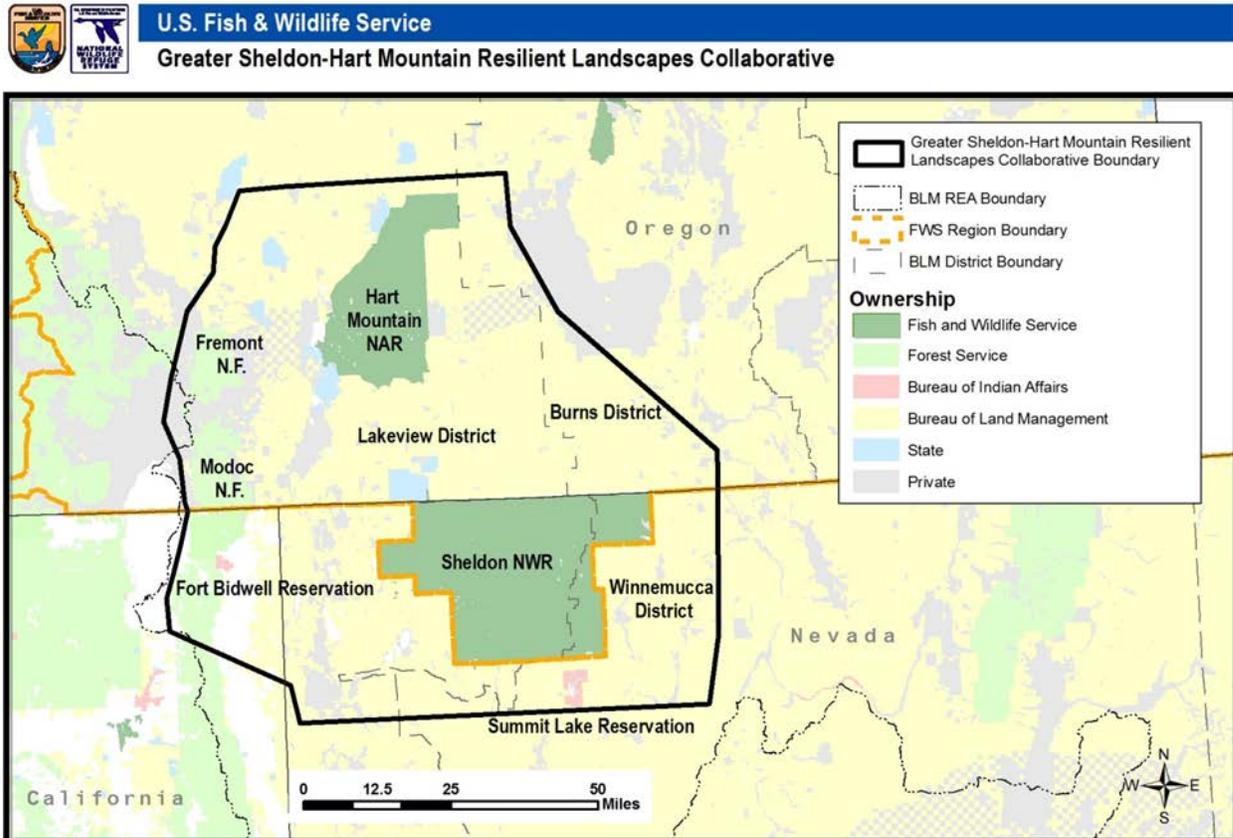




Greater Sheldon Hart Mountain Wildland Fire Resilient Landscapes collaborative Annual Report: 2017



Produced in the USFWS NWRS - Lands Division, Portland, OR; Sources: BLM Land Ownership; Updated 10/08/2015; File: 15-070-1a.MXD

The Greater Sheldon Hart Mountain Collaborative is comprised of the Pacific Region of the U.S. Fish and Wildlife Service (USFWS), Oregon/Washington Bureau of Land Management (BLM), Summit Lake Paiute Tribe (SLPT), Great Basin Landscape Conservation Cooperative (GBLCC), state, and private lands and covers approximately four million acres of sagebrush-steppe in south central Oregon, northern Nevada, and northeastern California. These are high priority landscapes, as identified by the Conservation Objectives Team (USFWS, 2013) in “The Strongholds Memo” (USFWS, 2014).

1. FY 2017 Summary Narrative

This accomplishment report describes continuing coordination by the Greater Sheldon Hart Mountain Resilient Landscapes Collaborative (GSHMRLC) to reduce the risk of damaging wildfire and increase resistance to invasive species across multiple partnerships in the northwest Great Basin. This 2017 narrative reports on funding received in FY17. In 2017, the collaborative received \$1,001,000 distributed as follows: \$600,433 to Lakeview BLM; \$40,220 to Summit Lake Paiute Tribe; \$207,509 to Sheldon-Hart Mountain National Wildlife Refuge Complex (SHMNWRC); \$50,276 to USFWS Partners for Fish and Wildlife (PFW) Program in Region 1; \$57,458 to USFWS PFW Program in Region 8; and, \$45,104 to the Great Basin Landscape Conservation Collaborative (GBLCC).

