

Site Characterization Report

Planned Project Name: Wildhorse Wildfire 2022

Planned Treatment Type: Aerial Seeding, Seedling, plug planting, Herbicide - noxious weed, Area closure/exclosure, Other fencing, Road, trail, infrastructure repair

Planned Treatment Overview

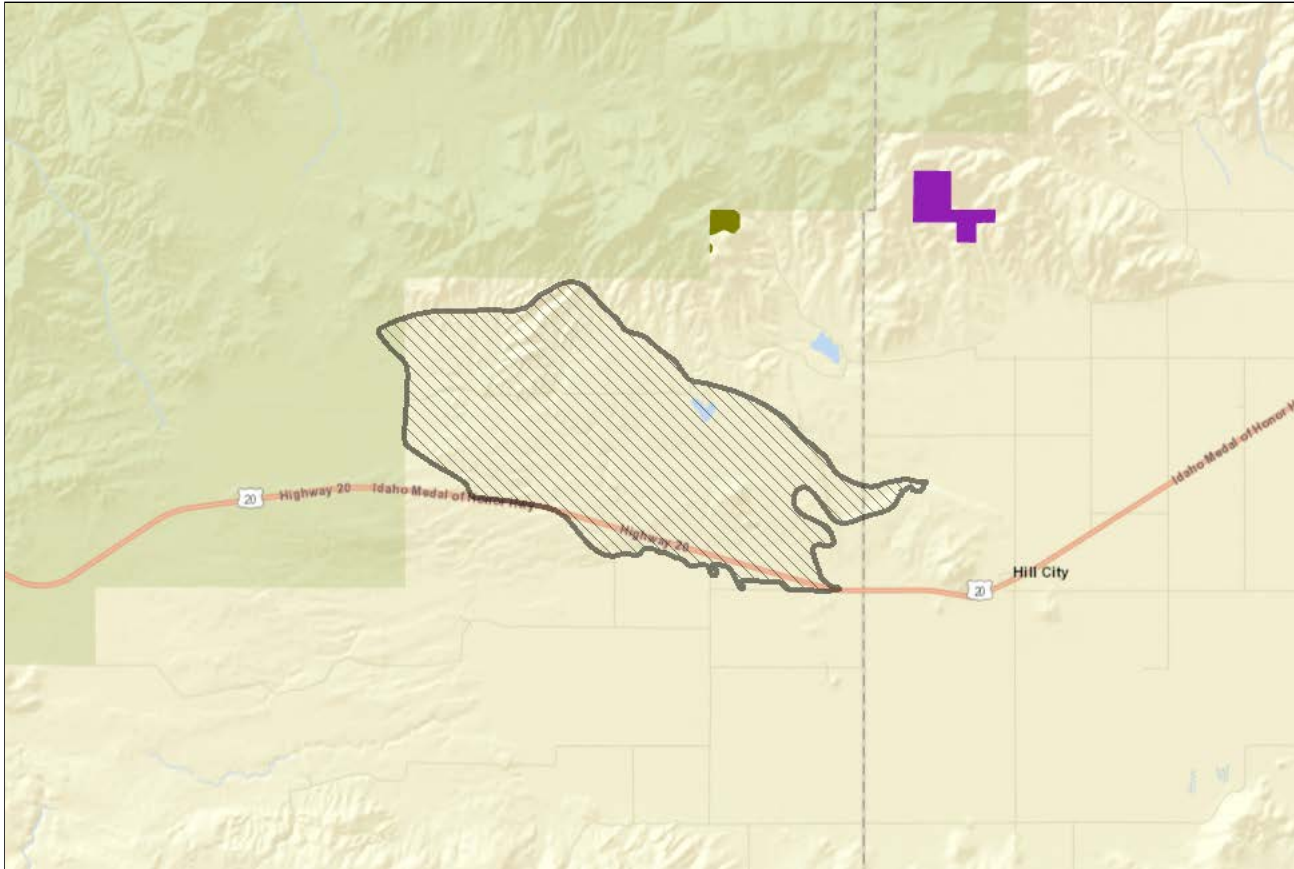


Figure 1. The general area for the planned treatment (gray, hashed box). The approximate area of the proposed treatment is 8880.39 acres (35.94 sq km). Included in the map are past land treatments from the Land Treatment Digital Library

LTDL Treatments

- Biological Control
- Closure/Exclosure
- Facilities/Fences/Roads
- Herbicide/Weeds/Chemical
- Prescribed Burn
- Seeding
- Soil Stabilization
- Vegetation/Soil Manipulation
- Other

BLM Administrative Unit Information

- Four Rivers Field Office, Boise District Office, ID (0.81%)
- Shoshone Field Office, Twin Falls District Office, ID (99.19%)

About the Land Treatment Exploration Tool

The Exploration Tool is designed for use by resource managers during the land treatment planning stage. This tool summarizes environmental characteristics of planned treatment areas and facilitates adaptive management practices by comparing those characteristics to similar legacy treatments.

How to cite

Site Characterization Report for **Wildhorse Wildfire 2022** Generated by Pilliod, D.S., Welty, J.L., Jeffries, M.I., Schueck, L.S., and Zariello, T.J., 2021, Land Treatment Exploration Tool, v. 1.0. <https://doi.org/10.5066/P98ATRLZ>. Access date **December 22, 2022**.

Annotations

This section provides overview notes for the proposed treatment area. For summary tables and maps related to these notes, see the corresponding section below.

Notes about the summaries:

Vegetation: There are no overlapping AIM monitoring locations within 10 miles of this boundary. According to remotely sensed data, this area was primarily Inter-Mountain Basins Montane Sagebrush Steppe (64%) with shrub cover between 20-30% (71% of the boundary). The area is expected to have an understory of annual herbaceous cover up to 30% in most of the boundary.

Soils and Topology: The area is primarily comprised of Frigid/Xeric-Typic (53%) and Mesic/Xeric-Typic (43%) soil temperature and moisture regimes. The dominant ecological sites are shallow stony loam 8-16 (49%) and loamy 12-16 (33%).

Special Status Species: The wildfire occurred within the Snake, Salmon, and Beaverhead-MV4 sage-grouse priority area for conservation, which is also designated as an important habitat management area for sage-grouse. Much of the area is modeled to have a high probability of sage-grouse breeding habitat (70%). According to the USFWS IPaC tool, this area may provide habitat for the north American wolverine.

Notes about the treatment history:

There are no records of prior land treatments from the BLM in this area. The Boise National Forest does have record of a roadside herbicide application along E High Prairie Road, but with no date listed. The nearest known BLM treatment was a Pubescent Wheatgrass seeding in 1964 to the north of the Wildhorse wildfire and southwest of hunter creek road.

Notes about the wildfire history:

There are numerous prior fires within the boundary. The oldest fire on record was in 1958 in the NW portion of the fire. Fires in 1993 and 2003 burned in the southern half of the area. An additional fire in 2003 burned a portion of the northern boundary. A small fire in 2017 burned along the highway in 2017. Lastly, a fire in 2020 burned in the NW, and over portions of the area burned in the 1958 fire.

Notes about seasonal drought:

This area is currently experiencing a moderate drought and drought conditions are likely to persist (US Drought Monitor).

Summary Statistics for the Planned Treatment Area

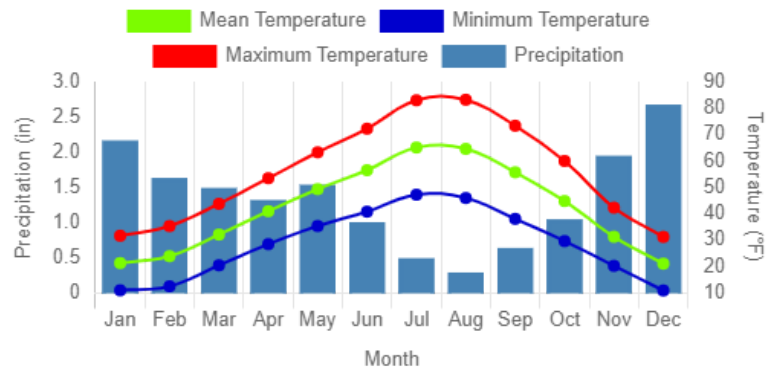
PRISM Annual Normal Temperature and Precipitation; DEM

Climate and elevation averages for the proposed treatment area. Temperature and precipitation values are generated from a 30-year average (1981 - 2010).

