

**NORMAL FIRE REHABILITATION PLAN SUPPLEMENT  
FINDING OF NO SIGNIFICANT IMPACT  
AND  
DECISION RECORD  
MILE MARKER 367 FIRE ( X-256)**

**Finding of No Significant Impact:**

Based on the analysis of potential environmental impacts contained in Normal Fire Rehabilitation Plan Supplement Environmental Assessment BLM/EK/PL2001/065, I have determined that the proposed action will not have significant impacts on the human environment and that an Environmental Impact Statement is not required.

**Decision:**

It is my decision to implement the Normal Fire Rehabilitation Plan (NFRP) Supplement as described in the Environmental Assessment for the Mile Marker 367 Fire BLM/PL2001/065. Approximately 578 acres of public land managed by the Bureau of Land Management Elko Field Office and 5 acres of private land were burned during this fire. Approximately 575 acres of burned public land will be rehabilitated by planting of multiple species seed mixtures in drainages and on steep slopes to enhance revegetation and minimize future erosion events. Approximately 100 acres will be planted with tree and shrub seedlings and trees would be repruned along the access road. The planting and pruning sites will be inventoried for cultural resources. Approximately 4000 feet of directional instream tree felling on approximately 22 acres will be conducted in three small drainages to reduce runoff, trap sediment, and prevent channel downcutting events. A flood hazard warning sign will be placed along the road in the SE1/4 of sec.16 at the bottom of the burn. Monitoring of the burn for infestation of noxious weeds will be conducted. Post-fire grazing management will be determined based on monitoring and achievement of site specific resource objectives.

**Rationale:**

Implementation of the proposed action described in the NFRP Supplement EA for the Mile Marker 367 Fire will protect soils from wind and water erosion; will reduce the probability of very high peak flows resulting in mud and debris flows impacting the road below the burn; will reduce potential invasion and establishment of noxious weeds and cheatgrass; will provide quality forage for livestock and wildlife; and will facilitate meeting established standards and guidelines for livestock grazing.

The Wells Resource Management Plan is silent for the proposed action. The proposed action is consistent with the objectives of the RMP and is consistent with federal, state, and local laws, regulations, and plans to the maximum extent possible

**Monitoring:**

Post-treatment monitoring studies will be conducted to evaluate the effectiveness of the proposed treatments and to determine the time frame for reopening lands for grazing.

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Helen Hankins  
Elko Field Office

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Date

**NORMAL FIRE REHABILITATION PLAN SUPPLEMENT  
ENVIRONMENTAL ASSESSMENT  
Mile Marker 367 FIRE (X-256)  
BLM/EK/PL2001/065**

**Introduction:**

This Supplement Environmental Assessment (EA) tiers to the Elko Field Office FY 2000 Normal Fire Rehabilitation Plan Environmental Assessment (NRFPEA) BLM/EK/PL2000/037. The Proposed Action includes NFRPEA Treatment # 2 (Planting of multiple species seed mixtures), 3 (Planting of native tree or shrub seedlings), 4 (Construction of erosion and sediment control structures), 8 (Invasive, Nonnative Weed Control), and 10 (Cultural resource site stabilization and protection). The format of this Supplement EA follows the outline in the Emergency Fire Rehabilitation Handbook, BLM Manual Handbook H-1742-1, dated 7/27/99, and is consistent with the draft Interagency Burned Area Emergency Stabilization and Rehabilitation Handbook, Version 1.0, dated 6/14/01.

**List of Preparers:**

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**Project Area Description:**

A. Fire Description:

The fire, started by lightning, was reported on August 4<sup>th</sup>, 2001 and was declared controlled on August 11<sup>th</sup>, 2001. It burned approximately 578 acres of public land and 5 acres of private land in the Big Springs Allotment. The fire impacted <1 % of the Big Springs Allotment and no structures were burned.

