

**United States Department of the Interior  
Bureau of Land Management**

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**Environmental Assessment ID-220-2009-EA-3591**

**Milner Wildland Urban Interface**

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# **INTRODUCTION**

## **BACKGROUND /CONTEXT**

The Milner Historical Recreation area is a relatively large isolated public land tract (approximately 1,900 acres) that is bound by the Snake River on the north and private agricultural lands on the east, west and south (see map). The tract is used heavily by the public due to its close proximity to many communities in the Mini-Cassia and Magic Valley area. It provides access to the Snake River, including boat ramps and offers public camping areas along the Snake River. There are approximately six and half miles of roads within the recreation area. They are mostly graveled surface one-lane roads. Approximately, four miles of the Eastern Idaho Rail Road (EIRR) bisects the area. The ingress and egress into the area on the east side of the project is under the railroad grade and is extremely narrow with continuous fuels on either side. In addition, the Burley Trap Club is located within the confines of the Milner Recreation area.

In a study of recreation activity near Milner Dam by Idaho Power Company, they found that there was approximately 82,000 hours of recreational use in this area. Approximately 75% of the use occurred in the months of July, August and September. This heavy use period also corresponds with the period of highest fire danger. Fire danger is measured by the Burn Index (BI). The BI is a number related to the difficulty of controlling a wildfire. It is a function of the spread component and energy release component. For south central Idaho, the BI was rated as high 85% of the time and very high 73% of the time during July, August and September. The fuel/vegetation within the Milner Recreation is characterized by a dense sagebrush overstory with a continuous understory of Sandberg's bluegrass and cheatgrass.

There are 11 BLM camping sites with an additional 24 dispersed sites within the recreation area. Since 1982, the BLM wildfire database shows that there have been 22 starts within the recreation area and have been burned approximately 700 acres since 1982 within the 3,100-acre project area. The project area is comprised of approximately 1,900 acres of public land, and 1,200 acres of private land of which approximately 800 acres is in developed agriculture (see map 1).

## **PURPOSE AND NEED**

The purpose of the proposed action is to provide for public and firefighter safety by improving ingress and egress in the Milner Recreation area and reduce the probability of a wildfire start along the railroad right-of-way (ROW) and the camping and picnicking areas. The need stems from the fact that the largest amount of recreational use occurs during the months with highest fire danger.

## **CONFORMANCE WITH APPLICABLE LAND USE PLAN(S)**

The Cassia Resource Management Plan (RMP) was approved on January 24, 1985. The Cassia RMP was amended in 2008 by the Fire, Fuels, and Related Vegetation Management Direction Plan Amendment (FMDA). The proposed activities are in conformance with the Cassia RMP as amended because the RMP specifically provides for vegetation treatments in and around WUI areas with the goal of reducing fire hazard (FMDA Record of Decision 16).

### **RELATIONSHIP TO STATUTES, REGULATIONS OR OTHER PLANS**

The proposed action is tiered to Final Programmatic Environmental Impact Statement for Vegetation Treatments using Herbicides on Bureau of Land Management Lands in 17 Western States (2007).

The use of Forage kochia is allowed in the Twin Falls District as per Instruction Memorandum-ID200-2008-003. The rationale and guidance for its use is found in Washington Office Instruction Memorandum 2007-206. It states that the use of Forage kochia is appropriate in areas where cheatgrass is the dominant species. These documents can be found in the projects administrative record.

### **PUBLIC INVOLVEMENT**

Scoping letters were sent to 14 interested publics in January 2009 and has been listed on the Idaho NEPA Database since January 2009. In response to this effort, four-interested public commented on the scoping package. Two of the interested public supported the project as proposed. One interested public suggested an alternative to the proposed action which was considered but not studied in detail (see discussion below). Other comments expressed concerns over the introduction and spread of noxious weeds, effects of off road vehicle use (ORV), and existence of sage grouse in the project area, spread of cheatgrass, destruction of sagebrush, livestock grazing, and the Wildland Urban Interface (WUI) designation of the project area.

The final EA and Finding of No Significant Impact (FONSI) were posted on BLM's NEPA website on May 18, 2009 and the NEPA database was updated to show that the Final EA and FONSI were available. Certified letters were sent to the 4-interested public that commented on the scoping package informing them of the posting. No comments were received from the internet posting or from the direct contact by certified mail were received from this scoping effort.