Temperature and precipitation values and trends can impact aspects such as germination initiation and seedling survival. Source:

<http://prism.oregonstate.edu/normals/>

Category	Mean	Range	St Dev
Elevation (ft)	5,347.51	557.74	138.42
Max Temp (F)	56.35	0.86	0.18
Mean Temp (F)	42.35	1.04	0.27
Min Temp (F)	28.35	2.00	0.56
Precipitation (in)	15.66	6.52	1.86



PRISM 30yr normal 800mM3
annual tmax
33.3 C - -6.11 C



PRISM 30yr normal 800mM3
annual tmin
23.58 C - -16.39 C



PRISM 30yr normal annual precip
6755.65 mm - 46.43 mm



PRISM 30yr normal 800mM3
annual tmean
25.81 C - -11.25 C

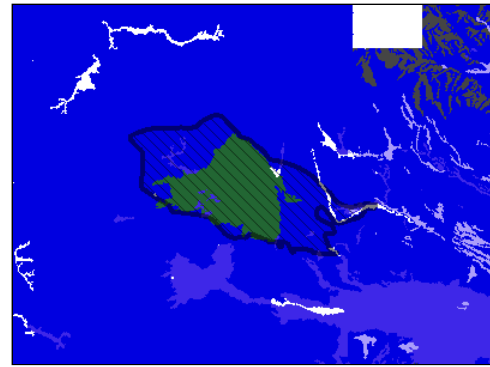


PRISM us dem
4258 m - -80 m

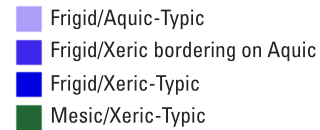
Soil Temperature and Moisture Regime

Soil temperature and moisture regimes for the proposed treatment area. Soil temperature and moisture can strongly influence the type of vegetation within an ecosystem. Source: <https://www.sciencebase.gov/catalog/item/53ac6b31e4b0dad35f8e8d0d>

Category	Acres	Percent Area
Frigid/Xeric-Typic	4,702	52.94%
Mesic/Xeric-Typic	3,855	43.41%
Frigid/Xeric bordering on Aquic	310	3.49%
Frigid/Aquic-Typic	12	0.13%



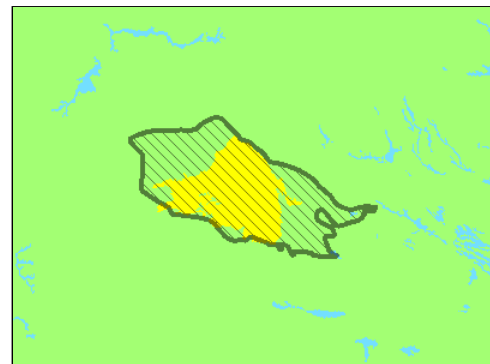
SSURGO MuRaster SGMZ v2



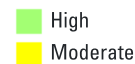
Resistance and Resilience

Relative ecosystem resilience and resistance for the proposed treatment area. Applications of ecosystem resilience and resistance concepts can help resource managers to better predict and mitigate impacts of wildfire and invasive annual grasses. Source: <https://www.sciencebase.gov/catalog/item/55229c34e4b027f0aee3cfa5>

Category	Acres	Percent Area
High	5,012	56.44%
Moderate	3,855	43.41%
Wetland/Riparian	14	0.16%



SGMZ western soil moist temp RR class



2001-2014 1y SPEI Mean and Standard Deviation

The Standardized Precipitation Drought Index (SPEI, Vicente Serrano et al. 2010), is useful in assessing how 'drought' prone site(s) of interest are based on long-term climate and tendency for the site to have annual deviations from climate. Several drought indices are available, but SPEI has become more widely used in settings such as the western US because the index incorporates temperature through basic calculation of precipitation minus potential evapotranspiration, and furthermore has been standardized using more complex calculations to make the index scalable for different applications (from the site to continent). SPEI values should be zero in the long term, unless directional change in moisture availability is occurring across the specified time range. SPEI typically range from approximately +2 to -2 for substantive wet and dry periods, respectively, and up to +4 and -4 for extreme wet or dry periods. Yearly data for 2001-2014 can be viewed in the Site History tab or with the Layers/Legend tab on the Planning Map. For the most current SPEI data, visit spei.csic.es/map/maps.html Source: <https://doi.org/10.5066/P9MZKCVZ>

Category	Mean	Range	St Dev
SPEI Standard Deviation	0.951	0.001	0.001
SPEI Mean	0.022	0.007	0.002



SPEI 2001-2014 Standard Deviation

1.11799 - 0.904986

Notes about seasonal drought:

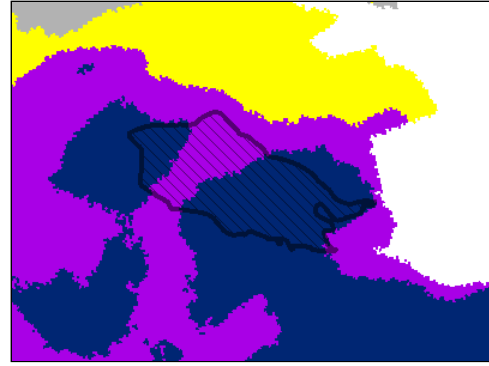
This area is currently experiencing a moderate drought and drought conditions are likely to persist (US Drought Monitor).

Sage-grouse Breeding Habitat

The sage-grouse breeding habitat probability within the planned treatment area. This data represents the probability the landscape to support a sage-grouse lek.

Source: <https://www.sciencebase.gov/catalog/item/57a26bbae4b006cb45553f57>

Category	Acres	Percent Area
High	6,177	69.56%
Moderate	2,683	30.21%



Breeding Habitat Probability

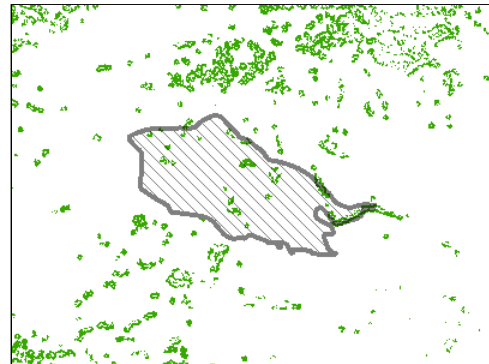
- Highly Unsuitable
- Unsuitable
- Low
- Moderate
- High

Sagebrush at Risk of Conifer Invasion

Sagebrush habitat at risk of conifer expansion for the proposed treatment area. This layer was created in 2015 to help identify threats to sage-grouse. Source:

<https://landscape.blm.gov/geoportal/catalog/search/resource/details.page?uuid=%7B1F9127DB-EE90-4EE9-A52B-3B530589A6E3%7D>

Category	Acres	Percent Area
Not at Risk	8,473	95.42%
At Risk	406	4.57%



**BLM FIAT Sagebrush Habitat at Risk of Conifer Expansion
2015 Integer Raster**

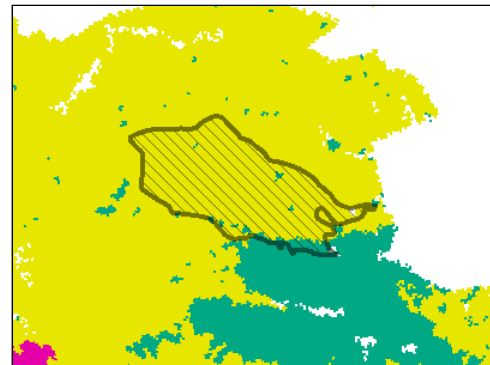
- Sagebrush Land Cover at Risk of Conifer Expansion

Fire Risk Assessment for the Greater Sage-grouse

The fire risk assessment within the planned treatment area. The final fire risk map identifies areas where ecosystem resilience and resistance interact and where Greater Sage-grouse habitats are at highest risk from fire across the Greater Sage-grouse distribution. These data were created to help understand how resistance and resilience and sage-grouse breeding habitat may help to inform wildfire management decisions. Source:

<https://www.sciencebase.gov/catalog/item/5846d366e4b04fc80e52376b>

Category	Acres	Percent Area
MODERATE, > 1 and < 3 fires per 100 yrs	8,387	94.44%
LOW, < 1 fires per 100 yrs	452	5.09%



Greater Sage-grouse Habitat Fire Risk

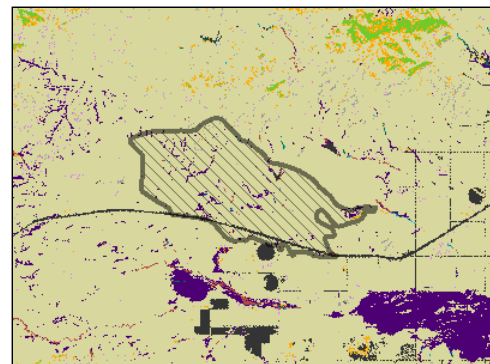
- LOW, < 1 fires per 100 yrs
- MODERATE, > 1 and < 3 fires per 100 yrs

Landfire Potential Vegetation Type

The environmental site potential of the planned treatment area. This represents the type of vegetation that could be supported based on the biophysical environment. These units represent the natural vegetation communities that would be established at late climax stages in the absence of disturbance.

