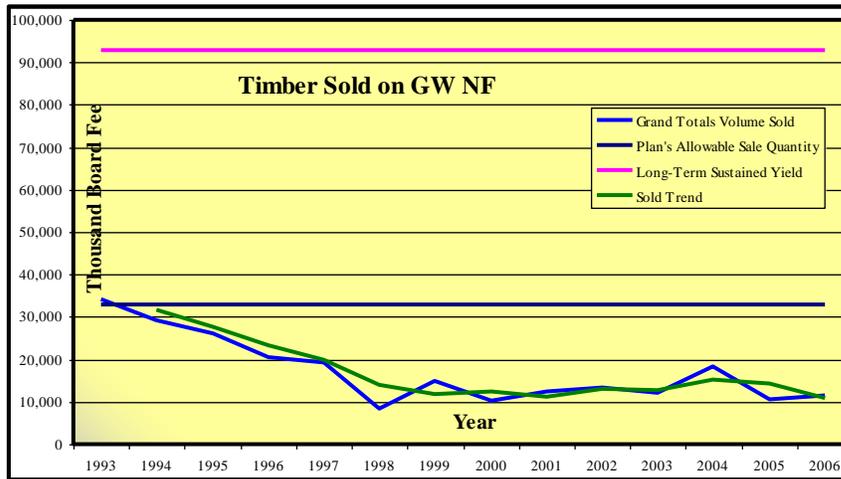
The 1993 Revised Plan also allowed for a combination of even-aged and uneven-aged regeneration harvest methods (Revised Plan page 2-27 and 2-28). Under all even-aged methods, about 2,300 acres were to be treated annually (Revised Plan FEIS, page 3-119 for alternative 8A). Uneven-aged harvest was to occur on about 800 acres annually or 80 acres annually of actual group selection with intermediate thinnings in between the groups across the rest of the acres.

Modified shelterwood harvest was to be the primary even-aged timber harvest method employed and was to have occurred on about 1,600 acres annually. Clearcutting was to be used only after site-specific, project-level analysis determined that other regeneration harvest methods would not achieve the desired future condition of the management area. The clearcutting objective in the 1993 Plan was for about 300 acres annually. For instance, (1) Clearcutting would be the only method that would be reasonable following wildfire damage; or (2) clearcutting could be the only method that can achieve the desired wildlife habitat conditions for a particular species (such as grouse) that requires high stem density(Revised Plan page 2-27 and 2-28).

All vegetation management, including timber harvesting, was to be accomplished in a manner that maintains the diversity, productivity, and long-term sustainability of ecosystems.

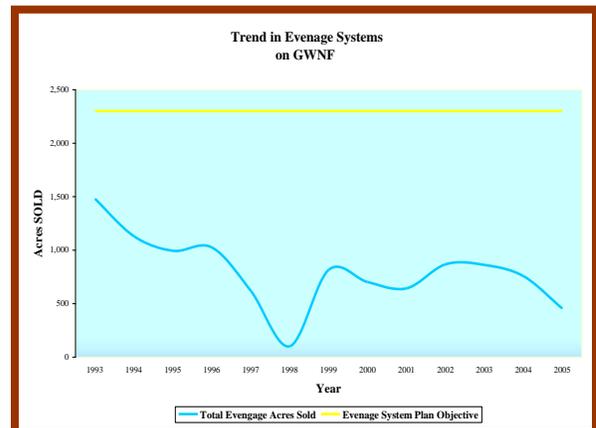
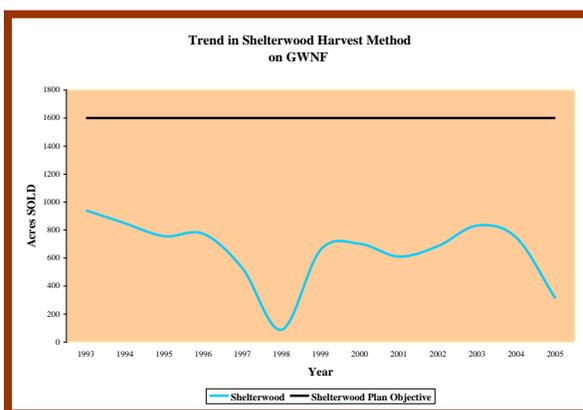
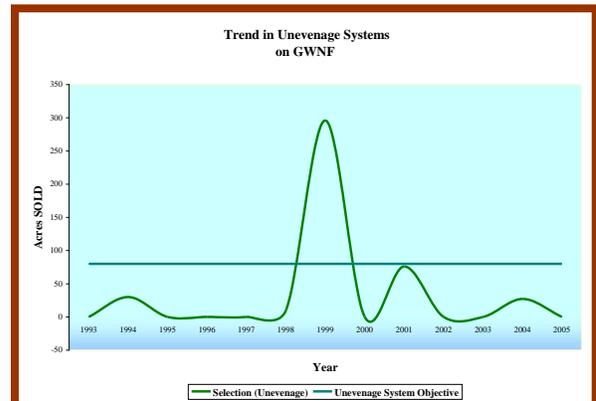
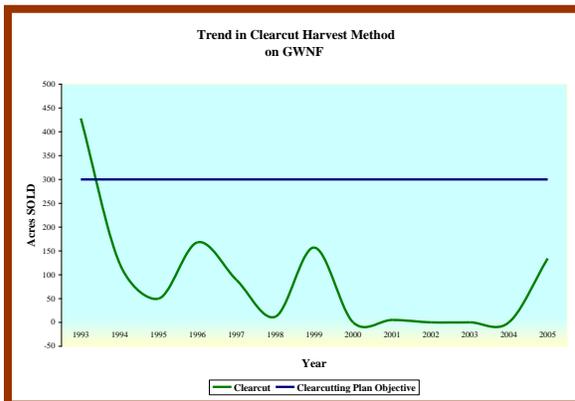
2. Where is the Plan Now?

The following graph shows the trend in volume sold since 1993 compared to the average annual ASQ of the 1993 Forest Plan. Long-Term Sustained Yield (LTSY) volume is also displayed for the 1993 Forest Plan. Sold



volumes have dropped well below the ASQ. Volume sold has trended downward since 1993. The average volume sold since 1993 has been about 16.3 mmbf, about half of the desired ASQ and less than 20% of the LTSY.

The following graphs present the trends in the type of silvicultural systems that were accomplished versus the Plan objectives. The acreages shown in these graphs represent what was sold through commercial timber sales.



3. Did Management Activities Move the Forest towards the Desired Future condition?

Management activities did not move towards maintenance of diversity of wildlife and/or wildlife habitat. Early seral habitat as created by commercial timber harvest decreased both in terms of acres harvested and failure to achieve the ASQ. Meanwhile, forests continue to age and provide an abundance of late seral stage habitat.

Sustainability and productivity were maintained as management activities have averaged less than 20% of the LTSY.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? We will need to reevaluate within the context of changes made in the desired condition, objectives and standards of the revised Plan.

c. Tentative Options or Proposed Actions for Change

C-1. Modify the Forest Plan by updating the analysis.

C-2. Do Nothing.

5. What are the Consequences of Not Changing?

We would not be addressing plan requirements.

Proposed Action

Propose Option C1.

6. Recommendations for Plan Revision

Complete the required analyses.

E. Salvage

1. What was the Plan Striving For?

The Plan strove to provide a forest environment where the ecological processes of the forest were balanced against social and economic uses (Rose 2001). It recognized that dying, dead and damaged trees were an important part of the ecosystems of the Forest and did not permit salvage harvesting in certain areas. Correspondingly, it also recognized that after an event such as that associated with insects or disease, dying, dead, and damaged trees were also a resource that can be used for fuelwood by the public or sawtimber if removed prior to deterioration (Plan pages 2-15 and 2-16).

2. Where is the Plan Now?

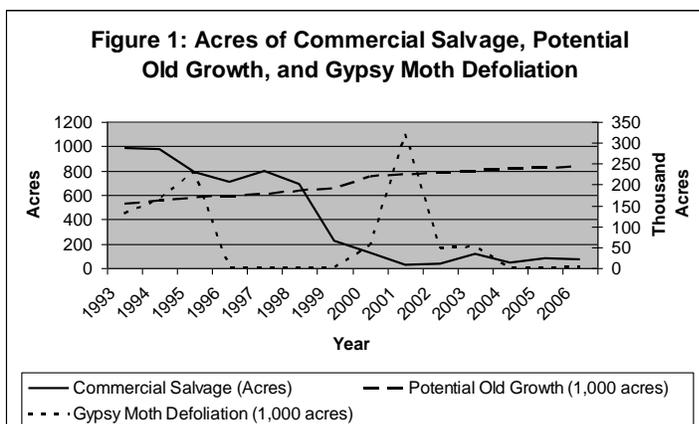


Figure 1 shows the trend in commercial salvage. Note that for the years of 1993 – 2001 volumes were converted from Thousand Board Feet to Hundred Cubic Feet using the Regional Conversion factor of 1.82 MBF per CCF.

The data suggests that: acres treated by commercial salvage sales have declined significantly despite an aging forest, two separate gypsy moth events, and projected increases in oak decline impacts. (Figure 1 and SAA, 1996) It is strongly indicated that in most cases high-value products are not salvaged before that value is lost. It also suggests that commercial salvage was not strongly tied to gypsy moth damage during the population explosion in the early part of this century (Figure 1).

Figure 2 displays estimation from a Forest Vegetation Simulator computer program using the Oak Decline Event Monitor and all Forest Inventory and Analysis 1992 Re-measurements on the George Washington National Forest. This shows that as the forest continues to age we can expect increasing mortality, especially as a result of oak decline (Oak 1991, Oak 2004).

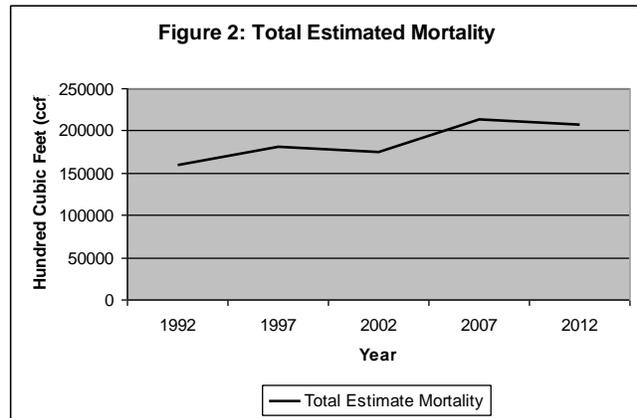
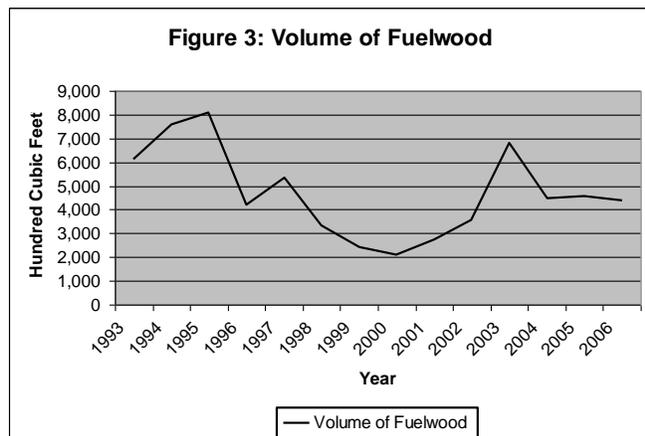


Figure 3 shows that although fuelwood uses have fluctuated, recent trends indicate increasing fuelwood use since 2000.



3. Did Management Activities Move the Forest towards the Desired Future condition?

No. We believe there is no readily apparent “balance” between ecological processes and social and economic uses related to the commercial salvage program. Mortality has increased from 1992 to 2001 and is expected to increase in the future (Rose 2001, Oak et al. 2004). Acres treated by commercial salvage sales have declined precipitously despite an aging forest, two separate gypsy moth events, and projected increases in oak decline impacts. The commercial salvage program does not appear to be balancing

ecological processes with social and economic benefits, since high value products may not be salvaged prior to loss of value in those areas where salvage is permissible.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? Increasing acres of mature and over-mature forests will result in increased incidence of oak decline (Figure 2 Oak 1991; Oak et al., 2004; SAA, 1996). The occurrence of gypsy moth is also expected to increase the incidence of oak decline. Heavy oak mortality has occurred over large areas of the Southern Appalachians. Major losses will probably be most common on national forests and in Virginia (SAA, 1996). The same condition results in increased vulnerability/susceptibility to many other insects and diseases such as red oak borer and gypsy moth. There is a need to revise certain guidelines to allow increased flexibility in utilizing salvage to achieve the stated desired condition.

c. Tentative Options or Proposed Actions for Change

C-1. Modify the Forest Plan by revising or adding standards and guidelines similar to the following to appropriate forest or special area direction:

- Special Biological Area (Old GW MA 4-58): Where salvage would maintain or enhance the unique attributes of a specific Special Biological Area as determined on a case by case basis, the following activities could occur. Ground-based systems could be used for the salvage of dead, dying, or damaged trees along open road systems. For that part of the area not accessible by existing roads, salvage activities should only be accomplished by helicopter with no new road or landing construction.
- Scenic Corridor or Viewshed (Old GW MA 7-14): Salvage of dead, dying and damaged trees can occur to provide for scenic rehabilitation and public safety using ground based or helicopter logging.
- Remote Backcountry Area (Old GW MA 9-12): Where salvage would not significantly impair the remote experience, salvage of dead, dying, or damaged trees can occur from perimeter roads using helicopter logging with no new permanent or temporary road or landing construction within the area. Salvage and firewood gathering from system interior roads can occur using ground based methods without additional road construction. Landings can be provided adjacent to existing roads.

C-2. Do Nothing.

5. What are the Consequences of Not Changing?

The Plan would not facilitate achieving the Desired Condition of balancing ecological processes with social and economic benefits in the face of an aging forest and projected increase in oak decline. Plan direction would inhibit the agency's ability to respond to future unpredictable insect, disease, and catastrophic weather events that may occur in many areas of the Forest.

Proposed Action

Propose Option C1.

6. Recommendations for Plan Revision

The recent increase in gypsy moth activity has revived the need to consider salvage harvest guidance. Include desired conditions and standards and guidelines that allow salvage in:

- 1) Special Biologic Areas as long as the biologic entity is not impaired by the salvage;
- 2) Scenic corridors as long as the scenic objectives are met; and
- 3) Remote backcountry recreation areas as long as there is no road construction and the remote character is not impaired.

Issue Forest Access

A1. System Roads in Wildlife Management Areas

1. What was the Plan Striving For?

The 1993 Revised Plan recognized that the desire for motorized access to the Forest must be balanced against conflicting desires of providing for certain types of wildlife habitat and non-motorized recreation use (Plan, page 2-17). Under the Revised Plan, a road system is to be maintained to serve the public, meet management needs, and protect resources in a cost-effective manner (Plan, page 2-17). Decisions that determine whether individual roads are open or closed to public vehicular use are to be made on a case by case (road by road) basis. Existing roads may be closed under one of the certain conditions, including meeting open road densities in Management Areas (MA) 14 or 15. (Plan, page 2-18 as corrected)

MA 14's desired condition is to maintain or enhance quality habitat for black bear and other disturbance-sensitive species (Forest Plan, page 2-29). The Desired Condition (DC) of MA 14 is to have motorized public vehicle access be restricted to provide suitable conditions for disturbance-sensitive species such as black bear (Forest Plan page 3-74 and 3-76).

MA 15's desired condition is to maintain or enhance quality habitat for wild turkey and other species that favor a more mature forest environment with small, herbaceous clearings (both temporary and permanent (Forest Plan, pages 2-29 and 3-79).

Both MAs have objectives to limit open interior road densities. For MA 14, the objective is to limit open interior road densities to no more than one-quarter mile of open road per 1,000 acres (Plan, Standard 14-7, page 3-75). For MA 15, the objective is to limit open interior road densities to no more than one mile of open road per 1,000 acres (Plan, Standard 15-5, page 3-81).

2. Where is the Plan Now?

During project-level analysis, the Forest knows of no roads that have been closed or were strived to be closed to meet this Plan objective for MA 14 and 15, even though in 1994, a [GIS analysis](#) was conducted to determine the number of areas where interior open road densities exceeded the objectives set for Management Areas 14 and 15. At that

time [North half](#) and [south half](#) maps were also produced to show where Plan road management objectives for managing black bear and wild turkey, exceeded on-the-ground conditions. The analysis shows that 26 Management Area polygons (37% of total) exceed the open road density standards within Management Areas 14 and 15. In contrast, 44 polygons (63% of total) do not exceed the road density standards. There are 23 unique Management area 14 polygons with 11 exceeding Plan standard 14-7. There are 47 unique Management area 15 polygons with 15 exceeding Plan standard 15-5.

