

**10-YEAR STRATEGY
ACCELERATED WATERSHED/VEGETATION
RESTORATION PLAN**

**GRAND MESA, UNCOMPAHGRE AND GUNNISON
NATIONAL FORESTS**

10-YEAR STRATEGY

GRAND MESA, UNCOMPAHGRE AND GUNNISON NATIONAL FORESTS

I. Introduction:

This strategy outlines the guiding principles and key elements of the Grand Mesa, Uncompahgre and Gunnison (GMUG) National Forest's approach to accomplishing the Region 2 Accelerated Watershed/Vegetation Restoration Plan (AWRP). It also describes how the Forest intends to develop and implement a process that integrates with, or is leveraged by other Forest priorities, such as the Forest Plan Revision and other existing program areas.

The purpose of this strategy is to efficiently utilize the Forest's resources to focus on AWRP outputs and outcomes on GMUG lands, and as appropriate, on adjacent Federal, State, and private lands administered by willing cooperators who have similar ecological, social, and economic objectives.

The immediate objective is to develop fuels, and vegetative treatments to improve the safety of the public and firefighting crews, and to reduce the threat to real property, infrastructure and municipal watersheds. In the long term, landscape level vegetative and restoration treatments are viewed as the Forest's approach to fuels and vegetation management outside of areas requiring direct hazardous fuels mitigation.

Vision:

The overarching goal of this strategy is to efficiently and effectively produce on-the-ground results on high priority watersheds and landscapes through an integrated, systematic approach to planning and implementation of treatments over the next decade (2004-2014).

The intent is to fully integrate forest health and fuels treatments with other program activities (timber, range, wildlife), while addressing communities-at-risk, important watersheds, ecological restoration, threatened and endangered species critical habitats, and invasive plant issues.

The initial focus of this strategy is integrated fuels and vegetation treatments in the Wildland Urban Interface (WUI), adjacent to communities-at-risk; and in important watersheds and landscapes. Fuel modification will be implemented to improve defensible space and create dispersed patterns of treatments to modify wildfire behavior and reduce the rate of progress of wildfires in and around at-risk communities. In adjacent areas, prioritization will be to accelerate the implementation of fuels and vegetation treatments to change vegetative Condition Classes 2 and 3 to an improved condition class. Priority will also be placed on addressing forest health, and insect and disease conditions that pose a threat to key ecosystem components.

GMUG AWRP Guiding principles:

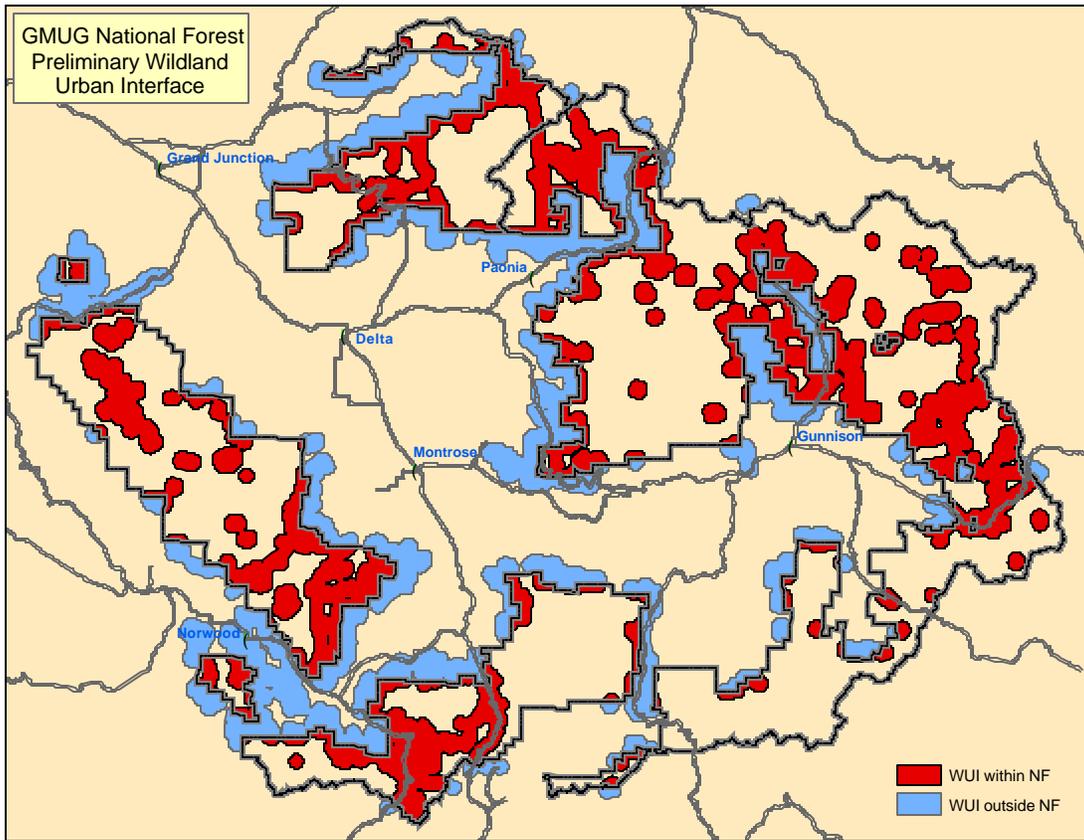
- ?? Public, employee, and firefighter safety is paramount in the planning and implementation of the GMUG NF AWRP Strategy;
- ?? Commitment to the 10-Year Strategic AWRP Plan as a top Forest-wide priority;
- ?? Collaborate internally and externally;
- ?? Develop and implement a diverse array (in size and complexity) of integrated projects to better ensure annual accomplishments;
- ?? Strive to achieve multiple resources benefits from projects that manage and/or restore vegetation, fuels, and habitat conditions;
- ?? Establish project priorities based on defined criteria;
- ?? Develop Community Wildfire Protection Plans and Wildland Fire Use Plans for Wilderness Areas, Inventoried Roadless Areas and Congressionally designated areas;
- ?? Incorporate the reintroduction of natural fire regimes where appropriate;
- ?? Efficiently utilize budget, contract, and force account resources;
- ?? Align annual and out-year budgets with the Strategic Plan;
- ?? Evaluate and allocate the Forest's workload and resources according to program and project priorities; and
- ?? Monitor accomplishments, critically and constructively evaluate and adjust the Strategy.

II. Management Situation

The Grand Mesa, Uncompahgre and Gunnison (GMUG) NFs consists of approximately 2,963,000 acres located in west central and southwest Colorado. The GMUG area of influence includes all or portions of eight counties. Current issues on the GMUG NF are related to: the implementation of the National Fire Plan (NFP) and the R-2 Accelerated Watershed and Vegetation Restoration Plan (AWRP); the Forest Plan Revision; travel management; coal and gas energy development; support of the Uncompahgre Plateau (UP) Project, and the 2002-2003 wildfire restoration efforts and subsequent salvage sales.

Southwestern Colorado is experiencing high rates of population growth and concurrent expansion of urban residences into the Wildland Urban Interface (WUI). **See WUI Map #1.** This trend is predicted to continue, compounding wildfire risk to communities and complicating potential fuel treatments and suppression efforts. The potential for person-caused fires also increases with increased population and their proximity and access to the public land.

WUI Map #1.



Two other factors within the regional area are also influencing the increased potential for wildfire risk; persistent drought and bark beetle infestations. The effects of the current drought in the Four Corners and the Southwest should not be underestimated. Stand replacing fires are influenced by the strong climatic control of drought and wind events. These factors are well represented within the region based on recent fire seasons. In the four year period 2000-2003, the GMUG has almost tripled the number of acres burned over the preceding decade (**Table 1**). The persistent drought and resultant increase in fire frequency will potentially have significant impacts to the forest composition and structure in terms of large patches of early seral conditions.

