Forest Aquatic Restoration Project
NEPA Compliance and Implementation Checklist

Project Number: _____ **Date: March 2019**

Category: Livestock Fencing, Stream Crossings and Off-Channel Livestock Watering Facilities

Location: Silvies River, Sarchen Creek, Poison Creek, Emigrant Creek RD, Malheur NF

Project Description: Chokecherry restoration with Burns Paiute Tribe

Heritage

☑ - Specific PDC for Heritage addressed (Heritage Surveys; Avoidance areas).

Botany

☑ - Specific PDC for Botany addressed (Sensitive Plant Surveys).

☑ - Specific PDC for Nox. Weeds addressed.

Land Management Consistency

☐ 4A	Big Game Winter range
☐ 6A & 6B	Wilderness
☐ 7	Scenic Area
☐ 8	Special Interest Areas
☐ 9	Research Natural Areas
☐ 10	Semi-Primitive Non-Motorized Recreation Areas
☐ 22	Wild and Scenic River
☐	Inventoried Roadless Area

I have reviewed this project and have determined it is within the Project Design Criteria identified for my resource.

Resource	Signature	Date	Comments
Heritage	[signature]	03/11/19	Avoid flagged heritage site near polygons
Botany/Invasives	[signature]	03/12/19	
Wildlife	[signature]	03/11/19	Good project - monitor bounce use if time permits
Fish*	[signature]	3/12/19	
Hydrology*	[signature]	3/12/19	
Range	[signature]	3/19/19	discuss fence installation with Range if adjust pas mgt
Soils	[signature]	3/12/19	
Recreation	[signature]	3/12/19	No impacts to designated Recreation sites
Lands and Special Uses	[signature]	3/21/19	See attached.
Engineering	[signature]	3/19/19	
Fuels / Fire	[signature]	3/19/19	Lop & Scatter. Heavy concentrations of slash
Silviculture	[signature]	3/19/19	No Silvicultural Concerns!!

* Ensure that an experienced fisheries biologist or hydrologist is involved in the design of all projects covered by Aquatic Restoration Biological Opinion II. The experience should be commensurate with technical requirements of a project.

Line Officer Signature: _____

Date: _____

Chokecherry Restoration Project

Emigrant Creek Ranger District, Malheur National Forest Service

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Anticipated Project Start Date: May 2019

Project lead – Lisa Foster

Action Plan

The goal of this project is to expand the ecological and cultural benefits of riparian habitat restoration in degraded riparian areas by focusing on chokecherry, an important cultural use plant (designated by the Burns Paiute Tribe) and important wildlife plant, in compliance with the National Environmental Policy Act (NEPA) under the Aquatic EA. The specific objectives are to:

- Increase quality, quantity and connectivity of chokecherry populations in riparian areas on the southern part of the Emigrant Creek Ranger District
- Increase access to chokecherry collection sites for Tribal members
- Enhance soil stability and prevent erosion on banks and terraces of degraded riparian areas
- Provide greater forage and habitat for a variety of wildlife and pollinators along riparian corridors
- Reduce out-shading by conifers on chokecherry sites and riparian shrub communities

Potentially site disturbing treatments include:

- Felling small conifers at planting or enhancement sites
- Planting chokecherry seedlings by hand
- Constructing small (~10x10) cages for newly planted seedlings

Project Description

The project area encompasses chokecherry habitat within the Emigrant Creek Ranger District, where aboriginal or native use areas (designated by the Burns Paiute Tribe) are prioritized for chokecherry restoration treatments. The planting and thinning sites are located within the Middle Silvies River and North Basin watersheds.

The need for restoration comes from past management of the Blue Mountains, including fire suppression and heavy grazing, which has altered the diversity and spatial extent of open stream floodplains and terraces that chokecherry inhabits. Many creeks in the ECRD are incised due to streambank instability and erosion, lowering the water table and reducing riparian shrub habitat. Planting chokecherry will provide soil stabilization, nutrient input, wildlife forage, and wildlife habitat, and stimulate understory vegetation. Additionally, they will establish successful populations that the Burns Paiute Tribal members can use as collection locations.

To meet project goals and objectives, several treatments will take place. In late summer, 2018, chokecherries were collected from several populations on the Emigrant Creek Ranger District and BLM land. These seeds will be grown out into rooted seedlings. These seedlings will be planted along the Silvies River, Sagehen Creek, and Poison Creek areas in early autumn of 2018. Ground disturbance will be limited. Planting will be completed by using dibbles or small shovels, with holes down to no more than 10" in the ground.