Black bear and wild turkey are Management Indicator Species under the 1993 Revised Plan. While road closures have been thought to be the way to increase populations of these species, monitoring of these species shows that their populations continue to increase even though no attempts were made to close roads to meet certain open road density objectives within certain management areas. However, the agency recognizes that roads may or may not be a critical indicator of why populations have increased. Populations may have increased due to other factors such as game regulation changes, weather affecting hunter's success, or even the number of hunters (VDGIF 2002).

[Monitoring](#) of black bear by Virginia Department of Game and Inland Fisheries shows the following increasing trend in populations from 1989 to 1998. In 2000, VDGIF and WVDNR estimated bear populations at 1,175 individuals on the GWNF (2004 Monitoring Report at page 96.)

**Virginia's Black Bear Population Trend, 1989 to 1998
(Downing Method)**

<u>Sex</u>	<u>Population Growth Trend (%) per year</u>	<u>R-Square</u>	<u>Significance</u>
Male	+ 7.4	0.97	P<0.97
Female	+ 4.2	0.91	P<0.91

[Monitoring](#) of wild turkey shows the following. The data suggests that total harvest numbers vary across years, but indicate an overall stable to slightly increasing population trend. In 2000, VDGIF and WVDNR estimated turkey populations at 4,149 individuals on the GWNF.

Spring Wild Turkey Harvest Information on GWNF, 1997 To 2006 (Source: <http://www.dgif.state.va.us/wildlife/turkey/nationalforestspringturkeyharvest2006.pdf>)

<u>County</u>	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Harvest /square mile
Allegheny	102	45	87	74	148	117	112	83	88	88	0.34
Amherst	34	26	30	30	37	43	51	32	40	35	0.39
Augusta	158	93	95	139	158	157	122	86	56	114	0.37
Bath	134	91	153	133	221	164	106	99	66	119	0.44
Botetourt	99	45	41	52	93	84	91	65	58	66	0.54
Frederick	4	6	4		3	3	6	5	6	8	1.04
Highland	26	26	41	47	61	38	32	17	22	36	0.40
Nelson	6	3	6	4	2	12	3	3	2	6	0.20
Page	10	6	6	7	13	5	8	6	9	20	0.47
Rockbridge	43	31	26	24	45	63	35	38	41	50	0.48

<u>County</u>	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Harvest /square mile
Rockingham	125	63	68	57	91	93	92	76	53	92	0.42
Shenandoah	57	41	31	20	48	48	47	60	44	70	0.59
Warren	3	4	3	3	9	5	9	6	3	3	0.31

(Source:

http://www.dgif.virginia.gov/hunting/va_game_wildlife/national_forests_spring_turkey_2004.pdf).

For black bear, the 2004 revised Jefferson Forest Plan objectives 8.01 and 8C-OBJ4 are to provide areas where open road density is less than 0.8 miles per square mile (Jefferson Plan, page 2-13; Management Prescription 8C, objective 8C-OBJ 4, page 3-122.) (1.25 miles per 1,000 acres) Likewise, for old growth forest communities associated with disturbance, objective 6C-OBJ2 says to maintain an open road density at or below .8 miles per square mile (Jefferson Plan, page 3-82 errata #1.)

For species such as wild turkey, the 2004 revised Jefferson Forest Plan objectives 8A1-OBJ4 and 8B-OBJ3 are to maintain an open road density at or below 1.25 miles per square mile (See Management Prescription 8A1 and 8B, objective 8A1-OBJ4, page 3-114; objective 8B-OBJ3, page 3-118 2.0 miles per 1,000 acres). The table compares the 1993 Revised Plan with the 2004 Jefferson Plan for open road density direction in wildlife areas.

Comparison of Open Road Densities between Forest Plans

<u>Area</u>	<u>Open Road Mileage per 1,000 Acres</u>	
	<u>George Washington Forest Plan</u>	<u>Jefferson Forest Plan</u>
Remote Habitat For Wildlife	0.25	1.25
Mix of Successional Habitats	1.00	2.00

Socially, the agency has had public pressure from the environmental community to close roads that are currently open seasonally or year-round to the public. Conversely, we've had public pressure from certain hunting associations to open roads that are currently closed year-round.

3. Did Management Activities Move the Forest towards the Desired Future condition?

The Forest did not meet any of its objectives of closing roads to public motorized use year-round where open road densities exceed desired densities in wildlife-emphasized management areas. However, black bear and wild turkey populations are stable to increasing.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? Black bear and wild turkey populations are stable to increasing even though GW Forest Plan road density objectives were not met. Furthermore, road density objectives are different between the GW and Jefferson Forest Plans. Thus, the Forest believes

there is no need to close roads for the sole purpose of providing wildlife habitat for black bear and wild turkey.

c. Tentative Options or Proposed Actions for Change (If the Revised Plan identifies distinct wildlife emphasis areas like MA 14 and MA 15)

- C-1. Adopt as George Washington Plan objectives the Jefferson Plan standard.
- C-2. Reallocate the eleven MA 14 polygons that exceed Plan standard 14-7 to Management Areas that have no open road density objectives. Reallocate the fifteen MA 15 polygons that exceed Plan standard 15-5 to Management Areas that have no open road density objectives.
- C-3. Remove the existing standards 14-7 and 15-5 and adopt the language from the Revised Jefferson Plan that says “existing open public roads are maintained at current density levels to provide for public access and safety.”
- C-4. Reassign GW standards 14-7 and 15-5 as objectives in MA 14 and MA 15 and leave the road density figures alone.
- C-5. Remove the existing standards 14-7 and 15-5 and create standard that roads should be closed during nesting and brooding rearing seasons and then can be opened during fall hunting seasons. (See also Wildlife discussion at the end of this report.)

5. What are the Consequences of Not Changing?

This is more a social value than a significant environmental effect on bear and turkey habitat and populations. Some environmental groups will criticize the Forest for not attempting to close roads; while some sportsman groups will criticize the Forest for not opening more roads, especially during all hunting seasons.

Proposed Action

Propose Option C5.

6. Recommendations for Plan Revision

In the revised Plan we will not have different management areas for remote wildlife, early successional habitat species, timber management and mosaics of habitat. Instead, we will have desired conditions for the portion of the forest where we want a diversity of habitat and production of wood products. However, to meet the desire to retain areas where road density is low, we will have an objective to not increase the miles of open road on the Forest. We will also continue to work closely with the State game agencies in establishing seasons when roads should be closed to benefit wildlife species.

A2. System Roads across the Forest

1. What was the Plan Striving For?

The 1993 Revised GW Plan continued the existing management direction of identifying and evaluating open roads. Roads that serve a legitimate access need, are consistent with the management area direction and meet standards in the Revised Plan were to remain open to public use. When they did not meet these requirements, these routes were to be permanently closed or improved, as funding permitted (Plan, page 2-18).

Decisions that determine whether individual roads are open or closed to public vehicular use are to be made on a case by case (road by road) basis. Existing roads may be closed under certain conditions, besides meeting open road densities in Management Areas (MA) 14 or 15. Fundamentally, existing roads may be closed if they are causing resource damage to soil and water functions. These conditions also include a) roads that will not be needed again (by placing physical barriers and ripping and seeding road), b) roads that will not be needed for several years (by placing a physical barrier such as large boulders at the entrance, and c) roads only needed for administrative purposes (by placing a locked gate at the entrance (Plan, page 2-18).

Under the Revised Plan, a road system was to be maintained to serve the public, meet management needs, and protect resources in a cost-effective manner. New roads were to be constructed as needed and to the standard to meet the desired future condition identified in each management area. The decision to construct any additional roads was and continues to be made when projects are selected and supported by appropriate site-specific analysis and documentation (Plan, page 2-17). The 1993 Revised Plan estimated that between 5 to 8 miles of roads would be constructed yearly (Plan, page 2-17).

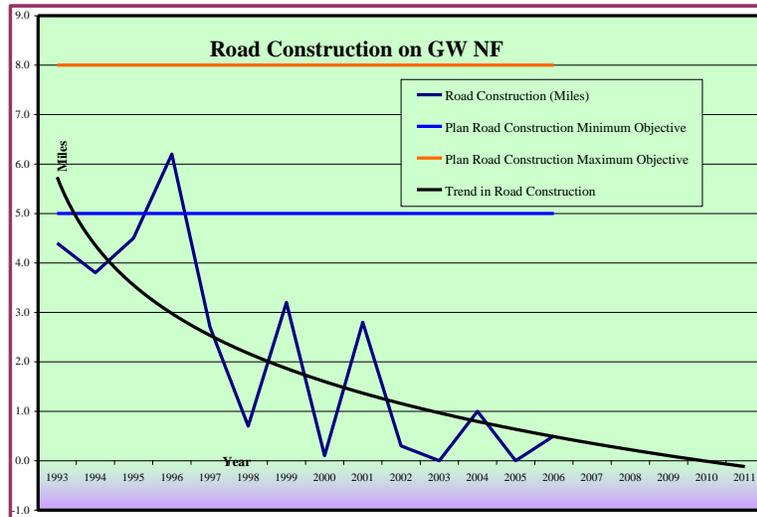
2. Where is the Plan Now?

The percentage of roads open to the public decreased slightly with the implementation of the Revised Plan, but has since remained stable. The Forest has decommissioned one mile or less of existing roads per year. The transportation system management trend across the Forest is shown in the table below. It should be noted that it appears road mileage is significantly up in 2006. This discrepancy is due to the fact that in previous years, the miles of Forest roads was pulled from the Infrastructure database and the 2006 data was extracted from the Forest's GIS roads layer. The GIS data more accurately depicts what exists on the ground; therefore the lengths of roads are closer to actual than the estimated lengths recorded in the Infrastructure database. Infrastructure road lengths may have been erroneous due to the fact that not all roads on the Forest have been located by GPS.

Year	Total Forest	Open Year-round Or Seasonally		Closed Year-round	
	(Miles)	(Miles)	(Percent of Total)	(Miles)	(Percent of Total)
1984	1,330	1,170	88	160	12
1993	1,760	1,050	60	710	40
1999	1,700	1,012	60	688	40
2003	1,798	973	54	825	46
2004	1,798	973	54	825	46
2006	1,872	1007	54	865	46
2007*				237	

*See Motor Vehicle Use Map document at http://www.fs.fed.us/r8/gwj/maps_brochures/mvum.shtml

The Forest has focused road funding on maintenance activities instead of construction and reconstruction. The trend in miles of construction of new roads has steadily declined, as depicted in the following graph.



3. Did Management Activities Move the Forest towards the Desired Future condition?

No.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? Road construction objective was not met. Road construction is a function of a project's purpose. Road management across the George Washington NF has followed the direction in the 1993 Revised Plan with no real conflicts or detours from guidelines. The review and evaluation of current information, including the Roads Analysis Report for the GWNF completed in 2003, and the Revised Jefferson NF Plan lead to the recommendation there is nothing new to incorporate into the Revised GW Plan. However, the forest will be completing a Transportation Analysis Process (TAP) in 2010 that will further refine the roads analysis done in 2003.

c. Tentative Options or Proposed Actions for Change

- C-1. Delete road construction as an objective of the Plan.
- C-2. Do nothing. The existing road construction objective remains.
- C-3. Review the TAP results as soon as available before making a recommendation but for now delete road construction as an objective of the Plan.

5. What are the Consequences of Not Changing?

An erroneous objective related to road construction would be displayed in the plan, but would have little effect on actual need to construct roads. The consequences of not changing the current plan direction and management of roads on the Forest would be that emphasis on road maintenance, reconstruction and decommissioning would continue with very little construction of new roads. This management is consistent with historical road funding received on the Forest.

Proposed Action

Propose Option C3.

6. Recommendations for Plan Revision

It does not appear that there is a need for an objective for permanent road construction. However, scoping may identify changes. Since old unclassified roads continue to be identified and other roads are identified that no longer meet access needs, taking into consideration the issues identified, benefits and risks analyzed and the recommendations for a minimum road system contained in the 2010 Transportation Analysis Process, there will be an objective to decommission roads.

B. Licensed OHV Use

1. What was the Plan Striving For?

The Plan recognized the spectrum of areas that are highly roaded (greater than 3 miles per 1000 acres) to essentially unroaded with less than .25 miles per 1000 acres (Plan page 2-17). There is a stated recognition of the need to balance the public desire for motorized access to the national forest with the often conflicting goals of providing certain wildlife habitat and non-motorized, backcountry recreational opportunities.

In the area of licensed OHV use (full sized four wheel drive vehicles- not ATV's or motorcycles), the planning effort produced a total of 157 miles of featured open roads allocated to OHV use and identified an additional 60 miles of roads suitable, at least seasonally, for such use. There was a clear recognition that the demand existed for this use in the early 1990's and by allocating certain roads in Management Area 11 there was a desire to retain these roads as much as possible in their rough and challenging condition to meet this demand. Without this allocation these roads would have been susceptible to either upgrading to a higher level or closure, either choice precluding the OHV opportunity. There was also a prediction in the Plan EIS that the OHV road mileage would need to more than double to meet the anticipated demand by 2000.

2. Where is the Plan Now?

The existing allocated OHV road network is largely intact. There has been some repair on a few roads over the past 15 years to correct erosion problems contributing to watershed impacts. Three roads initially listed in the Plan have been closed either by nature or through site-specific decisions: A decision was made in 1998 to close Jerkemtight road, while floods from 1995 through 1997 closed Cashew Road. Poplar Cove road was also closed after a site-specific analysis. A few of the MA 11 roads are classified as TSL D. No additional roads have been added to the MA 11 allocation. A review of INFRA indicates there are currently a total of 244 miles of roads having an objective Maintenance Level of 2 – High Clearance.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? ? Executive Order 11644, Use of Off-Road Vehicles on the Public Lands, required public land agencies to administratively designate specific areas and trails on public lands on which the use of off-road vehicles may be permitted, and areas in which they are not permitted. The process to designate roads and trails as open or seasonally open to motorized use, and whether that motorized use is limited to highway legal vehicles only or to all vehicles, was in accordance with the following criteria and are displayed on a set of Motor Vehicle Use Maps for the Forest:

- Minimize damage to soil, watershed, vegetation, or other resources;
- Minimize harassment of wildlife or significant disruption of wildlife habitats;
- Minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors;
- Avoid designated Wilderness Areas or Primitive Areas.

5. Recommendations for Plan Revision

Do not provide designated OHV routes or areas in the Forest Plan. The roads and trails open or seasonally open to OHVs are included on the 2008 Motor Vehicle Use Maps.

C. Non-Motorized Trails

1. What was the Plan Striving For?



The current GW plan is striving for a non-motorized trail system providing for a mix of uses including hiking, horseback riding, mountain biking, and backpacking in which the “Share the Trail” concept is promoted. Emphasis is placed on multi-use trails wherever feasible. This concept minimizes the provision of single use trails and thereby better controls total trail mileage, environmental effects, and maintenance costs. The 1993 non-motorized trail mileage was about 950 miles, including two National Recreation Trails (Lion’s Tale and Wild Oak)

and about 60 miles of the Appalachian National Scenic Trail. The plan identifies approximately 300 miles of potential trail to be constructed and 92 miles reconstructed over the course of the planning period if funding allows. The Appalachian Trail has a discreet Management Area (MA6) in the GW plan indicating the emphasis placed upon this nationally prominent trail resource.

2. Where is the Plan Now?

Approximately 18 identified trail reconstruction projects from the current plan, totaling about 38 miles have been completed. Approximately 28 identified construction projects totaling about 75 miles have been completed. A few trail construction and reconstruction projects in addition to those identified were also completed since 1993 and some trails were removed from the system. Most of the trails are multi-use, having more than one managed use. Based on INFRA, current non-motorized trail mileage on the GW is 1066 miles. This represents a net 12% increase since 1993. Some of this increase is due to more accurate mileage measurements.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? No

b. Why? . The current trails emphasis in the GW plan on non-motorized trails seems to be consistent with prevailing social attitudes. The Public Survey report, Southern Appalachian National Forests, 2002 (Cordell) identifies day hiking, mountain biking, backpacking, and horseback riding, as respectively the 5th, 13th, 18, and 19th most popular recreational activities on the GW. Almost 34% of respondents hiked on the GW at least once that year. The other non-motorized uses were substantially lower but there is no statistical evidence or surveys indicating that demand for non-motorized use is declining. Based on qualitative evidence from public contacts and volunteerism, equestrian and mountain bike use and interest is continuing to increase. Hiking and backpacking use fluctuates considerably based on seasonal weather conditions but appears to be remaining steady to increasing slightly. This is based on A.T. ridgerunner sampling between 2002 and 2004 for hikers and backpackers passing through the Tye River section of the A.T.