#### **Response to public comments:**

Noxious weeds, livestock grazing, removal and replacement of existing vegetation and ORV use are analyzed in the EA.

Sage grouse have been monitored in the Burley Field Office (BFO) since around 1951. No leks have been documented in the project area since that time. The closest active lek is 14 miles south of the project area. The project area is isolated and is surrounded by agriculture and urban areas it is not considered sage grouse habitat. Furthermore, there are no documented sage grouse sightings in the area so sage grouse are not affected.

The definitions of WUI were expanded by the Healthy Forest Restoration Act (HFRA) in June of 2004. HFRA allowed for the development of County Wildfire Protection Plan (CWPP) that used a collaborative approach to designate WUI areas in Cassia County. The CWPP's are available at [http://www.idl.idaho.gov/nat\\_fire\\_plan/county\\_wui\\_plans/cassia/cassia.html](http://www.idl.idaho.gov/nat_fire_plan/county_wui_plans/cassia/cassia.html). These WUI zones are not based on legal boundaries but are solely created by local fire chief's opinion of urban interface. These decisions were not formally calculated but contain the local knowledge and previous history of fire activity. *Process description:* 1) WUI areas were drawn on hard copy county maps provided to the local county/rural fire chiefs 2) Local issues/knowledge was used to determine WUI area. Factors that were considered were: fuel loading, terrain/topography, distance from station, manpower, available resources 3) Polygons were digitized using a heads-

up method in ArcMap 9.1 4) Resulting polygons were provided to fire chiefs again for proofing  
5) Edits were done as needed.

Lastly, a casual observation of the amount of activity that occurs in the area, the amount of infrastructure such as the Burley Trap Club, the EIRR bisecting the recreation area, power lines, agricultural fields, boat ramps, Oregon Trail Kiosks, and the amount of public recreation use the area warrants the WUI designation.

## **PROPOSED ACTION AND ALTERNATIVE(S)**

### **PROPOSED ACTION**

The proposed action is to create three 2-acre safety zones/anchor points. Two miles (37 acres) of fuel break 100-150 feet wide (50-75 from center). The fuel break on the east side of the project area would begin at the Milner Road and tie into a graveled parking lot on the north side. The fuel break on east site would begin at the Milner Road and tie into the safety zone near the railroad tracks. A buffer 25 feet from center (2.5 miles long, 16 acres) may also be created along the railroad right-of-way to catch sparks from passing trains. The method used to prepare the seed bed would be to mechanically remove the sagebrush overstory with a brush beater from the designated sites (see map 1) in the fall of 2009. These treated sites would then be ground sprayed with *Glyphosate* in the spring of 2010. The broad-spectrum non-selective herbicide *Glyphosate*, when applied at low concentrations (10-16 oz/3gallons of water/acre), is effective at controlling Cheatgrass brome and annual exotic weeds. Then in early fall, the sprayed vegetation would be mechanically removed to create a seedbed (bare ground). The seedbed would be prepared by dragging a Dixie harrow in the sprayed area two to three times until bare ground was created. Forage kochia would be applied in early winter at 3-6 lbs per acre using a broadcast seeder. Finally, a smooth roller would compact the seeded area creating adequate seed to soil contact.

The disturbed areas would be surveyed for noxious weeds during subsequent years. In order to accommodate cultural concerns the fuel break would be created on one side of the existing roads.

Equipment would be cleaned before beginning work. If noxious weeds are discovered, they would be treated as appropriate in order to control their spread.

A signing program would also be implemented to inform members of the public of the current fire danger what to do and where to go in the event of a wildfire.

In order to monitor seeding establishment two permanent density and cover plots with photo points would be established in the seeded areas.

Livestock will be removed from the allotment until the seeding becomes established or has been determined that it has failed.

If any cultural or historical sites are discovered during project implementation, work would cease and efforts would be made to avoid any further disturbance to the site. Site-specific mitigation would be determined and appropriate consultation with the SHPO would occur prior to resuming activities.

The proposed action would avoid harming migratory birds by timing the mechanical and chemical treatments outside the migratory bird nesting periods for the birds expected to occur in the project area (April 15- July 31).

**NO ACTION**

Under this alternative, the project would not be implemented.

**ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY**

The following alternatives were considered by the BLM or were crafted from comments that were received during the scoping process.