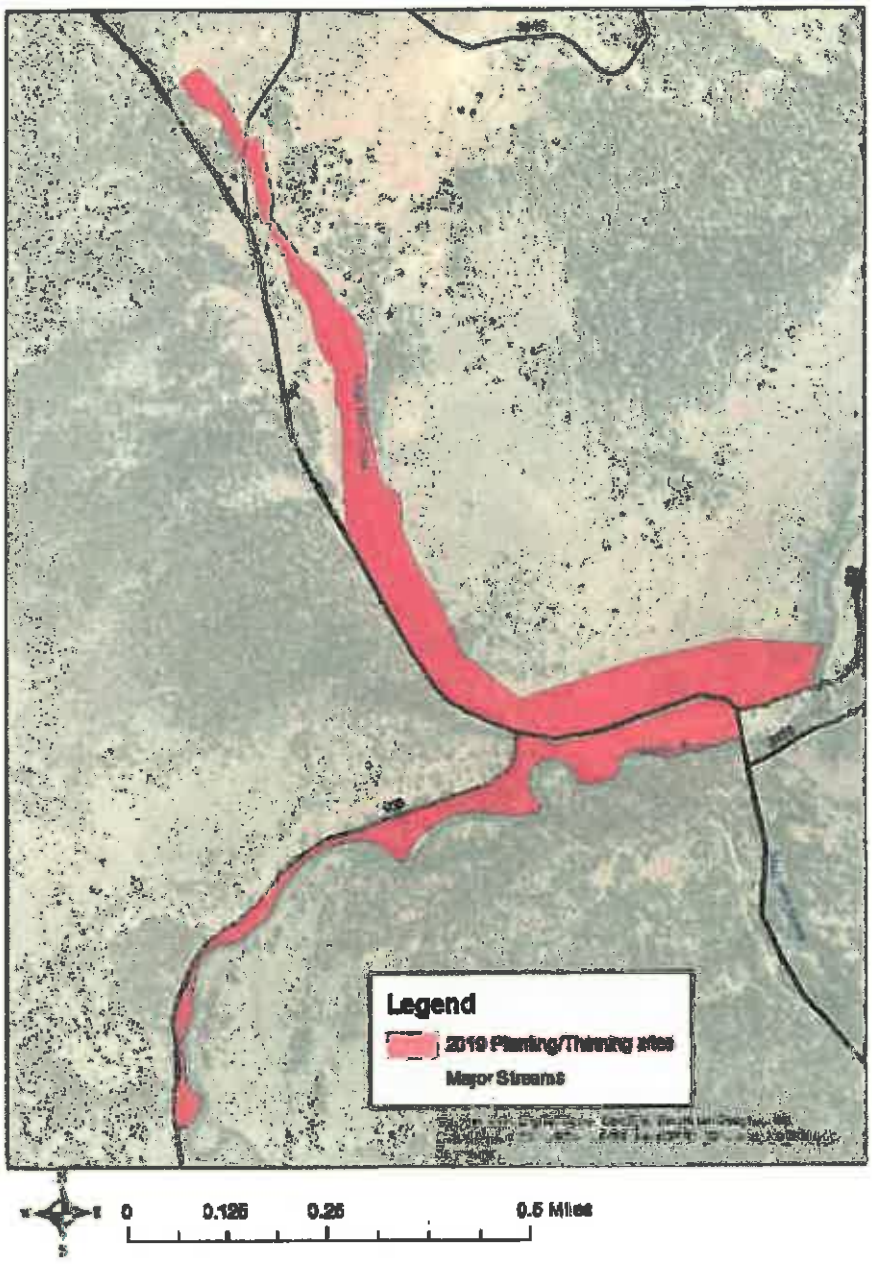
In some areas, seedlings will be protected by a combination of small (~10x10) fence cages and/or directional felling of small conifers. Standard T-posts may be utilized, being driven in no more than 24" into the ground. Thinning of small conifers will be accomplished by hand, and will also open up the canopy above chokecherry plants which will enhance suckering and vigor. All treatments will adhere to the Aquatic Restoration EA Project Design Criteria.

PHOTOS

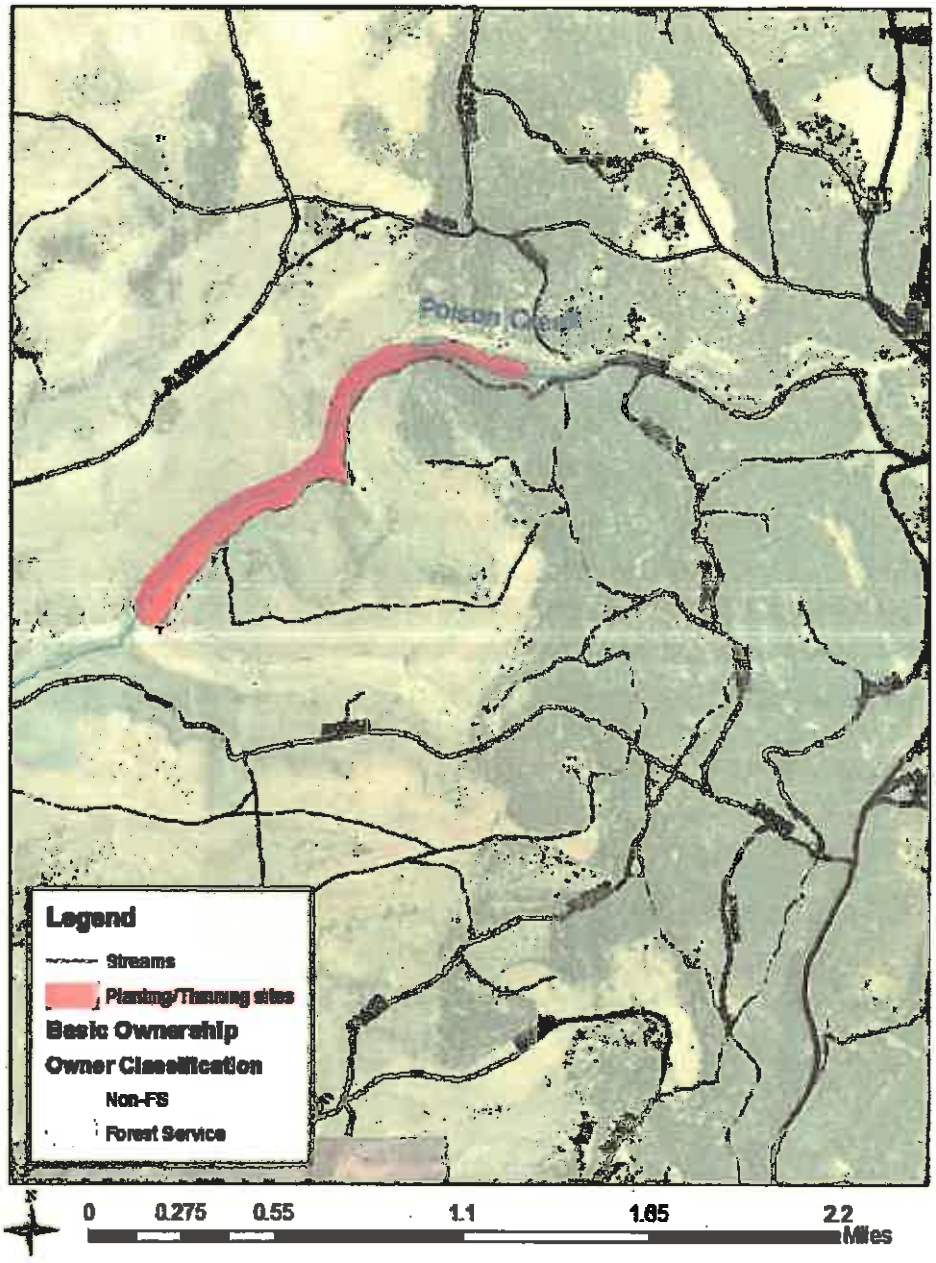
Examples of conifer encroachment and lack of riparian vegetation on the floodplain and terrace of Sagehen Creek. Open sites with gravelly or rocky soil on the margin between floodplain and terrace are ideal for chokecherry planting.

