United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Owyhee Field Office
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In Reply Refer To:
9214 (IDB-130)
4100 (IDB-130)

December 29, 2014

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

NOTICE OF FIELD MANAGER'S FINAL DECISION

ARS Johnston Draw Fire Effects Research

Dear Interested Public:

The Bureau of Land Management's (BLM) Owyhee Field Office (OFO), in conjunction with Agriculture Research Services (ARS), recently completed the Environmental Assessment (EA) (42 USC §4321) process for the ARS Johnston Draw Fire Effects Research project. In support of the EA process, an interdisciplinary team (IDT) of BLM and ARS resource management specialists analyzed and summarized available data to identify resource issues and evaluate the proposed action.

Through the EA process, the IDT identified possible short-term negative cumulative impacts from the proposed project to grazing, vegetation, watershed and soils, wildlife, and cultural resources, but in the long-term there would be overall positive cumulative impacts to the health of the ecosystem.

The decision to implement the prescribed burn is in accordance with the 1999 Owyhee Resource Management Plan (RMP). This Decision is being made in light of comments made through the EA review process and will provide rationale as to why I, the Authorizing Official, am making this decision. In accordance with the EA, this Decision authorizes juniper treatments as outlined in Section 2.3.2 of that document.

-BACKGROUND-

Wildland fire plays a fundamental role in the development and maintenance of mountain big sagebrush and mountain shrub communities of the intermountain west. Prior to European settlement in the mid-to-late 1800s, these sites burned approximately every 50 to 70 years (Miller et al. 2005). After settlement, wildfires were suppressed and fine fuels were consumed by livestock, thereby interrupting the natural fire cycle and facilitating juniper encroachment into these shrub communities (Miller and Rose 1999). Without fire, these sites eventually cross a threshold into fire-resistant juniper communities that exhibit low levels of structural and species diversity (Bates et al 2000; Miller et al. 2000).

Little data exist on the effects of fire on the soil-water balance among precipitation, infiltration, evaporation, and transpiration by plants. Brown (2000) suggests that additional research into the use of fire is needed to evaluate the primary and secondary effects of fire on ecological processes such as soil microclimate, plant establishment, and hydrologic function. Hydrologic assessments of fire effects have typically been limited to site-specific plot studies rather than the landscape scale hydrologic response (Hester et al. 1997; Pierson et al. 2011; Williams et al. 2014a). As such the BLM Owyhee Field Office, in partnership with and at the request of ARS, is proposing to conduct a prescribed burn on 2,309 acres of BLM, state, and private lands centered over Johnston Draw within the Reynolds Creek Watershed (Map 1). The prescribed burn is designed to add to ARS's knowledge base concerning the use of fire to manage intermountain rangelands.

A previous Environmental Assessment was prepared in 2002 for ARS's Reynolds Creek Experimental Watershed that included four prescribed burn areas, one of which was the Johnston Draw area. The other three project areas, The Breaks (which is within the current proposed burn area), Whiskey Hill, and Upper Sheep Creek were burned under that EA. The Johnston Draw area is the last remaining area to be burned. A weir to measure stream flow and sediment was installed along Johnston Creek in 2002 in preparation for the prescribed burn which was planned for 2007. However, due to changes in the project design based primarily on firefighter safety and project feasibility, including a larger treatment (2,309 acres versus 451 acres) and contingency area and a bulldozer control line, BLM determined that a new EA was necessary.

A scoping letter concerning this proposed project, as well as the other prescribed burn projects from the original 2002 EA, was originally sent to interested parties on June 4, 2002. Since the project has not changed significantly from the original proposal an additional external scoping was not conducted; however, the project proposal was published on the BLM's online NEPA Register on January 24, 2014. No comments were received. On February 6, 2014, a meeting was held in Reynolds Creek with the ARS and local land owners to discuss this proposed project. No issues were raised.

One alternative that was considered but not analyzed was to conduct the Johnston Draw prescribed fire as it was proposed in the 2002 EA. In that version, a significant amount of handline was to be constructed around the perimeter of the 451-acre burn area where no other existing control line features were available to contain the fire. Due to significant brush loads and steep slopes, BLM determined that it would be too difficult for firefighters to safely control the burn as proposed. Therefore, this alternative was determined infeasible and was not considered further.