B. Vegetation and Soil Description:

The burned area ranges in elevation from 6,100 ft to 8,200 ft. At lower elevations the vegetation was comprised of about a 50/50 mixture of single leaf pinyon pine and Utah juniper with a sparse understory of Thurber's needlegrass, bluebunch wheatgrass, and *Poa* spp. The forest sites at higher elevations were comprised of singleleaf pinyon pine and mountain mahogany with some Utah juniper. Several pockets of old growth singleleaf pinyon pine were consumed by the fire with trees estimated to be between 275 to 350 years old. Some isolated pockets of white fir and one aspen stand were also impacted by the fire. Other vegetation within the higher elevations included mountain big sage, bluebunch wheatgrass, Sandberg bluegrass, and thickspike wheatgrass. At lower elevations the dominant plants were pinion/juniper and mountain big sage with an understory of bluebunch wheatgrass and *Stipa* spp.

Soils in the higher elevations of the burn occur on 30 to 50% slopes. These soils comprise a little more than half of the burned area, and occur on the eastern portion of the burn. They are shallow soils over limestone that have high percentages of coarse fragments and are medium textured. Runoff is rapid on these soils. Water erosion hazard is moderate and the wind erosion hazard is slight. A recent field inspection of the burn, following a small rainfall estimated at 0.1 inches, revealed that a large runoff event occurred causing significant soil movement and rill erosion on some of the steep side slopes. Steep side slopes had little or no understory, leaving nothing to hold the soil in place after the fire.

The soil loss tolerance, T factor, on these shallow soils is only one ton per acre per year. The T factor is the maximum annual amount of erosion that can occur on soils before they permanently lose productivity. These soils have a high risk of exceeding the one ton per acre of soil erosion because there is no vegetation nor roots left to hold the soil together and curb runoff. Soil loss rates that were calculated on the same soils, approximately one mile south of the burn as part of the Pittston project, ranged from 0.57 to 0.96 tons/acre/year using USLE. The loss of litter and vegetative canopy from the fire would cause the soil loss values to increase over the T levels. The proposed contour tree felling and log erosion barriers would reduce overland and in channel flow, thereby dissipating runoff, and lowering the potential risk of rilling and downstream mud and debris flows. The loss of soil from steep slopes, cannot be replaced for thousands of years.

The Pittston well is located downstream in sec.20 and is at slight risk of being buried by sediment should an intense precipitation event occur. The proposed erosion control and vegetative treatments should reduce the risk of this occurring. The route for an annual motorcycle race is also found in the burned area. Some off-highway vehicle erosion was noted in the burn during the field inspection. Large runoff events could make this problem worse.

Approximately 100 acres occurring in the middle of the burn has soils that are shallow to moderately deep over limestone and dolomite. Rock outcrop occurs over approximately 15 percent of the area. These soils are very gravelly and medium textured. Runoff is rapid and the water erosion hazard is moderate to high. Recent and historic soil movement was evident during the field inspection. Wind erosion hazard is slight. Small fan remnants at lower elevations on 4 to 15 percent slopes have soils that are either shallow over a duripan or petrocalcic (cemented

calcium carbonate layer) horizon. Textures are typically gravelly loams. Burn severity was high with total stand replacement where dense pinyon pine, mountain mahogany and Utah juniper stands existed on the steep slopes, while the rest of the burn was moderate.

### **Proposed Project Treatments:**

#### A. Revegetation:

##### 1. Rangeland and wildlife aerial seeding:

Approximately 550 acres in the burn would be aerially seeded with bluebunch wheatgrass (or Newhy hybrid wheatgrass), Sandberg bluegrass (or Canby bluegrass), bottlebrush squirreltail, Western yarrow, flax wheatgrass, and small burnet. The seed would be broadcast on snow to aid in germination and reduce seed consumption by rodents and birds. The purpose of the seeding is to provide forage for livestock and wildlife and reduce the potential for invasion of nonnative weed species.

##### 2. Watershed aerial seeding:

Approximately 30 acres along the drainages would be seeded with Great Basin wildrye, intermediate wheatgrass, triticale, and yarrow. The seed would be broadcast on snow to aid in germination and reduce seed consumption by rodents and birds. The purpose of the seeding is to stabilize bare soils in the drainages impacted by the fire.