MAPS

Silvies River and Sagehen Creek Planting/Thinning Sites



Poison Creek Planting/Thinning site



Livestock Fencing, Stream Crossings and Off-Channel Livestock Watering Facilities

Projects will be implemented by constructing fences to exclude riparian grazing, providing controlled access for walkways that livestock use to transit across streams and through riparian areas, and reducing livestock use in riparian areas and stream channels by providing upslope water facilities. Such projects promote a balanced approach to livestock use in riparian areas, reducing livestock impacts to riparian soils and vegetation, streambanks, channel substrates, and water quality. Equipment such as excavators, bull dozers, dump trucks, front-end loaders, and similar equipment may be used to implement projects.

a. Livestock Fencing

i. Fence placement must allow for lateral movement of a stream and to allow establishment of riparian plant species. To the extent possible, fences will be placed outside the channel migration zone. ii. Minimize vegetation removal, especially potential large wood recruitment sources, when constructing fence lines.

iii. Where appropriate, construct fences at water gaps in a manner that allows passage of large wood and other debris.

b. Livestock Stream Crossings

i. The number of crossings will be minimized. ii. Locate crossings or water gaps where streambanks are naturally low. Livestock crossings or water gaps must not be located in areas where compaction or other damage can occur to sensitive soils and vegetation (e.g., wetlands) due to congregating livestock. iii. To the extent possible, crossings will not be placed in areas where ESA listed species spawn or are suspected of spawning (e.g., pool tailouts where spawning may occur), or within 300-feet upstream of such areas. iv. Existing access roads and stream crossings will be used whenever possible, unless new construction would result in less habitat disturbance and the old trail or crossing is retired.

v. Access roads or trails will be provided with a vegetative buffer that is adequate to avoid or minimize runoff of sediment and other pollutants to surface waters.

vi. Essential crossings will be designed and constructed or improved to handle reasonably foreseeable flood risks, including associated bedload and debris, and to prevent the diversion of streamflow out of the channel and down the trail if the crossing fails. vii. If necessary, the streambank and approach lanes can be stabilized with native vegetation or angular rock to reduce chronic sedimentation. The stream crossing or water gap should be armored with sufficient sized rock (e.g., cobble-size rock) and use angular rock if natural substrate is not of adequate size. viii. Livestock crossings will not create barriers to the passage of adult and juvenile fish. Whenever a culvert or bridge—including bridges constructed from flatbed railroad cars, boxcars, or truck flatbeds—is used

to create the crossing, the structure width will tier to project design criteria listed for Stream Simulation Culvert and Bridge Projects under Fish Passage Restoration (PDC 21).

ix. Stream crossings and water gaps will be designed and constructed to a width of 10 to 15 feet in the upstream-downstream direction to minimize the time livestock will spend in the crossing or riparian area.

x. When using pressure treated lumber for fence posts, complete all cutting/drilling offsite (to the extent possible) so that treated wood chips and debris do not enter water or flood prone areas.

xi. Riparian fencing is not to be used to create livestock handling facilities or riparian pastures.

c. Off-channel Livestock Watering Facilities

i. The development of a spring is not allowed if the spring is occupied by ESA-listed species. ii. Water withdrawals must not dewater habitats or cause low stream flow conditions that could affect ESA-listed fish. Withdrawals may not exceed 10% of the available flow. iii. Troughs or tanks fed from a stream or river must have an existing valid water right. Surface water intakes must be screened to meet the most recent version of NMFS fish screen criteria (NMFS 2011e)(NMFS 2011e)(NMFS 2011e)(NMFS 2011e)(NMFS 2011e)(NMFS 2011e)(NMFS 2011e), be self-cleaning, or regularly maintained by removing debris buildup. A responsible party will be designated to conduct regular inspection and as-needed maintenance to ensure pumps and screens are properly functioning. iv. Place troughs far enough from a stream or surround with a protective surface to prevent mud and sediment delivery to the stream. Avoid steep slopes and areas where compaction or damage could occur to sensitive soils, slopes, or vegetation due to congregating livestock.

v. Ensure that each livestock water development has a float valve or similar device, a return flow system, a fenced overflow area, or similar means to minimize water withdrawal and potential runoff and erosion. vi. Minimize removal of vegetation around springs, wet areas.

vii. When necessary, construct a fence around the spring development to prevent livestock damage.