Finding of No Significant Impact (FONSI)
A Finding of No Significant Impact (FONSI) was signed on December 29, 2014 concluding that the ARS Johnston Draw Fire Effects Research project is not a major federal action that will have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. Therefore, an environmental impact statement is not required. A copy of the FONSI for EA # DOI-BLM-ID-B030-2014-0001-EA is available on the web at:

https://www.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=renderDefaultPlanOrProjectSite&projectId=38216&dctmId=0b0003e880687cdc

Therefore, it is my Final Decision to implement the following prescribed burn within the ARS Johnston Draw Fire Effects Research project area.

-FINAL DECISION-

In accordance with the Owyhee RMP, and upon my review of EA # DOI-BLM-ID-B030-2014-0001-EA, I have determined that the prescribed burn identified in the ARS Johnston Draw Fire Effects Research project would benefit BLM managers by providing valuable landscape scale research with the potential to influence future land management decisions concerning prescribed burning. It is my Final Decision as the authorized officer to implement the following actions and Standard Operating Procedures (SOP):

Actions
The BLM would conduct a prescribed burn across 2,309 acres in the Reynolds Creek watershed focusing on Johnston Draw (Map 1). Up to 80% of the project area would likely burn in a mosaic pattern with fire behavior in the moderate to high intensity category mimicking a natural wildland fire. A 24,516-acre fire contingency area has been defined around the proposed burn area. The prescribed burn window would target spring of 2015 for blacklining and fall 2015 for full burn implementation.

An approximately 1-mile bulldozer line (0.8 miles on BLM and 0.23 miles on private lands) would be dug along the northern burn boundary where no road exists; the rest of the proposed burn perimeter is along existing two-track roads. Post-fire, a one-mile long temporary fence would be constructed within the rehabilitated bulldozed line to exclude livestock from the burned area for the required amount of time (i.e., until vegetation recovery objectives are met). All activities associated with the prescribed burn, except construction of the temporary fence, would be conducted by BLM's Boise District Fire and Fuels program. Construction of the fence is planned as a partnership between the BLM, ARS, and permittees.

Due to the moderate to high fire behavior expected, the prescribed burn operations would include blacklining as part of the ignition procedures. Blacklining involves burning the outer perimeter of the burn unit under conditions where the spread of fire would be minimal due to high fuel moistures and high relative humidity. This technique allows fire fighters to treat heavy concentrations of fuel (i.e., vegetation) near control lines by using weather and fuel parameters to reduce fire behavior. Blacklines would provide fire fighters a buffer to safely operate in and greatly reduce the chance for the prescribed fire to escape. Blacklining would occur in the spring

when fuel moistures are high and the spread potential is very low, or in the fall by burning at night and allowing for high humidity recovery to prevent the spread of fire. No pre-burn vegetation manipulation would occur within the burn area, except where needed for resource protection, to ensure the prescribed fire mimics a wildland fire. Limited road maintenance (i.e., possible road repair and brush removal) would be necessary to accommodate fire engines. Handlines may also be constructed where needed.

A fire crew camp and helispot would be located within an 8.5-acre parcel approximately 5 miles northwest of the project. This area is on private property and currently under a long-term lease between ARS and the private landowner.