Source: <https://www.landfire.gov/esp.php>

Category	Acres	Percent Area
Upland Shrub	8,247	92.87%
Wetland Herb	319	3.60%
Undetermined	210	2.37%
Other	44	0.51%
Wetland Shrub	32	0.37%
Sparsely Vegetated	25	0.28%



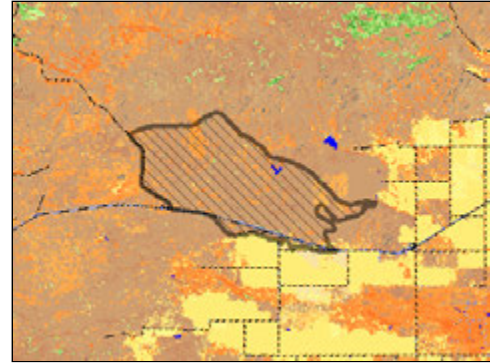
us 140esp

- Sparsely Vegetated
- Undetermined
- Upland Herb
- Upland Shrub
- Upland Woodland
- Wetland Forest
- Wetland Herb
- Wetland Shrub
- Wetland Shrub-Herb

LANDFIRE 2020 Existing Vegetation Cover (EVC) CONUS 2022 Capable

The existing vegetation cover of the planned treatment area. This represents the dominant canopy cover for each 30m pixel circa 2020 conditions. Source: <https://www.landfire.gov/evc.php>

Category	Acres	Percent Area
Shrub Cover >= 20% and < 30%	6,325	71.23%
Other	766	8.71%
Shrub Cover >= 30% and < 40%	662	7.46%
Herb Cover >= 40% and < 50%	617	6.95%
Herb Cover >= 30% and < 40%	300	3.38%
Herb Cover >= 50% and < 60%	202	2.28%



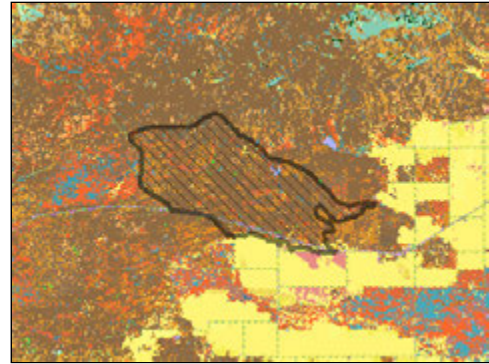
LANDFIRE 2020 Existing Vegetation Cover CONUS

■ Developed-Low Intensity	■ Developed-Roads
■ Developed-Upland Deciduous Forest	■ Developed-Upland Evergreen Forest
■ Developed-Upland Herbaceous	■ Developed-Upland Shrubland
■ Herb Cover >= 10% and < 20%	■ Herb Cover >= 20% and < 30%
■ Herb Cover >= 30% and < 40%	■ Herb Cover >= 40% and < 50%
■ Herb Cover >= 50% and < 60%	■ Herb Cover >= 60% and < 70%
■ Herb Cover >= 70% and < 80%	■ Herb Cover >= 80% and < 90%
■ NASS-Close Grown Crop	■ NASS-Row Crop-Close Grown Crop
■ NASS-Wheat	■ Open Water
■ Quarries-Strip Mines-Gravel Pits-Well and Wind Pads	■ Shrub Cover >= 10% and < 20%
■ Shrub Cover >= 20% and < 30%	■ Shrub Cover >= 30% and < 40%
■ Shrub Cover >= 40% and < 50%	■ Shrub Cover >= 50% and < 60%
■ Sparse Vegetation Canopy	■ Tree Cover >= 10% and < 20%
■ Tree Cover >= 20% and < 30%	■ Tree Cover >= 30% and < 40%
■ Tree Cover >= 40% and < 50%	

LANDFIRE 2020 Existing Vegetation Type (EVT) CONUS

LANDFIRE's (LF) Existing Vegetation Type (EVT) represents the current distribution of the terrestrial ecological systems classification, developed by NatureServe for the western hemisphere, through 2020. A terrestrial ecological system is defined as a group of plant community types (associations) that tend to co-occur within landscapes with similar ecological processes, substrates, and/or environmental gradients. Source: <https://www.landfire.gov/evt.php>

Category	Acres	Percent Area
Inter-Mountain Basins Montane Sagebrush Steppe	5,641	63.53%
Other	1,465	16.55%
Columbia Plateau Low Sagebrush Steppe	722	8.13%
Columbia Plateau Steppe and Grassland	557	6.27%
Inter-Mountain Basins Big Sagebrush Steppe	280	3.16%
Western North American Ruderal Wet Shrubland	211	2.37%



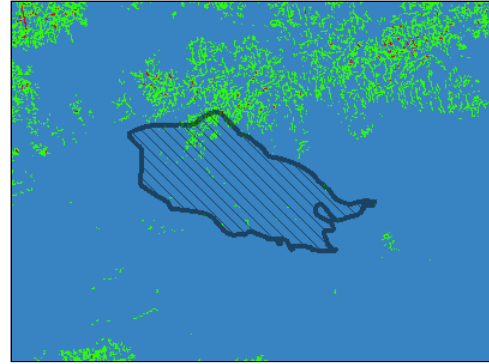
LANDFIRE 2020 Existing Vegetation Type CONUS

- | | |
|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| ■ Columbia Plateau Low Sagebrush Steppe | ■ Columbia Plateau Steppe and Grassland |
| ■ Developed-Low Intensity | ■ Developed-Roads |
| ■ Great Basin & Intermountain Introduced Perennial Grassland and Forbland | ■ Great Basin & Intermountain Ruderal Shrubland |
| ■ Great Basin Foothill and Lower Montane Riparian Herbaceous | ■ Great Basin Foothill and Lower Montane Riparian Shrubland |
| ■ Great Basin Pinyon-Juniper Woodland | ■ Interior Western North American Temperate Ruderal Grassland |
| ■ Interior Western North American Temperate Ruderal Shrubland | ■ Inter-Mountain Basins Alkaline Closed Depression |
| ■ Inter-Mountain Basins Big Sagebrush Shrubland | ■ Inter-Mountain Basins Big Sagebrush Steppe |
| ■ Inter-Mountain Basins Cliff and Canyon | ■ Inter-Mountain Basins Montane Sagebrush Steppe |
| ■ Middle Rocky Mountain Montane Douglas-fir Forest and Woodland | ■ North American Arid West Emergent Marsh |
| ■ Northern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest | ■ Northern Rocky Mountain Lower Montane Riparian Shrubland |
| ■ Northern Rocky Mountain Lower Montane Riparian Woodland | ■ Northern Rocky Mountain Lower Montane-Foothill-Valley Grassland |
| ■ Northern Rocky Mountain Montane-Foothill Deciduous Shrubland | ■ Northern Rocky Mountain Ponderosa Pine Woodland and Savanna |
| ■ Open Water | ■ Quarries-Strip Mines-Gravel Pits-Well and Wind Pads |
| ■ Rocky Mountain Alpine-Montane Wet Meadow | ■ Rocky Mountain Cliff Canyon and Massive Bedrock |
| ■ Rocky Mountain Subalpine-Montane Mesic Meadow | ■ Western Cool Temperate Close Grown Crop |
| ■ Western Cool Temperate Developed Shrubland | ■ Western Cool Temperate Fallow/Idle Cropland |
| ■ Western Cool Temperate Pasture and Hayland | ■ Western Cool Temperate Row Crop - Close Grown Crop |
| ■ Western Cool Temperate Urban Deciduous Forest | ■ Western Cool Temperate Urban Evergreen Forest |
| ■ Western Cool Temperate Urban Herbaceous | ■ Western Cool Temperate Urban Shrubland |
| ■ Western Cool Temperate Wheat | ■ Western North American Ruderal Wet Meadow & Marsh |
| ■ Western North American Ruderal Wet Shrubland | |

Ruggedness

The ruggedness of the planned treatment area. Ruggedness is a measure of terrain variation within a given area. An area with a consistent aspect and slope will have low ruggedness, while an area with variable aspect and/slope will have higher ruggedness. Source: <https://doi.org/10.5066/F7348JN3>