Accomplishments by the collaborative in 2017 were many and include:

- Over 18,590 acres were treated including 6,998 acres of juniper thinning, 2,733 acres of aerial herbicide spraying, and 1,984 acres of piles burned across all ownerships.
- 12,000 acres were mapped for invasive species presence.
- Rapid assessments on 4,375 acres were completed.
- The tractor that the Summit Lake Paiute Tribe purchased for fuels management in 2016 using RLC funds, was used to create over 30 miles of fuelbreaks along roadways on tribal lands in 2017. These newly created fuelbreaks contributed to a wildfire success story this summer, aiding the quick suppression of a wildfire keeping it to a small size, as the tribe continues to work to resiliency.
- Access to water facilities for firefighting resources were improved on Summit Lake Paiute Tribal Lands.
- Private landowners were engaged and project designs for treatments on private lands were completed. Two miles of fenceline were repaired and replaced to improve grazing management in and around riparian areas.
- Relationships continued to strengthen and the common assessment process developed for use across the landscape using BLM AIM and FIAT protocols was used to prioritize projects across multiple ownerships.
- Permanent and ephemeral monitoring plots were installed across the landscape on all jurisdictions.
- The landscape conservation design process known as the Northwest Basin and Range (NWBR) Synthesis conducted a two-day symposium and maintained a website and online collaboration platform
- All funded DOI partners (i.e. collaborative) had a one-day face-to-face meeting to establish business rules for decision making and establish a framework for adaptive management within the schedule of the OWF Resilient Landscapes activity. Contact FWS collaborative leads for a copy of this report. Quarterly conference calls were also conducted to discuss issues and chart progress across the collaborative.

- A face to face meeting will be held in 2018 in Lakeview Oregon to discuss and describe ongoing treatments and projects, share lessons learned, and coordinate implementation activities.

Working together and coordination on projects has established an atmosphere of friendship and trust across jurisdictions and the infusion of funding has helped bring in new cooperators, coordinate efforts across the landscape, create consistency in work applied and monitoring, and expand the amount of work accomplished in the area. The collaborative has agreed to continue regular calls and meetings despite the outlook for no more future funding.

The following are accomplishment highlights from each partner's reports.

BLM Lakeview District

The BLM focused on continued juniper cutting and piling followed by some fall burning of piles in the South Warner Project Area. This 70,000 acre project area began in 2011 and is nearing completion. In FY 17 we completed over 4200 acres of juniper treatment, over 7100 acres of aerial herbicide (Imazapic) treatment for invasive annual grasses, and over 2500 acres of seeding treatments in the South Warner Area. There have been some valuable lessons learned throughout the lifespan of this project including when to time herbicide treatments and seedings for improved effectiveness that will lead to increased resistance to invasives and fire resilience. We have learned that in areas of higher density, cut/pile and cover is more effective at lengthening the burn window into the winter and reduces impact of the burned area to the soils and surrounding shrubs and grasses. Additionally, we have learned that the treated juniper is better consumed with less "creep" when burning cut pile/cover treatments versus just cutting and lopping. We have also learned that persistent followup treatment of herbicides and seeding is required in certain locations such as south facing slopes, low elevation, areas that burned hotter than expected, and/or areas with annual grasses nearby. Most recently, we are also seeing the benefits of pre-treating with herbicide prior to burning.

Private lands treatments adjacent to the South Warner Project Area through NRCS, and treatments nearby on the USFWS Sheldon Hart Refuge Complex are contributing to holistically restore sage-grouse habitat and wildfire resiliency across boundary lines. ODFW has played a critical role with partner collaboration and in helping to refine treatment techniques. The South Warner Project could not have been as successful without Resilient Landscapes Collaborative funding through the Greater Sheldon Hart Collaborative. We are applying all lessons learned to the next Sagebrush Restoration Project Area—Clover Flat.

The 20,000 acre Clover Flat Project Area is being prepped for juniper treatment to restore its sage-steppe ecosystem. The focus for FY17 was herbicide treatment for invasive annual grasses with follow up seeding. Over 4800 acres of herbicide (Imazapic) was applied and over 1900 acres of seeding has been completed. Another 2000 acres of seeding is still in the works. We expect these pre-treatments will help promote improved resistance to further annual grasses spread and resilience to fire following the treatment of juniper in the years to come. We have been coordinating with ODFW to help make this project a success. Since 2015 the BLM has

been getting ahead of this project by treating annual grasses via aerial herbicide applications. We have also been coordinating with the local Soil Conservation District for juniper and herbicide treatments on private lands adjacent to the Project Area. Additionally, we are coordinating with the Fremont-Winema National Forest as they kick off their Thomas Creek Accelerated Landscape Restoration Project on forested public lands adjacent to the Clover Flat Project Area.

