United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Bishop Field Office
351 Pacu Lane, Suite 100
Bishop, CA 93514
Phone: 760 872-5000 Fax: 760 872-5050
www.ca.blm.gov/bishop

July 20, 2007

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To Whom It May Concern:

I have made a land use decision to implement emergency stabilization actions as described in the Larson Fire Emergency Stabilization Plan and Environmental Assessment (06/28/2007). This decision includes emergency stabilization actions to prevent erosion and flooding damage to private property as well as monitoring and treating invasive weed species proliferation on public lands recently burned in the Coleville, California area.

I am issuing this decision as “Full Force and Effect” under authority delegated to BLM which means the decision can be implemented immediately.

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and the enclosed Form 1842-1. If an appeal is taken your notice of appeal must be filed in this office (at the above address) within 30 days from the date of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If any individual or party wishes to file a petition pursuant to regulation 43 CFR 4.21 (58 FR 4939, January 19, 1993) for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

(1) The relative harm to the parties if the stay is granted or denied,
(2) The likelihood of the appellant's success on the merits,
(3) The likelihood of immediate and irreparable harm if the stay is not granted, and;
(4) Whether the public interest favors granting the stay.

If you have any questions, please contact Katie Vinzant, our Natural Resource Specialist or Joe Pollini, our Assistant Field Manager at this office.

Sincerely,

Bill Dunkelberger
Bishop Field Office Manager

DECISION RECORD AND FINDING OF NO SIGNIFICANT IMPACT FOR THE LARSON FIRE EMERGENCY STABILIZATION PLAN ENVIRONMENTAL ASSESSMENT (06/28/07) (EA 170-07-039)

I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. The BLM Bishop Field Office interdisciplinary review and analysis has determined that the proposed action with the would not have any significant impacts on the human environment and that an EIS is not required. This finding is based on the significance criteria, as defined by the Council on Environmental Quality (Title 40 CFR 1508.7)

The proposed action is limited in geographic context and is necessary to reduce emergencies from soil erosion, flash flooding, destruction of cultural resources, degradation of water quality, damage to private residences, etc. I am implementing this decision under the Full Force and Effect Authority delegated to BLM under 43 CFR 4190 and 43 CFR 5003.1 because the immediate threat of erosion hazards, flooding, and damage to private property warrants prompt action.

The project will have the following benefits:

- Reduce soil erosion from portions of steep slopes with high burn severity.
- Assist with native plant reestablishment, reducing native weed infestations to the extent practicable.
- Reduce flood damage to private residences, U.S. Highway 395, and nearby agricultural land.
- Assist with reestablishment of forage for mule deer habitat.
- Maintain water quality.

I have determined that the proposed project is in conformance with the Bishop Resource Management Plan, which was approved March 25, 1993. This plan has been reviewed, and the proposed action conforms with the land use plan terms and conditions as required by 43 CFR 1610.5.

It is my decision to implement the project as described in the Larson Fire Emergency Stabilization Plan and Environmental Assessment. Since the Plan was proposed by BLM, design standards to produce the most efficient plan possible were included, thus no mitigation measures are required.

Authorized Official: _____
Field Office Manager

Date: _____

ENVIRONMENTAL ASSESSMENT

BLM, Bishop Field Office
351 Pacu, Suite 100
Bishop, CA 93514

I. **EA Number:** CA-170-07-039

II. **Lease/Serial/Case File No.:** CA-170-07-ES-001

III. **Proposed Action Title/Type**: Larson Fire Emergency Stabilization Plan Environmental Assessment

IV. **Location of Proposed Action**: Sec. 12, T8N., R22E., MDM.

V. **Applicant (if any):** Not Applicable

VI. **Plan Conformance:** The proposed action is subject to the Bishop Resource Management Plan, approved March 25, 1993. The following direction in the Bishop RMP justifies this proposed action be executed and funded with Emergency Stabilization and Rehabilitation funds.

- Public lands will be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use. (Bishop RMP, 1993, page 8)

- Vegetation will be a key element in the plan and management will be directed toward the achievement of desired plant community goals. (Bishop RMP, 1993, page 9)

- Meet Desired Plant Community goals on 850 acres (75%) of sagebrush-bitterbrush to provide cover and forage for mule deer. (Bishop RMP, 1993, page 24)

The proposed action conforms with General Policies, Area Manager's Guidelines, Valid Existing Management, Standard Operating Procedures, Decisions and Support Needs prescribed in the Bishop RMP. The proposed action has been reviewed and is in conformance with the plan.

