

<b>FY 2019 Landscape Scale Restoration Competitive Program</b>	<b>Identification</b>			
	State:	NV	Keyword:	Meadow Vly Riparian
	Region:		Priority:	1
			Id:	
	<b>Administration</b>			
	Funds Requested:		\$276,402	
Match:		\$279,175		
<b>Score:</b>	<b>Ranking:</b>	<b>Project Funding:</b>		
		\$555,577		

<b>1</b>	<b>Lead Applicant Information [NV]</b>			
	State Forestry Agency:	Nevada Division of Forestry		
	Contact Person:	Heather Giger, Stewardship/Legacy Program Coordinator		
	Address:	2478 Fairview Drive		
	City:	Carson City	State:	Nevada
	Phone:	775-684-2552	ZIP Code:	89701
		Email:	hdgiger@forestry.nv.gov	

<b>2</b>	<b>Project Information</b>		
	Descriptive Title of Project:	Upper Meadow Valley Wash Riparian Forest Improvement Project	
	Partnering Agencies and/or Organizations:	Use the partner number in the budget and when describing their roles in the other sections.	
		1	Nevada Division of State Parks (NDSP)
		2	Nevada Department of Wildlife (NDOW)
		3	Eastern Nevada Landscape Coalition (ENLC)
4		Lincoln County Conservation District (LCCD)	
5		Meadow Valley Wildlife Unlimited (MVWU)	
6		Upper Meadow Valley Wash Weed Management Area (UMVWWMA)	
7	15 Local Private Landowners		
Project Duration:	<input type="checkbox"/> One Year	<input type="checkbox"/> Two Years	<input checked="" type="checkbox"/> Three Years
Is this a Multi-state project? Select 'yes' if you want to submit the same proposal with multiple state budget requests. This allows you to work on the same proposal with each applicant requesting funds.		<input type="radio"/> YES or <input checked="" type="radio"/> NO	

<b>2</b>	<b>GIS Coordinates</b>	
	Area Name:	Upper Meadow Valley Wash, Lincoln County, Nevada
	Boundary Lat/Longs:	38.141, -114.1878; 38.1208, -114.1133; 37.8881, -114.2544; 37.9168, -114.2904
Description:	Section of the Upper Meadow Valley Wash that will be treated as part of this project.	

National Relevance		
<input checked="" type="checkbox"/> Conserve Working Forest Landscapes	<input checked="" type="checkbox"/> Protect Forests from Harm	<input checked="" type="checkbox"/> Enhance Public Benefits from Trees and Forests
<input checked="" type="checkbox"/> High priority forest ecosystems and landscapes are identified and conserved.  <input checked="" type="checkbox"/> Forests are actively and sustainably managed.	<input checked="" type="checkbox"/> Fire-adapted lands are restored and risk of wildfire impacts is reduced.  <input checked="" type="checkbox"/> Threats to forest and ecosystem health are identified, managed and reduced.	<input checked="" type="checkbox"/> Water quality or quantity is protected or enhanced.  <input type="checkbox"/> Air quality is improved or energy is conserved.  <input type="checkbox"/> Communities plan for and reduce their risks from wildfire.  <input checked="" type="checkbox"/> The economic benefits and values of trees and forests are maintained or enhanced.  <input checked="" type="checkbox"/> Wildlife or fish habitat are protected, conserved or enhanced.  <input checked="" type="checkbox"/> People are connected to trees and forests and are engaged in environment stewardship activities.  <input checked="" type="checkbox"/> Trees and forests are managed and restored to help mitigate or adapt to changing conditions.

Project Overview	
4	<p>Meadow Valley Wash (MVW) is located within the Spring Valley Watershed which encompasses 235,000 ac. in eastern NV and supplies water to more than 50 agricultural producers. Sensitive species including the Greater Sage-Grouse (GSG) also depend upon MVW riparian habitat. This project seeks to improve habitat and water quality/availability along 18 mi. of MVW and expand the canopy cover of native cottonwood galleries. Strong partnerships with state and local agencies will ensure project success.</p>