Project Design Criteria by Resource

Fisheries and Hydrology

Fisheries and Hydrology resources will follow all mitigation measures and project design criteria for aquatic restoration activities as shown in the 'Aquatic Restoration Project Categories,

Program Administration, General Aquatic Conservation Measures, and Project Design Criteria for
Aquatic Restoration Activity Categories on the Malheur National Forest.'

Additional Aquatic project design criteria were developed for the following elements: Tree Tipping and Felling, Juniper Treatments, Tree Hauling, and Prescribed Burning.

General For Inside Riparian Habitat Conservation Areas

☐ All snags will be maintained within the RHCA unless deemed a hazard to the restoration activity.

Tree Tipping and Tree Felling for Large Wood Projects

- Source trees being extracted (either by tipping and or falling) as part of this project for in-stream restoration will not be harvested from within the primary shade zone.

Table 35 Primary shade zone width, based on adjacent hill slope.

	Hill Slope less than 30%	Hill Slope 30% to 60%	Hill Slope greater than 30%
Primary Shade Zone Width (slope distance	50 ft.	55 ft.	60 ft.

The Temperature Implementation Strategies allow the distances in the above table to be less (but not less than 25 ft.) if any of the following conditions applies:

- The trees are located on a south facing slope (175-185 degree azimuth) and therefore do not provide stream shade;
- An appropriate level of analysis is completed and documented, such as shade modeling, using site-specific characteristics to determine the primary shade tree width; and or
- Field monitoring or measurements are completed to determine the width where optimum Angular Canopy Density (65% or greater) is achieved (see TMDL Implementation Strategies).
- If trees are being felled for safety reasons they can be felled towards the stream.
- Source trees should come from but are not limited to: over or fully stocked upland and riparian stands, hazard trees, trees generated from administrative sites (maintenance, expansion, or new construction), and hardwood restoration.

There is no DBH (diameter at breast height) restriction for large wood, but consider the following before removing and placing trees:

<u>Diameter</u>

The key to establishing a logjam is utilizing larger diameter wood that resists decay. These pieces of wood are often called "key pieces," and serve as the anchors for the logjam structure. Wood can improve fish habitat only if the wood is large enough to stay, influence flow patterns, and sediment sorting. Larger diameter wood retains its size

longer as abrasion and decay occurs over the years. Larger diameter wood is more effective in creating pools and complex channels that improve fish populations. The minimum diameter required for a key piece of wood depends on the bankfull width of the stream is found in the following table.

Table 36 Bankfull widths and minimum diameter of logs to be considered key pieces.

Bankfull Width* - Feet	Minimum Diameter* - inches
0 to 10	10
10 to 20	16
20 to 30	18
Over 30	22
*This table was taken from '1995 A Guide to Placement of Large Wood in Streams.	

Length

- The length of the wood is also important to stability. To be considered a key piece a log with a rootwad still attached should be at least one and one-half times (1.5X) the bankfull or a log without a rootwad should be twice (2X) the length of the stream's bankfull width. As the best fish habitat is formed around jams composed of 3 to7 logs, at least 2 key pieces should be used at each structure.
- Mimic natural accumulations of large woody debris based on stream type, valley setting, and community type and ensure future large woody debris recruitment
- Tailholds as part of tree tipping operations are permitted across perennial, intermittent and ephemeral streams but the use of protective straps will be required to prevent tree damage.

Juniper Treatments

The majority of the juniper treatment areas would be within the riparian habitat conservation areas and adjoining uplands. For each area evaluated for juniper treatments, interdisciplinary teams would discuss the following questions in order to identify the attributes of an area and select the appropriate treatments:

- What kind of site (potential natural vegetation, soils)?
- Successional state of site?
- Components that need to be restored?
- How units may fit into the overall landscape mosaic?
- Long-term goals and objectives?
- Utilize the "Western Juniper Field Guide: Asking the Right Questions to Select the Appropriate Management Actions. (Bates et al. 2007, Circular 1321) http://pubs.usgs.gov/circ/1321/pdf/circ1321.pdf

Tree and Boulder Hauling

- Apply mitigation and best management practices for dust abatement (water, lignosulfonate, Calcium and Magnesium Chlorides) dry conditions, and erosion control as directed by physical scientist or road engineer (See Road Maintenance

project design criteria #6 for application). ☐ Haul on gravel and native-surface roads will be limited to dry conditions.

Haul Restrictions to Prevent Fine Sediment Delivery to Streams

Haul or maintenance is permitted on roads under the following conditions:

- During haul, weather conditions are monitored daily for the chance of precipitation by the Hydrologist or Fish Biologist.
- No rutting of the road surface is occurring, indicating the subsurface is wet.
- Frozen ground conditions.
- Haul will cease at any time when the travelway of the road is wet and turbid water or fines are observed moving off the road surface to ditchlines that deliver to stream channels regardless of time of year.

Roads Exempt from Haul Restrictions include (Do to no mechanism for sediment delivery):

- Paved roads
- Surfaced Ridge top roads
- Surfaced outsloped roads with no ditch or stream crossings

Prescribed Burning and Related Activities ☐ Mechanical piling and burning of large piles will be restricted to existing roads and landings.