Table 1. Recent GMUG Wildfire History (acres)

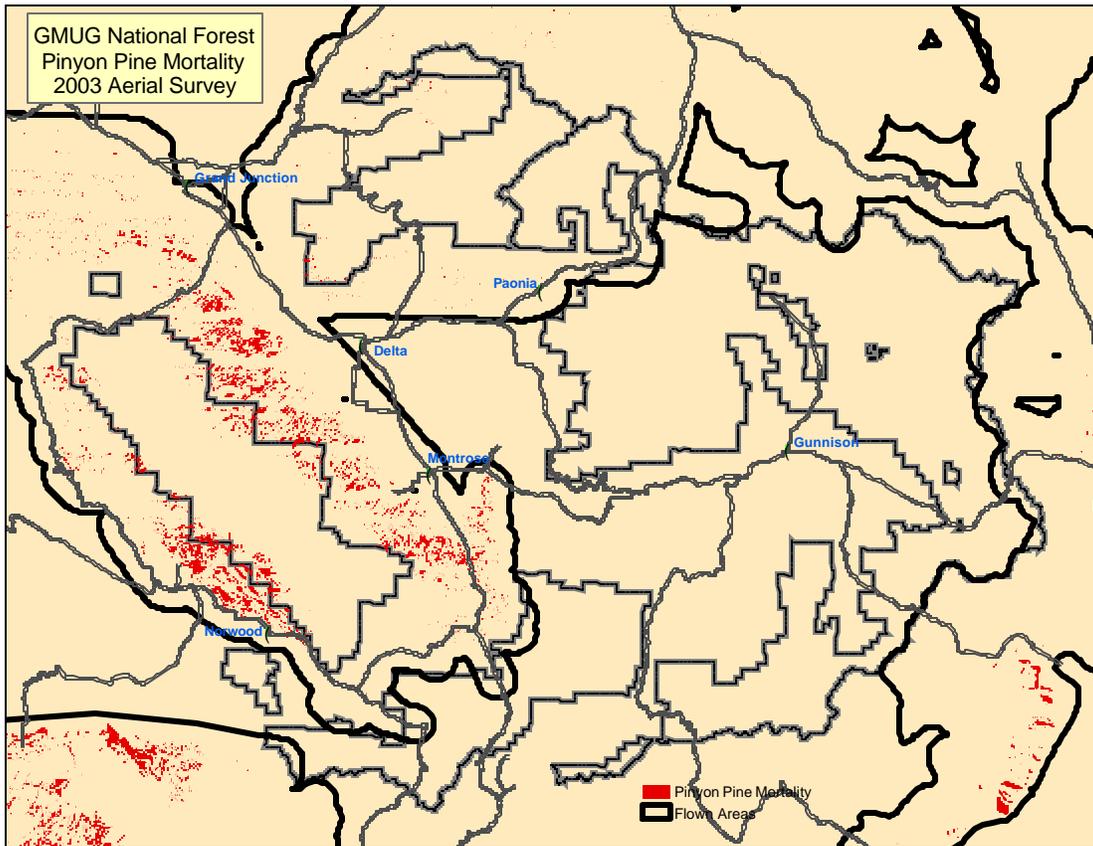
Time Period	Lightning	Human
1990-1999	6,476	1,322
2000-2003	17,780	19
Totals	24,256 acres	1,341 acres

In addition, bark beetle infestations have the potential to significantly alter forest and woodland plant communities through extensive mortality and the resultant increase in hazardous fuel conditions. This condition will continue to build and persist until stand

and/or drought conditions no longer support the insects. Although the interactive effect of drought and bark beetle infestation is a natural process, it is anticipated that wild fire risk will be heightened due to the resultant increase in fuel loading.

Pinyon decline (**Pinyon Mortality Map 2**) is an increasing problem on the Uncompahgre portion of the Forest and southward onto the San Juan NF and is a broad concern throughout the Four Corners area and the Colorado Plateau. This problem is differentially occurring on BLM lands located in lower elevations and in closer proximity to communities-at-risk.

Pinyon Mortality Map 2



Similar bark beetle, pathogenic and defoliator infestations occur in the ponderosa pine, mixed conifer and spruce-fir vegetation types at the higher elevations on Forest lands (Table 2). Table 2 does not reflect increased insect and pathogen activity from 2003.

Table 2. Insect and Pathogen Activity, GMUG NF.

Damage Causing Agent	Cumulative Acres Affected 1996 - 2002	Areas with most activity
Subalpine Fir Decline	222,500	San Juan GA, Grand Mesa GA*, West Elk Wilderness, Uncompahgre Plateau
Western Spruce Budworm	60,900	Uncompahgre Plateau, San Juan GA
Aspen Defoliation	18,300	Grand Mesa GA Uncompahgre Plateau
Mountain Pine Beetle	10,300	Uncompahgre Plateau
Douglas-fir Beetle	8,500	North Fork Valley
Pinyon Decline	7,400	Uncompahgre Plateau
Spruce Beetle	2,000 (Under estimated)	Limited activity identified in aerial surveys; however, problem is developing on Grand Mesa resulting from recent blowdowns.

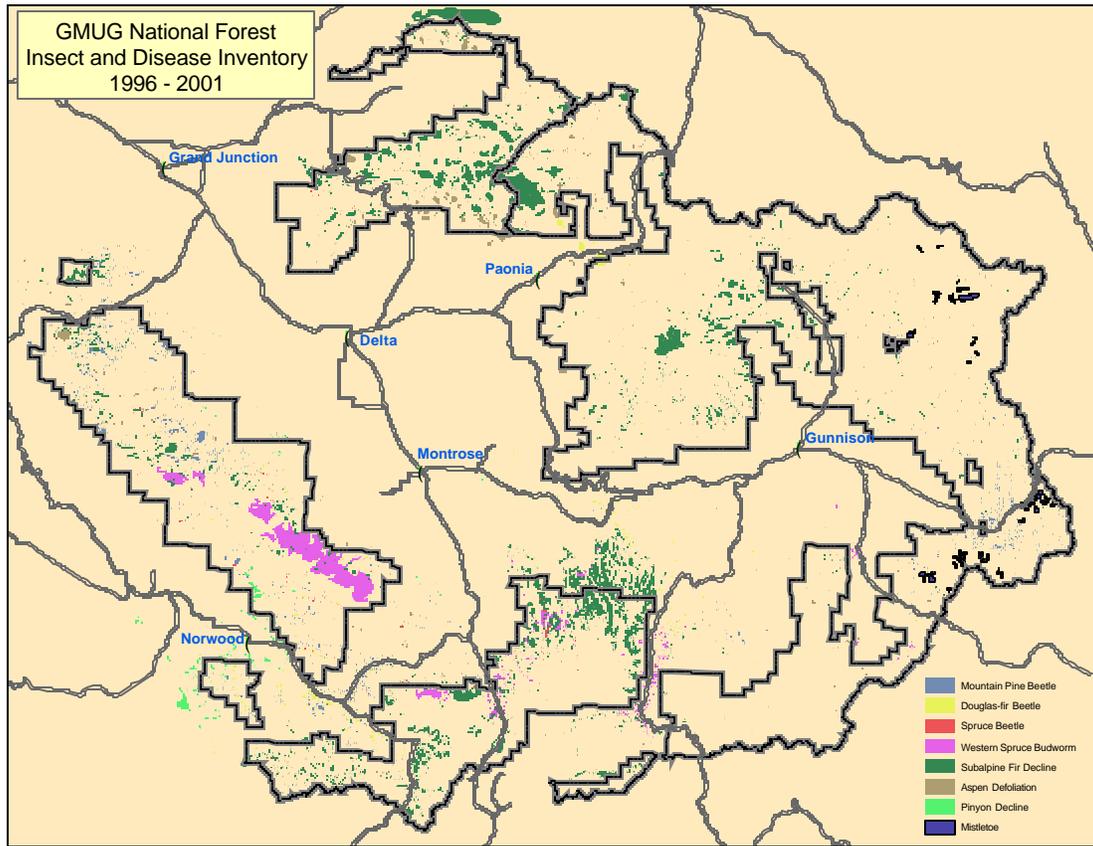
Data Source: Aerial Survey Data from 1996 – 2002 GMUG NF.