The Lakeview BLM also treated across approximately 3800 acres for Broadleaf invasive species in riparian areas including Deep Creek, Fifteen Mile Creek, Honey Creek and Parsnip Creek in FY17. All projects could not have been successful without the collaborative partnerships between agencies, stakeholders and funding through the RLC and matching sources.

Success Story: A video for *Successful Vegetation Management Practices in the Sagebrush-Steppe* was produced that featured the South Warner Project and Lakeview Resource's Area employees. See the following link: <https://youtu.be/OyHrHwVoceg>.

Summit Lake Paiute Tribe

The Summit Lake Paiute Tribe received \$40,220 in FY 2017. This funding was used to continue a wildland mowing project that created fuel breaks along roadways and fence lines on the Summit Lake Indian Reservation, which was initiated with monies received for FY 2015. Approximately 30 miles of fuel breaks were created with a tractor and mowing attachment also purchased with FY 2015 funding. In addition, gravel was spread around water storage tanks installed with FY 2016 funding to allow wildland fire pumpers better access to the tanks. The storage tanks were installed as an emergency water supply that can be quickly emptied into wildland fire pumpers assisting with wildland firefighting in the area.

Success Story: In June 2017, a small wildfire started on the Summit Lake Indian Reservation. Because of the fuel break already created along the roadside near where the fire started and the fuel break immediately created around the back side of the fire with the tractor, the fire was successfully contained and put out by Tribal employees.

Other related activities implemented in FY 2017 with but funded from other sources included treatment of noxious weeds during the spring of FY 2017. Upkeep mowing of vegetation, seeding mowed areas if appropriate, noxious weed treatment, and other activities are planned in FY 2018.

FWS Sheldon Hart National Wildlife Refuge Complex (NWRC)

The Wildland Fire Resilient Landscape collaborative made great strides in fulfilling the 2017 proposal by developing and implementing strategic habitat assessments on approximately 4,735 acres of sage-steppe habitat. This type of habitat assessment was developed by Lakeview BLM and adapted to meet Refuge needs. The assessments form the basis from which we will develop treatment prescriptions for these areas, including initial management actions and necessary follow-up efforts, to be implemented beginning in FY18.

Approximately 2,550 acres of sagebrush habitat was treated by cutting and piling juniper. The juniper densities ranged from light to moderate and included areas adjacent to high resilient habitat occupied by sage grouse. The juniper cutting areas will be treated to reduce the amount of non-native invasive plants and the areas where the piles will be burned will be re-seeded with native vegetation. All actions will result in habitats that exhibit higher resiliency to wildfire and be more resistant to non-native plants.

Approximately 1,984 acres were treated by burning piles or similar fuels reduction actions to encourage grass and shrub growth which will increase overall resiliency within the habitat. In addition, over 12,000 acres were mapped for invasive species presence and over 1,300 acres were chemically treated to control invasive annual grass. Follow-up seeding will occur in late 2017 and early 2018.

On July 11, 2017, a lightning caused fire occurred on the Hart Mountain NWR. The Hart Fire burned 488 acres in sage-steppe and riparian habitats. Areas of low sagebrush experienced mostly low severity, while areas of mountain big sagebrush and mountain shrub burned under moderate to moderately-high severity conditions. The riparian area burned under low to very low severity. Emergency Stabilization and Burned Area Rehabilitation Plans have been submitted and funded for the Hart Fire area. Some natural native regeneration, primarily perennial grasses and forbs, is occurring, though below the foliar cover percent identified as the resistance and resilience threshold of Miller et al. (RMRS-GTR-338). Some resprouting of mountain sagebrush and bitterbrush is occurring, though mostly only along the fire edges where heat was less intense. In the interior areas of the fire, the only shrub regrowth seen to date is a handful of rabbitbrush and horsebrush. Through the ES plan, the fire area was sprayed with Plateau in late October. Monitoring will be ongoing and some pre-fire monitoring data exists in the area due to monitoring of sage-grouse nest and brood-use sites in the area and adjacent to the fire perimeter.

FWS Partners for Fish and Wildlife (PFW) R1

This year a lot was accomplished in Greater Sheldon Hart Mountain Resilient Landscapes collaborative area. There are two primary projects underway; ongoing work to restore wet meadows, and new work to address the spread of invasive annuals.