An administrative change is necessary to show the existing AT corridor due to several minor relocations which have taken place since 1993. For instance, the A.T.s crossing of the James River on the AT pedestrian bridge is not depicted properly. This is shown on the [attached map](#) where the corridor needs to be properly identified and the old corridor reassigned to an adjoining management area direction. Construction of portions of the Alleghany Highlands Trail System on the James River and Warm Springs Districts has been completed by the Boy Scouts of America Order of the Arrow (ArrowCorps 5) in 2008 and Student Conservation Association trail teams in 2010.

5. Recommendations for Plan Revision

Public input emphasized the large demand for and enjoyment of the expansive trail system on the Forest. The Forest has the largest mileage of trails among the National Forests in the Southern Region. Given the large number of trail miles, we do not believe that we can expand. We will have an objective to retain current levels or slightly decrease trail miles. There may be limited additional trails, but some trails with low use may be abandoned so that new opportunities can be achieved.

We received public input with concerns related to use of trails for wildland fire and prescribed fire lines. We will add standards and guidelines to assure that when existing trails are used as firelines, they are maintained in, or returned to, the character desired by the users. We will also look for opportunities to improve trailhead parking for users of the trails.

D. Access for Persons with Disabilities



Sherando Lake Fishing Pier

1. What was the Plan Striving For?

The 1993 Revised Forest Plan addressed access for persons with disabilities with the following statement, “*The Revised Plan encourages the continued exploration of methods to provide access to persons with disabilities in accordance with the Americans with Disabilities Act and other applicable legislation. The Forest Service intends to continue to seek*

such opportunities as the Revised Plan is implemented.” Under Issue 13, The Mix of Goods and Services, the plan states, “*In accordance with the Americans with Disabilities Act (ADA) and other applicable legislation, most developed recreation facilities are made accessible as funding allows.*” The Plan did not have any objectives related to access for persons with disabilities.

2. Where is the Plan Now?

The intent of providing access to persons with disabilities is still valid, and indeed, there has been considerable progress made and many new and reconstructed developed recreation facilities are now accessible.

Likewise, the Forest Service nationally has better defined direction for providing accessibility. It is the Architectural Barriers Act of 1968 (ABA) and Section 504 of the Rehabilitation Act of 1973 that apply to the Forest Service. The applicable document for all new construction and alteration of Forest Service facilities under these laws is the *Architectural Barriers Act Accessibility Standards (ABAAS)*. Chapter 10 of the ABAAS addresses some recreation facilities but not camping and picnicking areas, outdoor recreation access routes, beach access routes, and pedestrian trails. These recreation facilities are addressed in the *Forest Service Outdoor Recreation Accessibility Guidelines (FSORAG)* and the *Forest Service Trail Accessibility Guidelines (FSTAG)*. On May 22, 2006, the Forest Service published, in the *Federal Register*, notice of the final directive that requires compliance with the FSORAG, effective on that date.

The 1993 Revised Forest Plan utilizes inaccurate terminology and limited itself in how it deals with the accessibility issues to developed recreation and disabled hunters.

The Plan inaccurately refers to *The Americans with Disabilities Act of 1990 (ADA)*, which does not apply to Federal Agencies with the exception of Title V, Section 507c that defines a wheelchair and states that wheelchairs may be used in Wilderness.

The 1993 plan implied that access for persons with disabilities was just for developed recreation areas and disabled hunters. Thus it is limited because access for persons with disabilities is to be provided to all programs and activities as well as all new and altered facilities on the Forest. Facilities are the physical features that are provided such as toilets, picnic tables, interpretive centers, and water fountains. Programs and activities are the things people do such as picnicking, camping, watching wildlife, hiking, listening to interpretive programs, etc. With funding constraints and construction limitations, as well as allowed exceptions, some facilities at some locations may not be accessible, but accessible opportunities will be provided in all program areas.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes, The Forest has made great strides in providing universal access at developed recreation facilities. In 2001 a programmatic transition plan was completed for the George Washington and Jefferson National Forests as required by 7 CFR 15e, the USDA implementation of Section 504 of the Rehabilitation Act of 1973. This transition plan shows that most programs on the Forest are accessible. There is now the opportunity for persons with disabilities to participate in all or most program activities.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes.

b. Why? Plan direction should incorporate current Forest Service policy of universal design ([FSM 2330](#)), by reference, to provide universal access to facilities and programs of the George Washington National Forest. Legal requirements should be corrected and clarified. Reference to the ADA is in error. c. Tentative Options or Proposed Actions for Change

C-1. Modify the Forest Plan by:

- a) Adding a standard or guideline that references Forest Service policy ([FSM 2330](#)) on universal access and use of the FSORAG and FSTAG when designing or rehabilitating recreation facilities..
- b) Making administrative corrections by adding legal references to American Barriers Act of 1968 and the Rehabilitation Act of 1973, removing the Americans with Disabilities Act reference and outdated terminology such as the word "handicap" and all its variations.

C-2. Do nothing.

5. What are the Consequences of Not Changing?

Regardless of what the Forest plan says, the requirements exist to provide access at all newly constructed or altered facilities in accordance with the referenced laws. It isn't necessary to include anything about access for persons with disabilities in the forest plan, because there are laws that require it. However, inclusion will keep the laws in the open and ensure that managers remain aware that there is still work to be done.

Proposed Action

Propose Option C1.

6. Recommendations for Plan Revision

The appropriate standards and guidelines will be included in the revised Plan.

Issue All-Terrain Vehicle (ATV) Use

1. What was the Plan Striving For?

The GW Plan was striving to accommodate this use but limit it to specific areas where the impacts could be feasibly mitigated and monitored. ATV's are allowed only on designated routes. Otherwise the forest is closed to off road and off-trail motorized use. The 1993 planning effort produced a total of 50 miles of designated ATV (unlicensed ATV's and motorcycles) routes in three areas: Taskers Gap/Peters Mill Run on the Lee District, Rocky Run on the Dry River District, and South Pedlar on the Pedlar District. It also called for an additional 15-mile system to be established on the Deerfield District if ATV organizations expressed interest and sponsorship for the project. The forest worked with several ATV organizations to identify potential areas where trail systems could be developed. Only a quarter of the potential areas were deemed suitable based upon environmental affects and the degree of conflict with other uses and services. The Plan EIS included an estimate that an additional 331 miles of ATV routes would be needed to meet the anticipated demand by 2000.

2. Where is the Plan Now?

Current total ATV route mileage for the three active areas is about 60 miles. The Rocky Run Area received significant flood damage in 1996 (Hurricane Fran) to the lower Rocky Run Trailhead and access trail. This access has been closed since that time and a final decision has not been made on its reestablishment. The proposed system on the Deerfield District did not become established due primarily to the lack of sponsorship from any ATV organizations. The Taskers Gap/Peters Mill Run and South Pedlar Areas continue to function and are popular trails. Both areas require frequent maintenance which is typically beyond the capability of the forest trail maintenance funding level and has been done through special regional and national allocations and Virginia Recreation Trails Fund grants.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? No

b. Why? Cordell's study, discussed under the Licensed OHV issue, does not differentiate ATV and motorcycle users from the sample so it is difficult to say how that data pertains to the unlicensed motorized users. However, it is pertinent that Cordell's study showed that a relatively low percentage of all GW respondents (12.1%) supported the objective of expanding access for motorized off highway vehicles.

There are no statistics to indicate that the demand for ATV trail mileage has increased as dramatically as predicted in the 1993 Plan but ATV and off-road motorcycle sales have increased substantially. However, based upon the expected use of the Jefferson Plan's Appendix H "Screening Criteria for New OHV Areas", it is doubtful that any new areas can be found to be suitable, including the Archer area on the Deerfield District, proposed in the 1993 Plan. The forest is very likely at the limit of its ability to support ATV use due to the relatively substantial environmental impacts and high costs of maintaining these systems.

5. Recommendations for Plan Revision

The Forest will retain the existing ATV areas, but not add any more.

Issue Roadless Area Management

A. Existing Inventoried Roadless Areas

1. What was the Plan Striving For?

The GW Plan EIS evaluated 27 inventoried roadless areas totaling more than 260,000 acres. The Plan allocated the roadless areas among the various Management Areas. Three areas, totaling about 12,000 acres were recommended for Wilderness Study (MA 8): The St. Mary's Addition, Three Ridges, and the Priest. The vast majority of the remaining acreage was allocated to Remote Highlands (121,000 acres), Special Management Areas (60,000 acres), and Special Interest Areas (32,000 acres). The Special Management Areas included Big Schloss, Little River, Laurel Fork, and Mt. Pleasant, each with its own Desired Future Condition and standards. According to the Plan, 89% of the roadless acreage is allocated to management areas which would preserve the roadless character. On the remaining 11%, approved projects could alter the roadless nature of a given area.

2. Where is the Plan Now?

During the mid 1990's there were a few projects within roadless areas, including three small timber sales affecting four roadless areas. There has also been some prescribed fire and minor trail relocation and construction in a few areas. However, these projects did not disqualify any area from the roadless inventory based upon FSH Handbook definitions. In 1994, the Mount Pleasant area was designated a National Scenic Area by Congress. The Plan was amended slightly based upon the provisions in the law. In 2000, the Priest and Three Ridges areas were designated as wilderness by Congress.

On January 12, 2001 the Department of Agriculture promulgated the Roadless Conservation Rule. That 2001 rule:

1. Prohibited new road construction and reconstruction in inventoried roadless areas on National Forest System lands, except:
 - To protect health and safety in cases of an imminent threat of flood, fire, or other catastrophic event that, without intervention, would cause the loss of life or property.
 - To conduct environmental clean up required by federal law.
 - To allow for reserved or outstanding rights provided for by statute or treaty.

- To prevent irreparable resource damage by an existing road.
 - To rectify existing hazardous road conditions.
 - Where a road is part of a Federal Aid Highway project.
 - Where a road is needed in conjunction with the continuation, extension, or renewal of a mineral lease on lands that are under lease, or for new leases issued immediately upon expiration of an existing lease.
2. Prohibited cutting, sale, and removal of timber in inventoried roadless areas, except:
- For the cutting, sale, or removal of generally small diameter trees which maintains or improves roadless characteristics and:
 - ●To improve habitat for threatened, endangered, proposed, or sensitive species, or
 - ●To maintain or restore ecosystem composition and structure, such as reducing the risk of uncharacteristic wildfire effects.
 - When incidental to the accomplishment of a management activity not otherwise prohibited by the rule.
 - For personal or administrative use.
 - Where roadless characteristics have been substantially altered in a portion of an inventoried roadless area due to the construction of a classified road and subsequent timber harvest occurring after the area was designated an inventoried roadless area and prior to the publication date of the rule.

The 2001 roadless rule was the subject of nine lawsuits in Federal district courts. On July 14, 2003, the U.S. District Court for the District of Wyoming found the roadless rule to be unlawful and ordered that the rule "be permanently enjoined." The Department of Agriculture revised the Roadless Area Conservation Rule on May 5, 2005 by adopting a new rule that established a State petitioning process that allowed State-specific consideration of the needs of these areas as an appropriate solution to address the challenges of inventoried roadless area management on National Forest System (NFS) lands.

On November 29, 2006 a federal judge in California set aside the State Petitions Rule and reinstated the 2001 Roadless Rule enjoining the Forest Service "from taking any further action contrary to the Roadless Rule without undertaking environmental analysis consistent with this opinion."

In an August 12, 2008 ruling, the Federal District Court for the District of Wyoming again held that the 2001 Roadless Area Conservation Rule was unlawfully promulgated in violation of the National Environmental Policy Act and the Wilderness Act. The Wyoming court declared that "the roadless rule must be set aside" and that "[t]herefore, the Court **ORDERS** that the 2001 Roadless Rule, be permanently enjoined for the second time"

With conflicting rulings in the California and Wyoming Federal Courts, the California judge clarified her opinion in a December 2, 2008 ruling. "Therefore, in the spirit of comity, the Court partially stays its injunction as to states outside the Ninth Circuit and New Mexico, pursuant to Rule 62(c). The injunction remains in full effect in all other respects."

The George Washington National Forest Plan does not have guidelines that require that all inventoried roadless areas retain their roadless characteristics, yet the management prescribed for the areas accomplishes nearly the same result. Ninety-five percent of the roadless areas are classified as unsuitable for timber production. There are very limited provisions for the harvest of dead or dying trees along the perimeters of some of these areas. In the George Washington Plan, road construction is prohibited on 88 percent of the areas with some exceptions to provide for site specific needs. Examples of these exceptions where new road construction could be allowed include: 1) to access approved mineral activities; (2) where the new road is the only prudent alternative to serve resource needs in adjacent management areas and it will minimally impact this management area; (3) to relocate existing roads; (4) to provide access to trailheads or (5) to provide access to private land if no other route is feasible.

Inventoried Roadless Areas of National Forest System Land:

National Forest	Roadless Areas (Number)	West Virginia (Acres)	Kentucky (Acres)	Virginia (Acres)	Grand Totals (Acres)
George Washington*	27*	17,331	0	243,902	261,233
Jefferson**	37	4,818	0	147,772**	152,590
Total Both Forests	52	22,149	0	391,674	413,823

* Total from 1993 Revised Forest Plan: However the Priest (5,726 roadless ac.) and Three Ridges (4,702 roadless ac.) were designated Wildernesses by Congress in 2000. Mt. Pleasant (8,905 roadless ac.) was designated a National Scenic Area in 1994.

** Includes Beaverdam Creek, London Bridge Branch, and Rogers Ridge which predominately lie on the Cherokee National Forest in Tennessee.

Permanent Road Construction Not Allowed within Inventoried Roadless Areas:

National Forest	Permanent Road Construction Not Allowed (Acres)			
	West Virginia	Virginia	Total	%
George Washington**	13,524	217,421	230,945	88%
Jefferson	4,818	147,772	152,590	100%
Total	18,342	365,193	383,535	93%

* Based on land management allocations in revised Forest Plans

** GW Management Areas 4, 6, 8, 9, and 21.

Timber Harvesting within Inventoried Roadless Areas:

National Forest	Timber Harvesting Allowed for Stewardship Purposes* (Acres)				Timber Harvest Not Allowed Except for Salvage of Dead, Dying, or Damaged Trees (Acres)			
	West Virginia	Virginia	Total	%	West Virginia	Virginia	Total	%
George Washington**	1,149	13,034	14,183	5%	16,182	230,868	247,050	95%
Jefferson	2,931	32,004	34,935	23%	1,887	115,768	117,655	77%
Total	4,080	45,038	49,118	12%	18,069	346,636	364,705	88%

* Stewardship Purposes Include:

- Improving or Maintaining Wildlife Habitat
- Reducing the Risk of Wildfire, Insects, or Diseases
- Restoring Ecological Structure, Function, Processes, or Composition
- Enhancing or Rehabilitating Scenery
- Salvage of Dead, Dying, or Damaged Trees

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes. No management activity disqualified an areas' suitability for Congressional wilderness designation. A roadless area's characteristics remain intact.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? There is a need to update the existing inventory to remove the areas designated wilderness and national scenic area. There may also be a need for change revised national direction on inventory criteria, new terminology (potential wilderness areas) and roadless area management.

c. Tentative Options or Proposed Actions for Change

Under all following options The Priest (5,726 roadless ac.), Three Ridges (4,702 roadless ac.) and Mt. Pleasant (8,905 roadless ac.) should be dropped from the roadless inventory because these areas are now congressionally designated areas. Therefore there are now 24 inventoried roadless areas.

C-1. Adopt the 2001 Roadless Rule as a standard; yet leave the existing management area allocations as identified and delineated in the 1993 GW Forest Plan.

C-2. a) Remove the three Special areas designations (Laurel Fork, Little River, and Big Schloss) and assign them to existing GW Remote Highlands (Management Area 9 or Jefferson Prescription 12B – Remote Backcountry); b) assign the remaining 21 roadless areas to existing GW Remote Highlands Area 9. c.) Add a standard that the inventoried roadless areas be managed under the 2001 Roadless Conservation Rule or whatever roadless rule is in effect.

C-3. Modify the Forest Plan by:

- h) Identifying Remote Backcountry areas that include: a) the three special area designations (Laurel Fork, Little River, and Big Schloss); b) the existing GW

Remote Highlands area (Management Area 9); and C) the portions of the 21 inventoried roadless areas not currently in GW Remote Highlands area.