**CLOSE THE MILNER RECREATION AREA DURING PERIODS OF EXTREME FIRE DANGER.**

One proposal was to close the recreation area during periods of potentially extreme fire behavior. The closure would remove potential human ignition sources from the area and provide for public safety but it would not provide for firefighter safety. In addition, the Eastern Idaho Rail Road (EIRR), the Milner County Road, power lines, natural starts and adjacent homes and agricultural lands would still provide ignition sources. As stated in the scoping package and the background/context section of this EA, the Milner Recreation area is an extremely popular recreation site with approximately 61,500 hours (73%) of recreation use occurs between July and September. A design feature of this project would be to place signs that inform and remind people to be extra cautious during these periods. In addition, the BLM has an active advertisement campaign in the form of billboards and radio commercials cautioning and warning people about wildfire while they are using public lands. Lastly, the BLM does have a plan to implement fire restrictions if certain criteria are met. The plan can be found at [http://www.blm.gov/style/medialib/blm/id/fire.Par.44330.File.dat/IdahoFireRestrictionsPlan\\_2008.pdf](http://www.blm.gov/style/medialib/blm/id/fire.Par.44330.File.dat/IdahoFireRestrictionsPlan_2008.pdf) (pg40-42). The BLM is mandated to manage for multiple use activities and the Milner Recreation area is highly popular. As previously stated, there are current plans in place to address specific closures and restrictions as fire risk changes and this proposal would not provide for firefighter safety. Therefore, this alternative was considered but eliminated from detailed study.

**NATIVE SPECIES TO CREATE A FUEL BREAK**

The use of a native species to create a fuel break was considered by the BLM. A literature, personal contact and internet search for a native species that would meet the purpose and need of the proposed action was conducted but native species that could serve as self sustaining fuels break were not discovered. Species like Thurber's needlegrass, Blue flax, Indian paintbrush, and Scarlet globe mallow were considered but were found inadequate because they would not meet the need for creating an effective fuel break. This is because they do not grow dense enough to keep out Cheatgrass brome in the long term (specialist report 1). In Monsen's (1994, p. 365) review of literature, he found that few native species demonstrate the broad adaptability, establishment or competitive attributes needed to create fuel break.

The use of the native Sandberg bluegrass was also considered but not analyzed in detail. In the same paper, Monsen (1994, p. 365) stated the Sandberg bluegrass has vegetative features useful for fire containment. These include low fuel load and competitiveness with annual weeds. However, during years with above-average moisture Sandberg bluegrass produces sufficient fine fuels to carry a fire. Sandberg bluegrass is found throughout the project area and is often found in large solid stands. Its burning characteristics are similar to Cheatgrass brome due to its

continuity (specialist report 2). It also dries out earlier than even Cheatgrass brome (specialist report 3) and is often a primary fire carrier. For these reasons, this alternative was considered but eliminated from detailed study.

#### **CRESTED WHEATGRASS TO CREATE A FUEL BREAK**

This alternative has been used by the BLM in the past with limited success. Crested wheatgrass is a self-sustaining vegetation and it has been used to create fuel breaks or "green strips" in the project area. Crested does stay greener longer than the current grasses/fine fuel that exist in the area (Cheatgrass brome and Sandberg bluegrass) but it also dries out and becomes ineffective at stopping a wildfire during the peak fire season (July 1 to September 15). For this reason, this alternative was considered but eliminated from detailed study.

#### **MOWING**

This alternative was considered by the BLM. Mowing does remove the current vegetation and would create a fuel break. However, mowing is a short-term solution because it would have to be conducted at least once every year since the majority of the project area is currently in a shrub-grass fuel model. Even if the shrub component was removed, the grass would grow back every year. Since most of the vegetation would have to be cut very short, year after year invasive and/or non-native species may become established into the open areas created by the frequent mowing. Lastly, in order to be effective at removing fuel (grass) mowing would likely occur after the grass has quit growing (April 15 to June 15). Since the vegetation would already be dried out, the risk of starting a wildfire would increase due to sparks created by the mower striking rock. For these reasons, this alternative was considered but eliminated from detailed study.

### **AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

The no-action alternative reflects the current situation within the project area and will serve as the baseline for comparing the environmental effects of the analyzed alternatives.

After reviewing the proposed action and the affected area, the Interdisciplinary Team determined that several elements of the human environment could potentially be affected. These elements and the expected impacts to the human environment are discussed below.