Wet meadow restoration has a multitude of benefits for landscape resiliency. Increasing the extent and duration of the year that these areas maintain higher moisture allows them to be less prone to ignition and can function as natural firebreaks. Additionally, functional wet meadow will store water longer allowing associated streams to flow longer, raising water tables in irrigated meadows reducing the rate at which meadows desiccate and extending the ability of irrigation to maintain meadows/pastures where grass, hay, alfalfa are green and less likely to ignite. Wildlife benefits include more stream flow for fish, riparian vegetation, plants, birds (sage grouse) and other wildlife. Wet meadows are less likely to be invaded by exotic annual grasses, so they can maintain a more native assemblage of vegetation.

Treating invasive annuals is also beneficial to the reduction of ignitions or the spread of wildfire. Cheatgrass and medusa head rye are both fire tolerant, in that they green earlier than native perennial grasses, need fewer resources and can overtake a site quickly. They are adapted to burning and often return stronger and more dominate than before. They are typically short lived, i.e. go to seed rapidly, and therefore they don't need a strong root base or many resources, but their early start can prohibit growth of slower growing natives by reducing the amount of available area. Doing what we can to reduce/slow the spread of invasives increases resiliency by removing a plant that allows for rapid ignition and spread of wildfire.

The wet meadow project is a large scale project that will have major restoration benefits, it is not simple, and there are risks to the watershed and the landowner if not implemented with care. Therefore while slower to be accomplished, significant progress has been made.

Accomplishments so far include:

- Watershed Scale Assessment – in 2016 we contracted with restoration firm Streamwise to conduct a watershed assessment of the Willow Creek Drainage in Lake County. Multiple issues were examined, and numerous alternatives provided to move forward.
- Alternative Selected – in 2016 we worked with the local partners including the Lakeview Soil and Water Conservation District and multiple landowners to select the restoration approach that would work with all involved.
- Additional Match Funds Acquired in 2017 – Additional funds were sought to complement RL funds and implement a larger, more comprehensive project to address more meadows. We competed to Oregon Watershed Enhancement Board funding against a number of other applicants and won an award of \$377,126.00 (See 'Contributed Funds' Table 5) - more than doubling the funds for the project – bringing the total project funding to \$683,692.00.
- Permitting Underway – We have completed a portion of the required project permits including Section 106 of the National Historic Preservation Act. We also are completing NEPA, Clean Water Act coverage, as well as required state permitting.
- Primary objectives for wet meadow restoration will focus on removal of encroaching conifers, reducing invasive plants, correcting shrub densities and restoring woody riparian species and native grasses and forbs.

In 2017 we are also working the Lake County Cooperative Weed Management Area to reduce the spread of weeds, with a primary target of medusa head rye.

As of October 2017 treatments are underway and exact numbers completed are not known as of this writing. Being treated and accomplishments will include the treatment of medusa head in four different area. The herbicide Imazapic is being aerially applied in 4 different locations, Willow Creek/Clover Flat (adjacent and complementary to the meadow restoration project above) 413 acres will be treated. Downstream of the project area but still within the Clover Flat area another 377 acres will be treated. Then two different areas of the North Warner's or 643 acres will be treated for a total invasive treatment in 2017 of 1,433 acres.

FWS Partners for Fish and Wildlife (PFW) R8

The Nevada PFW program completed juniper removal on 248 acres in cooperation with private landowners, Natural Resources Conservation Service, Great Basin Institute, and the Nevada Conservation Corps. In addition, two miles of fencing was repaired and replaced in order to better manage grazing within the RL Collaborative area.

Great Basin Landscape Conservation Cooperative (LCC)

The GBLCC continued facilitation of the Northwest Basin and Range Synthesis by employing a full-time coordinator for the first half of FY'17. This coordinator led the development of a formal steering committee to provide direction for identifying shared conservation goals, decision support needs, and other necessary foundational components that could lead to a landscape conservation design.

A major event conducted in FY'17 included a two day symposium (February 15-16, 2017 Lakeview, OR) attended by over 100 partners from state and federal resource management agencies, academics and agency researchers, non-governmental organizations, tribal groups, and the public together to share the state of knowledge on management issues specific to this region that affect conservation outcomes at landscape scales. Outcomes included sharing of new knowledge, results and lessons learned on restoration techniques, a review of decision support tools, new grazing management techniques for improving ecological condition and native species composition, and other topics.

The Great Basin Landscape Conservation Cooperative (GBLCC) developed and maintained the Northwest Basin and Range (NWBR) and Resilient Landscapes Collaborative data portals on the GBLCC Conservation Planning Atlas website, <https://gblcc.databasin.org/>, an online collaborative repository for sharing data, maps and additional resources. A webinar on navigating and using this collaborative resource was provided by the GBLCC Geospatial Data Specialist. This online map allows us to share accomplishments, and evaluate proposed treatments in context with decision support layers such as juniper canopy cover, invasive grass cover, mesic resource persistence, ecosystem resilience and resistance, as well as key wildlife habitat data layers.