- i) Adding a standard that inventoried roadless areas will be managed under the current agency roadless policy and direction.
- j) Adding a standard that where conflicts occur between management of inventoried roadless areas and known locations of special botanical – zoological areas, the biological values will be addressed first.

C-4. Allocate the roadless areas that allow road construction and timber harvesting to management area direction that avoid new road construction and reconstruction and cutting, sale, and removal of timber as per the table discussed above. See table on following pages. The areas proposed for change are also highlighted on the linked map.

5. What are the Consequences of Not Changing?

The Forest must update to reflect congressional designations. The Forest must also comply with any national rules on management of inventoried roadless areas.

Proposed Action

Propose Option C3.

6. Recommendations for Plan Revision

There is currently no roadless rule in place for the Forest. There was support for continuing to manage all of the inventoried roadless areas under the restrictions of the 2001 Roadless Conservation Rule. There was also interest in returning some of these areas to active management. The portions of the areas that were managed as Remote Highlands will be identified as remote backcountry areas. These will continue to be managed as unsuitable for timber production and with a prohibition for road construction (with limited exceptions). Salvage harvest will be allowed as described in the salvage section. Many of the remote backcountry recreation areas will be expanded to include the entire Inventoried Roadless Area. However, there was a common theme among many workshop attendees that we should continue to manage where we have good road access and reduce management in areas where there is poor road access. To respond to this concern, we will leave the roaded portions of a number of the Inventoried Roadless Areas in active management if they are currently in actively managed Management Areas (14, 15, 16, 17).

The following table displays these changes. A number of the remote backcountry areas contain special biological areas within them. Kelley Mountain is entirely a Special Biological Areas.

Roadless Area	W&S Rivers	Special Biological Areas	Mosaics of Wildlife Habitat	Dispersed Recreation	Remote Backcountry Recreation Acres	Total Roadless Area Acres
Adams Peak					7,282	7,282
Beards Mountain		x			7,504 - x	7,504
Big Schloss		x			20,811 - x	20,811
Crawford Mountain			1,000		8,852	9,852
Dolly Ann		2,068	800		4,998	7,866
Dry River (WV)		3,497	500		3,257	7,254
Elliott Knob		945	200		8,246	9,391
Gum Run		4,300			8,320	12,620
Jerkentight		1,230	800		14,819	16,849
Kelley Mountain		7,742				7,742
Laurel Fork		10,053				10,053
Little Alleghany		x - lbat	700		10,207-700-x	10,207
Little River	100	3,293	300	735	22,752	27,180
Mill Mountain		435	3,331		7,153	10,919
Mount Pleasant			735			735
Northern Massanutten					9,459	9,459
Oak Knob		2,975	800		7,077	10,852
Oliver Mountain					13,089	13,089
Ramseys Draft Add.		2,447			10,367	12,814
Rough Mtn Add.					1,154	1,154
Saint Mary's Add.					1,478	1,478
Skidmore		3,823			1,794	5,617
Southern Massanutten					12,080	12,080
The Friars					2,051	2,051
The Priest	Remove From Inventory - now Wilderness					
Three Ridges	Remove From Inventory now Wilderness					
Three Sisters					8,154	8,154

In addition, some of these areas may be considered for recommendation as wilderness.

B. New Potential Wilderness Area Inventory

The first step in the evaluation of potential wilderness is to identify and inventory all areas within the National Forest System that satisfy the definition of wilderness. For areas in the Eastern United States east of the 100th Meridian), the agency's evaluation yields one of the two following options: a) Manage the area for multiple uses other than wilderness; or b) Administratively recommend the area as a Wilderness Study Area to the United States Congress. Congress would then determine whether they want the agency to study any area further.

Final agency guidance ([Forest Service Handbook \(FSH\) 1909.12 Chapter 70](#)) on identifying potential areas was released on January 31, 2007.

The methodology used to identify the Potential Wilderness Areas is described in *Guidance on How to Conduct the "Potential Wilderness Area Inventory" for the George Washington National Forest Plan*. Another document, *Areas Not Included in the Potential Wilderness Inventory*, describes rationale for why some areas were not included in the Inventory. A number of other areas were also identified for consideration by members of the public, including a publication by the Wilderness Society, *Virginia Mountain Treasures: The Unprotected Wildlands of the George Washington National Forest*. They are discussed in the document *Review of the Wilderness Society's "Virginia Mountain Treasures: The Unprotected Wildlands of the George Washington National Forest*.

The Forest identified the following 37 areas as Potential Wilderness Areas.

Potential Wilderness Name	Total GWJEFF Acres	Jeff NF Acres
Adams Peak	8,226	0
Archer Knob	7,110	0
Beards Mountain	10,152	0
Beech Lick Knob	14,087	0
Big Schloss	28,347	0
Crawford Knob	14,851	0
Dolly Ann	9,524	0
Duncan Knob	5,973	0
Elliott Knob	11,070	0
Galford Gap	6,689	0
Gum Run	14,547	0
High Knob	18,447	0
Jerkemtight	27,314	0
Kelley Mountain	12,892	0

Potential Wilderness Name	Total GWJEFF Acres	Jeff NF Acres
Laurel Fork	10,236	0
Little Alleghany	15,395	0
Little Mare Mountain	11,918	0
Little River	30,227	0
Massanutten North	16,530	0
Oak Knob - Hone Quarry Ridge	16,343	0
Oliver Mountain	13,049	0
Paddy Knob	5,987	0
Potts Mountain	7,863	844
Ramseys Draft Addition	19,072	0
Rich Hole Addition	12,165	0
Rich Patch	5,625	4,754
Rough Mountain Addition	2,063	0
Saint Mary's North	3,006	0
Saint Mary's South	1,651	0
Saint Mary's West	278	0
Shaws Ridge	7,268	0
Shawvers Run Addition	84	0
Three Ridges Addition North	83	0
Three Ridges Addition South	187	0
Three Ridges Addition Southwest	9	0
Three Ridges Addition West	90	0
Three Sisters	9,871	0
TOTAL GWJEFF ACRES	378,229	5,598
TOTAL GW ACRES ONLY	372,631	

The evaluation of each of these areas is described in *Potential Wilderness Area Evaluation*. The Forest Plan will identify those areas forwarded to the Agency for recommendation to Congress for designation as wilderness. At least one area is anticipated for recommendation. Saint Mary's Wilderness West Addition was acquired

by the Forest Service for the express purpose of expanding Saint Mary's Wilderness The Plan will also identify management desires for the rest of the areas.

Issue Special Management Areas

A. Wilderness

1. What was the Plan Striving For?

The GW Plan provided direction for the four designated wildernesses: Ramseys Draft, Rich Hole, Rough Mountain, and St. Mary's, totaling about 32,000 acres or roughly 3% of the forest's area. Three areas, totaling about 12,000 acres were recommended for Wilderness Study (MA 8): The St. Mary's Addition, Three Ridges, and the Priest. The Desired Condition is to protect and perpetuate the wilderness character and values of these areas as directed in the Wilderness Act and subsequent Wilderness designating legislation including providing opportunities for solitude, education, physical and mental challenge, inspiration, scientific study and primitive recreation. Wilderness ecosystems are the result of natural succession and natural processes with as little human intervention as possible while retaining wilderness character. There is little evidence of visitor use and low interaction among users. The few trails and associated facilities present are retained primarily to protect the wilderness resources. No motorized use is permitted. The plan provides specific standards for management of the various resources and activities that are or could potentially occur in the wildernesses including, recreation, fire, lands, minerals, fish and wildlife, insects and disease, research, search and rescue, special uses, and hydrology.

2. Where is the Plan Now?

In 2000, the Priest and Three Ridges areas were designated as Wilderness by Congress, adding an additional 10,571 acres. The St. Mary's addition, totaling about 1500 acres has not been designated but continues to be managed to retain its wilderness attributes pending Congressional action on whether to designate or have the agency study it further.

In 1998 and 2005 the St. Mary's River and several of its tributaries were treated with helicopter applied limestone sand to counteract the effects of human caused acidification on the aquatic ecosystem. This watershed may need additional treatments in the future to maintain the pH of the streams at a level to support the aquatic biota. For this action, a site specific forest plan amendment allowed for the temporary reduction in the VQO below preservation.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Generally yes, except for fire management. There is no provision in the Forest Plan for managing unplanned ignitions for resource benefits in wilderness. Therefore, naturally caused (lightning) fires continue to be suppressed.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? There is need for naturally caused fires to be allowed to serve their role in the shaping of the wilderness ecosystems. This could happen to a much greater extent if direction to allow managing unplanned ignitions for resource benefits in wilderness were to be included in the Forest Plan.

The more current language from the Jefferson Plan direction regarding DFC and standards for wilderness and recommended wilderness should be used in developing the GW Plan wilderness direction.

c. Tentative Options or Proposed Actions for Change

C-1. Include managing unplanned ignitions for resource benefits as a suitable use within wilderness and adopt Jefferson standard #FW-140 that says: "FW-140: Lightning-caused fires may play their natural ecological role as long as they occur within prescribed weather and fuel conditions that do not pose unmitigated threats to life and/or private property, particularly to property within the wildland/urban interface zone."

C-2. Do nothing. Continue to disallow management of unplanned ignitions for resource benefits within Wilderness

5. What are the Consequences of Not Changing?

Fire is one of the most important and influential natural agent of change in a wilderness. Continuing to disallow lightning fire to play its natural role in the ecosystem is a significant trammeling (human control) of the wilderness. Over time, the continued aggressive suppression of fire will result in unnatural fuel buildup and increases in insects and diseases within the wilderness systems.

Proposed Action

Propose Option C1.

6. Recommendations for Plan Revision

Adopt desired conditions and standards and guidelines in the revised Plan that allow wildland fire to play its natural ecological role within wilderness.

B. Wild and Scenic Rivers

1. What was the Plan Striving For?

The GW Plan EIS identified and evaluated 14 streams located in or close to the forest. These evaluations determined which have outstandingly remarkable qualities that make them eligible for inclusion in the National Wild and Scenic River System. The evaluations also determined whether the eligible stream should receive wild, scenic or recreational classification. The streams were broken down into segments based on ownership or distinct geographical breaks. The evaluations were in accord with the 1968 National Wild and Scenic Rivers Act and were in response to and informed by the National Rivers Inventory and concerns of the American Rivers Conservation Council.

Eligibility is the initial step in the designation process. Streams or stream segments identified as eligible for designation are to be managed to preserve free-flowing conditions and to protect the outstandingly remarkable values of their segments

including the scenic, recreation, geologic, fish and wildlife, historic, and cultural values that made them eligible. Until designation decisions are made or other river studies are conducted, National Forest System lands associated with each eligible river corridor are managed to perpetuate or enhance the current conditions. Characteristics of the streams and their corridors are not to be reduced below the standards of their preliminary classification.

2. Where is the Plan Now?

The evaluation documented in Appendix D identified a total of 16 stream segments as eligible for designation based upon having at least one outstandingly remarkable value. The summary of these segments appears on page D-34 of the EIS Appendix. Most of these streams were allocated to Management Area 10, Scenic Rivers and Recreational Rivers with 55 miles of streams in the scenic river classification and 200 miles in the recreational river classification. Both classifications have corridor widths of ¼ mile on each side of the stream. There are approximately 4,000 acres in the scenic river corridor and 4,000 acres in the recreational river corridor. Portions of six streams segments are within other management areas but management practices permissible in these allocations will not preclude future inclusion of these river segments into the National Wild and Scenic River System under their identified classifications. Segment A of the St. Mary's River is the only stream identified as eligible under the wild classification. It is embedded in Management Area 8, Wilderness, which provides protection for the ½ mile river corridor.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? No

b. Why? The 1993 Wild and Scenic River Eligibility Study was comprehensive. Since that time and to date, there are no known additional streams on the forest needing evaluation and there does not appear to be a need for a reevaluation of identified streams. Streams will remain in the eligible status until suitability studies and the associated site-specific analyses are conducted. Meanwhile, eligible stream corridors would be protected and their respective classifications retained as under the current plan.

5. Recommendations for Plan Revision

Identify the currently eligible stream segments with desired conditions and standards and guidelines that recognize the need to maintain these areas in conditions that do not affect their eligibility for further consideration as Wild, Scenic or Recreation Rivers.

C. Important Scenic and Recreational Areas

1. What was the Plan Striving For?



Mount Pleasant National Scenic Area

Though there is direction for aesthetic and recreation management in each Management Area of the 1993 Revised Forest Plan, several have scenery and/or recreation resources as primary resources. These include: MA 5, Massanutten Mountain; MA 6, the Appalachian National Scenic Trail; MA 7, Scenic Corridors and the Highlands Scenic Tour; MA 10, Scenic and Recreational Rivers; MA 12, Developed Recreation; and MA 13, Dispersed Recreation (42,000 acres in

numerous areas with heavy dispersed recreation use).

Additionally, MA 21, Special Management Areas is made up of 59,000 acres in four areas, Big Schloss, Laurel Fork, Little River, and Mount Pleasant. From the 1993 plan, *“These areas contain a variety of unique natural resources where a mixture of compatible management emphases is deemed the wisest management.”* Scenic and recreational resources are among the mixture.

2. Where is the Plan Now?

The scenic and recreation resources of these areas remain intact. The scenic and recreation resources of the forest remain to be protected, enhanced, and preserved. The Mount Pleasant National Scenic Area has received congressional designation since the plan was written.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? No

b. Why? The goal of protecting scenic or recreation purposes remains the same. Though individual areas may have changed status, (e.g., Mt. Pleasant) the management for scenery and/or recreation has not changed forestwide. There are no additional travelways to add to the list of scenic corridors.

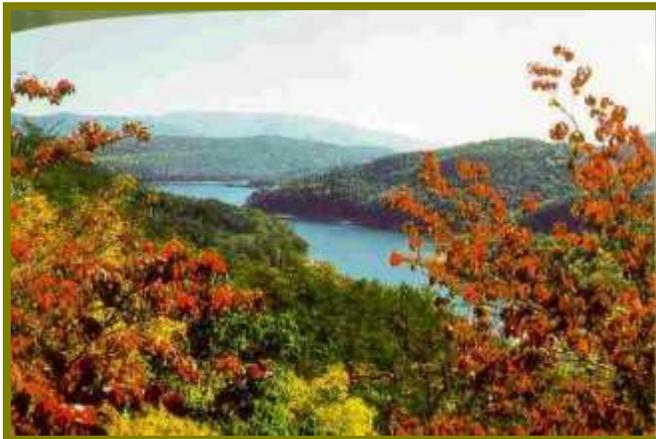
5. What are the Consequences of Not Changing?

The scenic and recreation resources are protected without change.

6. Recommendations for Plan Revision

Include desired conditions and standards and guidelines for the scenic corridors identified in the current plan. Also retain identification of desired conditions and standards and guidelines for the heavily used dispersed recreation areas.

Issue Aesthetics



Lake Moomaw, James River Ranger District

1. What was the Plan Striving For?

The 1993 Revised Forest Plan used adopted Visual Quality Objectives (VQO) to preserve and enhance the scenic resources of the forest. The inventory VQOs were derived using the National Forest Landscape Management Visual Resource Management System (VMS). Using the inventory as a basis, every acre of

the forest was assigned an adopted VQO by management area. Adopted VQOs in the 1993 plan are more restrictive than the inventory VQOs. See the acreage table below.

For the 1993 plan, forest landscape architects updated and verified components of the VMS. All roads (Interstate, federal, state, and forest), major vistas, developed recreation sites, hiking trails, and viewing points were examined during leaf off to inventory seen areas on the forest. The public was invited to review the inventory and their input was used to refine the concern levels used in developing the final inventory VQOs. This inventory was then used in developing the adopted VQOs.

Table 3-14 (pages 3-119 through 3-121) of the 1993 plan presents contrast reducing standards used in vegetation management on the forest. Standards are given for different vegetation management activities based on the adopted VQO.

The 1993 plan went beyond the VMS direction and placed a great importance on constituent analysis.

2. Where is the Plan Now?

In 1995, after the 1993 Revised Plan was put in place, the Forest Service revised the VMS and renamed it Scenery Management System (SMS) A direct excerpt from the SMS handbook (USDA Handbook 701) explains,

The Scenery Management System evolved from and replaces the Visual Management System (VMS) as defined in Agricultural Handbook #462, while the essence of the system remains essentially intact, still supported by current research findings. Conceptually, the SMS differs from the VMS in that: it borrows from and is integrated with the basic concepts and terminology of Ecosystem Management. The SMS provides for improved

integration of aesthetics with other biological, physical, and social/cultural resources in the planning process

While the VMS has adopted visual quality objectives, the SMS has adopted scenic integrity objectives (SIO) for each management area to describe the desired future condition for managing the scenic resources of the forest. The table below shows 1993 plan inventoried and adopted VQOs by acreage. The equivalent Scenic Integrity Objectives (SIO) under the SMS is also given.