VII. **Need and Purpose for Proposed Action:** The Larson fire burned a total of 1,080 acres of Bureau of Land Management (BLM), Forest Service (FS), state, and private lands between June 1 and June 11, 2007. (See Attached Map) The

following table identifies the wildfire's burn severity on the acres burned. The burn severity classifications of low, medium, high, and unburned are indicators of the soil's hydrophobicity and the composition of remaining vegetation in the burned area.

Burn Severity Table

Burn Severity	Percentage of Land Affected
Low	48.5%
Medium	37.8%
High	5.5%
Unburned	8.1%

The table shows that most of the burn severity was in the low to medium range. A small percentage of the Larson Fire burned at a high intensity, creating soils with high water repellency and no vegetative cover. These conditions may lead to significant erosion during a heavy precipitation event. However, it would likely take an extreme precipitation event, such as a 50 to 100 year storm to wash sediment onto U.S. Highway 395 and private lands.

A total of 450 acres burned on Bishop BLM Field Office administered lands.

Overall, the Larson burn area is the most recent wildfire in a decade old pattern of repeated fires that have damaged much of this local region. This geographic area has experienced extensive wildland fires exceeding 40,000 acres during 1996, 2002, and 2004. The Larson Fire burned in one of the last remnant intact portions of pinyon pine woodland and sagebrush steppe within the Walker River watershed. It also re-burned a small area that had burned in 1994. The effects of all these past burns over the years has resulted in soil erosion, damage to private property, and an invasion of exotic weed species that has established itself in the area.

The Larson Fire created impacts that include increased soil deposition hazards to U.S. Highway 395, two private residences and associated private lands; an increased risk of cheatgrass (*Bromus tectorum*) invasion; and potential degradation of water quality. Approximately ⅛ to ¼ mile of U.S. Highway 395 is now exposed to flash flooding from the burned drainage above the roadway. The highway supports millions of motorists per year and serves as the major road, where goods and services are transported daily, linking the economy of the east Sierra region to the Reno-Carson City region.

After the Larson fire was contained on June 11, an Emergency Stabilization Plan (ESP) was prepared immediately to identify several actions to protect newly exposed life and property, facilitate native plant reestablishment, and safeguard vulnerable

cultural resources. This environmental assessment will identify the impacts of this proposed action identified in the ESP. (See Appendix A)

VIII. **Description of Proposed Action:** The ESP identifies four actions comprising the proposed action. The proposed action is designed to decrease sediment deposition risk threatening U.S. Highway 395 and private lands by reducing soil erosion on steep, unstable slopes above the highway and residences.

The proposed action would also accelerate recovery of native vegetation, critical mule deer winter range, cultural resources, and water quality by reducing sediment erosion, limiting the spread of noxious weed infestations, and monitoring sensitive archeological sites.

The actions and application methodologies are described as follows:

Action #1 – Aerially Apply WoodStraw™ Mulching:

1. Location (Suitable) Sites: Spread mulch on approximately 15 acres of steep (30-40 degree), high intensity burn slopes, which drain into two significant canyons.

2. Design/Construction Specifications: Load 300 bales of WoodStraw, weighing approximately 575 pounds each, will by forklift onto helicopter slings. Transport bales by helicopter to the treatment sites and dropped in such a manner as to cover 70% of the treatment area in 1-2 inches of mulch. In order to ensure the achievement of these standards, a monitor will be located nearby to coordinate with the helicopter pilot. Prior to any ground disturbance an archeologist will survey the treatment area for historic and prehistoric artifacts and sites.

3. Purpose of Treatment Specifications: The primary purpose of the treatment is to reduce overland flow, runoff and potential soil erosion. Additionally, the mulch protects soil from precipitation impact, increases soil moisture holding capacity, and aids in re-establishment of vegetation.

4. Monitoring: In order to ensure the achievement of these design standards, locate a monitor nearby to coordinate with the helicopter pilot during implementation. Monitor treatment sites periodically after precipitation events to document the treatment stability and longevity. In addition, establish a Fire Effects Monitoring and Inventory (FIREMON 2006) protocol to document the effectiveness of the WoodStraw treatment. This protocol will involve setting up photo plots and transects within the treatment areas and established control sites to record the differences in vegetation recovery, ground cover, soil stability, and weed establishment. The monitoring data would be used to provide adaptive management feedback to improve future treatment performance.

Action #2 - Install Contour Rice Straw Wattles:

1. Location (Suitable) Sites: Spread wattles on approximately two acres of steep (30-40 degree), high intensity burn slope, which drains into the Coleville drainage.