The GBLCC also maintained the GSHM Wildland Fire Resilient Landscapes website for the collaborative. The website provides public facing online presence with links to key resources, the Office of Wildland Fire RL activity page, our annual reports and fact sheet, and contact information. <https://greatbasinlcc.org/greater-sheldon-hart-mountain-collaborative>

2. FY 2017 Geospatial Boundaries

The Hart Mountain and Sheldon National Wildlife Refuges, and Lakeview District BLM accomplishments and wildfire perimeters are included in the attached geodatabase, and also available online at the [GSHMRLC Conservation Planning Atlas](#). Accomplishments for the Summit Lake Paiute Tribe and USFWS Partners for Fish and Wildlife (both Regions 1 and 8) are included in the attached spreadsheet. The following table summarizes these accomplishments by treatment type for the RL activity funded partners for FY'17.

Agency (treatment type)	Treatment Acres	Treatment Miles
Summit Lake Paiute Tribe		
Chemical	n/a	
Mechanical		30
BLM Lakeview District		
Chemical	15,688	
Fire Use	95	
Hand Pile	3,979	
Hand Pile Burn	236	
Seeding	6,623	
FWS Partners for Fish and Wildlife R1		
Mechanical	80	
Chemical, Fire	1,433	
FWS Partners for Fish and Wildlife R8		
Mechanical	248	
Other (fencing)		2
FWS Sheldon Hart Mountain NWRC		
Chemical	1,558	
Hand Pile	5,074	
Hand Pile Burn	3,209	
Lop and Scatter	11,630	
Machine Pile	710	
Machine Pile Burn	710	
Other	67,310	
Seeding	3,063	
TOTAL	121,646	32

3. FY 2017 Other Activities Table

Table 1: FY 2017 Other Activities				
Other Activity	Unit of Measure	Total Units Completed	Total Activity Cost, if Known (\$)	Comments
Summit Lake Paiute Tribe				
Restoration of Sagebrush Ecosystems Class	Hours Received	32 hours for 1 person	None	Attended by Fish and Wildlife Biologist involved with fire resilience activities.
Restricted Use Pesticide Applicator Certification	Certificates Received	2 people completed the training = 2 certificates received	None	Certificates received by a Fish and Wildlife Biologist and Natural Resources Technician expected to implement noxious weed treatments.
BLM Lakeview District				
Proper Functioning Condition (PFC) Training	32 hours	2 people (64 hours)	\$0 (plus travel/lodging)	
Restoration of Sagebrush Ecosystem	32 hours	1 person	\$0 (plus travel/lodging)	
FWS Regional Office				
Collaborative planning, reporting, coordination, facilitation	Hours	Two pay periods each - 2 people	\$19,900	RO RL Project Leads, planning, reporting

Great Basin LCC				
GBLCC NW Basin and Range Ecosystem Symposium, Feb. 15-16, Lakeview, OR	Participants	100	\$3,450 direct cost to GBLCC	Bring together regional stakeholders to discuss the “State of the Knowledge” around key resource concerns
GSHMRLC - all				
GSHMRLC – all	Hours	8 people X 2 hours each		Planning, coordination phone calls for RLC; January 5 th , May 31 st , June 13, September 27
GSHMRLC	Day	1 for 8 people		Collaborative business meeting – March 9, 2017 in Bend, OR

4. Monitoring and Adaptive Management Activities

Healthy ecosystems are resilient to disturbance and resistant to invasive plant species. We consider the health of the native plant and animal populations to be a surrogate for the health of the ecosystem and measure of resistance and resilience. Monitoring these populations across the GSHMRLC is widespread and conducted on many levels.

All efforts continue to use the best available science and follow concepts developed through the resistance and resilience analysis of Chambers et al. (2014) and built upon through the FIAT analysis.

Summit Lake Paiute Tribe

During the spring of 2017, monitoring was conducted for the noxious weed treatment program. Employees visually monitored riparian areas on the Reservation for the presence of noxious weeds to direct treatment efforts. Following treatment, photos were taken both at previously established photo points for comparison with photos from previous years, as well as at two newly established photo point locations for treatment comparisons in future years. Comparison of photos from these photo points will guide future treatment implementation.

BLM Lakeview District

This year approximately 50,000 acres in the North Warner Area was inventoried for Juniper and Resistance and Resilience ratings. These inventories will help refine how we will prescribe future projects for restoration and improved fire resiliency. This effort was funded wholly by FY17 RLC funding.