Category	Acres	Percent Area
Very Low Ruggedness	8,622	97.10%
Low Ruggedness	258	2.90%
Moderate Low Ruggedness	1	0.02%



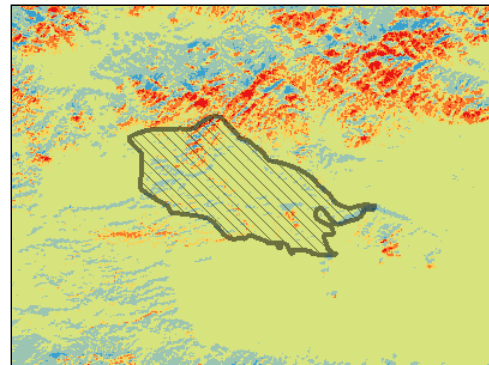
Ruggedness Natural Breaks 6 Classes.tif

- Very Low Ruggedness
- Low Ruggedness
- Moderate Low Ruggedness

Heatload

The heatload of the planned treatment area. Heatload represents the incident radiation and accounts for aspect, slope, and latitude. Source: <https://doi.org/10.5066/F7WD3ZRD>

Category	Acres	Percent Area
Moderate Low Heat Load	7,155	80.57%
Low Heat Load	1,039	11.70%
Moderate High Heat Load	447	5.04%
High Heat Load	201	2.26%
Very Low Heat Load	23	0.25%
Very High Heat Load	18	0.20%



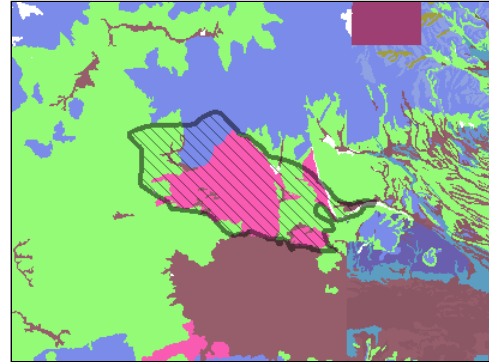
Western US 30m Exp HeatLoad Albers USGS Geometric Interval 6 Classes.tif

- Very Low Heat Load
- Low Heat Load
- Moderate Low Heat Load
- Moderate High Heat Load
- High Heat Load
- Very High Heat Load

Ecological Site Name

Ecological sites are the basic component of a land-type classification system that describes ecological potential and ecosystem dynamics of land areas. All land/land use types are identified within the ecological site system, including rangeland, pasture, and forest land. An ecological site is defined as a distinctive kind of land with specific soil and physical characteristics that differ from other kinds of land in its ability to produce a distinctive kind and amount of vegetation and its ability to respond similarly to management actions and natural disturbances. Lands are classified considering discrete physical and biotic factors. Physical factors include soils, climate, hydrology, geology, and physiographic features. Biotic factors include plant species occurrence, plant community compositions, annual biomass production, wildlife-vegetation interactions, and other factors. Ecological dynamics, primarily disturbance regimes, such as grazing; fire; drought; management actions; and all resulting interactions are also a primary factor of ecological sites. More information about the underlying data can be found at: <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1068392>

Category	Acres	Percent Area
SHALLOW STONY LOAM 8-16 - Provisional	4,364	49.06%
LOAMY 12-16 - Provisional	2,942	33.08%
SOUTH SLOPE GRAVELLY 12-16 - Provisional	975	10.96%
DRY MEADOW 8-15 PONE3-PHAL2	418	4.69%
MEADOW DECA18-CANE2	56	0.63%



Ecological Site Name DCD, NRCS Rangeland Site

- DRY MEADOW 8-15 PONE3-PHAL2
- LOAMY 12-16 - Provisional
- MEADOW DECA18-CANE2
- SHALLOW STONY LOAM 8-16 - Provisional
- SOUTH SLOPE GRAVELLY 12-16 - Provisional

Provisional Seed Zones

The provisional seed zones within the planned treatment area. The zones represent relative climatic similarity. These zones should be considered a general guideline for seed transfer and should be used with appropriate species specific information and local knowledge. Source: <https://www.fs.fed.us/wwetac/threat-map/TRMSeedZoneMapper.php>

Category	Acres	Percent Area
10 - 15 Deg. F. / 3 - 6	6,969	78.48%
5 - 10 Deg. F. / 3 - 6	1,911	21.52%



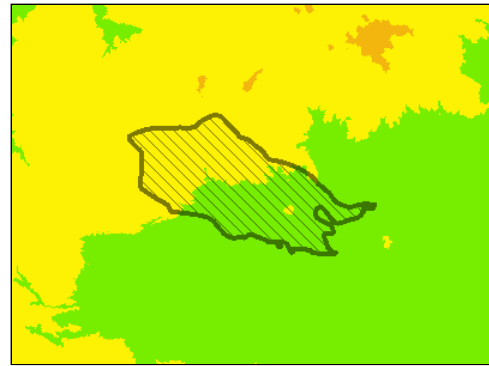
Seed Zones 2013

- 5 - 10 Deg. F. / 3 - 6
- 10 - 15 Deg. F. / 3 - 6

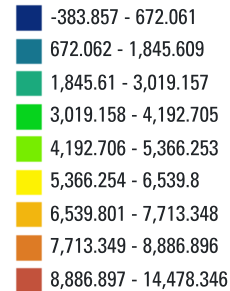
LANDFIRE 2020 Elevation (Elev) CONUS

The digital elevation model that represents land height above mean sea level of the planned treatment area. Source: <https://www.landfire.gov/elevation.php>

Category	Mean	Range	St Dev
Elevation	5,359.09	790.68	136.75



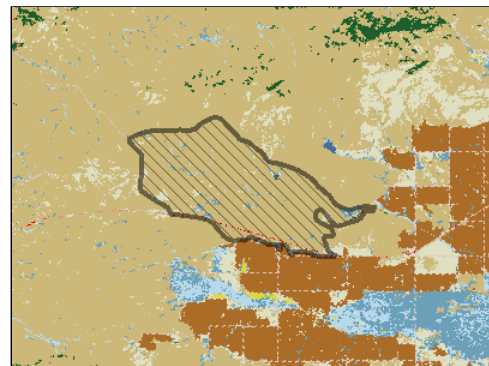
LANDFIRE 2020 Elevation CONUS



NLCD 2019 CONUS Land Cover

The National Land Cover Database (NLCD) provides classified land cover for 2019 ground conditions. NLCD layers are modeled from Landsat data. Source: <https://www.mrlc.gov/data/nlcd-2019-land-cover-conus>

Category	Acres	Percent Area
Shrub/Scrub	8,174	91.89%
Herbaceous	250	2.81%
Emergent Herbaceous Wetlands	170	1.91%
Other	119	1.28%
Woody Wetlands	103	1.15%
Developed, Open Space	70	0.79%



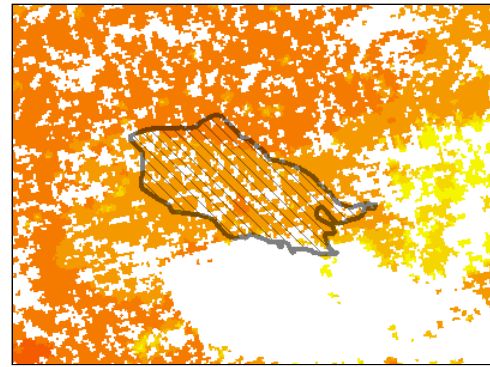
nlcd 2019 land cover l48 20210604.img



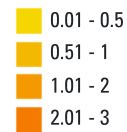
Wildfire Probability for the Sagebrush Biome

The wildfire probability within the planned treatment area. These data were produced to inform rangeland management decisions. Source: <https://www.sciencebase.gov/catalog/item/58516a0be4b0f99207c4f096>

Category	Acres	Percent Area
1.01 - 2	5,241	59.02%
2.01 - 3	865	9.74%
0.51 - 1	157	1.76%
0.01 - 0.5	39	0.44%



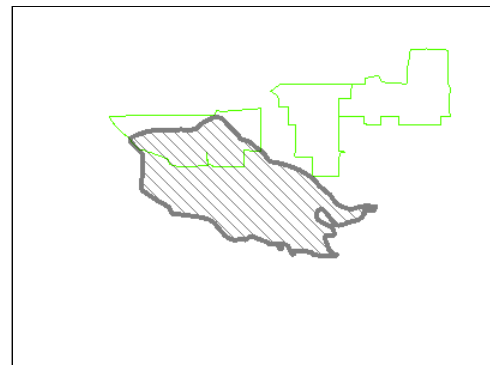
Probability of Wildfire



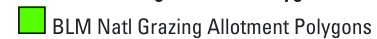
Grazing Allotments

The BLM Grazing allotments are areas designated and managed for livestock grazing. This dataset is supplemental to the Rangeland Administration System (RAS). Source: <https://gbp-blm-egis.hub.arcgis.com/datasets/BLM-EGIS::blm-natl-grazing-allotment-polygons/about>