2. Design/Construction Specifications: Drop wattles by helicopter to the treatment site. Locate a monitor nearby to coordinate with the helicopter pilot during implementation. After the helicopter has finished unloading the wattles, use a hand crew to place them according to the specifications below:

1. Lay out a contour line on the slope with a hand level and wire flags.
2. Dig a shallow depression 3 to 5 inches deep in soft soils and 2-3 inches in rocky soils with a pulaski or pick.
3. Soil excavated from the trenches should be placed on the either side of the trench to hold the wattle in position.
4. Place the fiber roll and backfill the upslope length of the fiber roll with the excavated soil. Compact to prevent water from flowing under the fiber roll.
5. Turn the ends of the fiber roll upslope slightly (like a smile) to trap sediment and prevent channeling of flows.
6. Drive a 1- by 2-inch or 2- by 2-inch wooden stake through the center of the fiber roll and at least 6 inches into the ground. Stop 2 inches above the fiber roll. (Stake lengths should be 18 to 24 inches.)
7. Put six stakes in the 25-foot fiber roll.
8. Place wattles 15 feet apart horizontally and 20 feet apart vertically (~50 per acre) on high-burn severity slopes.
9. Stagger the layout on the slope in a bricklayer pattern starting at the top of the slope with a 12 to 18-inch overlap.

3. Purpose of Treatment Specifications: Wattles reduce erosion by shortening the slope length to slow overland flow velocity. They also trap sediment and provide a seedbed for vegetative recovery. If water repellant soils are present, the installation of the wattles may break through the water repellant layer and can improve infiltration.

4. Monitoring: In order to ensure the achievement of these design standards, a locate a monitor nearby to coordinate with the helicopter pilot during implementation. Monitor treatment sites periodically after precipitation events to document the stability and longevity of the treatments. In addition, a Fire Effects Monitoring and Inventory (FIREMON 2006) protocol would be established to document the effectiveness of the wattle treatment. This protocol would involve setting up photo plots and transects within the treatment areas and established control sites to record the differences in vegetation recovery, soil stability, ground cover, and weed establishment. The monitoring data would be used to provide adaptive management feedback to improve future treatment performance.

Action #3 – Conduct Noxious Weed Detection Surveys and Eradication Treatments As Needed.

1. Location (Suitable) Sites: Complete surveys in riparian areas and dozerlines as the first priority. Conduct second survey along likely seed transmission corridors such as roads, handlines, and staging areas. Surveys of the general habitats in the burned area would be the lowest priority.

2. Design/Construction Specifications: Conduct noxious weed detection surveys and treatment annually at least two consecutive years after the fire. Begin surveys in 2008 during the flowering periods of weed species. Map all locations using GPS and document accordingly. If weeds are detected, a supplemental request for BLM Burned Area Rehabilitation funds would be made to eradicate the invasives. Treatments would involve manual pulling and possible use of approved herbicides under the BLM's **Vegetation Treatments Using Herbicides Programmatic EIS (2005).**

3. Purpose of Treatment Specifications: The objective of noxious weed treatments is to contain and prevent further spread of known and newly invading populations of weeds using appropriate weed control measures, i.e., early detection, treatment, and control. Early detection through on-site monitoring is the most effective means to prevent or control noxious weed establishment.

4. Monitoring: Complete all weed detection surveys in the first year after the fire. If treatable weed infestations are found at this time a monitoring report, requesting eradication funds, would be submitted to the BLM Regional Emergency Stabilization and Burned Area Rehabilitation Coordinator. These treatment areas would then be monitored for effectiveness for the following two years using BAR funding. If no weeds are found the first year, conduct a verification survey the second year. If weeds are found, then eradication funding would be requested. If no weeds are found, the monitoring would cease.

Action #4 – Monitor Cultural Resources

1. Location (Suitable) Sites: Monitor known historic and prehistoric sites.

2. Design/Construction Specifications: Monitor cultural resources for possible disturbance from sediment and ash erosion and looting/vandalism for the first year post-fire. If disturbance is found, stabilization treatments may be proposed, cultural sites may need to be inventoried, or law enforcement patrols may be implemented.

3. Purpose of Treatment Specifications: The objective of monitoring known historic and prehistoric sites is to determine the degradation risk from erosion and/or looting/vandalism. Reducing the risk of degradation to cultural sites would

provide for the long term management and protection of potentially eligible historic properties.

4. Monitoring: Monitoring will be conducted by a BLM–Bishop staff archaeologist, using established BLM Protocol, illustrating a best faith effort toward protection of cultural resources under Section(s) 106/110 Standards and Guidelines, upholding concurrent California State Agreements with the California State Historic Preservation Officer (SHPO).