Grand Total							
	Grant	Leverage			Source	TOTAL	
		Match		Non-Match			
		Funds Requested	Applicant	Non-Federal Contributors			Applicant, Non-Federal and/or Federal
5	<b>Personnel / Labor:</b>		\$42,000	\$80,000		1, 3, 4, 6, 7	<b>\$122,000</b>
	<b>Fringe Benefits:</b>		\$8,800	\$19,700		1, 3, 4, 6, 7	<b>\$28,500</b>
	<b>Travel:</b>		\$3,000	\$4,500		1, 2, 3	<b>\$7,500</b>
	<b>Equipment:</b>		\$14,520	\$10,155		1, 4	<b>\$24,675</b>
	<b>Supplies:</b>	\$38,500	\$2,500	\$4,000		5, 6	<b>\$45,000</b>
	<b>Contractual:</b>	\$180,000	\$90,000				<b>\$270,000</b>
	<b>Construction:</b>						
	<b>Consolidated:</b>						
	<b>Other:</b>						
	<b>Indirect Costs:</b>	\$57,902					<b>\$57,902</b>
	<b>TOTAL:</b>	<b>\$276,402</b>	<b>\$160,820</b>	<b>\$118,355</b>			<b>\$555,577</b>

## Applicant Budget [NV]

	Leverage					TOTAL
	Grant	Match		Non-Match	Source	
	Funds Requested	Applicant	Non-Federal Contributors	Applicant, Non-Federal and/or Federal	3rd Party Contributor/s	Total Project Cost
<b>Personnel / Labor:</b>		\$42,000	\$80,000		1, 3, 4, 6, 7	<b>\$122,000</b>
<b>Fringe Benefits:</b>		\$8,800	\$19,700		1, 3, 4, 6, 7	<b>\$28,500</b>
<b>Travel:</b>		\$3,000	\$4,500		1, 2, 3	<b>\$7,500</b>
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## Context, Goals, and Objectives

The NV Forest Action Plan (FAP) identifies Spring Valley watershed, which includes MVW, as a high priority landscape due to the presence of low-elevation riparian habitat. Nevada's cottonwood gallery riparian forests and associated stream corridors are under threat from multiple sources. FAP identified threats include invasive species establishment/spread, declining forest health, forest fragmentation and loss of cover type, impaired watershed function, sensitive species habitat loss and increasing wildfire size/intensity. This project will directly address forest health, watershed function and native plant/animal habitat threats, while mitigating hazardous fuel loads. National themes to be addressed include active forest management in high priority landscapes, ecosystem and wildfire threat reduction, and enhancing public benefits to landowners and local user groups.

Goals:

- 1) Restore riparian forests and wet meadows.
- 2) Decrease invasive plant populations and reduce associated wildfire risks.
- 3) Expand/improve available habitat for wildlife, including GSG.
- 4) Promote partnerships with private landowners and local communities, weed management organizations, sportsman groups and other natural resource agencies.

Objectives:

- 1) Conduct pole plantings of native cottonwoods and willows to restore riparian forests and increase canopy cover; seed with native forbs/grasses to out compete fire prone invasive weeds.
- 2) Treat invasive weeds with herbicides and prescribed burning to restore the riparian forests to a higher functioning condition, while reducing hazardous fuel loads.
- 3) Concentrate efforts in selected areas to increase available summer brood rearing habitat for GSG and increase shading to promote cooler stream temperatures for aquatic species, such as the MVW Desert Sucker.
- 4) Organize project implementation among all stakeholders for efficient and effective project completion.
- 5) Educate the public through scoping meetings and outreach events.

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## Proposed Activities

Project will reestablish riparian forest cover to improve habitat and increase stream flows; control invasive weeds; increase native forb/grass understory diversity through seeding; and restore ecosystem resistance to and resiliency from disturbances such as fire.

GF=Grant Funded; M=Match/In-kind

Activities:

- 1) Increase riparian tree cover and wet meadow plant species on 211 ac. of state park and private property.
  - a) Plant poles along 3.6 miles (86 ac.) of MVW using cuttings from nearby cottonwood stands supplemented with native willows. NDF Conservation Crews will cut and prepare poles, plant them along the stream bank to promote vegetative regrowth and protect them with grazing exclosures until established. Requesting \$3,500(GF) for supplies and \$40,000(GF) for contractual work. Matching funds of \$25,000(NDF) contractual; and personnel/labor - \$10,000(1), \$5,000(NDF) and \$5,000(7).
  - b) Seed 125 ac. using a native forb/grass mix. After herbicide treatments or prescribed burning, crews will seed the treated areas ahead of forecasted winter storms to improve germination rates. Requesting \$15,000(GF) for seed supplies and \$50,000(GF) for contractual work. Matching amounts of \$4,000(5,6) for seeds; \$30,000(NDF) contractual; personnel/labor - \$10,000(1), \$11,000(NDF); and \$9,250(NDF) for use of equipment.
- 2) Identify and target invasive weeds with herbicide treatments on 1,500 ac. (1,200 privately owned) and conduct prescribed burns on 400 acres.
  - a) Chemically treat invasives, including thistles, knapweed, hemlock and cocklebur that contribute to high fuel loads and rapid fire spread. Weed Management Area (WMA) and Conservation District professionals and crews will ID species and locations of infestations, determine Best Management Practices (BMPs), develop herbicide management plans and apply herbicides. Requesting \$20,000(GF) supplies for herbicide costs and \$75,000(GF) for contractual work. Matching amounts of \$25,000(NDF) contractual; personnel/labor - \$20,000(3,4,6,7 combined), \$10,000(NDF), and \$25,000(1); and \$6,075(1) for use of equipment.
  - b) Conduct prescribed burns on 400 acres to reduce weed recruitment in wet meadows. NDF personnel will write a burn plan for review and approval. NDF crews and equipment will be used to install hand line and conduct firing operations. Fire Effects Monitors (FEMOs) will staff the burn to ensure that optimal conditions are maintained to allow for post-fire seeding. Requesting \$15,000(GF) for contractual work. Matching amounts of \$2,500(NDF) for supplies; \$10,000(NDF) contractual; \$5,270(NDF) and \$4,080(4) for use of equipment; and personnel/labor - \$10,000(1) and \$15,000(NDF).
- 3) Pre/post implementation duties:
  - a) Conduct public outreach, cultural surveys and post-treatment effectiveness monitoring. Personnel/labor(M) - \$1,000(NDF).
  - b) Project associated travel for local/regional staff. Matching funds of \$3,000(NDF) and \$4,500(1,2,5 combined).

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## Deliverables and Outcomes

### Deliverables:

- 1) Completed herbicide treatments on 1,500 ac. - 1,200 of which are privately owned by a coalition of 15 different landowners. The spread of invasive species including knapweed, hemlock, cocklebur and thistle will be controlled.
- 2) Increased riparian forest cover over 3.6 miles of MVW through pole plantings. A total of 86 acres of cottonwood gallery riparian forest will be reestablished or expanded.
- 3) 125 acres seeded with forbs and grasses intended to out-compete invasive species and restore fire-adapted native vegetation.
- 4) Prescribed burning on 400 acres to reduce invasive species and associated wildfire threats, while stimulating native species growth and recovery in wet meadow sites along the MVW riparian corridor.

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### Outcomes:

- 1) Improved wildlife habitat through increased riparian canopy cover, providing shade and cooler water temperatures for sensitive aquatic species - such as the MVW Desert Sucker. Consulting NDOW biologists have stated that an ideal maximum water temperature of 70 degrees could be achieved through increased stream shading. Suitable nesting habitat will also be expanded for avian species - including the SW Willow Flycatcher, and high quality native vegetation will be available for GSG during critical brood rearing periods as a result of native plant restoration.
- 2) Restored riparian forest function through reestablishment of cottonwood galleries and native understory species, which will replace high water use invasive weeds. High functioning watersheds are crucial for maintaining stream flows, recharging groundwater and controlling floods.
- 3) Stream bank stabilization and reduced erosion created through established, deeply rooted native vegetation, resulting in improved water quality through lower turbidity/sedimentation.
- 4) Public/private partnerships strengthened through collaborative work efforts.
- 5) Increased public awareness of the benefits of active forest management to multiple user groups.

## Collaboration/Cross Boundary

NDF has a long history of working with the cooperators attached to this project. NDF will take the lead in development and implementation by providing labor and equipment, conducting pre- and post-treatment vegetation surveys, writing burn plans and conducting burns, preparing Herbicide Treatment Plans, conducting cultural resource surveys, hosting stakeholder meetings and organizing public outreach events.