##### 3. Native tree and shrub planting:

Approximately 50 acres would be planted with pinyon pine and curlleaf mountain mahogany. Antelope bitterbrush would also be planted on 25 acres to reestablish crucial deer winter forage. Pinyon pine stock would be available in 2004, depending on seed collection times. Mountain mahogany and bitterbrush stock would be sown in 2003 with outplant in 2004. Planting would either be contracted with NDF conservation crews, commercial contracts or a combination of the two. Planting would occur during the months of March or April of 2004. Planting these seedlings is necessary to help reestablish trees in portions of the burn to help with diversity on the once forested site. Natural reforestation isn't expected to take place for hundreds of years due to the fire intensity and lack of a seed source.

##### 4. Tree pruning:

Trees that were pruned along a half-mile stretch of the access road to the fire would be properly re-pruned by the contour falling crew. Pruning would be accomplished following standard Forest Service pruning guidelines which includes pruning flush to the main stem of the tree. The pruning would be completed at the same time as the contour falling.

5. Monitoring to detect noxious weed invasion of burned areas:

If noxious weed infestations are detected after fire rehabilitation efforts, appropriate Integrated Pest Management (IPM) control measures would be implemented to control the invasion. In particular, any disturbed areas would be targeted for this noxious weed monitoring and subsequent treatment if weeds are detected.

B. Structures: None

C. Erosion Control Treatments:

1. Directional instream tree felling:

Approximately 4000 feet of directional instream tree felling on approximately 22 acres would be conducted in three small drainages to reduce runoff, trap sediment, and prevent channel downcutting events. The construction would consist of felling trees across drainages every 30-50 feet and limbing the bottom side of the trees to obtain as much soil contact as possible.

2. Contour log falling:

Approximately 100 acres of steep hillsides would be stabilized by contour falling of trees horizontally on hillsides. This process involves felling trees horizontally, securing the logs in place, and trenching the uphill side of the log to help prevent water from flowing underneath the logs.

D. Site Preparation: None

E. Other:

1. Flood hazard warning sign:

A flood hazard warning sign would be installed along the dirt road access to the burn in the SE1/4 of sec.16. Large peak flows, possibly accompanied with large amounts of cobble, stone, and debris, could occur following an intense rainstorm before the vegetation has fully recovered. A recent small rain event caused high peak flows down the main drainage and extensive soil movement. There is a safety risk following a rain event to recreationists who frequent the area.

2. Cultural resource inventories:

None of the Mile Marker 367 Fire burn has been examined for cultural resources, but during fire suppression activities, several lithic scatters were reported to be located on the ridge near the east edge of the fire. These sites would require documentation and an extensive inventory would also need to be conducted on 62 acres proposed for tree and shrub planting and tree re pruning. These inventories would identify any cultural resources that might need to be protected during

rehabilitation treatments.

**Consideration of Critical Elements and Resources:**

The following critical elements of the human environment are not present or are not affected by the proposed action or alternative:

- ACECs
- Environmental Justice
- Farmlands, prime or unique
- Floodplains
- Threatened, Endangered, Candidate, and Special Status Species
- Wastes, hazardous/solid
- Wetlands/Riparian Zones
- Wild and Scenic Rivers
- Wilderness

Critical elements and resources brought forward for analysis:

A. Air Quality:

The burned area would be susceptible to wind erosion until revegetation occurs. Wind erosion can increase particulate matter <10 microns in size (PM 10) emissions causing exceedance of PM10 air quality standards which could negatively affect human health. In addition, airborne dust can cause visibility and safety problems on roads in the area. The proposed vegetation and erosion control treatments would encourage regrowth of vegetation, thus reducing future potential air quality impacts.

B. Cultural Resources:

The Mile Marker 367 Fire occurred within an area known to archaeologists as the Central Great Basin which has been inhabited by humans for approximately 12,000 years.