IX. **No Action Alternative:** Under this alternative, no emergency stabilization treatments would be implemented. Implementation of this alternative could increase the risk of soil erosion and jeopardize private lands and Highway 395. Soil erosion and weed infestation would compromise restoration of ecological site function and lead to degraded water quality from increased sedimentation. This alternative could lead to increased future costs from sediment deposition or flash floods, perhaps exceeding a million dollars, if U.S. Highway 395 and the private residences are damaged during a major rain event.

X. **Affected Environment/Environmental Impacts:**

The Larson Fire occurred in the eastern Sierra Nevada foothills on predominately steep, granitic slopes. The lower elevations of the burn were predominately private lands occupied by pasture vegetation. The more flat, upper elevation portions of the burn were dominated by sagebrush steppe and mountain big sagebrush vegetation and the steeper slopes included a mix of pinyon pine woodland. All of these native vegetation types have evolved with fire, with many species requiring fire to germinate. However, the ecosystem function of this geographic region has been upset by the introduction of non-native species, most especially cheatgrass. Most of the area burned in the Larson Fire had not burned in recent history, but infestations of cheatgrass were present from other disturbances, such as roads and trails. The amount of cheatgrass in the seedbank of the Larson burn is expected to be high and this will have an adverse impact on the recovery of native vegetation. The lack of re-establishment of species such as bitterbrush will in turn negatively impact wildlife such as mule deer, by decreasing their supply of winter range forage and habitat.

Due to the geographic location, size and configuration of the Larson Fire Burn Area, many resource values do not occur or exist in the area potentially affected by this proposed action. The following resource list identifies those physical, biological or other pertinent resources BLM considered and discarded from further evaluation because of their nonexistence:

Areas of Critical Environmental Concern
Essential Fish Habitat

Farmlands, Prime or Unique
Floodplains
Land Uses / Realty / Rights-of-way
Minerals (Mining Activity)
Threatened & Endangered, Sensitive Vegetation Species
Threatened & Endangered Wildlife
Waste, Hazardous or Solid
Wilderness
Wild & Scenic Rivers

The following resources exist in the area of potential effect, are described, and analyzed for impacts.

A. Air Quality

Affected Environment

The Larson Fire burned area is not within any federal non-atainment/maintenance area under jurisdiction of the Great Basin Unified Air Pollution Control District. Existing destabilized soil, ash, and burnt vegetation would increase air quality visibility issues when dust becomes airborne during wind events.

A. Proposed Action Impacts

No permanent, long term air quality impacts are expected under the proposed action alternative because the area is not within a federal air quality nonattainment area. Additionally, the implementation of the proposed action would cause some soil disturbance from helicopter activity over the loose soils and burnt vegetation at the project site. Impacts to air quality from various precursor ozone emissions would occur over the five days during implementation. In the long term, the proposed action should reduce air quality visibility issues as vegetative cover reestablishes itself and soils restabilize, thus reducing airborne dust activity.

B. No Action Impacts

Under this alternative, it is more likely destabilized dust and ash during high winds would cause reduced visibility, and drift onto roads, ditches, and low spots where it could hamper traffic and possibly contribute to U.S. Highway 395 closures or traffic accidents.

B. Consistency with County Planning

Affected Environment

The Larson Fire burn area is located in northern Mono County. Public lands in Mono County are classified as “Resource Management” (RM). The RM designation is consistent Federal law, policy and regulation and supports BLM mission to execute its multiple use mandate as directed by various authorities, regulations, and policies on public lands.

A. Proposed Action Impacts

The proposed action would not be inconsistent with county planning designations for the area classified as RM because BLM is exercising its policy to maintain and manage for biological and physical integrity of public lands. Additionally, the BLM’s strategy to protect life and property is consistent with related county services for residents and motorists in the area.

B. No Action Impacts

The no action alternative would be inconsistent with county planning because BLM would be abrogating its responsibility to maintain and manage the biological and physical integrity of public lands as directed by federal law, regulations, and policy. By taking no action, BLM would neglect a burned area requiring emergency stabilization and thus, exposing the area to soil erosion, possibly increasing life and property damage, degrading water quality, etc.

C. Cultural Resources

Affected Environment

The Larson Fire Burn Area is located on the natural and cultural transition zone-from High Sierra to Basin and Range. The west side of Antelope Valley is ethnographically documented as inhabited by the Washo (d’Azevedo; 1986; 471). Natural resources located in this area still support the potential for traditional uses. Building foundations (Chichester house), water conveyance system (Swagger Ranch ditch) and a local landmark (Centennial Bluff) are the physical remnants of an Historic era spanning to recent times.

