

<b>Organization Name:</b> Carson High School, Carson City School District, Carson City, Nevada		
<b>Organization Type:</b> nonprofit educational institution 501(c)(3) EIN# _____ <b>Governmental entity?</b> Y/N <input checked="" type="radio"/>		
<b>Address:</b> 1111 N. Saliman Road Caron City, Nevada 89701		
<b>Project Name:</b> Quill Canyon Restoration		
<b>Amount requested:</b> \$4,748	<b>Website:</b> Facebook group: CHS Honors Biology: Quill Canyon Project+ <a href="http://mrskoop.weebly.com/">http://mrskoop.weebly.com/</a>	
<b>Project start date:</b> 10/2014	<b>Project completion date:</b> 05/2017	
<b>This funding will be used to restore a drinking water protection area in Carson City that has been invaded with the noxious weed, Russian knapweed, following the Waterfall Fire of 2004. The area is a vibrant habitat for Sierra Front Range wildlife, including deer, bear, bobcat, and many avian species.</b>		
<b>Key People:</b>	<b>Director:</b> Julie Koop, Carson High School Honors Biology Teacher	
	<b>Board Chair:</b> Linda Conlin with River Wranglers <a href="mailto:nevadariverwranglers@yahoo.com">nevadariverwranglers@yahoo.com</a>	
	<b>Project Contact:</b>	<b>Name:</b> Julie Koop
		<b>Position:</b> Science Teacher
		<b>Phone:</b> (775) 338-3841 cell (775) 849-1538 home
		<b>Fax:</b> 775-283-1790
<b>Email:</b> <a href="mailto:jkoop@carson.k12.nv.us">jkoop@carson.k12.nv.us</a>		
<b>Organization Mission:</b> Carson High School challenges students to achieve their greatest potential for future success.		
<b>Project is on (check all that apply)</b> <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private land.		
<b>Are government permits or decision documents needed for the project?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If so, are those permits and decision documents already secured?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>If permits and decision documents are needed but not yet secured, in #4 of the Narrative Requirements provide a list of permits and documents needed and a schedule for securing them.</b>		
<b>Has your organization received other grants from the Dream Tags Fund?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (use additional to list ALL funded projects)	<b>If yes,</b>	
	<b>Date awarded:</b>	
	<b>Project # &amp; title:</b>	
	<b>Amount of Award:</b>	
	<b>Date awarded:</b>	
	<b>Project # &amp; title:</b>	
<b>Amount of Award:</b>		

## DESCRIPTION OF PROJECT UNDER CONSIDERATION

Indicate the description that best fits the project you are proposing. Mark no more than three categories:

- A. Projects that improve, protect, or restore habitat  
 B. Projects that embrace unique opportunities for advancing the mission of wildlife conservation in Nevada  
 C. Projects that address emergent needs  
 D. Other projects that meet the evaluation criteria

## NARRATIVE

1. Specific **project goals and measurable outcomes**. This project is a study of an area currently severely impacted with the noxious weed species Russian knapweed (*Rhaponticum repens*). Students will assess treatment and restoration efforts over time to determine success of the treatment.

Time Period	Measurable Goals
October 2015	40% reduction in Russian knapweed population
October 2015	30% increase in bunch- and sod-forming grasses
April 2017	70% increase in native flora on site and 90% reduction in Russian knapweed population.

2. **Project location**. Quill Canyon in Carson City, Nevada is a drinking-water protection area for Carson City residents. Because of its limited access the area is utilized by a variety of wildlife and contains a diverse assemblage of plants. (9.5 acres, aerial maps and photos attached.)
3. **Project description**. In 2013 during a routine noxious weed survey Russian knapweed was found to have increased greatly in abundance in the area. This invasive and noxious exotic species was introduced following the Waterfall Fire of 2004. Because of the area's sensitivity treatment was avoided for several years in hopes that the area's native plants would halt any advances of the knapweed. In light of the disturbing increase found in 2013, various treatment options were analyzed and it was finally decided to "spot-treat" individual plants with chemical herbicide and follow up with an aggressive revegetation/restoration program.