Long Term Vegetation monitoring was continued in the South Warner area to understand the effects of removing juniper on the surrounding vegetation. This effort was completed in FY 17 on a volunteer basis by a BLM sponsored OSU research student and his crew. BLM has been conducting this monitoring since 2012.

AIM (Assessment Inventory and Monitoring) has been ongoing throughout the resource area since 2016. This monitoring is required as part of the Oregon Greater Sage-Grouse Resource Management Plan Amendment. AIM monitoring is being used to inform BLM Land Health Evaluations. Additionally, we have been mapping State and Transition Models across the Resource Area. This mapping will help with future recommendations for applying conservation measures and will facilitate communication between agencies and stakeholders.

Additionally, continued survey for new infestations and monitoring of herbicide and seeding treatments also occurs on an annual basis.

FWS Partners for Fish and Wildlife R8

Worked with StreamWise to assess and monitor priority areas. Restoration needs were identified and outline. Projects will be pursued for implementation. RL \$562.51; PFW \$1,344.17

FWS Sheldon Hart Mountain NWRC

Habitat assessments were developed by Lakeview BLM and adapted to meet Refuge needs. These assessments form the basis for developing treatment prescriptions for the refuges, including initial management actions and necessary follow-up efforts, to be implemented beginning in FY18.

Monitoring plots have been established as a part of the juniper treatment assessments. No results are available to date as treatment began in 2017.

5. Expenditures and Obligations

a) WFRL Funds

Table 2: WFRL Funds Status				
Fund Source – WFRL Funds	Funds Allocated to Collaborative Area (\$)	Fund Status		
		Spent	Unspent	
		Obligated and paid in FY 2017 ¹	Obligated and unpaid in FY 2017 ²	Not obligated and unpaid in FY 2017 ³
Summit Lake Paiute Tribe	\$40,220	\$1,720		\$38,500
BLM Lakeview District	\$600,000	\$599,225	\$0	\$775
FWS Partners for Fish and Wildlife R1	\$50,276		\$50,276	
FWS Partners for Fish and Wildlife R8	\$57,458	\$0	\$57,458	\$0
FWS Sheldon Hart NWRC (FY17)	\$207,509	\$0	\$207,509	\$0
FWS Sheldon Hart NWRC (FY15-FY17)	\$1,861,758	\$227,380	\$1,634,378	\$0
FWS Regional Office	\$0	\$0	\$0	\$0
Great Basin LCC	\$45,104	\$45,104	\$0	\$0

¹50 CFR 80.91 defines an obligation of funds as “a legal liability to disburse funds immediately or at a later date as a result of a series of actions.” Here, we would like to know how much WFRL funding you have obligated and paid.

²50 CFR 80.91 defines an obligation of funds as “a legal liability to disburse funds immediately or at a later date as a result of a series of actions.” Here, we would like to know how much WFRL funding you have obligated but have unpaid.

³50 CFR 80.91 defines an obligation of funds as “a legal liability to disburse funds immediately or at a later date as a result of a series of actions.” Here, we would like to know how much WFRL funding you have not yet obligated and have unpaid.

Summit Lake Paiute Tribe

The Tribe was awarded, and late in FY 2017 received, \$40,220 for resilient landscape activities for FY 2017 through a BIA Self Determination Contract. At the beginning of FY 2017, the Tribe still had funds awarded for FY 2015 and 2016 remaining, as acquisition of the tractor with mowing apparatus had been delayed and therefore delayed FY 2015 activities; and the Tribe was unable to draw FY 2016 funds before the end of that fiscal year due to the process of incorporating it into a BIA Self Determination contract.

Of the funding obligated to the Tribe, in FY 2017 approximately \$19,000 was spent on salaries and wages for the Natural Resources Department Director, Environmental Specialist, Fish and Wildlife Biologists, Natural Resources Technicians, and Maintenance Worker. This covered time to attend meetings and trainings, mow vegetation along roadsides and fence lines, and to work on installation of gravel at the emergency water supply storage tanks for wildland fire pumper access. Approximately \$6,500 has been used for fuel and other supplies needed to operate the tractor for mowing activities, and approximately \$4,000 has been spent on overhead expenses such as utilities and transportation. Approximately \$23,000 was spent to pay the contractor who completed the livestock water tank retrofit for wildland fire pumper access (initiated in FY 2016 and completed in FY 2017), and \$12,000 was spent on supplies related to the installation and upkeep of the storage tanks, including gravel. The Tribe has approximately \$38,500 remaining. This funding will be used to continue upkeep mowing of vegetation, seeding mowed areas if appropriate, maintenance of the emergency water supply tanks, and other activities as needed during FY 2018.