*GA. Geographic Area.

Active management measures to alter the stand conditions to reduce the impacts of the bark beetle infestations on a landscape scale are not practical or feasible at this time due to the rapid rate of spread. However, it may be appropriate to treat high value areas and mitigate subsequent mortality related fuel loadings through hazardous fuel reduction projects. Management practices that increase large amounts of fresh tree boles can exacerbate bark beetle outbreaks and should be mitigated through seasonal timing of treatments and, by mechanical or prescribed fire fuel reduction. Current management strategies will consider application of silvicultural treatments that will reduce future epidemics.

The majority of forest types on GMUG NF are in or approaching mature, dense stand conditions. These conditions have increased susceptibility to insect and disease attack. The current insect, disease and drought conditions in the area predispose and heighten the potential for severe and/or uncharacteristic wildfire events. (See Map #3).

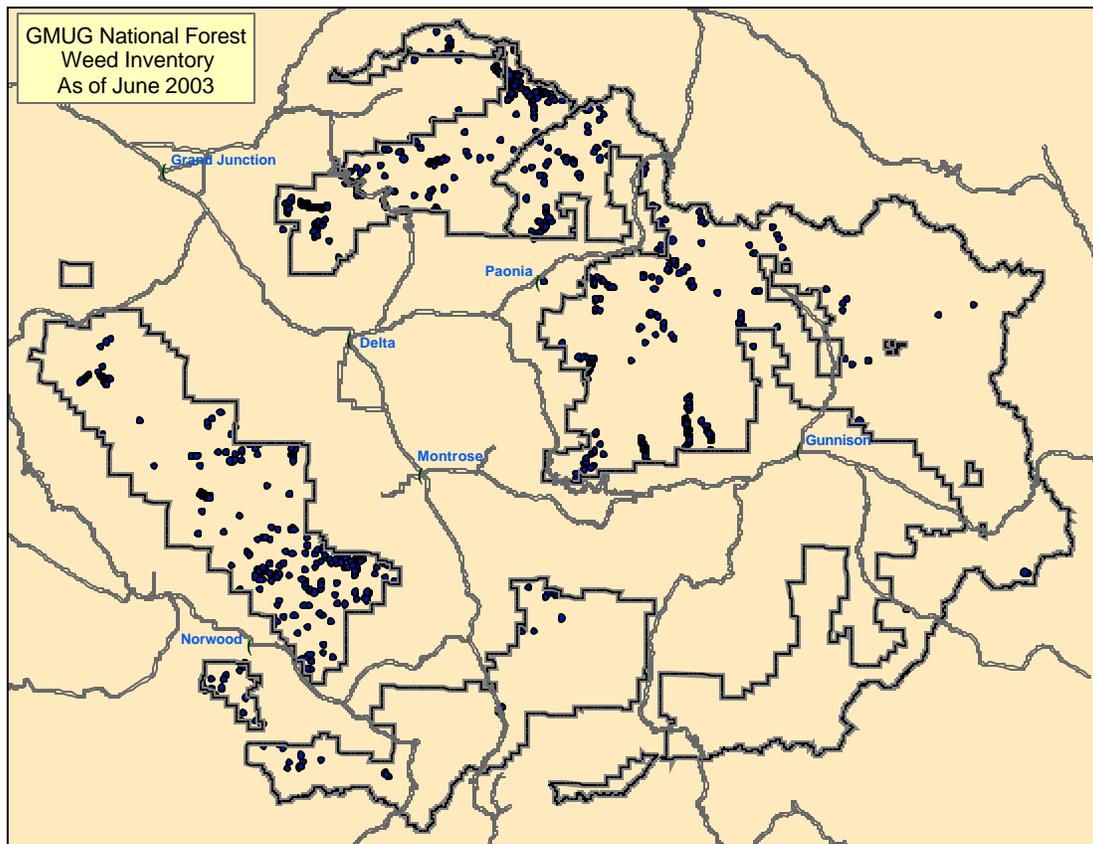
Insect and Disease Map #3.



This also has the potential to set off a cycle of invasion by exotic plant species that could colonize large areas subsequent to a stand replacing fire event. (See Noxious Weed Map #4.).

Cheatgrass is a concern at the lower elevations and western side of the Forest and has the potential to dramatically alter the fire frequency and fire regime. Noxious weeds are currently present at levels that are a cause for concern and pose a significant potential threat to the native vegetation, site productivity and wildlife habitat.

Noxious Weed Map #4.



With the exception of the Forest plan revision team, the Forest workforce is arrayed in a traditional functional approach. Due to other priorities and past funding constraints, the Forest has historically focused fuels treatments on areas with the least risk to communities.

Table 3 shows the Forest's accomplishments over the last decade (1994-2004). The ten year average was used as a baseline for AWRP planning and as a predictor of future outputs and capacity.

Table 3. GMUG 10 Year Accomplishment

GMUG Ten Year Average (Acres)	FY 94-03	FY 94-03	FY 94-03	FY 94-03	FY 94-03	FY 94-03	FY 94-03
YEAR	FUELS	TIMBER	THINNING	RELEASE	WILDLIFE	RANGE	TOTAL
1994	1,175	5,431	0	460	1,250	1,236	9,552
1995	2,200	2,490	181	512	4,395	1,200	9,778
1996	4,037	2,579	0	56	7,140	0	13,812
1997	5,019	1,587	35	237	4,200	1,875	12,953
1998	7,954	2,324	174	304	7,130	1,000	18,886
1999	8,653	521	393	647	6,600	2,000	18,814
2000	5,772	1,363	268	15	3,109	2,500	13,027
2001	9,314	1,556	0	0	2,750	1,565	15,185
2002	1,640	1,957	165	0	2,300	3,122	9,184
2003	6,851	899	0	0	1,795	1,532	11,077
Total	52,615	20,707	1,216	2,231	40,669	16,030	132,268
Average	5,262	2,071	122	223	4,067	1,603	13,227

There are 582,600 acres (20%) of Wilderness and Congressionally designated acres on the Forest. When Wilderness and designated acres are combined with the 89,000 acres of Inventoried Roadless Area (IRA) acres [allocated to a prescription that does not allow road construction or reconstruction (LRMP Management Area 3A)] approximately 78 percent of the Forest is restricted from the access and use of mechanical treatments. See **Table 4 and Map #5.**

Table 4. Selected GMUG NF Management Categories in Acres and Percent.