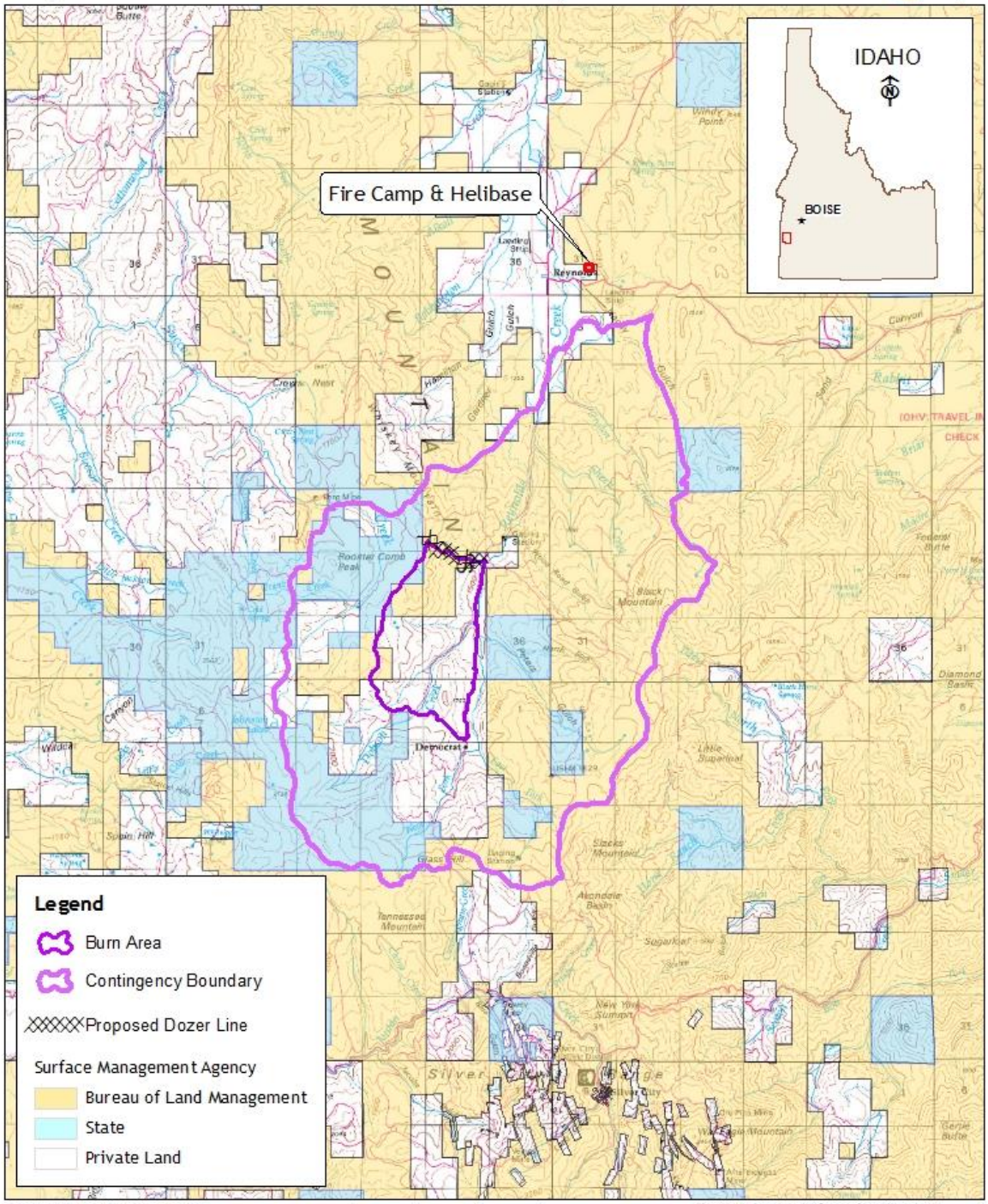
Project Design Features

All of ARS's moveable instrumentation within the proposed project area would be removed prior to implementation of the prescribed burn and replaced in its original location post burn. Weirs constructed by ARS and located on Dobson Creek and Johnston Draw would be protected from any adverse effects from the prescribed burn.

Broadcast Burning

- To minimize heat and smoke exposure to fire holding crews, existing natural and human made fire breaks would be used where possible. While minimizing ground disturbance that would result from establishing new control lines, there may be situations that require the use of dozer or handline for portions of the control lines.
- On short portions of existing roads, dozers or graders may be needed to clean out vegetation which could compromise the roads usefulness as firelines, and to improve small portions of these roads which may be inaccessible to vehicles associated with burning efforts. No widespread road grading is anticipated nor is the use of this equipment outside of existing roads except along the pre-defined bulldozer line.
- Fire engines, dozers, support vehicles, and ATV/UTVs would be used to contain the fire within control lines. Travel would be restricted to existing trails when possible, but may require some off-road travel.
- In accordance with BLM prescribed fire policy, a contingency area is proposed outside the burn perimeters to act as a buffer should a fire burn outside the perimeters (see Map 2). If this happens, the fire would be suppressed in the contingency area and burning operations could then continue in the treatment area.

Map #1 - Johnston Draw Project Map



The sources of the data are from Idaho-BLM Corporate Data, and the USGS.