#### **AIR QUALITY**

The Idaho DEQ routinely monitors air quality but does not regulate fugitive dust emissions. This area is meeting air quality standards. The closest non-attainment site to the project area is the Portneuf Valley site near Chubbuck, Idaho. It is approximately 70 miles east of the project area.

#### **No Action**

There would be no affect to air quality due to the proposed action.

#### **Proposed Action**

The proposed action would have a minor affect on air quality in the short term. This would be in the form of dust that would be produced while preparing the seedbed. The Environmental Protection Agency (EPA) estimates that dust emissions (particulate matter) from ground-disturbing activities (such as disking and drill seeding) are emitted at a rate of 1.2 lbs PM<sub>10</sub>/acre-pass (Gaffney and Yu 2003). Based on these estimates, the proposed action is anticipated to disturb approximately 53 acres of ground and would produce approximately 64 pounds of PM<sub>10</sub>

dust over a 2-year period. Dust created because of preparing seedbeds would be of short duration. Dust created because of the proposed action would be difficult to differentiate from dust created by farmers working fields in the Snake River Plain and would settle in few hours once the ground disturbing treatment is discontinued. The closest non-attainment site (Portneuf Valley site near Chubbuck, Idaho) is approximately 70 miles to the east of the project area. Dust from the project area is not anticipated to reach the site.

### **Cumulative Impacts**

Other activities in the project area that affect air quality include recreational and administrative use of roads, farming, and livestock grazing. These activities are not expected to result in measurable impacts to air quality. Road use creates dust. This dust is of short duration and settles out of the area within a few hours. Farming activities also create dust for short durations. Livestock use can also create small amounts of dust for a short duration. Based on the timing of these activities, dust created by these activities may overlap during times that the proposed action is occurring. The cumulative amount of dust is expected to be small and of short duration, because dust settles out of the air within a few hours of the activities taking place. Dust from these activities would not result in non-attainment of air quality standards.

### **NOXIOUS WEEDS AND NON-NATIVE, INVASIVE SPECIES**

Noxious weeds are plant species that have been designated "noxious" by law. The Idaho Department of Agriculture uses the following criteria for designation of a noxious weed:

- It must be present in but not native to Idaho;
- It must be potentially more harmful than beneficial to Idaho;
- Eradication must be economically physically feasible;
- The potential adverse impact of the weed must exceed the cost of control.

There are hundreds of weed species in Idaho; however, only 57 are designated noxious by the Idaho State Department of Agriculture.

Non-native, invasive species are defined as an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.

According to the BLM inventory, nine noxious weeds are known to occur in the project area. These weeds are scattered across the project area and usually occur as a single plant or in small patches. There were 46 occurrences each of Musk Thistle, 37 occurrences of Canadian thistle, 16 occurrences of white top and 13 occurrences of Poison hemlock. Russian knapweed, Scotch thistle, Field bindweed, Black henbane and Diffuse knapweed have a combined 15 occurrences. Cheatgrass brome is widespread throughout the project area and occurs to some extent in all areas. Approximately 1,700 acres (73%) within the project area has a large Cheatgrass brome presence or is dominated by Cheatgrass brome (see map 2).

The known sites of noxious weeds have been aggressively treated to stop the spread of noxious weeds. These sites are revisited two to three times per year to monitor and retreat any weeds if necessary.

### **No Action**

Do to the high use of the area new noxious weed are likely to be introduced into the area and existing noxious weeds may spread. In the event of a wildfire, indirect effects include a higher

possibility of new noxious weed species being introduced into the area by suppression resources coming from other areas of the district, Idaho or states. In addition, as the occurrences of noxious weeds increase, chemical treatments to treat noxious weeds would likely increase.

#### **Proposed Action**

During implementation, the proposed action would increase the risk of noxious weeds and invasive, non-native species becoming established in areas where vegetation is removed and the soil is disturbed. Spaying herbicides and mechanical treatments remove existing vegetation leaving bare soils that are conducive to noxious weeds establishment. However, design features such as cleaning equipment before work begins and monitoring and controlling any noxious weeds that are discovered in the project area are proposed as design features in order to reduce the likelihood that new infestations of noxious weeds would become established.