- Include all relevant PDC in Silviculture prescriptions and burn plan objectives for all fuel treatment activities within RHCA's.
- Use all available fuel treatments and preparation activities as necessary (e.g. multiple entries, slash pull-back; modified ignition methods, locations, timing, and sequence; thinning of small green trees; pruning of green trees and snags, prescribed fire, fire suppression, jack pot burning, etc.) to achieve the specific project design criteria. Suppression should be used only as a last resort to achieve other project design criteria.

For perennial and fish-bearing stream channels:

- Avoid removing trees along stream banks (e.g. don't cause bank instability or increase erosion)
- Within 100' of the stream channel backing fire is preferred.
- Within primary shade zone retain 100% of the over-story canopy closure with the exception of hardwood treatment.

For intermittent, non-fish-bearing stream channels:

- Within 50' of the stream channel backing fire is preferred.

For the maintenance and use of water sources and draft sites:

- Minimize disturbance of existing riparian vegetation to the greatest extent practical; in particular, maintain shade, bank stability, and large woody material recruitment potential.
- Use sediment control measures such as straw bales, filter cloth, or sediment fences when conditions warrant.
- Maximize maintenance activities during late summer and early fall to best avoid wet conditions.
- Do not pump from streams that do not have continuous surface flow. When pumping water in all situations from streams, ensure that at least one-half of the original streamflow remains below the pump site.
- Refuel power equipment, or use absorbent pads for immobile equipment, and prepare concrete at least 150 feet (or as far as possible from the water body where local site conditions do not allow a 150 foot setback) from water bodies to prevent direct delivery of contaminants into associated water bodies.
- Fisheries, hydrology or other qualified personnel must work with engineering/fire personnel to review proposed activities to minimize potential effects to fish, stream channel conditions, and water quality.
- Use and develop off-channel ponds outside of stream channels were feasible and appropriate.

Work with fire folks to prioritize and decommission unnecessary in-stream drafting sites.

- Water withdrawal equipment must have a fish screen installed, operated and maintained in accordance to NOAA Fisheries guidelines.

Wildlife

Threatened, Endangered or Sensitive Species

- If wolves become established (denning) while project implementation is occurring, measures will be taken to avoid activity in that vicinity
- If any evidence of wolverines is discovered during project implementation, measures will be taken to provide protection. If a den is found we would protect it from human disturbance.

Raptors

- No activities will occur within currently known goshawk or other raptor nest stands. To conserve nesting habitat and to minimize disturbance to nesting individuals, restrictions would be executed according to the requirements of the species involved.
- With all newly discovered raptor nests, a buffer zone would be established by the wildlife biologist to restrict activities near the nest area during occupancy.
- Where possible, retain trees with inactive nests that may be important to secondary nesters (e.g. Great Gray Owl).
- Any snags in riparian areas or uplands will be protected from disturbance, removal, or use in stream restoration activities unless deemed a safety hazard at a specific work site.

- Big Game
- Within big game winter range a wildlife biologist will be consulted between December 1 and April 1 to determine if activities should be restricted for big game needs.

Botany

Note: Pre-implementation planning project design criteria are identified.

Rare and Sensitive Plants and Habitats

- ***Pre-Implementation:*** Proposed restoration projects shall be completely surveyed early in the implementation planning process by a qualified botanist or rare plant technician, to identify and assess any sensitive or rare plant populations or habitats.
- ***Pre-Implementation:*** Proposed restoration projects shall develop restoration plans for degraded sensitive species habitats and/or mitigation plans in areas where sensitive plant populations are documented. This shall be accomplished by a journey-level Forest Service botanist in collaboration with the interdisciplinary team and other stakeholders.
- Heavy equipment, vehicle operation, road construction, staging areas, stockpile areas, piling of slash, fence construction, recreation sites, prescribed fires, fire lines, and other operational activities shall not be allowed in any documented sensitive plant sites unless it is for the demonstrated benefit or protection of the site. All sensitive plant populations should be buffered 100 ft. from all operational activities where topography does not restrict such a distance. Sensitive plant sites and associated buffers shall be identified as Areas to Protect.

Sensitive and Unique Habitats

- The integrity of unique habitats shall be maintained. Unique habitats [may] include meadows, rimrock, talus slopes, cliffs, animal dens, wallows, bogs [fens], seeps and springs. This shall be accomplished by incorporating cover buffers approximately 100 feet in width.
- Heavy equipment, vehicle operation, road construction, staging areas, stockpile areas, piling of slash, fence construction, recreation sites, prescribed fires, fire lines, and other operational activities shall not occur within, or at the interface of lithosols (scablands).
- Cutting of old-growth juniper shall be prohibited. Old-growth characteristics include: sparse limbs, dead limbed or spiked-tops, deeply furrowed and fibrous bark, branches covered with bright-green arboreal lichens, noticeable decay of cambium layer at base of tree, and limited terminal leader growth in upper branches.

Groundwater-Dependent Ecosystems

- The integrity of groundwater-dependent ecosystems shall be maintained. Spring developments shall not dewater Groundwater dependent ecosystems. Spring developments shall not be allowed if the spring is occupied by rare or sensitive plant

species, or in peatlands, fens, or where histic soils are present. These sites should be buffered 100 ft. from all operational activities where topography does not restrict such a distance, and be identified as Areas to Protect.