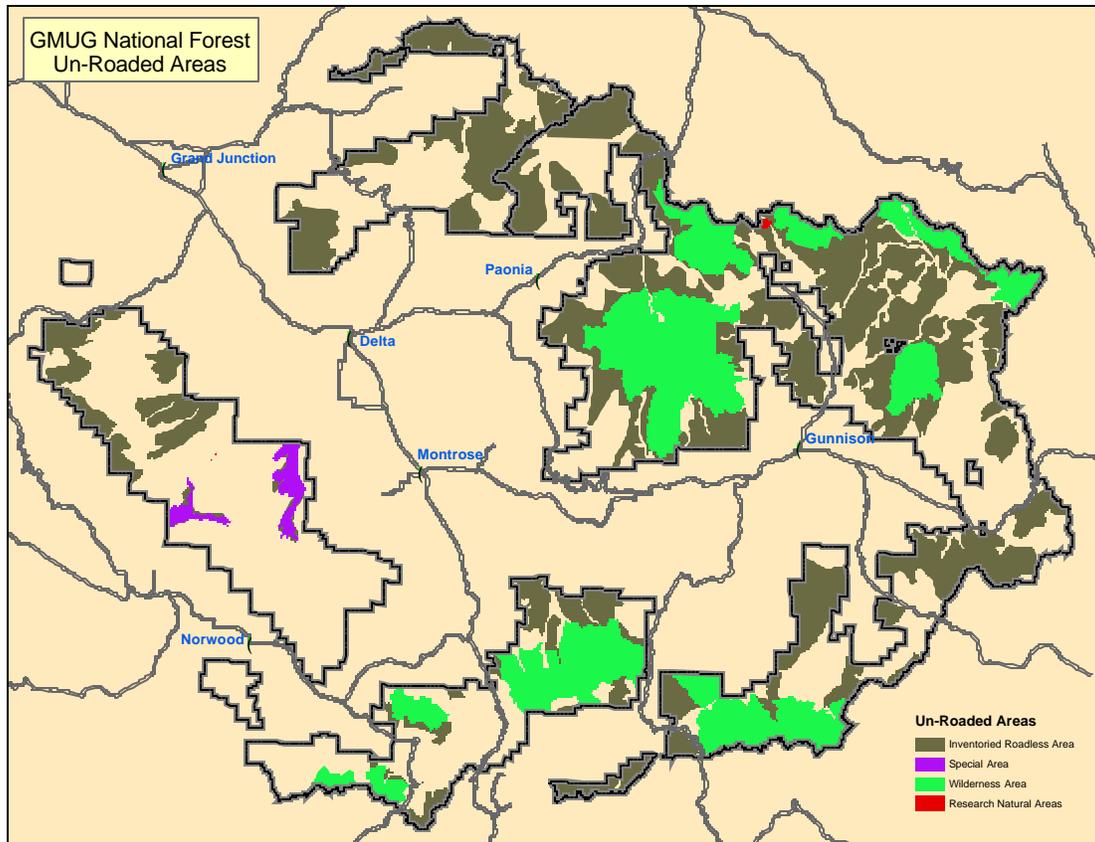
Land Management Category	Acres	Percent of Total Forest Area
GMUG NF	2,963,000	100%
Wilderness, SMAs*, RNAs*	582,600	20%
Unsuitable Timberland	2,604,300	88%
Lynx Analysis Units	2,563,600	87%
Slopes > 25%	1,721,500	58%
Wild Land Urban Interface (Preliminary)	1,161,800	39%

Acres rounded to the nearest 100 acres.

Congressionally designated Special Management Areas and Research Natural Areas.

However, Wilderness Areas tend to be at the higher elevations represented by the cool, moist mixed conifer, aspen and spruce-fir vegetation types in the upper montane and sub-alpine zones with a lower density of WUI. These more mesic forest cover types currently rate moderate to low on the Forest's priority although there are concerns in these areas (Fire Regimes IV,V) as well. The Forest does not currently have Wildland Fire Use (WFU) Forest Plan direction for Wilderness and other designated areas. WFU Plan direction is not anticipated before the completion of the Forest Plan revision in 2005.

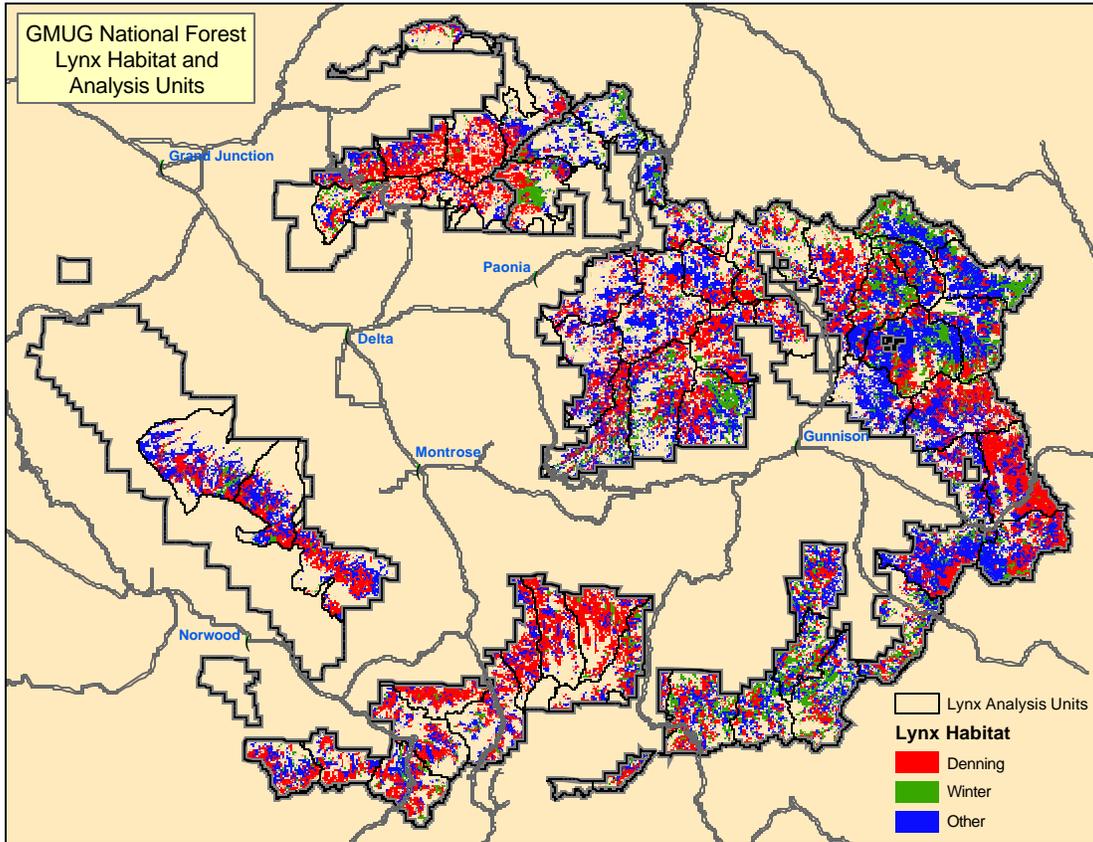
Wilderness, Designated and Roadless Area Map #5.



In addition to designated and inventoried roadless areas, steep slopes will also limit options for mechanical treatments.