#### **Cumulative Impacts**

Ongoing activities in the project area, which could lead to new noxious weeds being introduced or spread an existing infestation, are road uses, recreational use, and livestock related activities. Livestock grazing within this area is mainly in the form of cattle grazing. The railroad could lead to new weeds being brought into the area or transport existing weeds to other locations. The agricultural fields adjacent to the project area could also contribute to noxious and invasive weeds being spread into the project area. However, annual monitoring and treatment of known noxious weed areas occur throughout the project area. These ongoing treatments have resulted in controlling known areas of noxious weeds and led to new discoveries that are also treated. The known sites are being controlled and weed densities are becoming smaller. The railroad also treats noxious weeds along its ROW in the project area. All weed treatments

Cumulatively, noxious weeds are expected to persist and may expand in the project area primarily along roads and rights-of-way.

#### **CULTURAL AND HISTORICAL RESOURCES**

Cultural resources present include the Oregon Trail including campsites, as well as historic remnants of sheep and cattle herding activities.

#### **No Action**

There would not be an effect to any cultural or historical resources. Although, in the event of wildfire large areas of sagebrush would be removed and it is likely that an emergency stabilization plan would be implemented. The subsequent anticipated grass seeding may disturb any unknown cultural or historical resources.

#### **Proposed Action**

Consultation with the State Historic Preservation Office (SHPO) was conducted in compliance with Section 106 of the National Historic Preservation Act. The SHPO concurred with the BFO Archeologist that the proposed action would not affect any known cultural or historical resources in the project footprint area. If any sites are discovered during project implementation, work would cease and efforts would be made to avoid any further disturbance to the site. Site-specific mitigation would be determined and appropriate consultation with the SHPO would occur prior to resuming activities.

The proposed action is expected to result in smaller wildfires that burn fewer acres. Similar to the no action alternative, there is a risk of disturbing unknown cultural and historical resources.

It is anticipated that some disturbance because of fire suppression operations is likely in the future; however, because wildfires are expected to be smaller, suppression operations would occur on fewer acres. As a result, the risk of disturbing unknown cultural and historical resources would be less than under no action.

### **Cumulative Impacts**

The proposed action would provide a more stable site surface for cultural resources in the area. A more stable site surface better protects cultural resources from wind erosion, ORV use, livestock impacts and surface collection by artifact collectors. Other than the proposed action and the projects discussed above, there are no other past, present, or reasonably foreseeable future actions that are expected to alter cultural resources in the project area.

### **BLM SENSITIVE ANIMALS**

BLM sensitive animals that occupy or could occupy habitat in the project area include Brewer's sparrow, Sage sparrow, and Loggerhead shrike (Dechant et al 2002 and Knick and Rottenberry, Woods and Cade 1996). These species could use shrubs in the project area for nesting (specialist reports 4 and 5).

### **No Action**

The habitat available for affected BLM sensitive animals could more easily be lost to wildfires (which could remove the shrubs they use for nesting) if no action is taken to reduce fire size and improve the ability for firefighters to fight fires, and thus reduce fire size.

### **Proposed Action**

The habitat of affected BLM sensitive animals would be directly affected through the loss of existing vegetation containing shrubs suitable for nesting where it would be converted to Forage kochia. However, the total loss is not expected to be great, as it only converts 3% of the total loss area. Indirectly, these species could benefit if the added fuel breaks and increased firefighter safety leads to improved effectiveness of fire suppression and consequently smaller fires.

### **Cumulative Impacts**

Other potential actions which could affect BLM sensitive animals in the project area include livestock grazing, recreation, the EIRR and fragmentation resulting from settlement patterns. Grazing could affect the shrub nesting BLM sensitive birds occasionally if cattle disturb or trample nests. Recreation could have a similar effect on shrub nesting birds. The EIRR could disturb nesting birds through continual noise disturbance as trains pass. Fragmentation could continue to affect these species because it has rendered this portion of public land isolated from other larger tracts of sagebrush steppe habitat (Knick and Rottenberry 1995). Cumulatively, the proposed action is expected to improve the current situations for BLM sensitive birds through potential habitat protection.

### **MIGRATORY BIRDS**

Migratory bird species of conservation concern (migratory birds) which occur within the Burley Field Office (which are not considered sensitive by the BLM) were analyzed for potential effects. The only species which might be affected by this project is the Grasshopper sparrow which could use shrubs in the project area for nesting (Vickery 1996).