Category	Acres	Percent Area
Cow Creek	2,800	23.00%



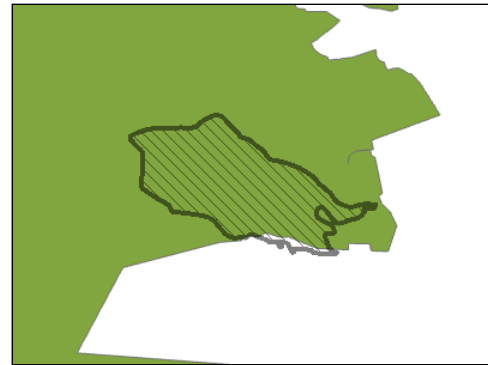
BLM Natl Grazing Allotment Polygons



Sage-grouse Priority Areas for Conservation

The 2015 Priority Areas for Conservation within the planned treatment area. A PAC was identified as area that is essential for the long-term conservation of the sage-grouse. Source: <https://www.sciencebase.gov/catalog/item/56f96d88e4b0a6037df066a3>

Category	Acres	Percent Area
253-Snake, Salmon, and Beaverhead-MZ4	8,632	97.20%

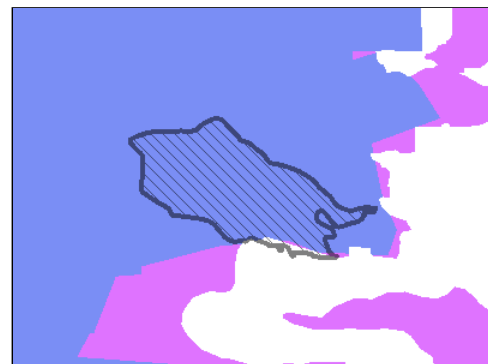


GRSG 2015 USFWS Status Review PACs
■ 253-Snake, Salmon, and Beaverhead-MZ4

BLM WesternUS GRSG ROD Habitat Mgmt Areas August 2022

The Greater Sage-grouse habitat management areas. The areas are as follows: Priority habitat management areas (PHMA): areas with the highest habitat value for maintaining sustainable sage-grouse populations and include breeding, late brood-rearing, and winter concentration areas; General habitat management areas (GHMA): areas that are occupied seasonally or year-round and are outside of PHMAs; Important management habitat areas (IHMA): areas in Idaho that provide a management buffer for and that connect patches of PHMAs; Other habitat management areas (OHMA): areas in Nevada and Northeastern California, identified as unmapped habitat in the Proposed RMP/Final EIS, that are within the Planning Area and contain seasonal or connectivity habitat areas; Restoration habitat management areas (RHMA): areas with ongoing or imminent impacts containing substantial and high-quality sage-grouse habitat that historically supported sustainable sage-grouse populations; Undesignated Habitat (UDH) for privately owned irrigated agricultural lands in Colorado; Linkage connectivity habitat management areas (LCHMA): areas that have been identified as broader regions of connectivity important to facilitate the movement of sage-grouse and maintain ecological processes; Anthro Mountain: an additional 41,200 acres of National Forest System lands in the Anthro Mountain portion of the Carbon Population Area in Utah that are managed as neither PHMA nor GHMA. Source: <https://gbp-blm-egis.hub.arcgis.com/datasets/BLM-EGIS::blm-natl-westernus-grsg-rod-habitat-mgmt-areas-august-2022/explore?location=89.969647%2C-58.488320%2C0.00>

Category	Acres	Percent Area
IHMA	11,831	97.20%
GHMA	60	0.49%

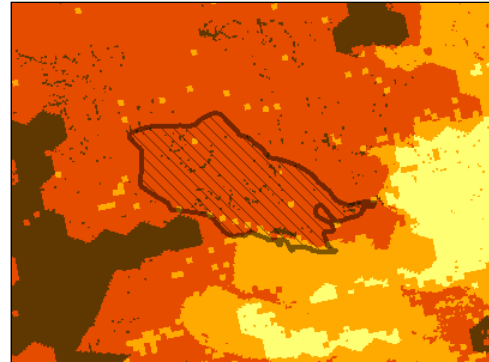


BLM Natl WesternUS GRSG ROD Habitat Mgmt Areas August 2022
■ GHMA
■ Additional Habitat Management Area (IHMA)

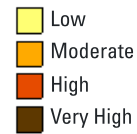
BLM ESR Priority Landscapes 2019 Raster

These raster data represents priority landscapes that can be used to help locate post-fire Emergency Stabilization and Rehabilitation treatments. The ESR priority Landscapes data can be applied retrospectively to evaluate if past ESR treatments were placed on highly valued landscapes for ESR treatment. The data also can be utilized as a screening tool for future ESR proposals, by assessing the location of proposed ESR projects against the high priority landscapes layer. See the full report for more details: 2019 Status Review of BLM's Emergency Stabilization and Rehabilitation Program. Source:

Category	Acres	Percent Area
High	8,154	91.82%
Moderate	378	4.26%
Very High	352	3.97%



BLM ESR Priority Landscapes 2019 Raster.img



Near-real-time Herbaceous Annual Cover in the Sagebrush Ecosystem, USA, July 2019

Percent of proposed treatment area for each cover bin

Component	0-10	10-30	30-50	>50
Annual Herbaceous Cover	44.70	43.65	5.74	0.35

Average cover value of each bin within the proposed treatment area

Component	0-10	10-30	30-50	>50
Annual Herbaceous Cover	7.16%	13.54%	39.67%	63.00%

USGS 2016 Shrub Fractional Components Summary Statistics for the Planned Treatment Area

Percent of proposed treatment area for each fractional group cover bin *

Component	0-10	10-30	30-50	>50
Annual Herbaceous	79.64%	16.27%	0.21%	n/a
Bare Ground	2.85%	83.42%	8.96%	0.89%
Big Sage	17.33%	78.26%	0.53%	n/a
Herbaceous	1.87%	74.52%	18.89%	0.84%
Litter	0.19%	95.43%	0.50%	n/a
Sagebrush	12.00%	82.60%	1.52%	n/a
Shrub	8.04%	60.96%	26.95%	0.18%

* Each column represents binned percent cover of the fractional group. The first bin (0-10) represents the percent of the proposed treatment area with cover values between 0 and 10% cover of the functional group.

Average cover value of each bin within the proposed treatment area **

Component	0-10	10-30	30-50	>50
Annual Herbaceous	3.84	14.96	33.85	n/a
Bare Ground	8.19	20.34	36.51	59.51
Big Sage	6.15	18.62	32.03	n/a
Herbaceous	8.56	21.01	36.93	55.28
Litter	8.49	24.68	31.36	n/a
Sagebrush	6.30	19.63	32.42	n/a
Shrub	6.83	23.64	34.57	53.93

** Each column represents the average cover value of the binned percent cover of the fractional group within the proposed treatment area. The first bin column (0-10) displays the average percent cover within the 0-10% cover bin within the proposed treatment.

Percent of proposed treatment area for each fractional group height bin ***

Component	0-10	10-30	30-50	>50
Sagebrush Height	8.98%	53.91%	28.31%	4.92%
Shrub Height	0.09%	6.67%	26.28%	63.09%

*** Each column represents binned height (cm) of the fractional group. The first bin (0-10) represents the percent of the proposed treatment area with height values between 0 and 10 cm of the functional group.

Average height value (cm) of each bin within the proposed treatment area ****

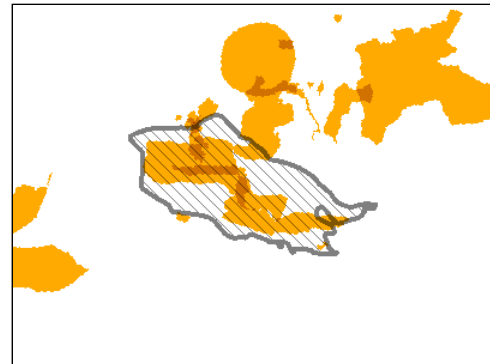
Component	0-10	10-30	30-50	>50
Sagebrush Height	6.63	21.20	37.19	63.63
Shrub Height	8.09	25.06	41.35	66.79

**** Each column represents the average height value of the binned height values of the fractional group within the proposed treatment area. The first bin column (0-10) displays the average height within the 0-10 cm bin within the proposed treatment.