<u>Adopted Visual Quality Objectives</u>	<u>1993 Inventoried (Thousand Acres)</u>	<u>1993 Adopted (Thousand Acres)</u>	<u>Scenic Integrity Objectives</u>
Preservation	34	46	Very High
Retention	94	379	High
Partial Retention	279	548	Moderate
Modification	641	88	Low
Maximum Modification	12	0	Very Low

In addition to the five long-term VQOs on the left, the 1993 plan adopted two short-term VQOs, rehabilitation and enhancement, to be used as needed, though they are not assigned to any particular management areas. The SMS establishes scenic classes, a step that was not included in the VMS, although the components used to derive scenic classes were included in the VMS inventory process. The two components of scenic classes are landscape visibility and scenic attractiveness. Landscape visibility relates to concern levels and distance zones, and scenic attractiveness equates to variety class. The inventoried combination of viewing distance, concern level, and scenic attractiveness will produce seven scenic classes with classes 1 and 2 having high public value and classes 6 and 7 having low value. There is no need for a wholesale reinventory of the scenic resources of the GW, but public input may result in site specific review and/or change.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? The Scenery Management System is now used by the Forest Service in scenic resource management.

c. Tentative Options or Proposed Actions for ChangeC-1. The SMS is evolutionary rather than revolutionary from the VMS. Therefore, the inventoried distance zones, variety classes, and sensitivity levels are used in SMS. Convert the adopted visual quality objectives of the 1993 plan to scenic integrity objectives for the revised plan by using the inventory components, determine the scenic classes and then assign SIOs in the standards and guidelines that are both appropriate to the management emphasis of the prescription area and adequately protect the scenic resource .

C-2. Do nothing.

5. What are the Consequences of Not Changing?

The Scenery Management System is the national direction for managing scenic resources on national forests and is being adopted by most forests in the plan revision process. While not adopting the SMS will have no effect on the quality of the scenic resources of the GW National Forest, the forest will be behind in terminology and tools. Practically, the scenic resource will remain protected regardless of which system is used.

Proposed Action

Propose Option C1.

6. Recommendations for Plan Revision

Adopt the Scenery Management System to maintain the high level of emphasis on scenic quality across the Forest and remain current with direction provided in the Agriculture Handbook for Scenery Management.

Issue Vegetation Manipulation

1. What was the Plan Striving For?

The Revised Plan allowed for a combination of even-aged and uneven-aged regeneration harvest methods. It also provided management for wildlife species, but not as featured species. Instead, the Revised Plan emphasized habitat for the traditional 'featured species' in Management Areas 14, 15, 16 and 22 while monitoring and evaluating the effects of management practices through management indicator species. The Revised Plan provided for a forest environment with a wide variety of habitats to meet the needs of wildlife species inhabiting the Forest.

2. Where is the Plan Now?

See the discussion of timber harvest by harvest method under Issue 2. C. Allowable Sale Quantity. Also see the discussion of habitat management for wildlife under Issue Wildlife and the discussion of successional habitat in Issue Biodiversity.

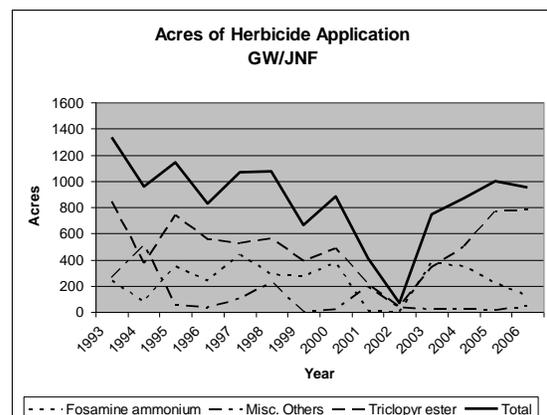
A. Herbicides

1. What was the Plan Striving For?

The Plan strove to safely utilize appropriate herbicides while avoiding significant adverse impacts to the human environment based on site-specific analysis (Plan, page 2-32).

2. Where is the Plan Now?

The graph shows the amount of land treated by herbicides over the combined George Washington and Jefferson National Forest. Figures for the GW alone are not available.



3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes, all herbicides applied were Class A herbicides as approved by the Environmental Protection Agency and the Regional Forester.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? No

b. Why? Herbicides are being used safely and conforming to appropriate State and Federal laws and policy.

5. Recommendations for Plan Revision

Utilize similar standards and guidelines as in the current plan to assure safe use of herbicides in management of vegetation.

Issue Minerals and Energy

A. Federal Minerals

1. What was the Plan Striving For?

The Revised Plan strived to continue to offer opportunities to explore and develop federal leasable minerals (energy minerals, such as natural gas, and non-energy minerals) and federal mineral materials on the Forest as one of the products important to the public (Plan page 2-33). In areas of high mineral resource potential, minerals were to be recognized as an important multiple use that may be developed in coordination with other resource values. Areas needing special protection (i.e. wilderness, recreation areas, etc.) either were to have minerals activities prohibited by law or restricted by timing, controlled surface use, or no surface occupancy stipulations according to the appropriate management area direction (Plan page 2-33). Furthermore, as existing oil and gas leases expire; new leases were to be issued under the standards of the appropriate management area (Plan page 2-33).

Federal oil and gas leasing was an issue in the development of the 1993 Revised Plan. Public involvement and environmental analysis (EIS) were considered in making the decision on what areas of the Forest would be available for federal oil and gas leasing, and under what condition or stipulation. In the EIS, the Forest examined withholding consent across the entire Forest (entire Forest unavailable for leasing). The Forest also examined withholding consent on various areas but found that Stipulations on leases could achieve similar protection of surface resources. Special Areas made available to lease under Controlled Surface Use Stipulation or No Surface Occupancy Stipulation have severe restrictions or prohibitions on ground disturbing activities. For example, the No Surface Occupancy Stipulation prohibits roads, well pads, and other ground disturbance on a lease, providing the same protection of surface resources as if consent to lease was withheld. It was also recognized that no ground disturbing activity could occur on any lease until a second environment analysis with public involvement was conducted for any site-specific proposal.

Although a large number of acres are 'available' for mineral activities, mineral deposits suitable for mining are scarce. Areas needed for mineral extraction are relatively small and isolated features on the vast acreage of the Forest. At most, only a very small percentage (less than 1%) of the Forest is expected to contain mineral activities.

2. Where is the Plan Now?

Federal leasable minerals

The Forest manages federal leasable minerals (energy minerals, such as natural gas, and non-energy minerals) in cooperation with the Bureau of Land Management (BLM), Department of Interior, which is the federal agency that issues federal energy and non-energy leases (36 CFR 288 B and E). Since 1993 the Forest has not received from BLM any requests for federal leases of non-energy minerals. From 1993 to 2006 no BLM-issued federal leases of non-energy minerals have been in effect on the Forest. Since 1993 natural gas has been the only leasable mineral on the Forest where there has been federal lease activity.

Federal oil and gas leasing on the Forest involves two levels of environmental analysis with public involvement and opportunities for public request for administrative reviews. The first environmental analysis with public involvement was the 1993 Forest Plan Revision EIS leading to the 1993 Forest Plan decision on the lands administratively available for leasing. The first administrative review was a Forest Service administrative review as a result of the 1993 Forest Service decision on lands administratively available for leasing. The second opportunity for administrative review is a BLM administrative review and occurs if and when BLM places any of these administratively available lands on a BLM public notice of competitive oil and gas lease. BLM places such lands on competitive lease sale in response to public nominations or expression of interest in leasing particular lands. This occurred in November 2007 when BLM placed on a competitive sale notice 4,802 acres on the Warm Springs Ranger District and 5,441 acres on the North River Ranger District. The public had the opportunity to request BLM administrative review of BLM's decision to offer these lands in the November 2, 2007 BLM public notice for lease.

No ground disturbance can occur on these existing leases or any future lease until the lessee submits an Application for Permit to Drill (APD) to the BLM, and a second environmental analysis with public involvement is conducted by the Forest Service and BLM. This second environmental analysis is site specific, focus on a specific proposal in a specific area of a specific lease. The Forest Service would review and approve the Surface Use Plan of Operations (SUPO). When the Forest Service makes its decision on the SUPO, and when BLM makes its decision on the APD, the public also has opportunity to request administrative reviews.

The fact that federal leases are issued does not automatically mean that any wells or road construction will be conducted on a lease. For example, during the oil and gas boom of the late 1970s and 1980s federal oil and gas leases were issued on hundreds of thousands of acres of George Washington National Forest. The result was a few

unsuccessful exploration wells were drilled that disturbed a few acres and were reclaimed. 99% of the leases expired with no ground disturbance.

Another reason for no ground disturbing activity on some federal leases can be because the drilling occurs on private land adjacent to federal land. Knowing how long it can take the federal government to process an APD and the wide range of environmental protections and restrictions on federal leases and APDs, some oil and gas operators may choose to drill on private land adjacent to federal leases.

The Laurel Fork Special Management Area became unavailable for future oil and gas leasing in a January 31, 1997 site-specific decision. Connected with this decision, the agency also withdrew consent to the Eastern States Office of the BLM to offer leases for oil and gas in the area. The Revised Plan was amended (Amendment #4) to be consistent with this decision. Federal gas wells in West Virginia are producing gas from a federal lease issued in 1952 in the Laurel Fork area. Wells drilled on a federal lease in West Virginia several decades ago showed this lease as well as the lease in Laurel Fork area was capable of gas production; but the leases did not produce because no pipeline was present. A gas pipeline was constructed in West Virginia in the 1990s. The gas pipeline allowed production from several federal gas wells in West Virginia near the Virginia state line as well as the lease in Laurel Fork area. No roads or wells are associated with the lease in Laurel Fork; it is drained by federal wells in West Virginia.

Since 1993 some seismic exploration was conducted and one natural gas exploratory well was drilled on a federal oil and gas lease in Highland County on the Warm Springs Ranger District. The exploration well drilled in 1997 did not discover commercial quantities of gas, and the well site was abandoned and reclaimed.

Oil and gas prices which were rising in recent years spiked upward in mid-2008 in the U.S. and around the world. In addition, there has been expression of interest in leasing in Hardy County and interest in the Marcellus shale (Devonian shale) as a potential source of natural gas in Virginia and West Virginia. Oil and gas prices dropped dramatically from mid-2008 to first quarter of 2009. Since 2008 the U.S. economy has slowed, and this has reduced demand for oil and gas. Interest in exploration and development for domestic energy sources, particularly oil and gas, can be expected to continue and may result in more oil and gas leasing on George Washington National Forest. However, the severe economic situation in the U.S. suggests reduced expectations or low level of potential oil and gas activity or any other mineral activity on federal mineral rights on the Forest. The Revised Forest Plan provides the direction for responding to requests to lease federal oil and gas by showing, by management area, which condition or stipulation would be applied.

Executive Order 13212 (Actions to Expedite Energy-Related Projects) of May 18, 2001 states "executive departments and agencies (agencies) shall take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy." Executive Order 13212 requires that: "For energy-related projects, agencies shall expedite their review of permits or take other actions as necessary to accelerate the completion of such projects, while

maintaining safety, public health, and environmental protections.” Laws and environmental protections are still complied with, it is just that agencies are required to process energy projects diligently and not put energy projects off to the side and ignore these projects for months or years.

Federal mineral materials

Mineral materials include aggregate, landscaping rock, rip-rap, flagstone, and other rock or earth construction materials. Mineral materials are basic raw materials needed to construct and maintain Forest infrastructure. Every year the Forest uses mineral materials: to build and maintain trails, roads, campgrounds; to control erosion and sedimentation; to restore riparian and aquatic habitat; to reduce effects of acidic rain; to prevent or repair flood damage; etc. Most of the mineral materials used by the Forest are extracted from mines off the Forest, but some mineral materials are from small borrow pits on the Forest.

The Forest issues mineral material authorizations to the public and to state and county road departments. Congress gave the Forest Service authority to sell mineral materials to the public. Since 1993 the Forest each year has issued permits to the public for mineral materials, such as flagstone. Federal mineral materials are managed by the USDA Forest Service (36 CFR 228C), and are not the BLM-issued federal leasable minerals, such as oil and gas. The Forest can make mineral materials available as free use to governmental agencies.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? As changes are made in revising the plan we will likely need to update the oil and gas leasing availability. The Revised Plan continues to offer opportunities to explore and develop federal leasable minerals (energy minerals, such as natural gas, and non-energy minerals) and federal mineral materials while providing integration with and protection of surface resources. Furthermore, site-specific analysis on any ground-disturbing mineral activity must still occur.

B. Private Mineral Rights on Federal Lands

1. What was the Plan Striving For?

The Forest Plan provided brief mention of outstanding and reserved mineral rights. The Forest Plan recognized the existence of outstanding and reserved mineral rights with three Forest-wide Standards 151, 152, and 153 (Forest Plan page 3-140). These standards strived for basic administration of mining operations (including oil and gas drilling) in areas of outstanding and reserved mineral rights on the Forest.

The owners of the private mineral estates underlying the Forest possessed those rights before the Forest Service acquired the surface estate. The Forest Service acquisition of

the surface estate was subject to these valid existing mineral rights. These private mineral rights include the right of access and use of the surface to explore and develop the mineral estate. This section on private mineral rights does not deal with federal mineral rights or the private companies that lease federal oil and gas or other minerals; refer to section on federal minerals for discussion on federal leases.

2. Where is the Plan Now?

Mineral rights are privately-owned on 16 percent (approximately 167,000 acres) of the Forest. Of the privately-owned mineral rights, 76 percent are mineral rights outstanding to third parties, and 24 percent are mineral rights reserved by the grantor at the time of acquisition by the federal government.

Since 1993, an offer to sell private mineral rights under part of the National Forest is occasionally presented to the Forest Service. Because of other land acquisition priorities, the Forest Service generally has not pursued such offers. Thus, mineral rights remain privately-owned on 16 percent (approximately 167,000 acres) of the Forest.

Mining of shale on the Pedlar Ranger District in the 1980s was an operation under private mineral rights on National Forest System land. Reclamation of the shale mine on the Pedlar Ranger District is an operation under private mineral rights conducted under Plan implementation.

In 2005 the James River Ranger District received a proposal to exercise private mineral rights by mining. Forest Service requested additional information about the proposal, but has not received the information. To date, the proponent has not pursued the proposal with the Forest Service.

It is important to recognize that just because mineral rights are privately owned does not automatically mean that the mineral rights will be exercised to explore and develop minerals. In fact, the exercise of private mineral rights on the George Washington National Forest going back for decades is rare. As with federally-owned mineral estates, mineral deposits suitable for mining are scarce on privately-owned mineral estates on the George Washington National Forest. For example, there has never been a private mineral rights oil and gas well developed on the George Washington National Forest. Areas needed for mineral extraction are relatively small and isolated features on the vast acreage of the Forest. At most, only a very small percentage (less than 1%) of the Forest is expected to contain mineral activities. Since 1993 there has not been any ground disturbing operations to explore and develop any of the 167,000 acres of private mineral rights on the George Washington National Forest

3. Did Management Activities Move the Forest towards the Desired Future condition?

The Forest Plan has served adequately. Since 1993 there has not been any ground disturbing operations to explore and develop any of the 167,000 acres of private mineral rights on the George Washington National Forest

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? Over the past 20 years the Jefferson National Forest has experienced substantially more outstanding and reserved mineral rights operations, especially oil and gas operations, than the George Washington National Forest. Integration of private mineral rights with management area direction was an issue in the 2004 Revised Jefferson Forest Plan. The analysis showed that failure to consider private mineral rights under federal surface when allocating management areas could produce incompatible and conflicting land uses. The potential for conflict with the exercise of private mineral rights is particularly high where management activities are restrictive, such as in recommended wilderness study areas or inventoried roadless areas.