### **No Action**

The habitat available for affected Grasshopper sparrows could more easily be lost to wildfires (which could remove the shrubs they use for nesting) if no action is taken to improve the ability for firefighters to fight fires and thus reduce fire size.

### **Proposed Action**

Grasshopper sparrow habitat would be directly affected through the loss of existing vegetation containing shrubs suitable for nesting where it would be converted to Forage kochia. However, the total loss is not expected to be great, as it only converts 3% of the total loss area. Indirectly, these species could benefit if the added fuel breaks and increased firefighter safety leads to improved effectiveness of fire suppression and consequently smaller fires.

### **Cumulative Impacts**

Other potential actions which could affect BLM sensitive animals in the project area include livestock grazing, recreation, the EIRR and fragmentation resulting from settlement patterns. Grazing could affect the shrub nesting BLM sensitive birds occasionally if cattle disturb or trample nests. Recreation could have a similar effect on the Grasshopper sparrow. The EIRR could disturb nesting birds through continual noise disturbance of passing trains. Fragmentation could continue to affect these species because it has rendered this portion of public land isolated from other larger tracts of sagebrush steppe habitat. Cumulatively, the proposed action is expected to protect the current situations for Grasshopper sparrow across the project area.

### **VEGETATION AND SOILS**

The dominant vegetation in the project area is Wyoming sagebrush overstory with a cheatgrass understory or simply cheatgrass without a sagebrush overstory. Forage kochia is a long-lived, semi-evergreen half shrub that averages 1 to 3 feet high at maturity. Individual plants may live 10-15 years. It develops an extensive fibrous root system with a taproot that may extend to a depth of 16 feet. It does not tolerate flooding or soil with a water table. Most of the above ground annual biomass grows as stems from a low woody base. In most environments, the lower 1/3 of the plant maintains green leaves throughout the year while the seed stalk and the upper stems turn reddish brown and dry up after seed shatter (Harrison et al. 2000).

### **No Action**

The vegetation and soils in the project footprint would not be disturbed. However, in the event of wildfire and due to the relatively small size of the project area it is likely that most of the Sagebrush overstory would be removed from the project area. Observations from the area indicate that the burned area would become dominated by annual grasses and weeds.

### **Proposed Action**

In the areas where fuel breaks would be constructed, the existing sagebrush would be removed using a mower in the fall or winter of the year. Then in the spring of the following year, *Glyphosate* would be applied to reduce the cheatgrass. The broad-spectrum non-selective herbicide *Glyphosate*, when applied at low concentrations (10-16 oz/2gallons of water/acre), is effective at controlling Cheatgrass brome and annual exotic weeds although it is not expected to kill perennial grasses. *Glyphosate* does not stay active in the soil; it must come in direct contact with herbaceous species while it is actively growing. The final mechanical treatment (harrowing the fuel breaks and safety zones) would remove the remaining perennial vegetation from the foot print area. This would create bare ground, roughen and loosen the soil surface and

make the 53-acre project footprint area susceptible to wind and water erosion. In the short term (<1 year) the removal of the existing vegetation would decrease the fuel model (bare ground) because little vegetation is expected to grow in the treated area after its removal. During this time, the soil would continue to be susceptible to wind and water erosion. Forage kochia would be planted on the area where vegetation is removed and soils disturbed and would become established within 1 year of the disturbance. Cheatgrass may temporarily increase in the project footprint area but would be replaced by Forage kochia as the site stabilizes and the Forage kochia matures (Monaco et al 2003). The area would become less susceptible to water and wind erosion as vegetation grew back on the site.

Forage kochia is not expected to move appreciably from the fuel break area. In a study of forage kochia movement, Harrison (2000, p. 17-20), summarized data from 81 Forage kochia seedings including 14 from southern Idaho. The furthest documented movement of Forage kochia in southern Idaho was near Interstate 84; at milepost 107 (p. 29, site 68). They found one plant that moved 300 feet into a disturbed site in a 14-year period. In 19 of 81 sites, they found that forage kochia moved less than 12 feet. Harrison and others reported (p 17) that near Kuna, ID Forage kochia spread into small playas and slick spots and competed with Slickspot peppergrass. However, there is no Slickspot peppergrass in the project area. Once established, forage kochia would compete well with Cheatgrass brome since it begins growth at cool temperatures and photosynthesizes at the same time of year as Cheatgrass brome providing direct competition for limited water resources.