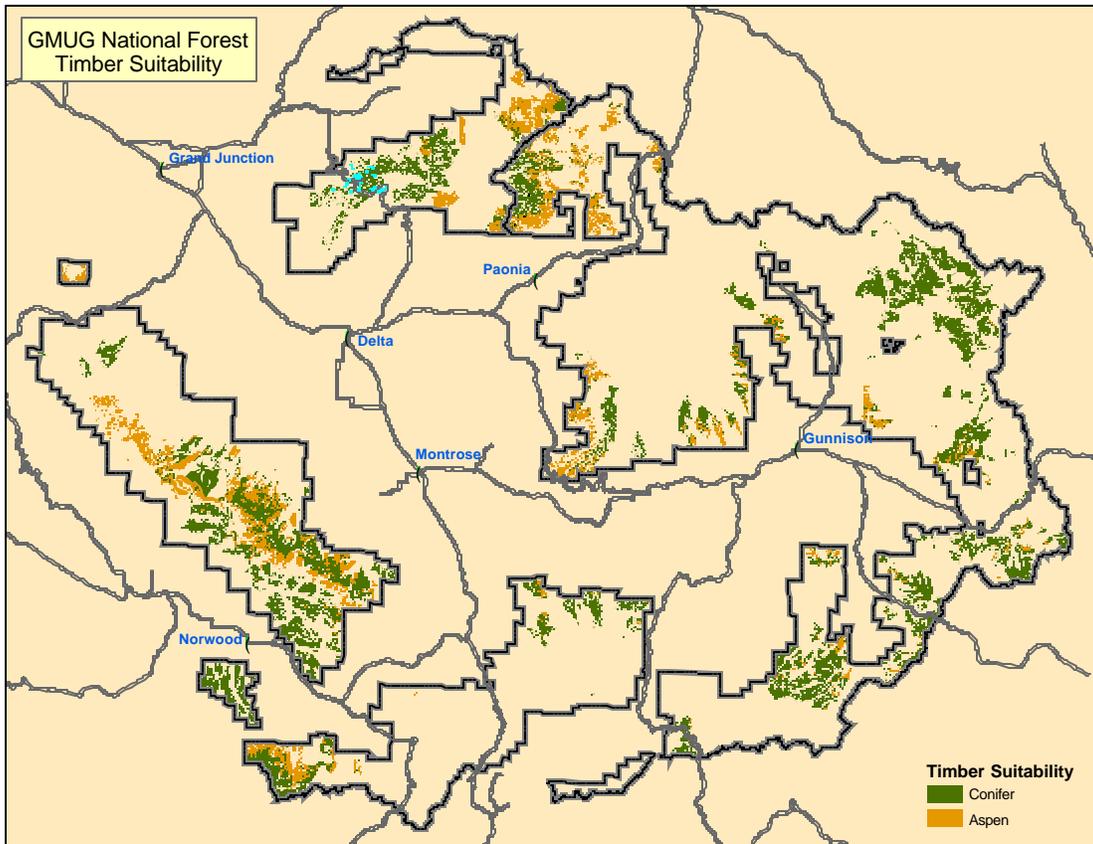
Lynx Analysis Units cover 87 percent of the Forest and will necessitate additional inventory, analysis and potential consultation with the FWS along with any subsequent monitoring. See **Lynx Analysis Units Map #6**.

Lynx Analysis Units Map #6



The current Forest Plan categorizes 88 percent of the Forest as unsuitable timberland which will limit opportunities to defray treatment costs through timber sale activity and Stewardship Contracting. (See Map #7).

GMUG Timber Suitability Map #7



In addition, the Forest has not completed a comprehensive old growth survey. This has implications in terms of the Healthy Forest Restoration Act of 2003 (HFRA). The HFRA provides for allowing the current old growth management plan direction to be used for up to three years if the plan is in the revision process. This would be the case for the GMUG. However, it also directs that the older management direction be reviewed and revised particularly as it relates to pre-fire suppression old growth conditions that do not necessarily meet earlier old growth definitions. It will be necessary to review, and, perhaps amend or revise the Forest Plan depending on the outcome of the review, Regional Office multi-forest direction, or the outcome of the plan revision process.

The Forest's acreage by Fire Regime Group is displayed in **Table 5 and Map # 8** with vegetation types in condition classes 2 and 3 displayed in **Table 6**. The majority of the higher frequency fire adapted ecosystems are located below 9000- 9500 ft. This zone represents pinyon-juniper woodland; mixed mountain shrub; Gambel oak; Ponderosa pine and warm dry mixed conifer forest cover types. A significant amount of this acreage

is on the Uncompahgre Plateau. This is also where a majority of the Forest's wildfire starts occur.

Table 5. Fire Regime Groups. GMUG NF (acres).

FIRE REGIME GROUP	ACRES
Fire Regime I	159,000
Fire Regime II	548,600
Fire Regime III	743,000
Fire Regime IV	107,000
Fire Regime V	1,350,000
Total	2,908,400*

Acres rounded to nearest 100 Acres.

*Difference in forest total acres reflects reduction for bare ground rock, water, etc.

GMUG Fire Regime Group Map #8.

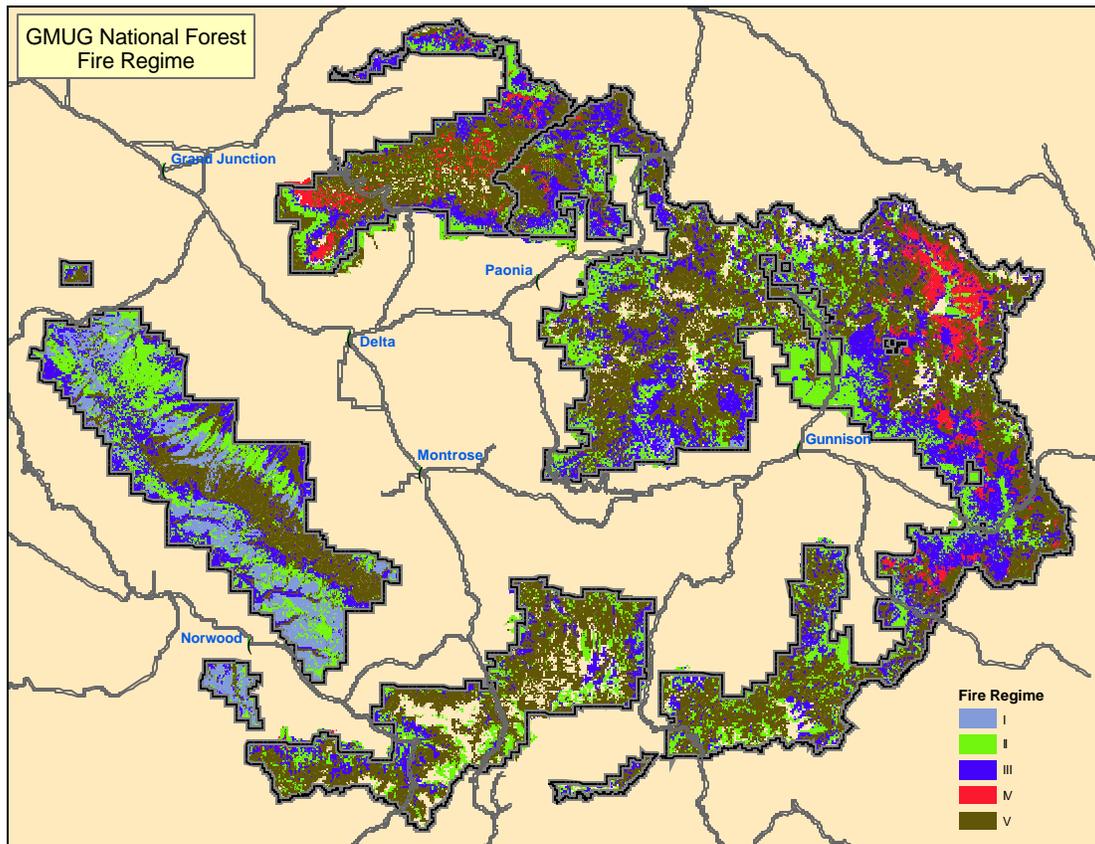


Table 6. Vegetation Types in Condition Class 2 and 3 (acres). GMUG NF.

Vegetation Classification	Acres
Sagebrush	133,900
Pinyon-Juniper	128,800
Ponderosa Pine/ Oak	159,800
Aspen	290,000
Douglas Fir	187,200
Lodgepole	77,900
Spruce/Fir	779,600
Total	1,757,200

Acres rounded to the nearest 100 acres.

Total acres do not reflect non-forested and non-woodland acres.