0 1 2 3
Miles

No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed. The following (map) cannot be made Section 508 compliant. For help with its data or information, please contact the BLM Idaho State Office Webmaster at 208-373-4000

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- The undercarriage of all vehicles involved in the prescribed burn would be cleaned before traveling to the project area to reduce the introduction of noxious weed seed. Monitoring for noxious weeds would be conducted post burn and, if found, would be treated.
- Burning would be conducted in accordance with the Idaho-Montana Airshed Group guidelines. Permission from the Airshed Group is required prior to ignition to ensure local air quality standards would be met.
- National Register of Historic Places (NRHP) eligible archeological sites with combustible features would be protected during the deployment of prescribed fire by reducing vegetation within and around the sites, blacklining resources, and use of appropriate ignition techniques. Fire engines, dozers, support vehicles, and UTVs/ATVs will not be allowed to drive on or through any site except on an existing road. The Fuels Archaeologist will review burn plans prior to project implementation.

Curlleaf mountain mahogany (*Cercocarpus ledifolius*) stands are within the project area. Mountain mahogany stands would be treated according to the mitigation protocol outlined in the Juniper Mountain Landscape Restoration Strategy which states that precautions should be used to protect curlleaf mountain mahogany from fire whenever practical (USDI BLM 2006). Although mountain mahogany would not be completely avoided by burning, ignition operations would not target these stands and efforts would be made to protect them. Prior to lighting the main fire, vegetation around the mountain mahogany would be burned to create a barrier of burned vegetation between the stand and the main fire. It is likely that mountain mahogany around the edges of the stand could burn, but the fire would largely back down once it reached the previously burned vegetation barrier. Further, the mountain mahogany is in the mid to higher elevations surrounding rocky outcrops that may not readily carry fire.

Wildlife Design Features

- Pretreatment fire crews would consult the Owyhee Field Office Wildlife Biologist to determine appropriate measures to prevent disruptive activities to raptor nests. The Field Office Manager can grant an exception to seasonal restrictions in cases where a nest has been destroyed (e.g., by wind, lightning, wildfire), is currently inactive, based on raptor species and variations in nesting chronology, topographic features (e.g., intervening ridge between treatment activities and nest), or other factors that are biologically reasonable. For instance, because nesting raptors may be shielded from disturbance by vegetation and/or topographic features, buffer areas may be individually developed and modified based on 3D analytical methods and/or landscape features (e.g., viewshed analysis or physiographic barriers such as cliffs and canyons).
- Broadcast burning would not be conducted within BLM-stipulated buffer zones of active raptor nests during the breeding season unless adjustment of the buffer is applicable based on a biologically reasonable exception as identified in the pretreatment SOP above. Buffer zones would be dependent on species, seasonal timing restrictions, and nest site activity status (See Table 1– Raptor Timing and Buffer Stipulations below).

Table 2. Raptor Timing and Buffer Stipulations

Species	Timing[1]	Breeding Season Nest Site Buffer (miles)[2]
Bald Eagle	Feb 1 – July 31	0.5 – 1.0
Peregrine Falcon	Feb 1 – July 31	1.0
Feruginous Hawk	Feb 1 – July 31	1.0
Golden Eagle	Feb 1 – July 31	0.5
Northern Goshawk	Feb 1 – July 31	0.5
Prairie Falcon	Feb 1 – July 31	0.5
Red-tailed Hawk	Feb 1 – July 31	0.33
Swainson's Hawk	Feb 1 – July 31	0.25
Burrowing Owl	Feb 1 – July 31	0.25

[1]Indicates timeframes for prohibiting broadcast/blackline burning and hand cutting/girdling around nest sites with active breeding attempts or until dispersal of young.

- Any new raptor nest discovered during treatment activities would be reported within 24 hours by phone or email to the Owyhee Field Office Wildlife Biologist. Protection of these nest sites will be handled on a case-by-case basis.
- Spring burning (black lining) would be implemented prior to nesting of migratory birds, which would be determined by a wildlife biologist.