FWS Sheldon Hart Mountain NWRC

In 2015, the Greater Sheldon-Hart Mountain Resilient Landscapes Collaborative was created to implement projects to address wildfire and invasive plant threats to sagebrush on approximately 4 million acres of sagebrush habitat in south central Oregon, northern Nevada, and northeastern California. The area was identified by the national cohesive strategy as a high priority for broad scale fuels management and community planning and coordination to restore and maintain fire-adapted ecosystems and achieve fire-resilient landscapes. The primary objective of the collaborative was to construct a collaborative platform of agencies, Tribes, and private landowners to increase sagebrush resilience and resistance to fire and invasive weeds. Actions to increase resistance and resilience include removing encroaching juniper, reducing exotic weeds, promoting native plant establishment, and wet meadow restoration.

Although the funded proposal was to be implemented over a ten year period, contracts and task orders were designed to be completed within five years. Some projects were more "shovel ready" than others and were immediately implemented as opposed to some treatments that required planning, assessment, and prescription development before implementation could occur.

Specifically, on Sheldon-Hart Mountain National Wildlife Refuge Complex (SHR), all juniper treatments required site assessments and treatment prescriptions before any cutting could occur and all task orders to conduct juniper treatments were given a Period of Performance ending in 2019 to allow for thorough and accurate planning. To date, over 42,000 acres of sagebrush habitat has been assessed and treatment prescriptions continue to be developed.

In addition to juniper treatment assessments and prescriptions, follow-up juniper pile burning will be completed by refuge full time fire staff, refuge collateral duty fire staff, and neighboring agency fire staff through an Interagency Agreement with the BLM.

The concluding steps in improving site resiliency after juniper treatments is to treat exotic weeds and annual grasses on an as-needed basis and conduct necessary follow-up native seeding. In addition, monitoring will occur throughout treatment areas to determine treatment efficacy and demonstrate success trajectories.

As a result of the sagebrush habitat assessments, SHR developed prescriptions to treat approximately 5,100 acres of juniper in 2017 and approximately 17,000 acres in 2018. It was anticipated that treatments would begin in early spring 2017, however, a tremendous snowpack and wet spring prevented contractors from accessing treatment areas. In addition to the environmental delays, complications often arise from a high demand of projects from multiple agencies for a low supply of contractors. For example, only two contractors are doing juniper treatment work in Eastern Oregon where they are contracted to do work in several BLM districts and national forests. To make matters more complicated, contractors have been experiencing extremely difficult circumstances in obtaining seasonal workers due to work Visa complexities. To date, we have complete 2,550 acres of juniper treatment and we remain focused and anticipate completing an additional 4,000 acres of juniper treatment in 2017, 17,000 acres in 2018, and remain on task to complete all projects as detailed in the 2015 Greater Sheldon Hart Mountain Resilient Landscapes Collaborative Resilient Landscapes Proposal.

Great Basin LCC

The Great Basin LCC used the majority FY17 RLC dollars for approximately 6 months of support and related overhead and travel for the Northwest Basin and Range (NWBR) Synthesis Project Coordinator. The remaining RLC funds in FY17 were used for the hosting costs and meeting support from contract team for the NWBR Ecosystem Symposium.

b) Matching Funds

Table 3: Matching Funds	
Fund Source – Matching Funds	Total Funds in FY 2017 (\$)
Summit Lake Paiute Tribe	\$21,500
BLM – Healthy Lands Initiative	\$385,000
BLM – Native Plants	\$118,00
FWS Partners for Fish and Wildlife R1	\$16,200
FWS Partners for Fish and Wildlife R8	\$9,939 salary and \$39,883 project funds EXPENDED, and \$139,140 project funds OBLIGATED
FWS Sheldon Hart Mountain NWRC	\$292,112
FWS Regional Office	\$0
Great Basin LCC	\$14,900

Summit Lake Paiute Tribe

Throughout FY 2017, the Tribe contributed approximately \$21,500 of match through the implementation of a noxious weed management program funded by the Bureau of Indian Affairs. This included labor and materials necessary to implement noxious weed treatment on the Reservation to increase the fire resilience of the landscape. (See attached letter)

BLM Lakeview District

Lakeview BLM Total matching funds: \$503,000 (see attached FBMS report)

FWS Partners for Fish and Wildlife R1

R1 PFW expended \$16,200 in salary by two FWS biologists to participate in the RLC and develop reported projects (cooperative agreements) applying RL funds to the landscape.