A. Proposed Action Impacts

Aerial application of engineered erosion control mulch (WoodStraw™) would contribute to slope stability, reducing runoff and potential soil erosion impacts to cultural resources. Any future ground disturbing activity would require additional assessment on a site specific basis. Proposed Action treatments would reduce impacts but would not

completely eliminate natural threats to these historic resources.

No negative impacts to cultural resources would occur because the proposed action requires cultural surveys prior to implementation.

B. No Action Impacts

Historic era cultural resources are currently vulnerable to erosion and deposition of sediments from the interior portion of the Larson fire. Likelihood for depositional flow onto these cultural resources would continue under the no action alternative damaging features that may contribute to an eligibility determination in the future.

D. Environmental Justice

Affected Environment

There are no low-income or minority populations living within the Larson Incident. Some members of these communities hunt and some do subsistence collecting of materials from public lands such as basket weaving materials, medicinal plants, etc . The Washoe and Antelope Valley Native American community would potentially use the area for traditional gathering although it is unlikely because of the area's inaccessibility and steep terrain. This no known economic value tied to Native American use or relationship to the area.

A. Proposed Action Impacts

The proposed action would likely have beneficial effects on native vegetation in the long term as native plants outcompete invasive weed species and become established in the area. This would restore the subsistence environment of grasses, pinyon pine, etc. typical of the area and important to the Tribe. There would be no disproportionate impacts to low income or minority groups, per Executive Order 12898 (2/11/94).

B. No Action Impacts

This alternative would lessen the availability of natural materials important to the Native American Tribe in the short term. Since most of the public land in the proposed action are on steep, inaccessible slopes, it would affect gathering practices very little.

E. Invasive, Non-Native Species

Affected Environment

Cheatgrass (*Bromus tectorum*), tansy mustard (*Descurania sophia*), and filaree (*Erodium sp.)* are known to occur on BLM land within the burn area. In addition, bulbous bluegrass (*Poa bulbosa*) and sisymbrium (*Sisymbrium sp.)* are known to occur on private lands within the burn and along access routes to the burn. Several plant vectors such as roads, trails, wind, and waterways occur within the fire area. In addition, seed could have been transported into the burn on suppression equipment and supplies. Fire is known to enhance the establishment of all weed species present.

A. Proposed Action Impacts

The proposed action would reduce the spread of weeds by limiting the amount of soil disturbance caused by erosion. Weed detection surveys would also identify new infestations and expedite eradication or control. However, regardless of completing weed surveys and noxious weed treatments cheatgrass would remain a threat to ecosystem health and function. No effective or feasible treatments or management are known to reduce this threat.

B. No Action Impacts

If no treatments are implemented then the likelihood of invasive weed infestations is more probable due to increased soil disturbance and lack of early detection. The costs associated with treating weed infestations once they have become extensive are usually very high and may make eradication or control unobtainable.

F. Riparian

Affected Environment

The Larson Fire burned several small creeks and springs at a low to moderate intensity. This riparian vegetation should recover rapidly as willows and water birch re-sprout readily in moderate intensity burns.

1. Proposed Action Impacts

The proposed action would increase the likelihood of native re-vegetation by limiting the infestation of nonnative weeds. However, regardless of completing weed surveys and noxious weed treatments cheatgrass would remain a threat to ecosystem health and function. No effective or feasible treatments or management are known to reduce this threat.

The mulch and wattle treatments would not be implemented in riparian zones therefore, no adverse impacts are expected.

b. No Action Impacts

If no action is taken, then invasive weed infestations is more probable due to a lack of early detection and control. The costs associated with treating weed infestations once they have become extensive are usually very high and may make eradication or control unattainable.

G. Soils

Affected Environment

The soil information for the Larson Burned Area was gathered by the Order 3 Soil Survey of the Bodie-Coleville Planning Units. These soils were grouped into two major areas. The first soil type is dominantly nearly level to gently sloping cool soils in closed basins that are undrained to well-drained. The second type is dominantly moderately to steeply sloping (30-70% slopes) cold soils on Sierra Foothill-slopes and glacial deposits; mostly very gravelly.

Soils that are very gravelly may tend to limit the establishment of seeds and seedling development. Furthermore, the very shallow soils may restrict water infiltration and plant rooting. These soils primarily occur on slopes and ridges. There is a potential for water erosion, mainly along stream banks, in meadows, at springs, and on steep slopes that lack native vegetation due to the fire.