- Heavy equipment, vehicle operation, road construction, staging areas, stockpile areas, piling of slash, fence construction, fire lines, and other operational activities shall not be allowed in springs, seeps, or any other groundwater dependent ecosystem, unless it is for the benefit or protection of the groundwater dependent ecosystems or development of the spring.
- Spring developments should not disturb the spring orifice (point where water emerges). Spring head boxes should be placed in a location that will cause the least amount of disturbance to the soils and vegetation of the groundwater dependent ecosystems. Preferable locations for spring head boxes should be in an established channel downstream from the orifice or a location where flowing water becomes subsurface.
- When necessary, construct fenced exclosures around spring developments to prevent damage from wild ungulates and livestock.
- Spring developments shall have a return flow system to minimize the diversion of surface and subsurface water from the catchment area. Consider using a float valve or similar device to reduce the amount of water withdrawn from the groundwater dependent ecosystems.
- When developing springs, place troughs far enough away from Groundwater dependent ecosystems, wetlands, and other sensitive or unique habitats to prevent erosion, compaction, or degradation to sensitive soils and vegetation due to livestock congregation.

Invasive Plant Species

- ***Pre-Implementation:*** Proposed restoration projects shall be surveyed for invasive plants early in the implementation planning process by a qualified invasive plant specialist /technician, to identify and assess any undocumented invasive plant infestation.
- ***Pre-Implementation:*** For project areas that overlap or are adjacent to invasive plant infestations, assure that there is sufficient time prior to develop a long-term site strategy for control, eradication, and revegetation of the site. This shall be accomplished by a qualified invasive plant specialist in collaboration with the interdisciplinary team and other stakeholders.
- All activities shall be conducted in a manner as to minimize or prevent the potential spread or establishment of invasive species.
- Actions conducted on National Forest System Lands that will operate outside the limits of the road prism, require the cleaning of all heavy equipment (bulldozers, skidders, graders, backhoes, dump trucks, etc.) prior to entering the National Forest. Cleaning will be inspected and approved by the forest officer in charge of administering the project.
- Assure that all materials are weed-free. Use weed-free straw and mulch for all projects conducted or authorized by the Forest Service on National Forest System Lands. If State certified straw and/or mulch is not available, individual Forests should

require sources certified to be weed-free using the North American Weed Free Forage Program standards or a similar certification process.

- Inspect active gravel, fill, sand stockpiles, quarry sites, and borrow material for invasive plants before use and transport. Treat or require treatment of infested sources before any use of pit material. Use only gravel, fill, sand, and/or rock that are judged to be weed free by District or Forest weed specialists.
- Prohibit heavy equipment operation, vehicle travel, staging areas, fire-control lines, and any other operational activities in invasive plant infestations, unless the activities are for the express purpose of eradicating the infestation or INV1 and INV2 have been completed.
- Conduct post-implementation monitoring for invasive plants. Continue monitoring, treating, and removing invasive plants until all infestations are eradicated and native plant species are well established.

Native Plant Materials and Revegetation

- ***Pre-Implementation:*** Where the need for native plant materials is anticipated, assure that there is sufficient time for the plant materials specialist to develop a native plant materials plan and/or prescription prior to implementation of planned revegetation, rehabilitation, and restoration projects. This may include allowing for enough time to harvest and store hardwood cuttings, produce suitable quantities of native seed, and/or grow-out container stock.
- Locally adapted, genetically appropriate native plant materials are the first choice for use in revegetation, restoration and rehabilitation, where timely natural regeneration of the native plant community is not likely to occur. Use a diverse assemblage of species that have the potential to naturally occur in the project area. Acquire native seed or plant sources as close to the watershed as possible. Examples of areas that may need treatment include: habitat restoration efforts, log decks, staging areas, landing zones, temporary roads, slash piles, culvert replacements, severely burned areas, skid trails, decommissioned roads, invasive species treatments, and other disturbances.
- Non-native, non-invasive plant species may be used in the following situations: (1) when needed in emergency conditions to protect basic resource values (e.g., soil stability, water quality, and to help prevent the establishment of invasive species), (2) as an interim, nonpersistent measure designed to aid in the re-establishment of native plants, (3) if native plant materials are not available and/or are not economically feasible, and (4) in permanently altered plant communities.
- Under no circumstances shall non-native invasive plant species and/or noxious weeds be used for revegetation.
- Development, review and/or approval of revegetation, rehabilitation, and restoration prescriptions, including species selection, genetic heritage, growth stage, seed mixes, sowing guidelines, and any needed site preparation, shall be accomplished by a plant materials specialist who is knowledgeable and trained or certified in the plant community type where the revegetation will occur.
- Concentrate plantings above the bank-full elevation. Sedge and rush mats should be placed and sized to prevent their movement during high flow events.

- Newly planted and/or seeded areas should be protected from animals and activities that may prevent, retard, or slow the establishment and recovery of native vegetation. Site-specific measures may include building fences, piling slash, jackstrawing, closing areas to vehicles, and/or temporarily changing grazing regimes until the desired condition is sufficiently achieved.

Soils

- For projects involving heavy machinery off roads, the project proponents shall inspect the site for existing impacts to the soil. If existing impacts appear to be heavy on the Malheur or moderate on the Ochoco, they shall contact a soil scientist, who shall determine what site specific project design criteria are necessary to meet Forest Plan and Forest Service Manual standards and guidelines. (If a soil scientist is not available, a silviculturist or hydrologist can do the work.) If standards and guidelines cannot be met, heavy machinery shall not be used.
- Erosion would be minimized by following General Aquatic Conservation Measures and by implementing the appropriate project design criteria based on the type of activity (see appendix A).
- Erosion from heavy machinery use would be minimized; by minimizing compaction and puddling, rutting would be minimized.
- For Livestock Stream Crossings and Off-Channel Watering Facilities, out-of-channel erosion would be minimized.
- For Road Erosion Control, erosion would be minimized.
- For Juniper Removal, erosion would be minimized. It is possible that Juniper Removal would increase ground cover within a few years, and thereby reduce erosion.
- Prescribed Fire (including for disposal of slash after Juniper removal) can involve only low and moderate severity fire, and erosion from fire lines would be minimized, so erosion from prescribed fire would not be significant.