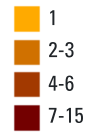
Wildfire History

A comprehensive wildfire database created by combining publically available sources. The combined dataset includes spatial summary statistics such as the number of times burned, earliest fire in the spatial record, and most recent fire in the spatial record. This dataset includes fires from 1800s - Present, though most fires are recorded since the early 80s. Source: <https://doi.org/10.5066/P9ZXGFY3>

Times Burned	Acres	Percent Area
1	3,418	38.42%
2	613	6.89%
3	9	0.10%



USGS Wildfire Frequency Raster FY21 Version

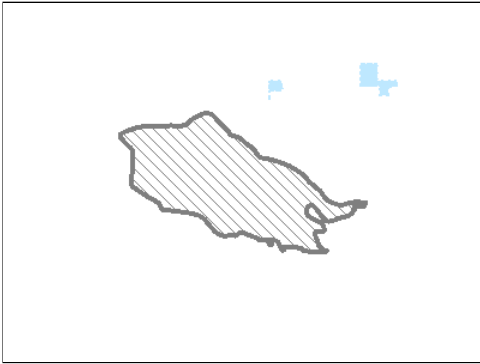


Notes about the wildfire history:

There are numerous prior fires within the boundary. The oldest fire on record was in 1958 in the NW portion of the fire. Fires in 1993 and 2003 burned in the southern half of the area. An additional fire in 2003 burned a portion of the northern boundary. A small fire in 2017 burned along the highway in 2017. Lastly, a fire in 2020 burned in the NW, and over portions of the area burned in the 1958 fire.

Treatment History

The Land Treatment Digital Library (LTDL) record of treatment frequency. This raster shows the overlap of polygon land treatment data in the LTDL and sums the overlap together, resulting in the frequency of land treatments per pixel. Main treatments are the only included treatment types (e.g, actual land manipulations) and both 'planned: unknown implementation' and 'implemented' treatments are included in this map. Source: <https://doi.org/10.5066/P980BOLS>



All Treatment Types



Notes about the treatment history:

There are no records of prior land treatments from the BLM in this area. The Boise National Forest does have record of a roadside herbicide application along E High Prairie Road, but with no date listed. The nearest known BLM treatment was a Pubescent Wheatgrass seeding in 1964 to the north of the Wildhorse wildfire and southwest of hunter creek road.

Treatments selected from the Land Treatment Digital Library for reference:

Project Name: Pony HJ6 Wildfire 2013
Project ID: 8979
Treatment ID: 24468
BLM Field Office: Four Rivers Field Office
State: Idaho
Major Treatment: Herbicide/Weeds/Chemical
Sub Treatment: Weeds
Treatment Type: Noxious Weeds: Weed Control
BLM Reported Success: See Comments

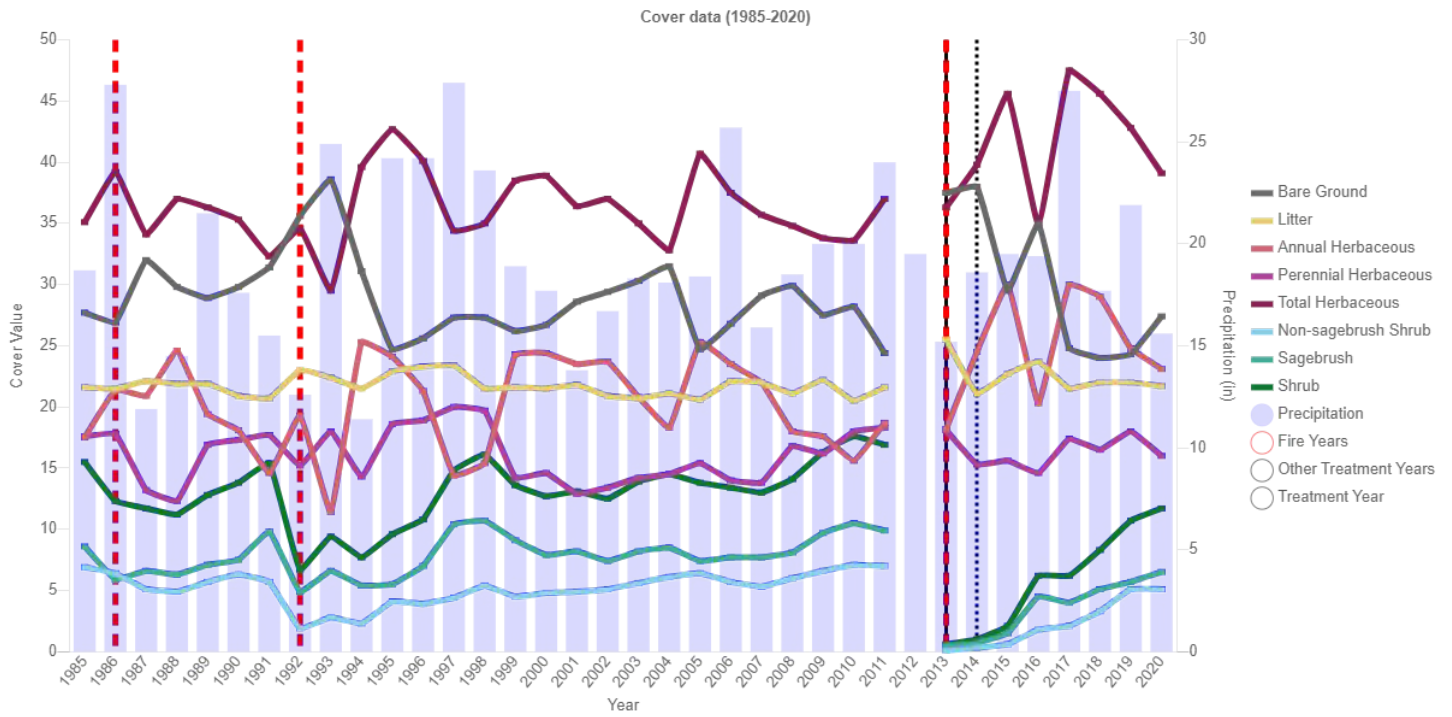
Purpose: Wildfire
Dates: (Confirmed)
Start: 10/00/2013
End: 9/00/2017
Area: unknown
GIS Acres: 155267.93 acres
GIS Feature Type: Polygon
Feature Status: Confirmed

Objectives: Inventory and treat noxious weed species to minimize their spread and invasion into currently unoccupied areas.

Actual Implementation: Noxious weed inventory and treatment was completed by ESR/Weeds personnel and a Great Basin Institute field crew.

Numerous visits were made from fall 2013 – summer 2014. Inventory was focused on areas with a high probability for weed presences and/or invasions (e.g., disturbed areas near travel corridors, watering/salting sites, and areas near old homesteads) and cursory where probability for noxious weeds was low (e.g., where conditions do not favor noxious weeds). R5 - FY15: Original funding request was \$73,000. Full funding was provided. Noxious weed inventory and treatment was completed by ESR/Weeds personnel and a Great Basin Institute field crew. Numerous visits were made from fall 2014 – summer 2015. Inventory was focused on areas with a high probability for weed presences and/or invasions (e.g., disturbed areas near travel corridors, watering/salting sites, and areas near old homesteads) and cursory where probability for noxious weeds was low (e.g., where conditions do not favor noxious weeds). FY16: Original funding request was \$69,000, WO allocated \$0. Noxious weed inventory and treatment was completed by ESR/ Weeds personnel, Elmore County Weed Control and a Great Basin Institute field crew. Diffuse knapweed was treated adjacent to roadsides; treatments have reduced plant density in many locations. Inventory focused on new invaders including squarrose, Russian and spotted knapweeds, and scotch thistle. FY17: Additional funding was requested under the revised ESR program extending from 3 to 5 years. Noxious weed inventory and treatment was completed by ESR/ Weeds personnel, Elmore County Weed Control and a Great Basin Institute field crew. Diffuse knapweed was treated adjacent to roadsides; treatments have reduced plant density in many locations. Inventory and treatment focused on diffuse knapweed along roadsides and trails.