Partnering agencies will assist as follows:

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- 1) 15 private landowners will contribute valuable local knowledge of the riparian system, assist with weed identification on their properties, and provide in-kind labor and equipment during pole plantings and invasive weed treatments.
- 2) NDSP will provide in-kind labor from seasonal and permanent employees, expertise in weed abatement issues, herbicide application equipment and supplies, assist with transporting and storing of poles and provide sources for pole gathering from its managed properties.
- 3) NDOW will assist with wildlife habitat coordination - specifically with native forb and grass seed selection - along with providing in-kind labor and equipment for pole plantings. Fisheries biologists will determine the effectiveness of stream side shading efforts, while avian biologists identify GSG brood rearing habitat and monitor the treatment effectiveness on habitat quality.
- 4) ENLC, UMVWWMA and LCCD will identify/map invasive weed infestations, conduct weed inventories, and ensure proper herbicide selection and application techniques.
- 5) MVWU will provide match for seed materials and advise on the selection of wildlife compatible species.

Through collaborating with private landowners, state and local agencies, as well as WMAs and sportsman's groups, both initial and long-term success of this riparian forest restoration initiative will be achieved. Additionally, agency mission statements and planning documents fully support conserving priority resources through active cross boundary management.

## Forest Action Plan Integration

The following FAP identified threats for the Spring Valley high priority landscape will be addressed:

Threat 3 - Increasing fuel accumulation and tree densities predispose watersheds to more destructive wildfires, which could have significant temporary impacts on municipal water supplies and on in-stream flow values.

Prescribed fire and herbicide treatments will be used to reduce fuel loads created by invasive weeds; reducing fire threats and improving riparian function.

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Threat 6 - Low elevation riparian forests are declining or have been completely replaced by exotic, invasive species. And - Threat 11 - Invasive weeds are a well documented problem.

MVW has been infested with many invasive species. NDF will team with WMAs, conservation districts and other interested parties, to mitigate this threat and restore native vegetation.

Threat 8 - Plant and animal habitats are under pressure.

Plant and animal habitats are declining along the MVW due to excessive erosion, agricultural practices and disturbances such as floods and fires. This project will focus on habitat restoration.

Reversing riparian forest degradation is a high priority for NDF. Proposed project activities will lead to improved riparian function and habitat

## Meaningful Scale/Cross Boundary

In Nevada, the majority of low elevation riparian areas are privately owned. This project would coordinate the efforts of 15 private landowners, owning 1,200 ac., who are committed to habitat improvement and restoration. By combining these parcels with the adjacent state owned riparian areas of 300 ac., a contiguous area can be treated at a landscape scale. Improving 1,500 acres of riparian forests in the Spring Valley Watershed will have positive effects for downstream users, which include many agricultural producers.

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This project seeks to actively manage and improve riparian forests and associated wet meadows to enhance functionality of the system as a whole. Additionally, the project is in line with NDF's, NDSP's, and NDOW's mission statements and management objectives, and the collective goals of landowners, WMAs and other stakeholders. Threats to ecosystem health will be identified, treated and reduced through implementation of the grant components. Public benefits will also be realized over the longer term as cottonwood galleries are reestablished, wildlife habitat improves, sensitive species are protected and wildfire risks are mitigated. MVW restoration will serve as a model for future cross boundary management efforts.

## Sustainability of Outcomes

The MVW project will restore a significant stretch of Spring Valley Watershed by controlling invasive weeds, reestablishing riparian forests and improving habitat on 1,500 acres of private and public lands. Project activities are designed to provide long term, sustainable outcomes through generating stakeholder investment in protecting and enhancing riparian resources for the benefit of all user groups. Private landowners, WMAs and recreational users will receive tangible benefits from successful project implementation, which will incentivize continued restoration/maintenance efforts, and make a strong case for future funding commitments. Positive outcomes may also encourage surrounding landowners in the watershed to adopt management practices modeled by MVW participants to achieve similar results. Additionally, NDF, NDSP and NDOW are committed to providing dedicated staff with the required technical expertise and local knowledge to complete the current project and facilitate future efforts on additional properties. Agency commitments are secure and reliable for the foreseeable future. The combined components of this project will allow it to serve as a example of effective multi-agency, multi-landowner cross boundary management.

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