Archaeological sites and cultural properties in this area must be afforded protection whenever possible. Section 106 of the Natural Historic Preservation Act mandates that the federal government would account for cultural resources in its projects and undertakings, including fire rehabilitation efforts. Ground disturbing activities such as drill seeding, dozer line rehabilitation, and fence construction could damage cultural sites. Therefore, areas designated for mechanized seeding and other ground disturbance would be inventoried for cultural resources before the disturbance occurs in accordance with the State Protocol Agreement Between BLM, Nevada and the Nevada State Office of Historic Preservation (SHPO). At a minimum, to reduce potential impacts to cultural resources, activities that involve mechanized surface disturbance of less than 10 cm depth would generally have transect spacing of 100 meters. More intense inventory will

be used for highly sensitive areas. If surface disturbance is greater than 10 cm, then 30 meter transect intervals would be used.

All cultural resources discovered or relocated will be plotted on maps and at a minimum would be recorded on the Nevada IMACS short form. Resources except those previously determined not eligible, by BLM and SHPO, or that have been fully mitigated, would be flagged for avoidance and avoided during rehabilitation activities.

#### C. Native American Religious Concerns:

By law, policy and executive order, BLM is required to undertake a good-faith consultation process with regional Native American tribal and band governments prior to projects that might affect Native American sacred areas, Traditional Cultural Properties or other traditional values. Native Americans would be consulted as appropriate prior to any ground disturbing activities or herbicide treatments. If the BLM obtains information identifying Traditional Cultural Properties or other areas having traditional or religious significance, then the BLM would insure that reasonable measures are taken to avoid impacts to these areas of concern to Native Americans.

#### D. Visual Resources:

The project falls within a Class III visual resource management (VRM) area. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.

Within Class III VRM areas, management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. The project area is a steep mountain canyon with numerous limestone rock outcrops. The proposed treatments would be implemented in a way as to maintain the naturalness of the setting. Contour felling of trees would be completed randomly and only in those areas where slope stabilization is necessary. The remaining burned trees would be left standing to maintain a natural setting.

#### E. Wildlife:

The area surrounding the burn provides year long mule deer and elk habitat. Wildlife was impacted by the Mile Marker 367 Fire primarily through temporary loss of habitat through removal of vegetation by the fire. The proposed rehabilitation treatments include resting the area from livestock grazing and seeding with multiple species to restore critical forage and speed recovery time.

#### F. Water Quality, surface/ground:

Average annual precipitation ranges from 8 inches at lower elevations of the burn to 18 inches at

the highest elevations. Most of the precipitation falls during winter as snow, or during the spring as rain.

There are no perennial streams within the burned area. There is one main ephemeral drainage and several smaller tributaries to that drainage. The watershed is very steep, averaging more than 40% slopes. High intensity, short duration storms are common in the Pequop Mountains. Peak flows were calculated using the SCS Runoff Curve Number Method for the 382 acre subwatershed located in the southeastern part of the burn. Peak flow for a 2-year, 6-hour storm event, occurring before the vegetation is reestablished, would be 127 cfs at the confluence of the two side drainages in section 22. This flow would be reduced to 85 cfs when vegetation recovers. Peak flows for other storm events are as follows: 10-year, 6 hour storm: 72 cfs burned, 41 cfs vegetated; 25-year, 6-hour storm: 127 cfs burned, 85 cfs vegetated. Flows would be much higher at the bottom of the ephemeral drainage along the western edge of the fire.

Fire severity in the center of the burn, south of the road, is high. The rest of the fire was moderate. The greatest runoff potential is expected from steep slopes with high burn severity. Flood flows are expected to be at least twice as high as they were before the fire. Flash floods can carry people and vehicles off roads, possibly resulting in injury or death. The greatest risk occurs on roads in narrow canyons, such as the road that goes through the middle of this fire. Peak flows would not occur at the bottom of the canyon for at least two hours following the rain event. Often rain only occurs at the top of the watershed and is not noticed by people downstream. This can catch people off guard and put them in potential danger. Therefore a flood hazard warning sign is being recommended for the bottom of the canyon, just inside the burn perimeter.