Treatment Results: Rush skeletonweed is common throughout the fire. It occurs across all BLM lands within the fire perimeter and due to the extent of the infestation it is not a viable option to chemically treat this species in this area. Further, the suite of biological control agents for rush skeletonweed (i.e., rust – *Puccinia chondrillina*; gall mite – *Aceria chondrillae*; gall midge – *Cystiphora schmidtii*) is fully established throughout the region. Although diffuse knapweed was known to occur at various locations along Highway 20, inventories showed larger populations of both species than anticipated. Diffuse knapweed infestations mainly occur along the access road to the transmission line running from the Timmons Field Spring (T2S R8E Sec04) southwest to T2S R8E Sec18. The majority of these infestations are <0.1 acre although they become nearly continuous along the roadside in some areas. Isolated infestations of diffuse knapweed were also found along Prairie Rd. and at Rattlesnake Spring. The presence of diffuse knapweed is extremely concerning because nearly all known infestations are within or adjacent to the drill seeding and the possibility of expansion is high. Scotch thistle and whitetop were inventoried in various locations across the fire and infestations of both appear to be isolated and scattered. All infestations were <0.1 acre. Diffuse knapweed, Scotch thistle, and whitetop infestations were chemically treated by Elmore County and BLM personnel over multiple visits to the area in the summer of 2014. Treatments are expected to be effective at reducing the density of infestations; however, continued treatment over multiple years will be required due to an existing seed bank. Monitoring Summary 2018 - The total cover objective for Pasture 1 of the Cottonwood allotment is currently being met with an overall total cover of 89%; 85.4% in T08 and 94% in T09. The open patches in HJ6T08 have created suitable areas for the establishment of seeded plants including sagebrush, alfalfa, and small burnet (Photo 8-12). This plot also had very little perennial grass cover due to lack of perennial grasses in the immediate area before the fire. In 2015 Idaho fescue on the hillside to the west of the plot was doing well and foliar cover was likely above the 60% threshold. While plot HJ6T08 is representative of hot burned areas, the majority of the pasture is bettered represented by plot HJ6T09. Across the allotment all perennial grasses, except for bottlebrush squirreltail, exhibited good vigor and were either flowering or fruiting at time of monitoring. There was evidence of grazing on alfalfa, bluebunch wheatgrass, bottlebrush squirreltail and lupines. Bottlebrush squirreltail exhibited fair vigor throughout the allotment. In 2015 forb richness was high especially at T09.



Caption:

Cover data (1985–2020) - Rangeland Condition Monitoring Assessment and Projection (RCMAP) fractional component cover yearly mean - 1985–2020, within the selected treatment. Year of selected treatment is indicated by the vertical, solid black line. Years of other treatments at the same site are indicated with vertical, dashed black lines. Years of fire events are indicated with the vertical, dashed red lines. Precipitation by water year are displayed as blue bars with values corresponding to the secondary y-axis. Hover over the chart to see values. Legend items can be selected to display or not on the chart. Unselected legend items will display with a strikeout. No cover data are available for 2012. For more information on the RCMAP data, visit the [Multi-Resolution Land Characteristics Consortium website](#).

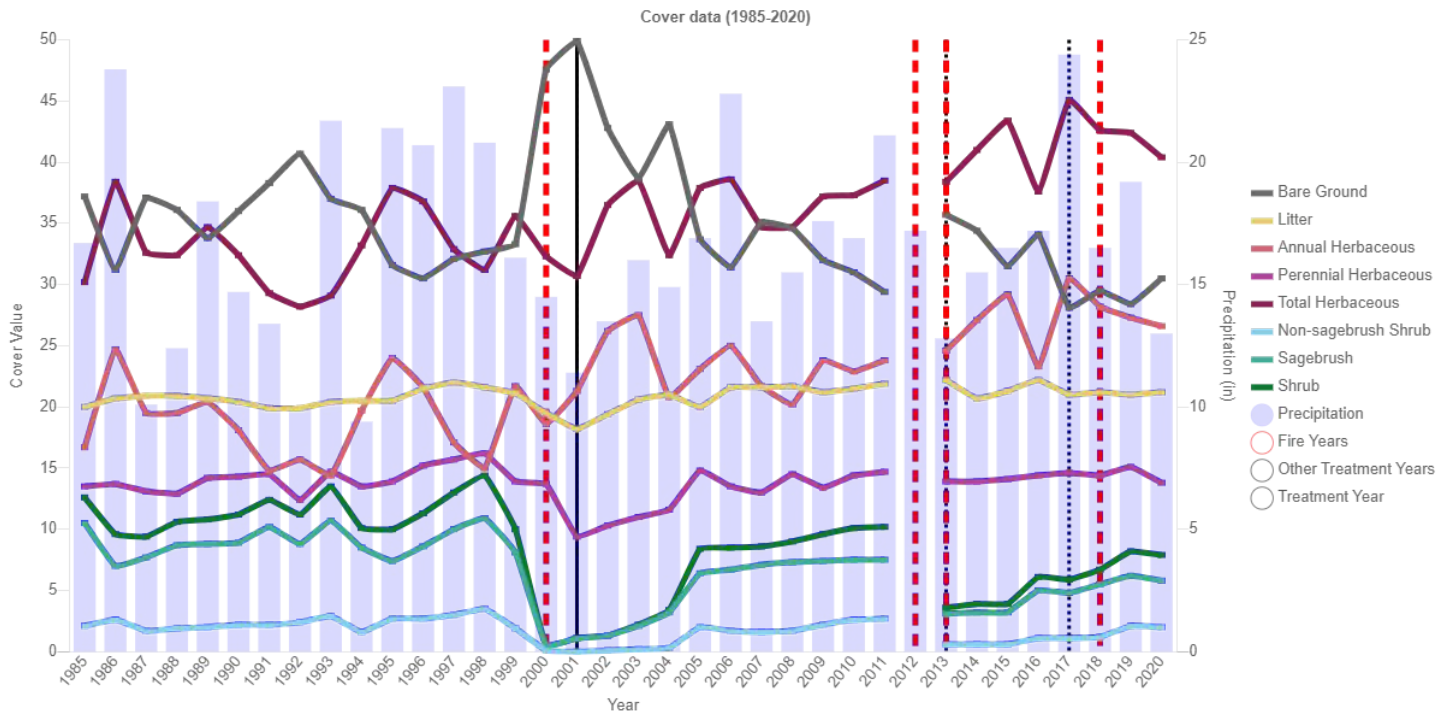
Project Name: Oregon Trail Wildfire F084 2000
Project ID: 8407
Treatment ID: 22975
BLM Field Office: Four Rivers Field Office
State: Idaho
Major Treatment: Seeding
Sub Treatment: Aerial Seeding
Treatment Type: Aerial Seeding: Rotor Wing
BLM Reported Success: Not Successful

Purpose: Wildfire
Dates: (Confirmed)
Start: 2/6/2001
End: 2/12/2001
Area: 16946 acres
GIS Acres: 15810.75 acres
GIS Feature Type: Polygon
Feature Status: Confirmed

Objectives: Re-establish a population of Big Sagebrush (Mountain/Basin) on 16,946± acres of public lands burned in the 2000 Oregon Trail Fire by aerially broadcasting Mountain/Basin Big Sagebrush seed.

Actual Implementation: The aerial seeding was completed by Reeder Flying Service on 2/6 thru 2/12/2001 using a Bell 206 B III helicopter with 2 standard seeder buckets. Agitation was used to aid in feeding the sagebrush and prevent it from bridging. Ground conditions were frozen with 30% snow coverage at higher elevations. Aerial seeding was shut down often due to adverse weather conditions. ESR plan called for Wyoming Big Sagebrush to be seeded on the lower elevations and Mountain Big Sagebrush on the higher elevations. A miss communication during seed mixing resulted in the Wyoming and Mountain being combined and broadcast over the entire project.