III. Criteria from the 10-Year Comprehensive Strategy and Implementation Plan:

The nature of the landownership patterns in the eight county GMUG area of influence is such that the communities-at-risk and wildland urban interface, and public land-private land interface occurs in concert with BLM and State lands. This proximity to communities at-risk, subdivisions and the WUI makes this zone the highest priority for vegetative treatments to reduce the risk of wildfire to communities and important municipal watersheds. Clearly, not all of these acres need to be treated but they represent an area that will primarily require mechanical treatments within ½ to 1½ mile of priority properties. Prescribed fire will be a follow-on or secondary treatment in this area. The priority for treatment diminishes with distance from communities. Many of the acres are in Condition Class 2 and 3.

The vegetative plant communities moving down in elevation from the warm dry mixed conifer into the ponderosa pine, pine-oak, mountain shrub and pinion juniper woodlands constitute a bulk of the high priority treatment areas on the Forest. These areas are adjacent to the Forest boundary, rural intermix, communities at risk and WUI.

Based on the distribution of communities-at-risk, the Forest has developed the following treatment prioritization:

- ?? Treat at-risk communities and Wildland Urban Interface utilizing a refined proximity to Forest / federal land, density of development, vegetation, aspect and slope as a criterion;
- ?? Potential for fire to cause irreversible damage to communities, municipal watersheds, ecosystems, or historical or cultural resources;
- ?? Risk to ecosystems and watersheds outside of the WUI;
- ?? Departure from historical ecological/fuel conditions and fire occurrence;
- ?? Fire Regime Groups I, II III;

Condition Class;

1. Condition Class 2 - Fire Regimes moderately altered from their historic range.
 2. Condition Class 3- Fire Regimes significantly altered from their historic range.
- ?? Projects that span multiple agency and ownership boundaries with broad interagency, community, and individual stakeholder participation;
 - ?? Multi-year projects based on current land use and fire management plans, and collaboration with federal, state and tribal partners;
 - ?? Benefits that extend beyond treatment areas;
 - ?? Prior performance in the hazardous fuels program.

Other Criteria:

- ?? Focus on category/zone or identified landscape with highest overall risk but also consider other projects/ zones;
- ?? Identify the best suite of projects that will effectively reduce the risk to the community or resource value;
- ?? Identify opportunity for complementary treatments and leveraging of resources;
- ?? Determine the willingness and ability (i.e. capacity) of the community /stakeholders to participate in an identified project;
- ?? Determine the capacity of partners of the adjacent/surrounding land to undertake, and maintain a complementary project;
- ?? Set priorities based on the projects that best meet the blended criteria. The highest risk or rating may not have the greatest potential for a project success, if the cooperator does not have the willingness and ability to participate;
- ?? Consider long-term investments and sequencing of projects; build on prior year programs to ensure that projects are strategically located and implemented across the landscape;
- ?? Work with Cooperators/partners that have engaged in the project selection process.
- ?? Utilize and leverage the existing collaborative: North Fork Working Group; Public Lands Partnership (PLP); Uncompahgre Plateau (UP) Project; National Forest-County Partnership in Restoration (CPR); Habitat Partnership Program (HPP); NGOs such as Rocky Mountain Elk Foundation and the Mule Deer Foundation and district level partnerships and stakeholder groups.

IV. GMUG Ten Year Strategy:

Several assumptions were made in the Forest's assessment and development of the 10 Year AWRP Strategy. All outputs are conditioned on future budget allocations. Additional limitations are associated with Forest program capacity, unit cost of treatment and mill capacity. For example, it is estimated that the total volume of material and type of material that needs to be removed through fuel reduction is significantly more than the current mill processing capacity. In addition, the receipts for timber sales will not be able to significantly offset the cost of treating the large number of acres of non-merchantable forest and rangeland that require treatment. For comparison purposes all acres that are displayed in the 10 Year Strategy are direct treatment, primary purpose acres. It is recognized that there are multiple benefits to treatments and that direct treatment acres in many cases translates into a higher number of affected acres.

The AWRP effort will shift emphasis to treatment of high-risk areas, rather than least-cost acres. The implementation of AWRP will require the Forest to consider a more integrated approach to planning and implementation of hazardous fuels reduction, and forest vegetation and restoration projects. While the Forest direction is clearly to integrate vegetation and restoration management at the landscape level, the transition period from a functional and agency approach to more boundary-less behavior both internally and externally may be more difficult than first contemplated because of institutional and cultural differences. At present, the GMUG fire suppression personnel are integrated with the respective BLM Field Offices. Hazardous fuels planning and treatment efforts are coordinated to various degrees depending on the situation and opportunities.

The GMUG NF has selected a 20 year treatment schedule due to the magnitude and scope of the fuels management task (approximately 1,727,200 acres) and the emphasis on maintenance of Condition Class 1 and prevention of Condition Class 2 areas from slipping into Condition Class 3 (to avoid missing an additional fire return interval). It will not be necessary to treat all acres to accomplish AWRP Condition Class objectives.

The AWRP program will have to do several things simultaneously: continue to apply maintenance treatment to areas in Condition Class 1, reduce the backlog of sites in Condition Class 3 that require restoration, and treat Condition Class 2 areas to prevent them from accumulating fuels to the extent that the areas move to Condition Class 3. This will also require a combination of restoration and maintenance to maintain Condition Class 2 in Condition Class 2. Not all acres in Condition Class 2 and 3 will need to be treated, as a dispersed pattern of treatments on the landscape can achieve the objective.

The Forest utilized preliminary estimates for developing the percent condition class by cover type in the targeted treatment areas. Data confidence in Condition Class mapping is low based on preliminary modeling completed in February 2004. Additional model runs with refined parameterization are anticipated to yield higher confidence levels. Currently, over 90 percent of the GMUG NF is rated as Condition Class 2. It is estimated

that twenty percent of the Condition Class 1, fifty-five percent of the Condition Class 2, and twenty-five percent of the Condition Class 3 areas will require treatment in any one year.

For comparison purposes the future outputs in timber utilize the GMUG 5-Year Timber Sale Action Plan five year average. Although this figure uses a constant, the actual figures will be based on the Regional Vegetation Management Strategy. Wildlife and range vegetation treatments are considered in this goal and use similar constants based on the GMUG ten year average. However historically, the bulk of the range and wildlife treatments are designed to improve the availability, quality and quantity of livestock and big game forage. In many cases, they do not typically change the structural stage of the priority fuel types. Because of this, the percent of acres treated in wildlife and range have been adjusted accordingly with respect to changing Condition Class 2 and 3. Another reason for using a flat or constant output for the timber, wildlife and range programs is that personnel in these programs areas will be shifting to support the AWRP strategy and budgets are anticipated to decline in real terms.

The GMUG 10- Year Strategic AWRP program is below (Table 7).

Table 7. The GMUG 10- Year Strategic AWRP program

GMUG NF AWRP Treatment Schedule	10 Year Average (FY 94-03)	FY 2004	2 Year Average FY 2005-06	3 Year Average FY 2007-09	4 Year Average FY 2010-14
Annual Fuels Acres	5262	10,540*	8000	10,000	12,000
Annual average Timber Acres	2071	1280**	1280	1280	1280
Annual average Wildlife Acres	4067	4000	4000	4000	4000
Annual average Range Acres	1603	1600	1600	1600	1600
Total	13,003	17,420	14,880	16,880	18,880
% Increase in Program over GMUG 10 year average	N/A	All 34% Fuels 100 %	All 14% Fuels 52 %	All 30% Fuels 90%	All 45% Fuels 128%

* R2 Draft Fuels Program Increase 3/2/2004

** Actual figures will be based on the Regional Vegetation Management Strategy.

Unit costs are expected to climb (**Table 8**) as the Forest shifts emphasis to higher unit costs associated with: treatments focused in high risk areas, complex interdisciplinary planning efforts; inter-agency, state and local government collaboration; increased archeological surveys; increased personnel cost associated with project design, layout and implementation; ESA consultation; contract preparation and administration; an increased emphasis of mechanical treatment; complex ownerships; landline locations and monitoring.