#### G. Forestry:

Trees within the fire perimeter suffered 100 percent mortality. Over 90 percent burned hot enough to consume all needles. Natural reforestation of the area will take 100 to 200 years and planting portions of the burn with native single leaf pinyon pine and Curleaf mountain mahogany trees would help speed recovery of the site. The contour falling will play a duo-fold benefit by not only helping reduce runoff, but it will also produce micro-sites for the trees when they are planted several years later.

Annual sustained yield capabilities of the Pequop forest unit was reduced by about 50 cords of firewood and 180 posts. An inventory of the immediate area showed approximately 5,460 cords of firewood and 21,543 posts were lost. Without extending the road network further up the canyon, only about 200 cords of firewood may be salvageable.

#### H. Migratory Birds:

The proposed restorative actions are located in a sagebrush habitat type. The Nevada Partners in Flight Bird Conservation Plan identifies the following bird species associated with this physiographic region: sage grouse (obligate), black rosy finch, ferruginous hawk, gray flycatcher,

loggerhead shrike, vesper sparrow, prairie falcon, sage sparrow, sage thrasher, Swainson's hawk, burrowing owl, calliope hummingbird, Brewer's sparrow, Western meadowlark, black-throated sparrow, lark sparrow, green-tailed towhee, Brewer's blackbird, horned lark, and lark sparrow.

The greatest threat to these sagebrush-dependant migratory bird species is type conversion of sagebrush communities. Maintaining complete, diverse sagebrush communities is integral to conservation efforts for these species. Low elevation sagebrush sites, such as the project area, are vulnerable to conversion to cheatgrass types following wildfire. The proposed action to reseed with aggressive perennial grasses to prevent cheatgrass from dominating the site, coupled with secondary efforts to re-establish sagebrush on the stabilized site (as necessary) should provide beneficial impacts to these species and is consistent with the conservation measures listed in Section 3(e) of the President's Migratory Bird Executive Order.

#### I. Invasive, Nonnative Species:

Fire suppression efforts, including use of engines and other mechanized vehicles, may have introduced noxious weed species seeds into the burned area. If noxious weeds are discovered to have invaded the burn area, herbicide treatments would need to be implemented to reduce the spread of the noxious weeds. The proposed noxious weed monitoring and treatments would help to prevent or reduce noxious weed invasions of the Mile Marker 367 burn area.

#### J. Cumulative Impacts:

Cumulative impacts for proposed Emergency Stabilization and Rehabilitation treatments are discussed in the programmatic Elko Field Office FY 2000 Normal Fire Rehabilitation Plan Environmental Assessment (NFRPEA) BLM/EK/PL2000/037, which is available for review at the BLM Elko Field Office.

#### **References:**

Bureau of Land Management, Elko Field Office. 2000. Pittston Nevada Gold Co. Ltd. Pequop Project Environmental Assessment BLM/EK/PL-2000-011.

USDA, Natural Resources Conservation Service, 1992, Draft Soil Survey of Elko County, Southeastern Part, (NV 766).

**Project Cost Summary:** (the cost summary information can be found in the Burned Area Emergency Stabilization and Rehabilitation (BAER) Plan and Accomplishment Report for the August 2001 Fire Complex.)

**Project Maps:** (project maps can be found in the Burned Area Emergency Stabilization and Rehabilitation (BAER) Plan and Accomplishment Report for the August 2001 Fire Complex.)

**Cost/Risk Assessment:** (the cost/risk assessment can be found in the Burned Area Emergency Stabilization and Rehabilitation (BAER) Plan and Accomplishment Report for the August 2001 Fire Complex.)

**Native/Nonnative Worksheet:** (the native/nonnative worksheet can be found in the Burned Area Emergency Stabilization and Rehabilitation (BAER) Plan and Accomplishment Report for the August 2001 Fire Complex.)