Treatment Results: Line-point intercept cover data collected along 5 transects over three sites in mid July 2003 showed that the mean ground cover was 76.1 percent and the mean canopy cover was 30.2 percent. Analysis of the canopy cover data showed that perennial grasses afforded 60 percent of the total canopy cover. Line intercept basal vegetative cover data collected along 5 transects over three sites showed that, on average over all sites, 10.9 percent of the line directly beneath the tape was comprised of vegetative basal gaps greater 50 centimeters in length. Bottlebrush Squirreltail (*Sitanion hystrix*), Sandberg Bluegrass (*Poa sandbergii*), Bulbous Bluegrass (*Poa bulbosa*) were present along all transects at three sites at mean densities of 0.72 plants/m², 12.3 plants/m², and 8.0 plants/m², respectively. Blue bunch Wheatgrass (*Agropyron spicatum*) was present at one high elevation (>4000 ft.) site at 0.6 plants/ m². Crested Wheatgrass (*Agropyron cristatum*), from a previous seeding, was present at the site located in the northwestern portion of the burn at a mean density of 0.32 plants/m². Cheatgrass (*Bromus tectorum*) was present at two sites at a mean density of 12.1 plants/m². Medusahead Wildrye (*Taeniatherum caput-medusae*) was present at the site located in the northwestern portion of the burn at a mean density of 13.9 plants/ m². The mean density of live Antelope Bitterbrush seedlings, planted in the spring of 2002, at two locations was 0.05 plants/m² (~202 plants/acre). No evidence to indicate any level of establishment of sagebrush/alfalfa was found at any location within the burn. Re-sprouted bitterbrush/rabbitbrush plants were encountered throughout. Line-point intercept cover data collected along 15 transects over 5 locations in mid June 2002 showed the mean ground cover was 62 percent. Plant density data collected in late November 2002 along transects within the two areas where Antelope Bitterbrush was planted the preceding spring showed the mean live seedlings within the two areas was 0.17 live seedlings/m² (~688 seedlings/acre). No evidence to indicate successful establishment of either sagebrush or alfalfa was encountered at any location within the burn. Line-point intercept cover data collected along five transects at one location in early July 2001 showed the mean ground cover was 62 percent. No data relative to the establishment of shrubs was reported. Cover data collected along five transects at a site in an adjacent unburned site suggested that the pre-fire ground cover was 71.8 percent. Except for those areas that contained healthy pre-fire shrub populations, the 2003 monitoring data along with observations at random locations throughout the burned area suggest that the present vegetative state of the public lands burned in the 2000 Oregon Trail Fire have is similar to pre-fire vegetative state. The data indicates that the: natural regeneration treatment was partially successful; establishment of shrubs/forbs via aerial seeding (Big Sagebrush and Ladak Alfalfa) was unsuccessful; and establishment of shrubs via hand-planting of seedlings was minimally successful. Cover data indicates that present ground cover is similar to pre-fire. In mid July 2003 more than 60 percent of all perennial grasses encountered exhibited seed heads.



Caption:

Cover data (1985–2020) - Rangeland Condition Monitoring Assessment and Projection (RCMAP) fractional component cover yearly mean - 1985–2020, within the selected treatment. Year of selected treatment is indicated by the vertical, solid black line. Years of other treatments at the same site are indicated with vertical, dashed black lines. Years of fire events are indicated with the vertical, dashed red lines. Precipitation by water year are displayed as blue bars with values corresponding to the secondary y-axis. Hover over the chart to see values. Legend items can be selected to display or not on the chart. Unselected legend items will display with a strikethrough. No cover data are available for 2012. For more information on the RCMAP data, visit the [Multi-Resolution Land Characteristics Consortium website](#).

Species List Status: Confirmed on Paper

Seeds or Seedlings Planted: Seeds

Symbol	Species	Common Name	Seed Variety	Bulk Seed Pounds	Bulk Pounds/Acre	PLS Rate	PLS Seed Pounds	PLS Pounds/Acre	Seedling Number	Seedlings/Acre
ARTRV	<i>Artemisia tridentata</i> Nutt. ssp. vaseyana (Rydb.) Beetle	Mountain Big Sagebrush	None	9620	0.5676					
ARTRW8	<i>Artemisia tridentata</i> Nutt. ssp. wyomingensis Beetle & Young	Wyoming Big Sagebrush	None	6700	0.3953					
MESA	<i>Medicago sativa</i> L. - Ladak	Alfalfa - Ladak	None	9100	0.5369					

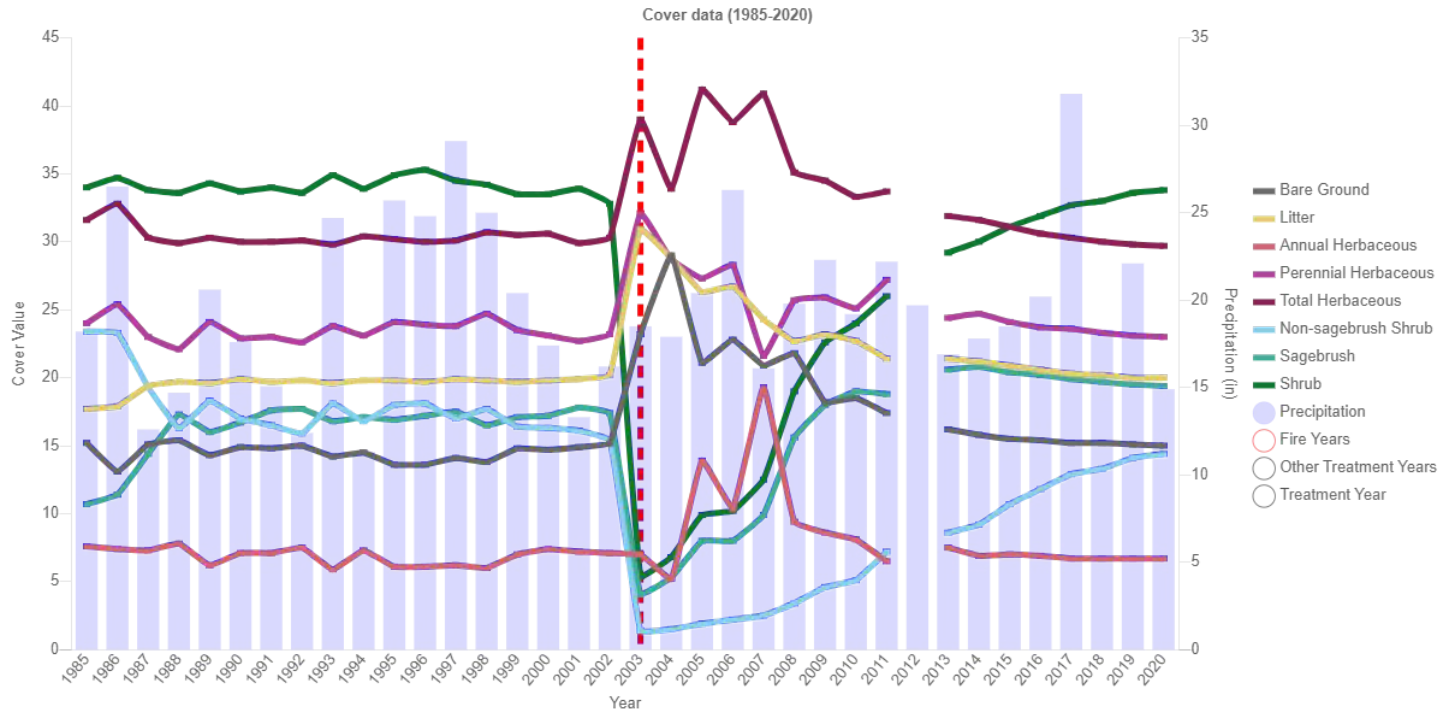
Project Name: Cow Creek Wildfire 0059D 1964
Project ID: 2824
Treatment ID: 7830
BLM Field Office: Shoshone Field Office
State: Idaho
Major Treatment: Seeding
Sub Treatment: Aerial Seeding
Treatment Type: Aerial Seeding
BLM Reported Success: Unknown

Purpose: Wildfire
Dates: (Confirmed)
Start: 10/30/1964
End: 10/30/1964
Area: 110 acres
GIS Acres: 73.97 acres
GIS Feature Type: Polygon
Feature Status: Confirmed

Objectives: Area burned over by wildfire during the summer of 1964.

Actual Implementation: This project was the aerial seeding in conjunction with the U.S.D.A. Forest Service of an area burned over by a wildfire during the summer of 1964. The seeding is plotted on aerial photo number DLG-16T-43.

Treatment Results: Unknown



Caption:

Cover data (1985–2020) - Rangeland Condition Monitoring Assessment and Projection (RCMAP) fractional component cover yearly mean - 1985–2020, within the selected treatment. Year of selected treatment is indicated by the vertical, solid black line. Years of other treatments at the same site are indicated with vertical, dashed black lines. Years of fire events are indicated with the vertical, dashed red lines. Precipitation by water year are displayed as blue bars with values corresponding to the secondary y-axis. Hover over the chart to see values. Legend items can be selected to display or not on the chart. Unselected legend items will display with a strikeout. No cover data are available for 2012. For more information on the RCMAP data, visit the [Multi-Resolution Land Characteristics Consortium website](#).

Species List Status: Confirmed on Paper

Seeds or Seedlings Planted: Seeds

Symbol	Species	Common Name	Seed Variety	Bulk Seed Pounds	Bulk Pounds/Acre	PLS Rate	PLS Seed Pounds	PLS Pounds/Acre	Seedling Number	Seedlings/Acre
THIN6	Thinopyrum intermedium (Host) Barkworth & D.R. Dewey	Pubescent Wheatgrass		1397	12.7	0.8188	1143.8636	10.3987		