Fire and Fuels

- Mechanical tools may be necessary to prepare fire control lines for these burns, but would be limited, and typically no heavy equipment would be used. Prescribed burns or wildfires could temporarily affect air quality.
- The project design criteria for both Juniper Removal and Riparian Vegetation Treatment (controlled burning) would be followed. National, state, and local policies regarding prescribed fire implementation will be met.
- Activities that are expected to create smoke emissions would follow the State of Oregon Smoke Management Plan. Prior to burning, approval will be obtained from the Oregon Department of Forestry, who determines compliance with the Clean Air Act. State smoke forecasts, which predict wind direction and smoke mixing height, will be obtained prior to all burning to ensure smoke intrusions will not occur in the local smoke sensitive receptor areas. □ Burning will follow the guidance provided by the Oregon Smoke Management Plan (Directive 1-4-1-601, Operational Guidance for the Oregon Smoke Management Program), which is an agreement between

federal land management agencies in northeast Oregon and Oregon Department of Forestry limiting smoke emission amounts. Oregon Department of Forestry monitors activity, and if a limit is reached it will shut down prescribed fire activity.

Heritage Resources

- Compliance with Section 106 of the National Historic Preservation Act for activities authorized under this analysis will be completed and concurred with by the Oregon State Historic Preservation Office before any ground disturbing action takes place. For each potential activity the District or Zone archaeologist will determine which of the criteria in the 2004 Programmatic Agreement with the Oregon State Historic Preservation Office best fit the particular project. This will vary somewhat project to project based on the scale of the particular activity, the location on the landscape, and the nature of associated cultural resources, if any.
- The District or Zone archaeologist will document their findings on a Programmatic Agreement form with a project description, rationale and location map which will be attached to the Forest Service Heritage Event database. The Forest archaeologist will review and sign off on the Programmatic Review form if concurred with. For appendices A, B and C projects as defined in the 2004 Programmatic Agreement, the Forest will retain the documentation and provide the Oregon State Historic Preservation Office with the annual summary of projects as described in the Preservation Act.
- For full inventories the District or Zone archaeologist will complete an inventory report meeting current Oregon State Historic Preservation Office standards which will be reviewed by the Forest archaeologist. The Forest archaeologist will forward the completed inventory report to the Oregon State Historic Preservation Office for review and concurrence signature or further discussion as appropriate.
- Consultation with Native American tribes is conducted under the terms of the Memorandums of Understanding the Forest has with each individual tribe. The Forest regularly consults with the Burns Paiute Tribe, the Confederated Tribes of the Umatilla Indian Reservation and the Confederated Tribes of Warm Springs Reservation.
- For work requiring a full inventory under the terms of the 2004 Programmatic Agreement any identified cultural resources sites will generally be avoided. For cases where site avoidance is impractical mitigation procedures will be developed in consultation with the Oregon SHPO before project work begins.
- If any previously unidentified cultural resources are located during project implementation, ground disturbing work will be halted until the resources are evaluated by the District or Zone archaeologist. If the cultural resources are determined to be potentially eligible for listing on the National Register of Historic Places work will either be permanently halted or a mitigation plan will be developed in consultation with the Oregon SHPO before work continues.

Recreation

- Motorized aquatic restoration methods would not be used within Wilderness, Wild portions of Wild and Scenic Rivers, and Inventoried Roadless Areas.
- Mechanized aquatic restoration methods would not be used within Wilderness or Wild portions of Wild and Scenic Rivers.

Grazing

General

- Range and Fire Specialists and permittees would coordinate activities including scheduling of burning activities in grazing units.
- Utilize the Forest Post-Fire Interim Grazing Guidelines to aid in determining when to resume grazing activities.
- Whenever possible, units to be rested would be burned in the spring of the year to be rested or in the fall prior to the rest year.
- If a rest period is required following a burn the permittee has the option to exclude cattle grazing from those portions of a pasture that were burned through the use of fencing and could continue to graze the unburned areas of a unit.

Protection of Government and Permittee Investments

- All existing structural range improvements (fences, gates, spring developments, etc) and permanent ecological plots would be contractually protected.
- Maintain structural integrity of range improvements.
- If structural improvements are damaged during project operations they would be repaired to Forest Service standards prior to livestock scheduled use by the party responsible for causing the damage. Repairs would be required of the purchaser if damage were done during thinning or fuel treatment contractors or by force account where appropriate.
- Three or more splices to a single wire within a distance of 20 feet will be replaced with a single splice.
- Fence right of ways (6ft either side of fence), trails, other developments and access to them would be cleared of slash produced by project activities.

Aspen Restoration

- New aspen exclosure fences would have gates installed in proper locations to allow for removal of stray livestock. Aspen fences would be maintained each year and repaired whenever necessary. Plans for aspen exclosures will define when restoration of the protected stand has been achieved and who has responsibility for maintenance of the structure. When fences are no longer needed, aspen fences should be removed.
- Alternate livestock water sources to those being used in aspen stands would be developed offsite before fencing aspen or re-evaluate fencing of the aspen site. Coordinate with range specialist and permittee.