Within the Larson burn area, infestations of cheatgrass have become established in the seedbank. Cheatgrass has a shallow root system that is weak in binding the top soil in place. Also, cheatgrass will often out-compete native plant species for available soil water and nutrients. The interactions between the physical, chemical, and biological properties of soils and plants strongly influence soil stability and watershed function (BLM 1998).

A. Proposed Action Impacts

Implementing the proposed action would aid native plant species reestablish, helping to reduce or control weed infestations. Native plant reestablishment would help maintain soil stability with extensive root systems and provide protection from strong precipitation events. Plant production would in-turn provide plant litter which plays an important role in soil stability by providing surface cover. However, regardless of completing weed surveys and noxious weed treatments cheatgrass would remain a threat to soil stability. No effective or feasible treatments or management are known to reduce this threat.

B. No Action Impacts

If no action is taken, then the likelihood of invasive weed infestations proliferating is more probable due to a lack of early detection and control. The potential for soil erosion is higher because many weed species have shallow roots or single taproots that are not as effective at stabilizing soil as native shrub species with deep, fibrous root systems. Native plants hold soils in place more effectively than weeds.

H. Vegetation

Affected Environment

The predominant plant communities within the BLM fire perimeter are; pinyon pine woodland, sagebrush steppe, mountain sagebrush, riparian, and cheatgrass (Lavin 1983).

Pinyon pine woodland, dominated by an intermittent canopy of single-leaf pinyon (*Pinus monophylla*) with an understory of mountain sagebrush (*Artemisa tridentata* ssp*. vaseyana*), Mormon tea (*Ephedra viridis*), bitterbrush (*Purshia tridentata*), squirreltail (*Elymus elymoides*), needlegrass (*Acnatherum* sp.), and cheatgrass (*Bromus tectorum*) is found throughout the burn area. Pinyon pine does not regenerate quickly after fire (200-300 years). A small portion on the northwest side of the Larson fire reburned vegetation previously covered in pinyon pine burned in 1994. This frequency is too recurrent for pinyon pine establishment and reproduction. Pinyon pine can also be restricted by excessive cheatgrass stands, which are already established throughout most of the burn area.

Sagebrush steppe comprised of an overstory of sagebrush (*Artemisia* sp.), bitterbrush, and desert peach (*Prunus andersonii*) and an understory of Mormon tea, needlegrass, and cheatgrass is also found throughout the burn area. The plant species of sagebrush steppe have evolved with fire return intervals of 25-30 years and will regenerate in the burn by sprouting and/or seeding. The success of sagebrush steppe vegetation re-colonizing the burn will depend on the density and cover of weed infestations. Heavy infestations of cheatgrass are already present in much of the burn area, especially at lower elevations. Cheatgrass will limit the growth and reproduction of native sagebrush steppe species and will likely lead to vegetation type conversion to non-native grassland if fire intervals continue at a high frequency (<30-100 years).

Mountain sagebrush vegetation, dominated by mountain sagebrush (*Artemisia tridentata* ssp. *vaseyana*) and bitterbrush (*Purshia tridentata*) with commonly associated species desert peach (*Prunus andersonii*), gooseberry (*Ribes viscossimum*), needle and thread grass (*Hesperostipa*

comata ssp. *comata*), and desert needlegrass (*Achnatherum speciosum*), is primarily found on the southern and northern flats of the burn area. Similar to sagebrush steppe, mountain sagebrush vegetation recovery depends on the density and cover of cheatgrass infestations. Cheatgrass is already well established in the seedbank of mountain sagebrush habitat and it will compete strongly with native species.

Riparian vegetation dominated by willows (*Salix* sp.) and water birch (*Betula occidentalis*) is distributed in several canyons, creeks, and springs throughout the burn area. In most locations, riparian vegetation burned with moderate to low intensity. The dominant vegetation is expected to fully recover over the next few years through re-sprouting. Seedling establishment of willows and water birch is expected to occur naturally in sandbars created by sediment deposition.

Infestations of cheatgrass dominated vegetation are scattered throughout the burn area with the heaviest infestations being in recently burned or disturbed areas. Cheatgrass responds extremely well to fire by producing a prolific number of seeds, ability to germinate more than once in a season, and heat tolerant seeds. These attributes allow cheatgrass to out-compete native species and can eventually lead to type conversion to cheatgrass stands.

A. Proposed Action Impacts

The proposed action would increase the likelihood of native re-vegetation by limiting the infestation of nonnative weeds. However, regardless of completing weed surveys and noxious weed treatments cheatgrass would remain a threat to ecosystem health and function. No effective or feasible treatments or management are known to reduce this threat.