Table 8. GMUG Treatment Increments

GMUG NF Treatment Costs	% Treated by Condition Class (CC)	Acres Treated by Condition Class	Cost per ac. w/o Overhead & Planning Cost	Average Treatment cost	Total Cost/Year
FY 2004					
CC 1	.20	2110	N/A		
CC 2	.55	5797	N/A		
CC 3	.25	2635	N/A		
Total		10,540 ac/yr		\$129/ac.	\$1,360,000.
2 Years 2005-06					
CC 1	.20	1600	\$100		
CC 2	.55	4400	\$400		
CC 3	.25	2000	\$500		
Total		8,000 ac/yr		\$167/ac.	\$1,336,000.
3 Years 2007-09					
CC 1	.20	2000	\$100		
CC 2	.55	5500	\$400		
CC 3	.25	2500	\$500		
Total		10,000ac/yr		\$365/ac.	\$3,650,000.
4 Years 2010-14					
CC 1	.20	2408	\$100		
CC 2	.55	6622	\$400		
CC 3	.25	3010	\$500		
Total		12,000ac/yr		\$366/ac.	\$4,394,600.
Ten Years 2004-14					
CC 1	.20	20,485		N/A	N/A
CC 2	.55	56,334			

CC 3	.25	25,606			
Total		102,425ac/yr			

Historically, the Forest has averaged 30-35 prescribed burning days annually per Zone with the exception of the Gunnison Zone which has averaged 50-60 burning days annually. Typically the Forest requests smoke management permits in the neighborhood of the 175-250 acre range. Given air quality restrictions and limited budget and staffing the Forest cannot rely solely on prescribed fire to meet fuel target accomplishments. Public support for the program would likely diminish with prolonged smoke impacts to the communities in the region. The Forest also has to factor in the need to pre-treat mechanically and anticipate limitations associated with burning in the WUI. Smoke management issues are associated with smoke impacts to the Grand Valley (Grand Junction, Fruita); Uncompahgre Valley (Montrose, Delta); North Fork Valley (Paonia, Hotchkiss); Surface Creek Valley (Cedaredge, Eckert, Orchard City) and the Gunnison Valley (Gunnison).

Because of these factors unit costs are anticipated to rise to account for increased mechanical treatments and more difficult prescribed burns (**Table 9**).

Table 9 GMUG AWRP Costs

GMUG NF Total Per Acre Cost	Average Treatment cost/ac. (all CC*)	Overhead costs/ac.	Planning Costs/ac.	Total Cost /acre/year	Treatment acres/year
FY 2005-06	\$167	(.25) \$41.75	(.50) \$83.50	\$292.25	8,000
FY 2007-09	\$365	(.25) \$91.25	(.50)\$182.50	\$638.75	10,000
FY 2010-13	\$366	(.30)\$109.80	(.40)\$146.40	\$622.00	12,000

*Condition Class

Total estimated fuels program costs including overhead, planning and implementation for the GMUG 10-year strategy are displayed below (**Table 10**).

Table 10 GMUG AWRP Total Cost and Outputs

GMUG NF Total Cost/Year	Total Cost* acre/year	Treatment acres/year	Total Cost /year
FY 2005-06	\$292.25	8,000	\$2,338,000.
FY 2007-09	\$638.75	10,000	\$6,387,500.
FY 2010-13	\$622.00	12,000	\$7,466,400.

* Total cost per acre includes: overhead, planning and implementation costs.

V. AWRP Action Item Timeframes:

To achieve AWRP objectives in a timely manner the following action items have been developed.

A. Short-Term (FY04-05)

- ?? Implement existing pipeline of projects using the AWRP 5-Year Action Plan. See GMUG 5-Year Action Plan.
- ?? Emphasize mechanical and thinning projects that are not vulnerable to burn windows closing. Focus on mechanical treatments that are necessary for sequencing prior to prescribe burning.
- ?? Anticipate increasing prescribed burning acres and additional burning into the spring /fall shoulder seasons*.
- ?? Maximize the use of new Categorical Exclusions* for: Hazardous Fuels; Fire Rehabilitation; Timber Harvest; Salvage; and Insect & Disease Prevention (Categories 10-14). Where feasible utilize Stewardship Contracting.
- ?? Develop and refine a Gate System approach to planning and implementation of the 5-Year Action Plan based on the timber gate system.
- ?? Rapidly align workforce, resources and budget to accomplish AWRP 5-Year Action Plan.
- ?? Refine approach for leveraging the assessment process: Forest Plan Revision Geographic Areas to AWRP priority watersheds and landscapes. Complete mapping of fire regime, condition class, hazard and other critical features that influence project and watershed prioritization.
- ?? Develop and refine prioritization criteria and processes to meet the goals of community protection as well as ecosystem maintenance and restoration.
- ?? Begin completing focused assessments and include appropriate mix of large and small scale projects.

B. Mid-Term (FY 05-08)

- ?? Institute the full Collaborative Working Group Forum (CPR, Federal, State and Local).
- ?? Implement an annual schedule (calendar of events) for review and approval of Collaborative Working Group Projects and Landscapes.
- ?? Complete watershed/landscape assessments and implement corresponding NEPA effort to supply the integrated planning pipeline.
- ?? Update a 5-Year Action Plan* (Current FY +4 years) for budget and program planning.
- ?? Establish standardized processes and methodologies for working with the BLM, State and local level partners to identify and coordinate fuels treatment projects in high-risk areas. Refine FS CVU to BLM Basin wide coverage crosswalk.
- ?? Improve interagency GIS and data integration efforts to reduce data incompatibility and limitation issues*.

C. Long-Term (FY 07-14)

- ?? Develop integrated multi-year landscape level fuels and vegetation treatment plans across administrative boundaries*.
- ?? Implement comprehensive landscape level treatments*.
- ?? Schedule re-entry and maintenance treatments.
- ?? Develop Stewardship Contracting and private sector linkages to address biomass reduction/removal needs and to help defray long-term program costs*.

* Action items common to all timeframes

VI. Collaborative Project Development and Review Process

It will be necessary to establish a coordinated process that focuses on identifying and implementing high priority fuels reduction and ecosystem restoration projects. The process should ensure collaboration and cooperation between federal, state, local communities and other interested parties that are involved in project development and prioritization. The level of collaboration should be consistent with the complexity of land ownership patterns, resource management issues, and the number of interested stakeholders. The collaborative process should be timely and responsive to prevent collaboration gridlock.

Process objectives:

- ?? Increase effective and comprehensive collaboration between federal agencies, and with state and local partners/stakeholders;
- ?? Use a systematic approach to project selection;
- ?? Ensure timeliness and efficiency in project selection;
- ?? Improve planning and implementation across administrative boundaries;
- ?? Design projects to ensure treatment effectiveness;
- ?? Achieve AWRP objectives on a ecosystem scale.

Collaborative Working Group Tasks:

- ?? Identify goals and plan their achievement across the entire GMUG area of influence (8 county CPR area). Focus on areas of high risk and, reducing present or future unwanted fire effects in priority landscapes and watersheds. Utilize the priority criteria listed in the National 10-Year Comprehensive Strategy and Implementation Plan and the partners from the FS/DOI/NASF/NACo MOU for the Development of a Collaborative Fuels Treatment Program.
- ?? Update 5-year Action Plan of carryover, current year, and new multi-year fuel treatment projects to be submitted to the CPR/Stakeholders group for local prioritization. The priority considerations for local project development will be based on the 10-Year Comprehensive Strategy and Implementation Plan Strategy and local issues.
- ?? Develop plans and propose activities for the next year based on budget projections.
- ?? Amend plans and adjust activities for the current year based on approved budget levels.