FWS Partners for Fish and Wildlife R8

R8 PFW expended \$9,939 in salary and travel. Cooperators include:

- Coleman Valley Ranch Project (EXPENDED FUNDS, FY16 funds) \$65,000 RL, \$39,882.79 FWS-PFW
- Nevada Department of Wildlife (OBLIGATIONS, FY17 funds) \$37,885.55 RL, \$47,114.45 FWS-PFW
- Great Basin Institute (OBLIGATIONS, FY17) \$19,572.45 RL, \$25,000 FWS-PFW, \$67,025.17 FWS-ES

(see attached reports)

FWS Sheldon Hart Mountain NWRC

In FY17 the Sheldon - Hart Mountain National Wildlife Refuge Complex obligated \$259,400 to contracts for juniper treatment, native seed purchase and aerial application, and herbicide purchase and aerial application, and \$32,713 for associated staff costs complimenting the treatments accomplished with RL funding. (see attached letter)

Great Basin LCC

The Great Basin LCC provided matching funds: (1) to cover the costs for travel to the RL collaborative business partners meeting in Bend, OR (\$750); and (2) to cover the contracted costs for hosting a meeting and developing a Scenario Planning report and associated travel to Lakeview, OR (\$14,150). (see attached letter)

c) Cost Sharing

Table 4: Cost Sharing Funds	
Fund Source – Tribal/DOI Fire Management Funds	Total Funds in FY 2017 (\$)
FWS Sheldon Hart Mountain NWRC	\$99,678
FWS Regional Office - Fuels Management	\$8,890

d) Contributed (Partnership) Funds

Table 5: Contributed Funds		
Contributor's Name	Contributor Category	Total Funds in FY 2017 (\$)
Oregon Department of Fish and Wildlife (in collaboration with PFW R1)	State	\$20,000
Oregon Watershed Enhancement Board (in collaboration with PFW R1)	State	\$377,126
Coleman Valley Ranch (in collaboration with PFW R8)	Private	Undisclosed
Nevada Department of Wildlife (in collaboration with PFW R8)	State	Undisclosed
Great Basin Institute (in collaboration with PFW R8)	NGO	Undisclosed

There are hundreds of thousands, if not millions, of dollars invested in this landscape annually by partners to the Collaborative besides the funded DOI entities. The majority of these investments are on private lands that intersperse public land across the entire four million acre WFRL boundary. Private lands are the “third leg of the stool” in this landscape along with the Tribal Lands, National Wildlife Refuges and BLM Rangelands. Significant contributors that must be recognized while unable to be quantified include the following:

- Watershed Council
- Weed Management district
- Lake County Soil Conservation District
- ODFW
- Nevada Department of Wildlife
- NRCS
- Reno Fish and Wildlife Office
- Great Basin Institute
- Nevada Conservation Corp
- Many Private Landowners
- Forest Service. While not focused on private lands, the USFS works toward R&R within the forests west of the collaborative rangelands where many wildfires originate and contain many high elevation meadows that provide brood rearing summer habitat for GRS and associated wildlife species. The USFS is also an equal partner in the interagency wildland fire suppression community for this landscape.

6. Partnerships

The following organizations and contacts represent the working group of DOI partners and project leaders directly managing funding from the RL activity for the Greater Sheldon-Hart Mountain landscape. The partnerships these individuals and their organizations develop and maintain with other government agencies, private land-owners, NGOs, and academia are vast, and necessary to accomplishing the goals of wildland fire resiliency. This expanded constellation of partnerships is the true Collaborative.

Organization Name	Contact Name
BLM Lakeview District	Jami Ludwig Todd Forbes
Summit Lake Paiute Tribe	William Cowan Rachael Youmans
FWS Partners for Fish and Wildlife R1	CalLee Davenport Dirk Renner
FWS Partners for Fish and Wildlife R8	Susan Abele
FWS Sheldon-Hart Mountain National Wildlife Refuge Complex (NWRC)	Shannon Ludwig John Kasbohm Gail Collins Kevin Goldie
FWS Ecological Services, Bend Field Office	Angela Sitz
FWS Regional Office (R1 Portland, OR)	Dan Craver Cyndi Sidles
BLM OR/WA State Office	Leanne Mruzik
Great Basin Landscape Conservation Cooperative (LCC)	Rick Kearney John Tull

7. Attachments

Attachment 1: Photos (PDF)

Attachment 2: Geodatabase (GDB)

Attachment 3: Accomplished Treatments Table (XLS)

Attachment 4: Matching Fund Verification Letters and FBMS Reports (ZIP)

- GSHMRLC_MatchVerificationFY17_FBMSReport_BLM.xlsx
- GSHMRLC_MatchVerificationFY17_FBMSReport_PFWR8.pdf
- GSHMRLC_MatchVerificationFY17_Letter_GBLCC.pdf
- GSHMRLC_MatchVerificationFY17_Letter_SHMNLWRC.doc
- GSHMRLC_MatchVerificationFY17_Letter_SLPT.pdf