B. No Action Impacts

If no action is taken, then the likelihood of invasive weed infestations is more probable due to a lack of early detection and control. Costs associated with treating weed infestations once they have become extensive would be higher and may make eradication orcontrol unobtainable.

I. Visual Resources

Affected Environment

The area is classified as a Visual Resources Management (VRM) II area in the Bishop RMP (1993). This means that any management action in this classification area must retain the existing character of the landscape. The level of change to the landscape should be low. The changes may be

seen from key observation points such as highways, campgrounds, etc. but should not attract the attention of the casual observer.

The burn area currently appears as a charred lunar landscape with little to no vegetation and numerous burnt snags, limbwood, and skeletal sage brush. Most of the burn area on BLM land is above the private land that borders it. From the highway which is the main key observation point, the motorist can observe mostly the higher, steeper reaches of the burned hill areas. Many of the drainages on public land are not easily visible because of their angular physiography, tucked away from the highway viewshed.

A. Proposed Action Impacts

The proposed action would conform with the VRM II standard because the proposed straw waddles and other erosion control devices would not been seen from the highway or nearby areas used by the public. The proposed monitoring would have not a visual impact because only footprints would be left once surveys are completed.

B. No Action Impacts

The No Action alternative would make it more difficult to meet the VRM II standard in the short term because the visual character of the area would improve more slowly without erosion control devices to maintain the natural appearance of the landscape and native plants to hold soils firmly in place and provide the vibrant color typical of the area.

J. Water Quality

Affected Environment

The Larson Fire impacted the water quality in several small creeks and springs by introducing ash and sediment into the watercourses. Precipitation would periodically impact water quality until vegetation regenerates in these watercourses and springs. This riparian vegetation should recover rapidly as willows and water birch re-sprout readily in moderate intensity burns.

A. Proposed Action Impacts

The proposed action would improve water quality by reducing the amount of sediment and ash runoff into creeks and springs. The treatments would reduce overland flow by protecting soil from precipitation impact, increasing soil moisture holding capacity, and aiding in re-establishment of vegetation.

B. No Action Impacts

If no action is taken, then water quality would be negatively impacted, due to increased soil erosion levels. Water quality would continue to be impacted until vegetation can re-establish which may be delayed by increased soil disturbance.

J. Wildlife

Affected Environment

There has been a significant, cumulative loss of key mule deer winter range for the West Walker mule deer herd due to the numerous fires in the region, and the short ecosystem recovery interval between those fires. In addition, because of the fire intensity associated with the Larson Fire, it is unlikely given past ecological recovery of adjacent fires, that bitterbrush (*Purshia tridentata*) the key winter forage species for mule deer, would regenerate to pre-fire conditions.

Loss of this critical forage base has been exacerbated by past fires, especially in re-burned areas that have lost recovering native species and have been type-converted to a cheat grass dominated system from the Vittori and Dana Fires.

A. Impacts of Proposed Action

The proposed action would increase the likelihood of native re-vegetation, specifically bitterbrush, by limiting the infestation of nonnative weeds. However, regardless of completing weed surveys and noxious weed treatments cheatgrass would remain a threat to bitterbrush regeneration and therefore, mule deer winter range forage. No effective or feasible treatments or management are known to reduce this threat.

B. Impacts of No Action

If no action is taken, then the likelihood of invasive weed infestations, other than cheatgrass, is more probable due to a lack of early detection. If these infestations become unmanageable there would most likely be a significant detrimental impact on deer winter range forage.

X. **Cumulative Effects:**

Cumulative effects of the proposed action are largely confined to the Antelope and Slinkard Valley areas where this east-central Sierra ecotone has endured several wildfires in the last decade. Emergency actions of these past wildfires

have included similar actions as those described in this environmental assessment i.e. protection of life and property, monitoring for spread of invasive species, etc.

This proposal, like its predecessors (the Vittori, Dana, and Cannon Fires), would initiate restoration and stability of natural functioning processes that are severely impaired by past wildfire destruction. The proposal would be another attempt to restore similar landscapes in the area using erosion control devices, monitoring, etc. The effect would be positive in facilitating native plant reestablishment and soil stability, protecting water quality, safeguarding cultural resources, and reducing impacts to U.S. Highway 395 and nearby residences.

This project is not expected to contribute to cumulative effects because the nature of this proposal and its impacts are such that it would benefit natural processes to restore itself, subsequently averting negative impacts to other resources affected i.e. cultural, life and property, etc. This project does not have significant impacts upon the human environment.