Notification

- **During planning stage of each individual project all potentially impacted grazing permittees will have notice of action and opportunity to provide input that may lessen impacts to their livestock operation well in advance of implementation.**
- **Prior to implementation all potentially impacted grazing permittees will be given notice of dates when work will start.**

Forest Service | Washington Office | 1400 Independence Avenue, SW
Washington, DC 20250

File Code: 7150 **Date:** March 18, 2016
Route To: 5500; 7150

Subject: National Forest Boundary Line Policy

To: Regional Foresters

The Forest Service Line Officer has a public trust responsibility to efficiently manage, protect and preserve the public estate managed by the Forest Service as National Forest System (NFS) land. This includes the responsibility to ensure any land, resource or restoration project occurring near or adjacent to any Forest Service boundary line does not proceed until the legal NFS boundary lines are properly located and physically marked in the field prior to any management action.

Current Forest Service policy is that all NFS boundary lines shall be located, monumented, marked and posted to prescribed Forest Service boundary marking standards prior to undertaking land management activities planned near or adjacent to any Forest Service boundary line, and that no management activity take place that may create or cause a false or misleading boundary location. This Forest Service policy has been in effect for decades and is currently documented in FSM 7152.03 Policy, Item 3. Land Stewardship. Lands and Realty Management is currently in the process of updating FSM 7150 – Surveying, and issuing direction under a new Boundary Management Chapter and Handbook to be released in the fall of 2016.

The updated direction will require all NFS property line and Special Designated Area boundary lines be surveyed, marked and maintained in their correct legal location in the field prior to undertaking any land, resource and restoration projects occurring within ¼ mile of any NFS boundary line. While the Forest Service national standard is "within ¼ mile of any NFS boundary line," the regional land surveyor and/or forest land surveyors may increase or decrease this distance based upon their professional knowledge of the accuracy and reliability of Forest Service maps, the land net and land surveys of record.

An accurate delineation and location of NFS boundary lines will help prevent boundary disputes and/or loss of valued NFS land and its resources. It is Forest Service policy to fully manage the NFS land and resources to the legal boundary location on the ground. Creating false or miss-leading boundary lines by deliberately offsetting back onto NFS lands from an unknown or an approximated boundary, or adjusting land, resource and restoration project boundaries to avoid the responsibility to mark NFS boundary lines violates Forest Service boundary line policies and is not acceptable.

Geographic Information System (GIS) based coordinates for the land net shall not be used as authorative indicators of legal boundary lines and property corners, unless the GIS coordinate values are derived from direct physical occupation and observation, validated by a state licensed professional land surveyor or an authorized Bureau of Land Management (BLM) cadastral surveyor. In addition fence lines, fence corners and other alleged physical evidence of the lines and corners are not to be used as indicators of boundary lines unless their locations are also validated by a state licensed professional land surveyor or a BLM cadastral surveyor.

Substandard boundary location practices used to locate land, resource and restoration boundaries cause the following problems:

1. Mislead adjoining landowners and promote encroachments by them or by the Forest Service.
2. Neglect our public land stewardship responsibilities.
3. Create unmanaged strips of NFS land and resources.
4. Dramatically increase Federal and possibly personal liability, when Forest Service management actions trespass onto adjoining private lands.
5. Violate the laws and regulations applicable to protection and preservation of Special Management Areas established by Pubic Law, or other special areas established by Executive Order, Proclamations and other establishment procedures and processes.
6. Create litigation, along with the associated expenses to resolve encroachments.

It is against Forest Service policy for any employee other than an individual authorized by the Forest Service or the BLM and acting in their official capacity as a land surveyor to determine and/or mark NFS boundaries. Surveying, locating, marking and maintaining NFS boundaries of any type shall be performed under the direct supervision and responsible charge of a land surveyor working under state or federal land survey authority, whether the survey work is completed by force account or contract.

A Forest Service state licensed professional land surveyor, or a BLM cadastral surveyor, shall be consulted prior to any ground disturbing activity such as a prescribed burn, fire rehabilitation, mechanical thinning, road realignment and construction, facilities improvement or construction, etc. All original corner locations and boundary locations shall be searched, restored and maintained as necessary by a state licensed professional land surveyor or a BLM cadastral surveyor so the expense of perpetuating original corners and original lines to standard is not lost during the management activity. NFS boundaries that have not previously been located and marked shall be surveyed and marked to Forest Service boundary line marking standards. All land surveys and identification of NFS boundary lines shall be completed to Forest Service land surveying standards, as well as appropriate federal and state laws, regulations and guidelines governing the profession of land surveying.

In order to meet our boundary management goals, it is critical we pursue and act upon opportunities to share the financing of project generated boundary work with other programs when appropriate. Unit Line Officers should work collaboratively with their professional land surveyor and other staff areas to identify, approve and prioritize the annual program of work and ensure the project-specific survey and boundary line programs are funded.

/s/ Gregory C. Smith

GREGORY C. SMITH
Director of Lands and Realty Management

2019 ECRD Chokecherry Restoration with Burns Paiute Tribe

Lands & Special Uses project review & comments

3/21/2019

- Lands Special Use Permits currently identified within project boundary:
  - 138 kV, overhead powerline, 100' ROW, Sec. 29, T. 20 S., R. 31 E.
    - Coordinate with Utility company to ensure proposed work will not adversely affect powerline right-of-way or right-of-way access.

- Ensure *National Forest Boundary Line Policy* is reviewed prior to project implementation and adjacent landowners are adequately notified.

- No access issues identified.

- No points of diversion identified within project boundaries.