The George Washington Forest Plan could be improved by providing more consideration and integration of private mineral rights in the Plan and the Revision process. The 1993 Revised GWNF planning effort did not analyze the potential conflicts between management areas on federal surface and exercise of private mineral rights on federal surface to the degree analyzed in the Revised Jefferson Forest Plan completed in 2004. This reflects the fact that the Jefferson National Forest has more private mineral rights activity than the George Washington National Forest. However, as part of this Plan Revision it is prudent to apply some lessons learned from the Jefferson Plan Revision process regarding potential effects or conflicts relating to private mineral rights. Even though the exercise of private mineral rights on the George Washington National Forest has been rare, the potential to exercise private rights cannot be ignored, as even one operation can have substantial effects. Moreover, these private mineral rights have legal status as valid existing rights on the National Forest and need to be recognized and respected in the Forest Plan. There are two potential effects or conflicts relating to outstanding and reserved mineral rights:

- a) The potential effects of outstanding and reserved mineral operations on federal surface management (for example, potential for access roads and oil/gas wells pads in recommended wilderness study areas or inventoried roadless areas), and
- b) Potential effects of highly restrictive surface management direction on the exercise of outstanding and reserved mineral rights on the National Forest (for example, the potential for “taking” of private mineral rights due to federal action or inaction that prevents or unreasonably delays private mineral operations in recommended wilderness study areas or inventoried roadless areas).

The exercise of private mineral rights (reserved and outstanding) to explore and develop privately-owned minerals on NFS lands is a private decision, not a federal decision. Tens of thousands of acres of the George Washington National Forest System lands were acquired subject to these private mineral rights. Forest Plan direction needs to recognize and respect these existing private rights (outstanding and reserved mineral rights). It creates a challenging situation to manage public resources, but unless and until the government acquires these private rights, Forest management is subject to these valid existing rights.

Oil and gas prices which were rising in recent years spiked upward in mid-2008 in the U.S. and around the world. Then, oil and gas prices dropped dramatically from mid-2008 to first quarter of 2009. Since 2008 the U.S. economy has slowed, and this has reduced demand for oil and gas. Interest in exploration and development for domestic energy sources, particularly oil and gas, can be expected to continue and may bring requests to

exercise private mineral rights on the George Washington National Forest. However, the severe economic situation in the U.S. suggests reduced expectations or low level of potential oil and gas activity or any other mineral activity on private mineral rights on the Forest.

Additional rationale for the need for change for the GWNF Revised Forest Plan is contained in the following extended excerpt from the Jefferson NF Revised Forest Plan FEIS. The same rationale applies to the GWNF Revised Forest Plan.

The Jefferson NF Revised Forest Plan FEIS (p. 3-358, 3-359) noted:

A Comptroller General Report to Congress (GAO/RCED-84-101; July 26, 1984) found that the Forest Service in the eastern U.S. failed to provide Congress with information about private mineral rights and their potential effect on wilderness management. After designating many Wilderness areas in the eastern U.S., Congress was concerned about tens of millions of dollars that the Forest Service then said could be needed to acquire private mineral rights in several Wildernesses. The Forest Service was faced with management problems, litigation, and administrative costs, and was looking to Congress to purchase the private mineral rights. As the GAO noted: "Recent attempts by the federal government to acquire private mineral rights and prevent development in eastern wilderness areas have caused considerable controversy and congressional debate primarily because of the high costs associated with these purchases."

The GAO recommendation to the Secretary of Agriculture was: "Because the Forest Service did not analyze the potential problems or costs associated with private mineral rights when it developed its 1979 wilderness recommendations, GAO recommends that the Secretary direct the Forest Service's southern and eastern regional offices to do this type of analysis when reevaluating its wilderness recommendations. This analysis should include for each area consideration of private mineral development potential, the government's ability to control mineral development if it occurs, the need to acquire private mineral rights, and a range of acquisition costs."

These problems (management conflicts, litigation, and high costs) apply not only to Wilderness, but to 1) any highly restrictive surface use designation that conflicts with exercise of private mineral rights on National Forest System lands, and 2) management area direction that impose severe restrictions on use of the surface or prohibit certain activities such as road construction or mining. Examples include Special Biological Areas, Appalachian Trail Locations/Relocations, Wild & Scenic River designations, Wilderness Study Areas, or backcountry recreation areas. In 1997, the Jefferson National Forest spent more than \$300,000 to acquire private minerals interests and lands to shut down private sand mine deemed inappropriate near the Appalachian Trail in Smyth County. Currently the Jefferson National Forest is evaluating purchase of another private mineral interest in NFS land near the Appalachian Trail in Smyth County.

The 5th Amendment to the U.S. Constitution provides that private property shall not be taken for public use without just compensation. In addition to designation or direction that prohibit mining or are de facto prohibitions on mining, a "taking" can have other forms. For example, the time required to process private mineral activities under the Forest Plan's framework might result in unreasonable delays that amount to a "taking" of the mineral rights. Partial takings are also possible. Executive Order 12630

"Governmental Actions and Interference with Constitutionally Protected Property Rights" was signed in 1988. E.O. 12630 requires federal decision-makers to 1) evaluate carefully the effect of their administrative actions on private property rights, and 2) to show due regard to these 5th amendment rights and to reduce the risk of undue or inadvertent burdens on the federal treasury. Concern about government "takings" of private property rights is a national issue. In 1995, Congress held hearings on this issue.

c. Tentative Options or Proposed Actions for Change

- C-1. Recognize, consider and integrate outstanding and reserved mineral rights during the Forest Plan Revision process, such as in assessing suitability for Wilderness designation.
- C-2. Adopt a guideline such as: "Scoping for projects, including special designations, should determine whether reserved or outstanding mineral rights may affect or be affected by the proposed action."
- C-3. Adopt a guideline reflecting that review of proposed operations involves more than just riparian areas.
- C-4. Do nothing.

5. What are the Consequences of Not Changing?

The consequences of not changing is that the Revised Plan may create 1) unnecessary resource conflicts, 2) inability to achieve desired future conditions in some areas, 3) public controversies that could have been avoided, 4) situations ripe for "takings" of private mineral rights, 5) multi-million costs to federal government to avoid potential "takings", 6) another Congressional investigation and GAO report for not implementing the 1984 GAO recommendations regarding analysis of private mineral rights and the potential effect on National Forest management.

Proposed Action

Propose Option C1, C2, and C3.

6. Recommendations for Plan Revision

Consider outstanding and reserved mineral rights throughout the planning process. Adopt standards and guidelines to assure proper review of mineral rights during project implementation.

C. Wind Energy Development

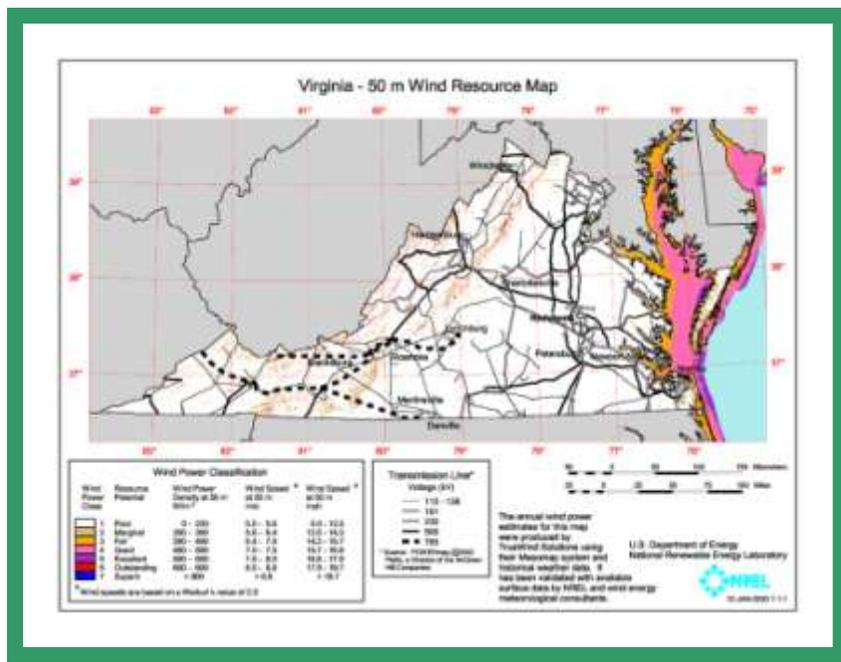
Highland County, Virginia approved a wind energy development on private land ridgeline in its county. Wind energy projects are being discussed in neighboring West Virginia Counties. The Virginia Counties of Rockbridge, Warren, and Nelson counties have discussions in their comprehensive plans on the protection of mountain ridgelines. Nelson County's policy is to "discourage ridgeline development". Warren County's objective is to develop standards for ridgeline development. Rockbridge County's strategy is to explore the potential for establishing a mountaintop development

ordinance, which would be designed to protect valuable ridgelines from future development using a threshold elevation.

Ridgeline development associated with wind energy development is not discussed in the George Washington 1993 Forest Plan.

This is an emerging public issue. Representatives of Virginia's environment groups first met with representatives of [Virginia's Wind Energy Collaborative](#) at James Madison University on [May 9, 2003](#). The [Virginia Wind Energy Collaborative \(VWEC\)](#) published a Model Small Wind Zoning Ordinance. The [Model Ordinance](#) is based on the ordinance adopted in October 2004 by Virginia's Rockingham County. VWEC and an Environmental Working Group had an Environmental GIS Wind Siting Tool Workshop on [April 21, 2005](#). The overriding issue regarding this topic is the potential for requests related to the development of commercial wind facilities on public lands. [Current Forest Service Policy](#) follows that developed by the Bureau of Land Management for consideration of such a request. The Forest Service designated a National Team to investigate this topic and develop guidance and requirements regarding commercial wind development on Forest Service Lands. Progress of this Team will be tracked and available information included in the Plan as it becomes available. In the mean time, BLM processes and procedures will be followed.

Map courtesy [of U.S. Dept. of Energy](#)



The Forest Plan's existing rural development desired condition (Plan, page 2-13) is still valid. The desired future condition involves continuing Forest contributions to the economic and social vitality of the Forest's neighbors. The Forest works with neighboring people and communities in developing natural-resource-based opportunities and enterprises within the

capabilities of the resources.

Commercial wind farms fall into the category of a special use of the National Forest. Forest Plan special use standard 236 states "Each new request is evaluated on a case-by-case basis for consistency with management area objectives and public need."

Guidelines for development of wind energy on land suitable could be developed based upon the best information and science available on the effects of wind farms on key environmental resources such as avian threatened, endangered, and sensitive species,

views from certain roads and trails, and other environmental considerations such as noise. Guidelines may need to focus on scale of development.

c. Tentative Options or Proposed Actions for Change

C-1. Identify the Forest as suitable for locating wind energy development (commercial wind farms) outside of the following special areas: Wilderness or wilderness study areas; special botanical, zoological, geological, or research natural areas; Shenandoah Mountain Crest (Cow Knob Salamander Habitat); both Indiana Bat protection areas; Appalachian Trail corridor; remote backcountry areas; Mt. Pleasant National Recreation Area; and Big Schloss, Laurel Fork, and Little River Special Areas. The Forest is assuming that only Department of Energy wind power classes 3 or greater would be generally commercially feasible in these areas. In addition,

1. If and when an application is received and, during site-specific analysis, consider designating as a special area the wind energy site.
2. For commercial scale requests, adopt as guidelines those guidelines developed by BLM, followed by any nationally Forest Service-developed guidelines. These will be incorporated into the planning process as they become available. Guidelines for development of wind energy on land suitable could be developed based upon the best information and science available on the effects of wind farms on key environmental resources such as avian threatened, endangered, and sensitive species, views from certain roads and trails, and other environmental considerations such as noise.

C-2. Identify as suitable for locating wind energy development (commercial wind farms) the entire National Forest outside of Congressionally-designated areas. The Forest also recognizes that only Department of Energy wind power classes 3 or greater would be generally commercially feasible in these areas. In addition, the sub-options 1 and 2 would still pertain.

C-3. Do not address in the Revision effort, acknowledging that agency does not know enough about this subject as it pertains to eastern United States. Agency would address through site-specific analysis as proposals are received.

C-4. Identify that nowhere on the National Forest is suitable for wind energy development because of known effects on bats, particularly the Indiana bat (whose summer habitat is the entire Forest), until such time as wind energy technology exists that significantly lessens the known effects of the turbines on bats.

Proposed Action

Propose Option C1.

Recommendations for Plan Revision

Identify the following special areas as unsuitable for locating wind energy development (commercial wind farms): Wilderness or wilderness study areas; special botanical, zoological, geological, or research natural areas; Shenandoah Mountain Crest (Cow Knob Salamander Habitat); both Indiana Bat protection areas; Appalachian Trail corridor;

remote backcountry areas; Mt. Pleasant National Recreation Area; and Big Schloss, Laurel Fork, and Little River Special Areas. Proposals for wind energy development in other areas would be addressed following Agency policies for special use permits and any Agency policy specifically for wind energy development.

Issue Mix of Goods and Services

Developed Recreation in West Virginia

A. Developed Recreation

1. What was the Plan Striving For?

The 1993 Revised Forest Plan describes a developed recreation program (MA12) with facilities provided to: 1) protect the natural resources of the developed recreation sites, 2) provide for the safety of visitors, and 3) enhance the visitors' recreation experiences. Facilities range from minimally developed sites with emphasis on resource protection to highly developed recreation areas that provide facilities for visitor comfort and convenience. Several facility expansion and enhancement projects are called for, all to meet then current and projected demands. Another statement says that most developed recreation facilities are made accessible as funding allows. The 1993 vision of a balanced developed recreation program remains valid.



The Forest plan (pages 2-38 and 2-39; 3-61, 3-62, and 3-63) scheduled construction of 15 new developed recreation facilities and rehabilitation and expansion of 11 other facilities.

2. Where is the Plan Now?

Demand for developed recreation opportunities on the GWNF continues to grow as was projected in the 1993 plan, particularly at highly developed recreation sites such as Bolar Mountain and Sherando Lake. There has been good progress made in upgrading, replacing, and rehabilitating many recreation areas, yet few new or expansion facilities have been built. For instance, in recent years many replacement vault toilets have been installed, several highly developed toilet/shower buildings have been constructed, campsites have been reconstructed at campgrounds, and swim sites have been enhanced, all as called for in the 1993 Plan. All of the construction and rehabilitation was completed with accessibility for persons with disabilities included as a matter of course. But, there is a whole lot of work called for in the Plan that has not happened primarily due to funding shortfalls.

Under the plan, fifteen new developed recreation areas are called for as funding permits. The table below shows the status of construction of new facilities. Though intended as developed sites with toilets, water, and camping facilities, so-called dispersed camps are meant to accommodate horse users as well as hunters and other types of dispersed recreation users. Some such as Shaw's Fork and Oliver Mountain are site specific, and

others are for yet to be determined sites. Lacking funding and staffing, most were not accomplished. It is not that they are not good ideas; it is that money was better spent elsewhere.

Status of Construction of New Developed Recreation Areas

<u>Ranger District</u>	<u>Area Name</u>	<u>Status</u>
North River	Shaws Fork Dispersed Camp	Completed
	Dry River Dispersed Camp	No
	Dry River Rifle Range (VA)	No
James River	Oliver Mtn Dispersed Camp	No
	Highlands Scenic Tour	Completed
Lee	Bear Wallow Dev Campground	No
	Bucktail Dispersed Camp	No
	Edinburg Gap Dispersed Camp	Partially Complete
	Lee Rifle Range	No
Pedlar	Crabtree Meadows	New toilets only
	Pedlar Dispersed Camp	No
	Pedlar Rifle/Archery Ranges	No
	Environmental Education Center	Road Only
Warm Springs	Greavers Ridge Dispersed Camp	No
	Warm Springs Dispersed Camp	No

Under the plan several existing recreation areas are scheduled for expansion and/or rehabilitation as funding permits. This is meant to be more than just toilet replacement. It is intended to add capacity as well as upgraded facilities.

Status of Construction/Expansion at Existing Developed Recreation Areas

<u>Ranger District</u>	<u>Area Name</u>	<u>Status</u>
North River	Hone Quarry expansion/upgrade	New toilets only
	Braley Pond expansion	No
James River	Longdale expansion	No
	Morris Hill expansion	Incomplete
Lee	Elizabeth Furnace expansion	New campsites, vault toilets only
	Camp Roosevelt expansion	No
	Trout Pond expansion	No
Pedlar	Crabtree Falls Trail and Obs Point	Completed
	Sherando Lake expansion	No
Warm Springs	Bolar Mountain CG Conversion	Completed
	Hidden Valley expansion/upgrade	New vault toilets only
	Greenwood Point expansion	No
	Blowing Springs expansion/upgrade	New vault toilets only
	McClintic Point Camp	New vault toilet only

Since 1993, six minimally developed recreation areas have been closed and have been either abandoned or moth-balled, likely to never reopen. The ability of recreation managers to provide adequate maintenance and capacity has been reduced by funding and staffing cuts. Demand for these areas has not been great enough to warrant funding and personnel time for operations and maintenance. These areas include Reddish Knob

Hang Gliding, Shenandoah Mountain Picnic, Hazard Mill Family Camp, Hazard Mill and High Cliff Canoe Camps, and New Market Gap Picnic.