XI. Persons/Agencies Consulted:

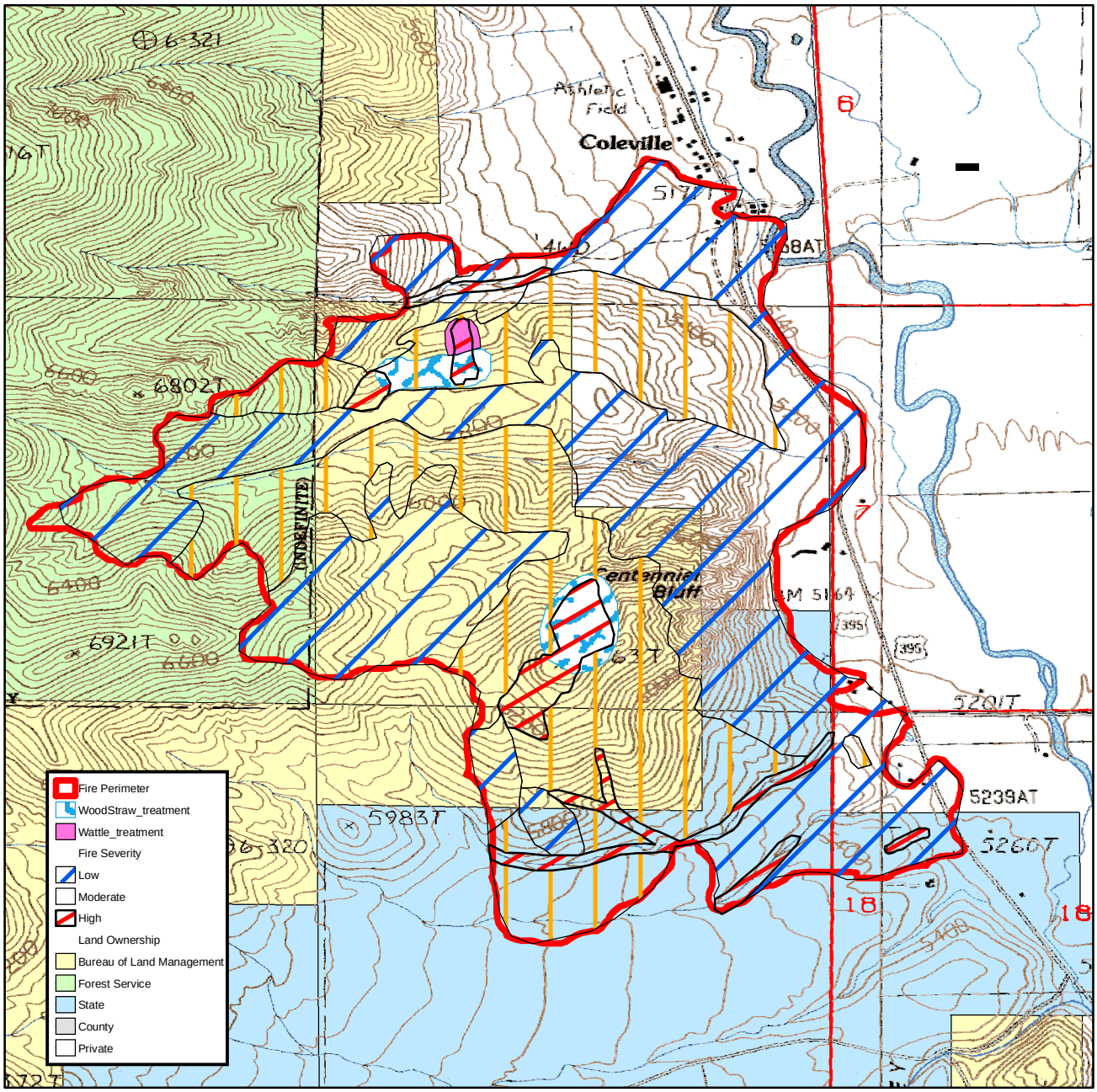
Inyo National Forest
Department of Fish and Game
Humboldt-Toiyabe National Forest

XII. Preparer(s):

Todd Ellsworth, USFS Soils Scientist
William Kerwin, BLM Archeologist
Joe Pollini, BLM NEPA Coordinator
Casey Shannon, USFS Hydrologist
Katie VinZant, BLM Natural Resource Specialist

Reviewed By:_____ Date: _____
Environmental Coordinator

Larson Fire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Bureau of Land Management
Forest Service
State
County
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Athletic Field
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