### **Cumulative Impacts**

Livestock grazing is expected to continue and is not expected to alter vegetation conditions because the area is not grazed heavy enough to alter the current fuel model. Vegetation will continue to be influenced by annual weather conditions. Other than the proposed action and the projects discussed above, there are no other past, present, or reasonably foreseeable future actions that are expected to change vegetation and soil conditions in the project area.

### **FIRE BEHAVIOR**

Fire behavior in this fuel type can be extreme. This is especially true on the Snake River Plain where there is a long history of large summer fires. Due to relatively small size of the project area once a wildfire became established it is likely that it would burn a large portion of the project area. Fire behavior within the project area is modeled by a grass-shrub (GS) fuel model GS2. This fuel model is represented by shrubs that are 1 to 3 feet high with a high ROS and moderate FLs (Scott and Burgan 2005, pp. 9-10 and 36-37) (specialist report 6). The width of the fuel break is more than adequate to stop fire spread due to convection and radiant heat transfer. It has also been reasoned that the majority of fire spreading embers would land within its 100-150 foot width (specialist report 7).

### **No Action**

There would not be a direct change/disturbance to the vegetation/fuel model in the project footprint area. Therefore, the anticipated fire behavior is not expected to change within the project area.

### **Proposed Action**

The proposed action would directly change the vegetation/fuel model within the project footprint area from its current state to a Forage kochia fuel model. Forage kochia would also tend to keep grass from becoming established in the project footprint areas. This would result in a reduction

the fuel continuity within the project footprint. The discontinuity of the fuel would lead to reduced fire behavior in the Forage kochia strip and would cause fires to go out on their own when they run into a Forage kochia strip or make them easier to suppress. In the event of a wildfire, the safety zones would create havens for people to assemble until they could be escorted from the area. The reduced flame lengths and fuel continuity in the fuel break would catch most of the fire carrying embers. This would reduce spotting distance as most of the embers would land in the fuel break and thus be unable to ignite new spot fires beyond the fuel break area.

### **Cumulative Impacts**

Livestock grazing is expected to continue; however, livestock grazing is not expected to alter vegetation conditions or the fuel models because the area is not grazed heavy enough to alter the current vegetative conditions. There are no other past, present, or reasonably foreseeable activities that would alter the amount or continuity of fuel in the project area.

### **FIRE FIGHTER SAFETY AND WILDFIRE SUPPRESSION**

The current situation exposes fire fighters to a rapidly spreading wildfire, longer flame lengths in an area that is often full of inundated with recreationists.

### **No Action**

There would be no change to fuel loading or fuel continuity either at the footprint (53 acres) or at the project area level under the no-action alternative and therefore no change to fire behavior. Risks to fire fighters would continue to remain high. Flame lengths in the project area during the peak of the wildfire season (1% 1-hour fuels) were calculated to range from 12-23 feet long depending on fuel model and the current year's production. This type of fire behavior coupled with the lack of safety zones, anchor points, and the rapid rates of spread increases the risk to fire fighters. Due to the relatively small size of the project area a fast moving wildfire has the potential to burn across the project area before suppression resources could engage the wildfire.

### **Proposed Action**

The proposed action would change the vegetation characteristics from a fuel model GS2 to a modified GR1 fuel model at the project footprint level. The modified GR1 fuel model is represented by short, patchy grass with higher moisture content than the surrounding vegetation. In the long-term, the proposed action would change the fuel loads in the footprint area (53 acres). Flame lengths would drop in the footprint area from their current projected 12-23 feet to 1 foot (specialist report 5). The longer flame lengths that would occur outside of the fuel break area could not be sustained in the fuel break area because of the reduction in fuel continuity within the fuel break area.

This change in vegetation (i.e. break in fuel continuity) would reduce the fire behavior by decreasing ROS and flame lengths (see Specialist report 6). Forage kochia has been shown to slow or stop the spread of wildfire. In a review of literature, Harrison and others (2002, pp. 3-6) found that the use of forage kochia was an effective green strip species for fire-prone landscapes in the Great Basin and Western United States. Monsen and Memmott (1999, p. 115) found that a test fire only burned 2 feet into a forage kochia test strip before it went out, even though the wind speed was approximately 16 mph.