All new and altered facilities will be accessible to persons with disabilities to the extent called for in the Forest Service Outdoor Recreation Accessibility Guidelines (FSORAG) regardless of plan options selected for implementation

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes, but at a slower pace than anticipated.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? The developed recreation program called for in the 1993 Forest Plan was good, but did not consider a realistic expectation of funding. There was a sharp decline in recreation funding in the early years of the new millennium. From 2002-2003, the George Washington National Forest conducted a Recreation Realignment, in accordance with direction from the Regional Office, to analyze use-specific and site-specific costs and benefits in order to make fiscally responsible decisions about recreation areas management. As a result, many actions were implemented from simply modifying opening and closing dates to actually closing visitor centers and stand-alone picnic areas and low use sites. In 2006, more than 100 part-time workers involved with the Senior Community Service Employment Program, who worked primarily in developed recreation, were transitioned to non-Forest Service assignments under new grantees, which resulted in reduced services at many recreation sites. To add insult to injury, fixed costs have risen substantially for supplies, trash collection, pumping vault toilets, utilities, mowing contracts, personnel and vehicles to transport personnel to recreation areas. Recreation fees were increased at six campgrounds on the George Washington National Forest in 2008, however the increased revenues did not keep pace with increased costs of operations and maintenance.

The next step for the Forest is to develop a portfolio of sustainable recreation facilities. It is believed that additional measures will be taken to reduce the development scale and/or reduce visitor services at moderate to low level developed recreation sites and limit the highly developed recreation areas to those that currently exist.

c. Tentative Options or Proposed Actions for Change

C-1. Do nothing but administrative corrections by revising the proposed facilities construction lists to reflect accomplishments and removing from the list areas that have been closed. Maintain the existing developed recreation program in the 1993 plan, with updates to reflect accomplishments and closings and with realization and acceptance that funding will be limited. The distinction of minimally developed and highly developed sites would remain.

C-2. Make an administrative change by removing the listings of individual developed recreation facilities. The developed recreation program for expansion and/or new construction will be dealt with by site specific analysis and completed only to the extent that funding and staffing levels allow. The Plan would continue to provide for a variety of development scales, from minimally to highly developed recreation sites.

5. What are the Consequences of Not Changing?

By not changing the plan, there will be no acknowledgement that funding levels are limiting and Forest Service personnel and recreation program resources are subject to unexpected and sometimes radical changes.

No hard consequences will result if changes are not made. Developed recreation facilities will be managed as funding allows. A quality program responsive to visitor needs is desired and intended either way.

The advantage of change in the plan is that the forest will maintain the issue of providing a quality developed recreation program to the extent practical. Managers acknowledge the visitor desires for developed recreation opportunities with site specific analysis. Knowledgeable management is more likely to be funded to provide a better developed recreation program.

Proposed Action

Propose Option C2.

6. Recommendations for Plan Revision

Remove the list of potential projects from the Plan desired condition. Acknowledge the desire to maintain and improve the existing developed recreation facilities. If new opportunities become available, address them through a site specific analysis.

B. Dispersed Recreation

1. What was the Plan Striving For?

The current GW plan recognized the importance of providing a variety of present and future dispersed recreation opportunities for the approximate 60 million residents within a day's drive of the forest. These opportunities include but are not limited to hunting, fishing, wildlife viewing, hiking, backpacking, camping, horseback riding, mountain biking, OHV use, driving for pleasure, and visiting historical sites. The Plan strove to meet demand for each of various Recreation Opportunity Spectrum (ROS) class settings as well as both motorized and non-motorized types of recreation. According to the EIS (page 3-34), as of 1993 the forest had ample land capacity to meet current and future demand for all the various ROS classes.

The GW Plan adopted six ROS classes to reflect the types of recreation opportunities and settings available on the forest. These six were: Rural, Roaded Modified, Roaded Natural, Semi-primitive Motorized – Subclass 1 (SPM1), Semi-primitive Motorized – Subclass 2 (SPM2) and Semi-primitive Nonmotorized (Plan Table 2-11, page 2-40).

Roaded Modified areas were differentiated from Roaded Natural areas solely on the basis of visual quality objectives (VQO). Roaded modified areas were to be managed to meet a modification VQO, while Roaded Natural areas were managed to meet the full range of VQOs except modification (FEIS, Appendix G, and page G-6.)

SPM1 and SPM2 areas were differentiated from each other based on whether roads built into an area were available for public motorized use. SPM1 areas were to be managed so that roads built could be open year-round, open seasonally, or closed year-

round depending on site-specific considerations. Conversely SPM2 areas were to be managed so that roads built into this area were not available for public motorized use (FEIS, Appendix G, page G-4 and G-5.)

A more thorough discussion of these six classes was discussed in Appendix G of the EIS.

2. Where is the Plan Now?

All management areas allowed for some form of dispersed recreation and the desired future condition for each included a discussion of the settings and types of opportunities that are consistent with the management area direction. Dispersed recreation was emphasized in MA5, Massanutten Mountain Sensitive Viewshed; MA6, Appalachian Trail; MA7, Scenic Corridors and the Highlands Scenic Tour; MA8, Wilderness/Wilderness Study; MA10, Scenic Rivers and Recreation Rivers; MA11 All-Terrain/Off Highway Vehicle Routes; MA13, Dispersed Recreation; MA 14 Remote Habitat for Wildlife, MA 15 Mosaic of Wildlife Habitat, MA16 Early Successional Habitat for Wildlife, MA21 Special Management Areas; and MA22 Habitat-Small Game/Watchable Wildlife. Forestwide and management area standards were designed to protect the environment from human caused impacts while providing recreation opportunities.

As of 1993 the Roded Natural (RN) class comprised by far the largest percentage of the forest at 58%. This class provides the widest range of settings and opportunities since it tends to be amenable to both motorized and non-motorized forms of recreation. The Semi-Primitive Non-Motorized (SPNM) class, which restricts motorized recreation, comprised about 14% of the forest. Roded Modified (RM) which least restricts motorized recreation comprised approximately 8% of the forest.

While the Plan had six classes, the normal ROS inventory would have only four germane to the GW. The roded modified is a subset of the Roded Natural Class. Likewise the Semi-primitive Motorized, SPM1 and SPM2 are subsets of Semi-primitive Motorized class.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes, there did not seem to be any problems in managing the Forest under the adopted ROS concept. However, there is direction in the FEIS Appendix G that is not in the Plan regarding how roads built into SPM 1 and SPM2 areas are to be managed.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? The GW Plan is technically silent on the type of road (temporary, permanent, or both) that can be constructed and how it should be managed within adopted ROS class areas. The direction about road construction and management of SPM1 and SPM2 areas is in the FEIS and should be in the Plan. Furthermore, it may not be appropriate to have a differentiation from the SPM inventory to deal with how one aspect – roads – are managed.

The Plan's Roded Modified distinction is not warranted. This is not a class that is provided in the Recreation Opportunity Spectrum. The protection of scenic quality is provided by assigned Scenic Integrity Objectives for every acre of Forest Service land that can be viewed from roads, trails, overlooks, and other viewing vantage points on, or

outside of, the national forest. The Scenery Management System contains direction on compatibility with ROS. Roaded Modified therefore serves no useful purpose and is redundant.

According to The Public Survey report, Southern Appalachian National Forests, 2002 (Cordell) 52% of respondents viewed wildlife/scenery, 52% drove for pleasure, 41% visited a wilderness and almost 34% hiked on the GW at least once that year. The other dispersed uses such as OHV use, fishing, biking, backpacking, and hunting are substantially lower but there is no statistical evidence or surveys indicated that demand for dispersed recreation in general is declining. Based on qualitative evidence from public contacts and volunteerism, equestrian and mountain bike use and interest is continuing to increase. Hiking and backpacking use fluctuates considerably based on seasonal weather conditions but appears to be remaining steady to increasing slightly. Hunting, by contrast, is evidently declining based on the drop in numbers of state hunting licenses issued over the past several years. This survey data confirms the need for providing a good mix of ROS classes while avoiding loss of opportunities for the activities tied to the more primitive/remote settings found primarily on the national forest.

For context, the most primitive class in the ROS system is Primitive (P). This class is characterized as being essentially unmodified; at least 5,000 acres in size and at least 3 mile from all roads, railroads or utility corridors. There are no Primitive (P) ROS class areas inventoried on the forest and there is little or none of it known to exist anywhere in the East. Thus the Semi-Primitive ROS classes (SPNM and SPM) are the most primitive to be found on the GW. These approximately 2,500 acre areas comprise roughly a third of the GWNF land area. While this is significant percentage of the forest, on a landscape scale these areas are scarce and comprise a very small percentage of the total land base (less than 2% of Virginia). The national forest is the primary provider of these types of settings and opportunities which are dependent upon land that is at least ½ mile from a better than primitive road to provide remoteness. Over time, the Semi-primitive classes will inevitably continue to shrink due to development on adjacent private lands. In addition, on the GW currently there is little protection in place against the increase in adjacent road construction which in turn would cause shrinkage of the semi-primitive ROS classes and their associated settings and opportunities.

While the GW Plan used six ROS classes for management of the recreation experience, the Jefferson Plan utilized four ROS classes: Roaded Natural, Semi-primitive Nonmotorized, Semi-primitive motorized (SPM) and a subset of SPM called Semi-primitive motorized 2 (SP2). The SP2 area was differentiated from SPM areas to provide a buffer to protect SPNM and SPM areas by allowing only temporary roads to be built within a ½ mile of an inventoried SPNM or SPM area. (Plan, page 2-42, standards FW-163 to FW-168) Thus both forests handled road construction and management differently and for different purposes.

c. Tentative Options or Proposed Actions for Change

- C-1. No change. Continue to use the existing GW Plan adopted ROS classes by applying them to identified areas of the Forest.

- C-2. Remove the SPM 1, SPM2, and Roaded Modified designations from the GW Plan, thereby collapse the GW ROS classes into the basic inventory classes; and provide suitable uses and associated guidelines on road construction and management by SPM and SPNM classes in the Plan.
- C-3. Complete a new inventory of ROS on the GW and adopt the inventory in place of the 1993 adopted ROS classes. Incorporate into plan direction a desire that the acres of SPNM and SPM will be maintained (where it is within our management control). This could be done with a guideline on road construction or using the SP2 Class concept from the Jefferson Plan. The SP2 Class concept creates a buffer area around SPNM and SPM areas where permanent road construction is limited to protect against loss of SPNM and SPM areas.

5. What are the Consequences of Not Changing?

Areas with SPNM and SPM opportunities have a potential for shrinking due to adjacent road construction and use on the Forest.

Proposed Action

There is no proposed action on this issue at this time.

Additional Information

The ROS classes were re-inventoried in 2009.

The following table displays the inventory from 1993, the acres adopted by class in the 1993 Forest Plan and the current inventory. Acres of RM were combined with RN for the Forest Plan adopted acres.

Acres of ROS Class			
ROS Class	1993 Inventory (Acres)	1993 Adopted (Acres)	2009 Inventory (Acres)
SPNM	167,000	150,000	198,266
SPM	203,000	208,000	211,000
RN	691,000	703,000	655,200

The ROS inventory shows that the semi-primitive class areas on the GW increased from 35 percent to 38 percent of the Forest from 1993 to 2009. The semi-primitive component of the GW is also substantially greater than that on the Jefferson NF (22 percent). So while the effects of development on adjacent lands have diminished some areas of semi-primitive opportunities, management activities on the National Forest have had minimal effects on semi-primitive opportunities.

c. Tentative Options or Proposed Actions for Change

- C-1. No change. Continue to use the existing GW Plan adopted ROS classes by applying them to identified areas of the Forest.

- C-2. Remove the SPM 1, SPM2, and Roaded Modified designations from the GW Plan, thereby collapsing the GW ROS classes into the basic inventory classes; and provide suitable uses and associated guidelines on road construction and management by ROS classes in the Plan.
- C-3. Remove the SPM 1, SPM2, and Roaded Modified designations from the GW Plan, thereby collapse the GW ROS classes into the basic inventory classes. In addition, use the new ROS inventory to help identify remote backcountry areas and evaluate potential wilderness areas. Additional standards or suitable use restrictions will not be identified. Any potential projects in the future that could affect the current ROS setting will be addressed through site specific project analysis.

6. Recommendations for Plan Revision Propose Option C-3.

C. Land Ownership

1. What was the Plan Striving For?

The Plan was striving for the consolidation of national forest ownership by exchange or acquisition with particular emphasis on acquiring desirable interior tracts, high value recreation lands, or threatened, endangered, and sensitive species' habitat.

The objectives are to have an exchange program of 100 acres per year and an acquisition program of 200 acres per year. The existing lands objectives do not reflect the reality of what can be accomplished under current National and Regional criteria and funding. (Plan Page 2-41, 2-42)

2. Where is the Plan Now?

The Plan goal has not changed. It is still striving for the consolidation of national forest ownership.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? A change is warranted because it is no longer feasible to accomplish the goals with the funding program, Land and Water Conservation Fund (LWCF) identified or in the time/acreage frames set in the Plan.

The land exchange program history shows that since 1993 in only two out of thirteen years was the 100 acre objective achieved or exceeded. The average for the exchange program was 34 ½ acres. The land acquisition program history shows that in only two of the years during the same period was the 200 acre goal achieved or exceeded. The average was 146 acres.

Trend in Land Acquisitions and Conveyances across the Combined Forests

<u>Year</u>	<u>Land Acquired Thru Exchange, Purchase or Donation (Acres)</u>	<u>Federal Land Conveyed Thru Selling or Exchanges (Acres)</u>	<u>Land Acquired Thru Exchange, Purchase or Donation (Acres)</u>	<u>Federal Land Conveyed Thru Selling or Exchanges (Acres)</u>	<u>Land Acquired Thru Exchange, Purchase or Donation (Total Acres)</u>	<u>Federal Land Conveyed Thru Selling or Exchanges (Acres)</u>	<u>Net Increase in National Forest System Land (Acres)</u>
Forest	GW	GW	Jefferson	Jefferson	GWJEFF	GWJEFF	
1987	296	-175	869	-132	1,165	-307	858
1988	4368	-130	885	-504	5,253	-634	4,619
1989	71	-212	524	-240	595	-452	143
1990	137	-376	0	0	137	-376	(239)
1991	83	-43	2058	-240	2,141	-283	1,858
1992	29	-23	1175	-293	1,204	-316	888
1993	167	-10	2011	-82	2,178	-92	2,086
1994	29	0	943	-370	972	-370	602
1995	192	0	3771	-46	3,963	-46	3,917
1996	76	0	1521	0	1,597	0	1,597
1997	35	-54	256	-444	291	-498	(207)
1998	95	0	1715	-34	1,810	-34	1,776
1999	772	-194	1039	-5	1,811	-199	1,612
2000	181	0	994	-99	1,175	-99	1,076
2001	210	-20	47	0	257	-20	237
2002	0	-170	381	-62	381	-232	149
2003	22	0	234	0	256	0	256
2004	0	0	1806	-54	1,806	-54	1,752
2005	120	-1	80	0	200	-1	199
2006	0	0	13	0	13	0	13
2007	14	25	0	5	14	30	44
						Grand Total	23,236

c. Tentative Options or Proposed Actions for Change

C-1. Modify the Forest Plan by:

- a) Making administrative correction by removing all reference to Land and Water Conservation Fund (LWCF) as the funding source for land acquisition since no funding is available for land acquisition.
- b) Deleting land program objectives for an exchange and acquisition program and replacing with language that states exchanges and acquisitions of land will be accomplished as funding is available

C-2. Do nothing.

5. What are the Consequences of Not Changing?

The changes will reflect that land managers are keeping abreast of changes in the program and are working toward realistic goals.

Proposed Action

Propose Option C1.

6. Recommendations for Plan Revision

Make the proposed changes.

D. Special Uses

1. What was the Plan Striving For?

The Plan was striving to minimize and or discourage the dedication of public land to a single private use. However, the plan did allow for special uses provided the uses were consistent with the objectives of the management area where the use was to be applied. Every use request was to be assessed to determine compatibility and compliance. (Plan Page 2-42)

2. Where is the Plan Now?

The Plan objective has not changed. It is still striving for minimizing the dedication of public land to a single private use.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Yes

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? No

b. Why? The objectives as stated in 1993 are still valid for the next planning period.