Range Projects (Fences)

Any new fences located on BLM land would conform to the specifications for standard livestock fences in deer/elk/pronghorn habitat in accordance with the Owyhee RMP and Boise District Office fence specifications and fence marking guidelines (USDI BLM 2011). Techniques to minimize disturbance during and as a result of construction would be employed as practicable. Fence construction is anticipated to be a partnership between the BLM, ARS, and permittees. A one-mile temporary fence (along the dozerline) would be constructed in the East Reynolds Creek and Gaging Station FFR allotments (Maps 2 and 4). This fence would provide rest from livestock grazing until vegetation recovery objectives have been met.

Livestock Grazing

Approximately 593 acres of BLM land would be burned affecting four grazing allotments (Map 4). The Owyhee RMP requires rest from livestock grazing on BLM land following the prescribed fire for a minimum of two growing seasons. However, due to the small acreages and locations (in resilient vegetation communities) on BLM lands, two full growing seasons of rest may not be required in all allotments to meet vegetation recovery objectives. Refer to section 3.7 Livestock Grazing for more detail. Rest would be accomplished by construction of a temporary

protective fence (see Range Projects above) and permittees herding livestock away from burned areas. Temporary reductions in livestock numbers and/or duration of use would also be made.

These burned areas will be rested from grazing for a minimum two growing seasons or until the following objectives are met:

- Foliar cover of perennial grasses, excluding Sandberg bluegrass (*Poa secunda*), shall meet or exceed 10%.
- Desirable perennial grasses (e.g., bluebunch wheatgrass) are a minimum of 4 inches tall, on average.
- Qualitative assessments of the following factors to evaluate readiness for grazing resumption:
    - Perennial plant vigor
    - Perennial plant seed production
    - Precipitation during the non-growing (winter) and growing (spring through early summer) seasons has provided sufficient soil ground moisture to allow for natural regrowth of desirable plants
    - Erosion potential

Post-fire monitoring of the burned area would be completed by the BLM's Boise District Fuels Monitoring group. Their data would indicate whether vegetation recovery objectives have been met or not. If objectives have not been met, the reasons for failure to obtain objectives would be identified. Depending on the group's findings, the temporary livestock grazing closure may be lifted or extended. The decision to resume grazing or to extend the closure would be made by the Owyhee Field Office Manager. However, if the ID team determines livestock grazing would not hinder future achievement of vegetation objectives, or that objectives are unattainable, the Field Office Manager may authorize livestock grazing resumption at full active use levels in accordance with the grazing permit.

-RATIONALE-

Through a cooperative relationship between BLM and ARS this project intends to provide research with the potential to influence future land management decisions regarding prescribed burns on rangelands. The proposed project, which is the implementation of a prescribed fire centered over Johnston Draw in the Reynolds Creek watershed, would present research opportunities to study the effects of fire (prescribed or wild) on vegetation, soil properties, water balance, water quality, watershed function, post-fire livestock management, and the spatial pattern of fire impacts at the landscape scale. Research results would be directly applicable to fire management planning in the Reynolds Creek Experimental Watershed, Owyhee County, southern Idaho and eastern Oregon sagebrush ecosystems.

Research proposed for this project is complementary to previous and ongoing work in the area of fire effects, rangeland restoration, juniper management, and hydrologic processes conducted by ARS rangeland research units (Boise, ID; Burns, OR; Reno, NV; Logan, UT; Dubois, ID) and their collaborators in the intermountain west (BLM, U.S. Forest Service, Natural Resources Conservation Service, University of Idaho, Oregon State University).

This project would contribute to a longer-term research and management plan under development by ARS' Northwest Watershed Research center (NWRC) for assessing prescribed fire impacts in the Reynolds Creek Experimental Watershed. The NWRC has a long-term commitment to collaboration with BLM and private landowners at Reynolds Creek Experimental Watershed to address current and future scientific issues pertaining to western rangeland management. The NWRC is currently expanding its network of collaborators and encouraging additional research that can take advantage of the monitoring infrastructure and long-term data collection activities that have already taken place.

SOPs identified are required in order to ensure attainment of the treatment and management objectives while ensuring the protection of fire crews, the general public, and to mitigate any negative impacts to vegetative, wildlife, or cultural resources.

-AUTHORITY-

Authority under which this decision is being issued is found in Title 43 of the Code of Federal Regulations (CFR) Subpart 4.410 – Appeals to the Board of Land Appeals.