Since a wildfire is less likely to burn across the project area, the Forage kochia areas could be used as control lines, anchor point, and safety zones. This would allow for the effective use of engines, dozers, and aerial retardant since flame lengths shorter than 4-feet are able to be directly attacked by mechanized equipment. The fuel break would also allow for the use of direct attack tactics which would make fighting a fire in the project area safer and more effective and would help keep fires smaller.

### **Cumulative Impacts**

Cumulative effects for fire fighter safety and wildfire suppression are essentially the same as those discussed for fire behavior

### **RECREATION**

The area is used primarily for fishing, camping, and OHV/ATV riders in the summer and upland bird hunting in the fall. There is some widely dispersed hiking and camping that occurs in the project area throughout the year.

### **No Action**

Existing recreation opportunities in the project area would not be altered. As stated in the background/context section recreationists tend to use the project area in the summer time. In the event of wildfire, recreation may be disrupted if the majority of the Sagebrush covering the recreation site is removed by a wildfire.

### **Proposed Action**

Existing recreation opportunities in the project area would not be altered because of the proposed action. In the long term, recreational activities may be enhanced if the current sagebrush overstory is kept in its current condition.

### **Cumulative Impacts**

There are no past, present, or reasonably foreseeable activities that would affect recreation opportunities in the project area.

### **LIVESTOCK GRAZING**

The project area is currently grazed by 17 cattle from April 1 to November 30. For a total of 136 AUMs.

### **No Action**

The livestock permittee would not be affected by the proposed action. In the event of a wildfire, the removal of a large portion of the current sagebrush overstory would lead to an increase in grass. This would benefit the livestock operator by increasing the amount of forage available for livestock to eat.

### **Proposed Action**

Livestock would be removed from the allotment until the seeding becomes established or it is determined to have failed. Forage kochia is very grazing resistant once it becomes established. Herbel et al (1981) reported that Forage kochia can sustain non-growing season use levels of 70-80% on a consistent basis but should not be grazed down to less than two inches during the growing season. Once it becomes established it would be maintained from becoming woody (Pellant personal com. 2009). The planting of 53 acres to forage kochia would not measurably

increase the amount of forage available for livestock grazing since palatable vegetation would be removed then replaced with a different kind of palatable vegetation. Therefore, the proposed action would not serve as a basis for future forage increases.

### **Cumulative Impacts**

Forage will continue to be influenced by annual weather conditions and wildfires. However, an increase in permitted use (time or numbers) is not anticipated because of this anticipated increase in forage. Other than the proposed action discussed above, there are no other past, present, or reasonably foreseeable future actions that are expected to alter the amount of forage available for livestock grazing.

## **CONSULTATION AND COORDINATION**

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## GLOSSARY

**Anchor or Anchor Point** - An advantageous location, generally a fireproof barrier, from which to start constructing a fireline. It minimizes the chance of being out flanked by a fire while the fireline is being constructed.

**Chain/hr** - Speed which a fire burns. A chain is 66 feet. It is equivalent to .012 miles per hour.

**Fire-Return Interval** - The number of years between two successive fire events at a specific site or an area of a specified size.

**Flame length** – The distance measured from the tip of the flame to the middle of the flaming zone at base of the fire. It is measured on a slant when the flames are tilted due to effects of wind and slope.

**Flank or Flanking Fire Suppression** – Working along the flanks or side of a fire, whether simultaneously or successively, from a less active or anchor point towards the head of the fire in order to contain the latter.

**Flanks of the fire** – The part of the fire's perimeter that are roughly parallel to the main direction of spread.

<b>Fuel</b>	<b>Description Material</b>	<b>Diameter</b>
Fine	Grass, leaves, needles, etc. Equal to 1 hour fuel	<1/4"
1 hour	Plant material drying out in less than 1 hour	< 1/4"
10 hour	Plant material drying out in less than 10 hour	1/4" -1"

**Fuel Model** - A standardized description of fuels available to a fire based on the amount, distribution and continuity of vegetation and wood

**Head of the fire** – A fire spreading or set to spread with wind and/or upslope.

**Lek** – A lek is a gathering place of a species, specifically for males to display and attract females for breeding.

**Pinch** - To work up the flanks of a fire in order to pinch of the head of the fire.

**Project Area** - The area that bounds the affected environment area.

**Project Footprint** - The area that is actively disturbed by the proposed action.

**Rate of Spread:** The speed a fire travels, generally expressed as chains/hour.