- ?? Adjust planned program and implementation program as necessary. Recommend substitute projects, carryover projects, and projects that are to be dropped. Report implementation accomplishments/progress annually, monitor milestones, support increased implementation, and identify needs for personnel/resource/ funds transfers.
- ?? Ensure treatment implementation is sequenced; initial treatments will be planned near values/properties to be protected with subsequent treatment building on these accomplishments to widen the buffer and/or expand the desired landscape effects.
- ?? Coordinate project implementation such as technical and operational support, resource sharing, contracting, grants and agreements, and multi-party financing.

VII. Institute Landscape Analysis as Fundamental Process:

Landscape analysis and focused assessments are the preferred processes for identifying and prioritizing AWRP actions at the broad scale (i.e., a scale large enough to make real progress in ecological restoration). Its purpose is to analyze and model existing vegetation and fuel conditions, HRV, display departures in conditions and to identify and recommend integrated vegetation and fuels management to support the Forest AWRP goals for the next decade (2004-2014). This analysis is also the most effective way to identify and integrate multi-resource management and restoration activities. The assessment processes must be refined and integrated between scales (Forest Plan Revision GAAs to watershed/landscape). Complete delineation of sub- watershed (6th HUC) analysis areas within the GAA.

Develop a Landscape Assessment program to:

- ?? Make Landscape Analysis a priority;
- ?? Develop Focused Assessment methodology and analysis process that uses streamlined approaches for:
 1. Rapid characterization of exiting landscape conditions;
 2. Develop approximations of the landscape HRV for comparison to the existing vegetative/fuels conditions;
 3. Document departures, trends and implications;
 4. Recommend appropriate, integrated, resource and landscape maintenance and restoration treatments, and appropriate intensity of NEPA analysis.

Summary of Process:

- ?? Identify landscape or analysis areas;
- ?? Identify cooperators and partners;
- ?? Determine data standards;
- ?? Utilize specific criteria for sorting landscapes by similarity, departures, issues or relative risk to resources or communities;
- ?? Implement an efficient process for prioritizing and scheduling Landscape Assessments/Planning and Implementation of effective fuel reduction projects;
- ?? Assign priorities, categorize and place in database and display on GIS Maps;
- ?? Display priority areas/zones;
- ?? Use Flam-Map /VDDT/RMLANDS/UP Methodologies;
- ?? Screen for use of new Hazardous Fuels and Timber Categories of CEs:

1. Determination of no Extraordinary Circumstances;
2. Areas previously inventoried and cleared by Archeological Survey.

Principles:

- ?? Utilize an ecosystem focus that crosses agency and administrative boundaries;
- ?? Ensure analysis steps are appropriate for the ecosystem scale being assessed and that the results of assessment are readily interpreted, synthesized, and transferred between the nested levels of analysis;
- ?? Periodically complete re-assessments;
- ?? Maintain an appropriate mix of landscape and project planning across Forest units;
- ?? Maintain databases and GIS libraries;
- ?? Adaptively manage;
- ?? Apply effective landscape and project-level monitoring.

VIII. Monitoring Strategy

Monitoring will be used to validate assumptions, reduce uncertainties surrounding management treatments and to measure program progress.

The Monitoring Plan will outline for the steps being undertaken to ensure that the strategy is on track. It will involve the periodic collection and evaluation of data relative to stated project goals, objectives and activities. It will describe the project's audience, list information needs, the strategies and methods used for data collection, the criteria and indicators to be measured, when data will be collected, by whom, and where the information will be stored.

10 Year Strategy monitoring objectives will include, but is not limited to:

1. The broad plan for obtaining data needed to meet each informational need. Describes the specific comparison that will be made with the monitoring efforts.
2. Monitor to evaluate the effectiveness of various treatments to reduce unnaturally intense fires while restoring forest ecosystem health and watershed function.
3. Establish objectives, strategies and milestones for restoration and maintenance of fire adapted ecosystems using changes in condition class as one measure of performance.
4. Monitor, analyze, and report on the status, changes and trends in ecosystem health on all forest and rangeland land in a timely manner. Analysis and reporting will address forest health issues and concerns that affect the sustainability of forest and rangeland ecosystems. Priority is given to forest health issues including outbreaks of forest insects and disease, air pollution/ smoke management, fire, and extreme weather events. Efforts will be to gather indicators of forest health and causal agents associated with those indicators.

5. Monitor post treatment activities for the presence of invasive species and apply appropriate treatment as necessary.

Project monitoring: objectives will include a process of collecting information to evaluate whether or not objectives of a project and its mitigation plan are being realized. This will be accomplished at the project level.

1. Implementation Monitoring;
2. Effectiveness Monitoring;
3. Validation Monitoring.

IX. Adaptive Management

Adaptive Management as used in this document is a type of resource management in which decisions are made as part of an ongoing process. Adaptive Management involves testing, monitoring, evaluation, and incorporating new knowledge into management approaches based on scientific and operational findings. Results are used to modify management policy.

The strategy provides an iterative approach, based on adaptive management and incremental steps. Assumptions of management approaches across broad landscapes will be clearly identified and articulated as part of the adaptive management process. In response to monitoring, the Forest will determine whether to pursue ongoing management, modified management approaches, or to propose new actions in response to what is learned through monitoring.

Implement a process that integrates project design, management and monitoring to provide a framework for adaptation and learning utilizing an adaptive management model.

- 1.) Develop Strategic Plan (goals, indicators, methods);
- 2.) Develop Monitoring Plan (goals, indicators, methods);
- 3.) Implement management plan and Monitoring Plan;
- 4.) Analyze data and communicate results;
- 5.) Feedback Loop;
- 6.) Use results to adapt management plan and monitoring plan.

Based on the results of monitoring develop techniques, priorities, processes and prescriptions that are useful in meeting objectives of ongoing actions that have been implemented, have contracts awarded or permits issued.

Communication Plan:

- ?? Develop a Strategic Communications Plan
- ?? Emphasize Public outreach, Public education, Public information
- ?? Demonstration Areas for mechanical and prescribed fire
- ?? Talking Points

- ?? Fact Sheet
- ?? Print and media contact and outreach
- ?? Congressional contacts and briefings
- ?? GMUG NFs and UP Project Website update
- ?? Public meetings and field tours as appropriate

Research and Development Needs:

Discussion:

At present there is very little known about actual applied restoration strategies and treatments at the landscape scale in southwestern Colorado and the eastern Colorado Plateau. There are also questions about long term sustainability of systematic approaches to developing treatments to mimic spatial heterogeneity in southwestern plant communities at the landscape scale. Further, the duration of treatment effectiveness remains to be determined at the treatment unit and landscape scales. Relatively short lived plant communities such as mixed mountain shrub, oak and seral forest types are problematic in terms of duration of effectiveness. This is also true of firebreaks specifically constructed and maintained to protect WUI. At present, models and decision support tools are not adequately refined at the operational level to determine exact successional pathways for highly complex landscapes. Empirical data to determine precise successional pathways to support restoration is still lacking although experience and recent research indicates that certain forest, woodland and shrub land plant communities are outside of their historic range of variability in terms of stand structure, fire frequency, and fire behavior. In the absence of unambiguous documentation regarding past landscape conditions, develop a working hypothesis of the HRV of the major cover types and mosaic drivers for use in comparison with the existing vegetative cover condition. Document departures and identify trends, implications and recommendations.

The current science indicates opportunities for reversing trends in forest and woodland cover, thickening, expansion, and succession, particularly where opportunities exist in the pinyon-juniper savannah and woodland and other fire adapted ecosystems including ponderosa pine and mountain shrub communities. Facilitating practices in the form of noxious weeds treatment, native plant seeding, grazing management and prescribed burning of seedling tree regeneration show significant promise to extend the effectiveness of treatments.

Attachment GMUG AWRP Glossary.