E. Grazing

1. What was the Plan Striving For?



The 1993 Revised Plan continues the current program of grazing on five allotments on 250 acres (Plan, page 2-42). Four allotments are located along the South Fork of the Shenandoah River (Moody, Whitting, Cullers, and Curl) and one is along Cedar Creek (Zepp Tannery) on the Lee Ranger District. Grazing is to be used to maintain a pastoral setting on lands historically grazed or

cultivated. (GW Plan Pg 3-130).

2. Where is the Plan Now?

Grazing continues on three of the five allotments; the Curl and Cullers allotments are no longer grazed. Lee District likes to have the presence of the permittee on these isolated tracts to discourage illegal use and traffic on these lands.

Even though the allotments are grazed to maintain the pastoral setting of these lands, impacts on soils and water are occurring. The Moody, Whitting, and Zepp Tannery allotments are currently being grazed with varying degrees of riparian protection or animal access to stream channels. The allotment on Cedar Creek has no controls to keep cattle from the creek. Otherwise, the other allotments have reasonable controls in place to limit cattle access to the South Fork of the Shenandoah.

3. Did Management Activities Move the Forest towards the Desired Future condition?

Pastoral settings are being maintained through grazing on three of the five allotments. While other the allotments (Curl and Cullers) are not being grazed, their pastoral setting is now being maintained by mowing or haying the fields.

4. Is There a Need for Change?

a. Is a Change in the Plan warranted? Yes

b. Why? Maintaining pastoral settings through grazing may not be appropriate on each of the five allotments. On the South Fork of the Shenandoah River, pastoral settings are common. However, Eastern Riverfront Hardwood communities (Bottomland Hardwoods) are not common. The JNF Plan (pages 3-170 and 3-178) recognizes the importance of this ecosystem, while the George Washington currently does not.

As a corollary, if pastoral settings is appropriate, and since cattle still have access to the streams for water, there is a need to strengthen the desired conditions and standards and guidelines under which grazing can occur. Utilizing just cattle to maintain a pastoral setting may not be appropriate. Currently the Curl tract's setting is maintained by mowing or haying. Utilizing cattle may conflict with trying to have intact riparian corridors and high water quality given that cattle have access to the stream/river water for drinking. Management of the allotments could become a model for other privately-managed farms in the valley.

Likewise, the NRCS is the leader in agricultural conservation in the United States and its [standard practices](#) on reducing effects from cattle grazing should be adopted by the Forest Service. NRCS can recommend appropriate practices for these allotments.

c. Tentative Options or Proposed Actions for Change

- C-1. Remove pastoral settings and cattle grazing as a desired condition and replace the desired condition to be one of a bottomland hardwood forest along the South Fork of the Shenandoah River.
- C-2. Change the desired condition to include having bottomland hardwood forest as well as pastoral setting (managed through grazing, burning, mowing, or hay fields), and bring any grazing program in line with the Jefferson Plan and Natural Resource Conservation Service (NRCS) practices by:

- a) Adopting as desired conditions and objectives Jefferson Plan Goal 28 and Objectives 28.01.
- b) Adopting Jefferson Plan Forestwide range standard FW-212.
- c) Adopting Jefferson Plan Management Prescription 7G (Pastoral Landscapes) desired condition statements as they pertain to pastoral settings and grazing.
- d) Adopting Jefferson riparian standards 11-38 through 11-40.
- e) Creating an objective that the existing four grazing allotment plans be revised over the next 10 years.

C-3. Do nothing. Leave pastoral settings and grazing as is in the Plan.

5. What are the Consequences of Not Changing?

Cattle will still graze and will still have access to the rivers and streams. The Forest would continue to attempt to remove cattle access to rivers and streams on a site-specific basis as funding permits.

Proposed Action

Propose Option C2.

6. Recommendations for Plan Revision

Include a desired condition for bottomland hardwood forest as well as pastoral setting (managed through grazing, burning, mowing, or hay fields) and bring any grazing program in line with the Jefferson Plan and Natural Resource Conservation Service (NRCS) practices by:

- a) Adopting as desired conditions and objectives Jefferson Plan Goal 28 and Objectives 28.01.
- b) Adopting Jefferson Plan Forestwide range standard FW-212.
- c) Adopting Jefferson Plan Management Prescription 7G (Pastoral Landscapes) desired condition statements as they pertain to pastoral settings and grazing.
- d) Adopting Jefferson riparian standards 11-38 through 11-40.
- e) Creating an objective that the existing four grazing allotment plans be revised over the next 10 years.

CHAPTER 5. ADDITIONAL ISSUES

A. Drinking Water

Many comments were received regarding the need to emphasize protection of water quality in watersheds that provide drinking water to downstream users. Resolutions

requesting that the Forest identify drinking water watersheds and develop direction to protect water quality in those watersheds were received from: Clarke County, Town of Timberville, Dayton Town Council, Warren County, Page County, Shenandoah Riverkeeper, Friends of the North Fork of the Shenandoah, Shenandoah Forum, Shenandoah Valley Network, Community Alliance for Preservation, Scenic 340 Project, Town of Amherst, Central Shenandoah Planning District Commission, Robert E. Lee Soil & Water Conservation District, Amherst County, Staunton City, Central Virginia Land Conservancy, Campbell County, and Bedford County. Wild Virginia prepared a document, *The State of Our Water: Managing and Protecting the Drinking Water Resources of the George Washington National Forest* that identified many drinking water watersheds and some recommendations for management.

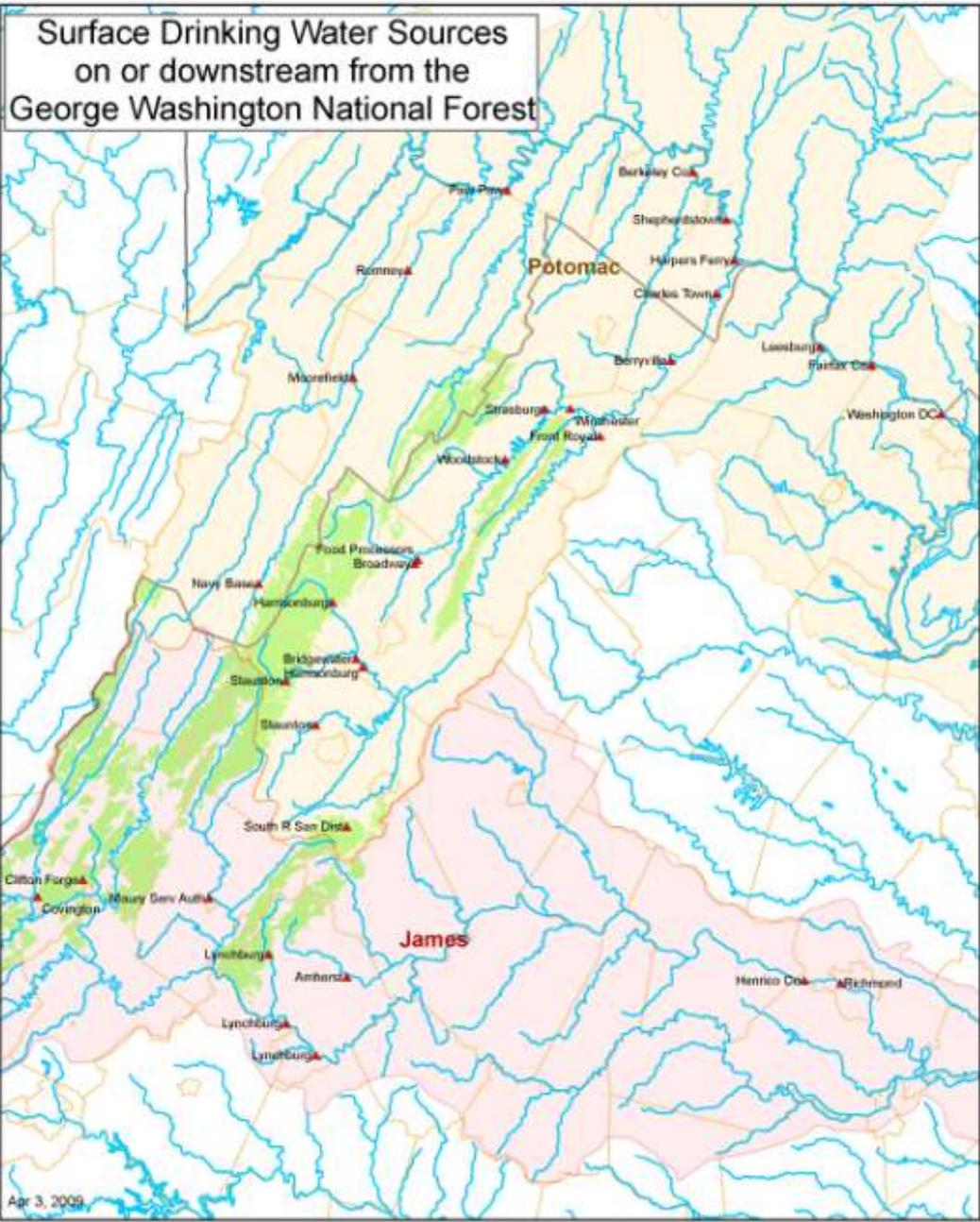
Water has been a key factor in National Forest Management since the creation of the National Forests and has been a key component of forest planning efforts on the GWNF (Cite 1960 plan) for over forty years. Proper management of water requires managing healthy forests throughout the watershed and taking appropriate management precautions in all activities. However, one of the main aspects of protecting water quality is managing the streams and the lands immediately adjacent to the streams – the riparian areas. (See the Riparian section of this document.) On the Forest we must provide water quality that is sufficient to support all of the aquatic life in our streams. Many of these plants and animals are very sensitive to water quality and we have a number of endangered and threatened aquatic species. Therefore, we have established guidelines that protect water quality for these species. By protecting them, we provide water quality of very high quality for drinking water sources.

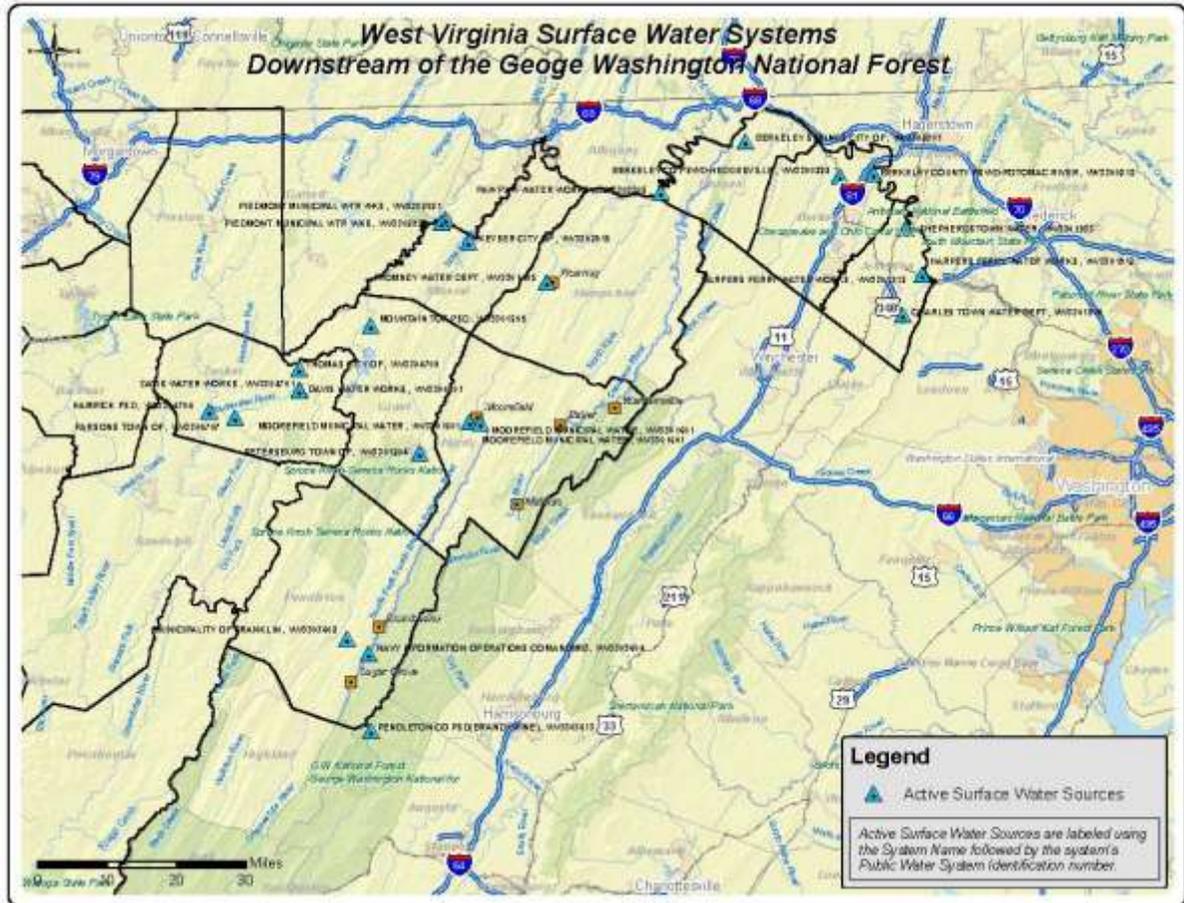
In the revised Plan we need to identify the drinking water supplies that depend on the National Forest. See Map and list of water supplies. In the strategy section of the revised Plan we can identify the importance of considering downstream uses in determining priorities for watershed improvement activities.

DRINKING WATER SUPPLIES WITHIN OR DOWNSTREAM OF GEORGE WASHINGTON NATIONAL FOREST

SYSTEM NAME	RIVER SYSTEM
LYNCHBURG, CITY OF	JAMES RIVER – COLLEGE HILL
LYNCHBURG, CITY OF	JAMES RIVER – ABERT
RICHMOND, CITY OF	JAMES RIVER
HENRICO COUNTY WATER SYSTEM	JAMES RIVER
AMHERST, TOWN OF	BUFFALO RIVER
JAMES RIVER CORRECTIONAL CTR	JAMES RIVER
LYNCHBURG, CITY OF	PEDLAR RESERVOIR
MAURY SERVICE AUTHORITY	MAURY RIVER
COVINGTON, CITY OF	JACKSON RIVER
CLIFTON FORGE, TOWN OF	SMITH CREEK
SOUTH RIVER SANITARY DISTRICT - ACSA	COLES RUN RESERVOIR
STAUNTON, CITY OF	NORTH RIVER DAM
HARRISONBURG, CITY OF	DRY RIVER – RIVEN ROCK
HARRISONBURG, CITY OF	NORTH RIVER
BRIDGEWATER, TOWN OF	NORTH RIVER

SYSTEM NAME	RIVER SYSTEM
BROADWAY, TOWN OF	NORTH FORK SHENANDOAH RIVER
FOOD PROCESSORS WATER COOPERATIVE, INC	NORTH FORK SHENANDOAH RIVER
WOODSTOCK, TOWN OF	NORTH FORK SHENANDOAH RIVER
FRONT ROYAL, TOWN OF	SOUTH FORK SHENANDOAH RIVER
WINCHESTER, CITY OF	NORTH FORK SHENANDOAH RIVER
STRASBURG, TOWN OF	NORTH FORK SHENANDOAH RIVER
FAIRFAX COUNTY WATER AUTHORITY	POTOMAC RIVER
BERRYVILLE, TOWN OF	SHENANDOAH RIVER
LEESBURG, TOWN OF	POTOMAC RIVER
BERKELEY COUNTY PSWD-POTOMAC RIVER	MAIN STEM POTOMAC RIVER
ROMNEY WATER DEPT	SOUTH BRANCH POTOMAC RIVER
MOOREFIELD MUNICIPAL WATER	SOUTH BRANCH POTOMAC RIVER AND SOUTH FORK OF THE SOUTH BRANCH POTOMAC RIVER
CHARLES TOWN WATER DEPT	SHENANDOAH RIVER
HARPERS FERRY WATER WORKS	MAIN STEM POTOMAC RIVER
SHEPHERDSTOWN WATER	MAIN STEM POTOMAC RIVER
PAW PAW WATER WORKS	MAIN STEM POTOMAC RIVER
NAVY INFORMATION OPERATIONS COMAND/MB	SOUTH FORK OF THE SOUTH BRANCH POTOMAC RIVER





B. Environmental Education

Many comments were received regarding the importance of providing environmental education opportunities on the Forest. While environmental education is not a plan component, it is important to highlight the need for more emphasis on environmental education and to acknowledge the tremendous opportunities that the Forest provides to meet the need to educate youth about the Forest's resources.

C. Climate Change

Please see the separate report addressing climate change, *Climate Change Trends and Strategies for the George Washington National Forest*.

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