-RIGHT of APPEAL-

Any applicant, permittee, lessee, or other interested publics may appeal a final decision under Sec. 43 CFR 4.410, 4.411, 4.412, and 4.413 in person or in writing to Michelle Ryerson, Acting Owyhee Field Office Manager, at 20 First Avenue West, Marsing, Idaho 83639 within 30 days after receipt of such decision. The notice of appeal, if filed, must include a statement of reasons for the appeal, a statement of standing if required by 43 CFR 4.412(b), and any arguments the appellant wishes to make. The person/party must also serve a copy of the appeal on the Office of the Solicitor, Boise Field Solicitors Office, University Plaza, 960 Broadway Ave., Suite 400, Boise Idaho, 83706 and person(s) named [43 CFR 4.421(h)] in the CC: section of this decision. The Interior Board of Land Appeals must decide an appeal of this decision within 60 days after all pleadings have been filed, and within 180 days after the appeal was filed as contained in 43 CFR 4.416.

If you have any questions, please contact me at 208-896-5913.

Sincerely,

Michelle G. Ryerson

Michelle G. Ryerson
Acting Field Manager
Owyhee Field Office

cc: Owyhee Mailing List

Literature Cited

Bates, J.D., R.F. Miller and T.J. Svejcar. 2000. Understory dynamics in cut and uncut western juniper woodlands. Journal of Range Management 53:119-126.

Brown, J.K. 2000. Ecological principles, shifting fire regimes and management considerations. In: Wildland Fire in Ecosystems: Effects of fire on Flora. J.K. Brown and J.K. Smith eds. Gen. Tech. Rep. RMRS-GTR-42-volume 2. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. pp. 185-203.

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Williams, C. J., F. B. Pierson, P. R. Robichaud, and J. Boll. 2014a. Hydrologic and erosion responses to wildfire along the rangeland–xeric forest continuum in the western US: a review and model of hydrologic vulnerability. International Journal of Wildland Fire 23:155-172.

Company Name / Title	First Name	Last Name	Address	City	State	Zip
Brandaus's W7 Ranch	Richard & Connie	Brandau	9902 Wilson Cemetery Ln.	Wilson	ID	83641
Hook Family LLC	Theron	Hook	20509 Upper Reynolds Creek Rd.	Murphy	ID	83650
Junayo Ranch Limited	Owen	Orndorff	1087 River St., Suite 230	Boise	ID	83702
Idaho Conservation League	John	Robison	PO Box 844	Boise	ID	83701
Idaho State Department of Agriculture: Div. of Animal Industries			2270 Old Penitentiary Rd., PO Box 7249	Boise	ID	83707-9985
Idaho Department of Lands: Grazing Program Manager			300 N. 6th St., Suite 103	Boise	ID	83720-0050
Moore Smith Buxton & Turcke	Paul A.	Turcke	950 W. Bannock St., Suite 520	Boise	ID	83702
Owyhee Cattlemen's Association	Scott	Jensen	PO Box 400	Marsing	ID	83639
Owyhee County Commissioners			PO Box 128	Murphy	ID	83650
Poison Creek Grazing Association LLC	Tim	Mackenzie	PO Box 443	Homedale	ID	83628
Sierra Club			PO Box 552	Boise	ID	83701
US Fish & Wildlife Service	Mike	Carrier	1387 S. Vinnell Way	Boise	ID	83709
Western Watersheds Project	Travis	Bruner	PO Box 1770	Hailey	ID	83333
Western Watersheds Project	Katie	Fite	PO Box 2863	Boise	ID	83701
Wintercamp Ranch Trust	Don	Barnhill	PO Box 1	Murphy	ID	83650
	Anthony & Brenda	Richards	8935 Whiskey Mtn. Rd.	Murphy	ID	83650
	Ed	Wilsey	16550 Hwy. 95	Marsing	ID	83639
US Senator: James E. Risch	c/o Mike	Roach	350 N. 9th St., Suite 302	Boise	ID	83702
	Lloyd	Knight	PO Box 47	Hammett	ID	83627
The Nature Conservancy	Lou	Lunte	950 W. Bannock St., Suite 210	Boise	ID	83702
	Ramona	Pascoe	PO Box 126	Jordan Valley	OR	97910
	Jerry	Hoagland	13528 Reynolds Creek Rd.	Wilson	ID	83641
	Bill	Watterson	3946 Jump Creek Rd.	Homedale	ID	83628