The initial herbicide treatment was completed in October of 2013. Carson City Weed Coalition Coordinator established three 100-foot transects through some of the heaviest weed infestations and collected plant community data along those transects. She then obtained a small amount of seed and worked with volunteers to disperse it in the area just prior to the first snowfall.

Carson High School Honors Biology taught by Julie Koop offered to take on the area's continued study as a long-term class project. Students, under direction from local natural resource professionals established an additional six transects and did a survey of wildlife utilization in the area. However, in order to continue with the study funds are needed to cover some of the treatment costs, including herbicide application, seed mix, and bussing of students to and from project site.

4. **Permitting**. No permitting is required; access to area has been pre-approved by City staff.

5. Future **phases**. This grant request is for funds to cover three years of monitoring and assessment. At the end of that time, City employees and natural resource professionals will determine future needs of the area.
6. **Principals involved** in leading and coordinating the project are Julie Koop, CHS teacher, Linda Conlin, River Wranglers, Ann Bollinger, Carson City Parks and Recreation, Kim Klawson, Nevada State Parks and Margie Evans, Nevada division of Environmental Protection and former Weed Coalition Coordinator-UNR Cooperative Extensions.
7. Number of **staff positions involved** in project: Fulltime \_\_\_\_\_ Part-time 3
8. Number of **volunteers involved** in project and an estimated number of volunteer hours. Carson High School Honors Biology consists of 40-50 students each year. Volunteer hours were estimated at the lower number. A total of 360 volunteer hours is estimated at the reduced volunteer rate of \$10 per hour.
9. **Time Line** of Project.

Phase I, October 2014 – May 2015	Assess 9 transects to establish baseline. Determine prevalence of Russian knapweed. Calculate species richness of native flora. Document Wildlife use.
Phase II, October 2015 – May 2016	Assess 9 transects. Determine increase or decrease in Russian knapweed. Calculate species richness of native flora. Document Wildlife use.
Phase III October 2016 – May 2017	Assess 9 transects. Examine the data to insure a broad diversity of plants are represented, with Russian knapweed excluded. Document Wildlife use.

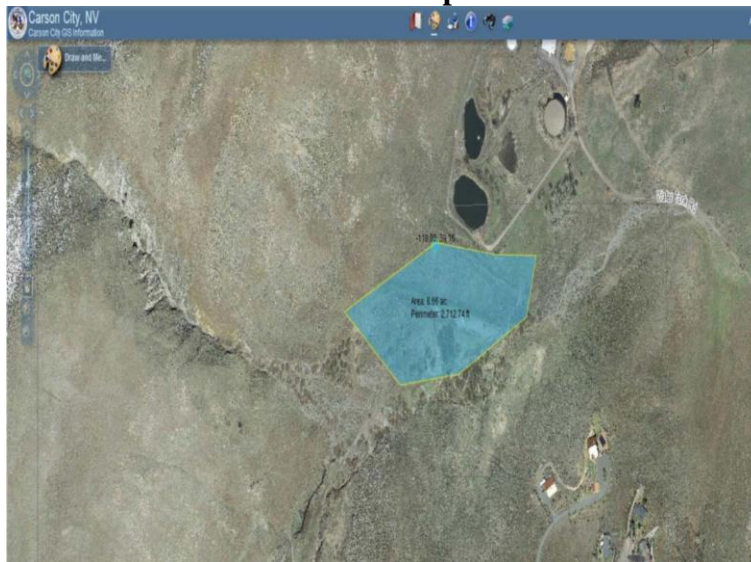
The project's success could be impacted by continued severe drought limiting germination, or alternatively a very wet summer that restricts herbicide treatment.

10. **Success**. The observed and documented increase in native flora and fauna will show that this is a successful project. Also, the student's knowledge and experiences acquired during this project will help them gain a better appreciation and understanding of our local ecology. The biology class is documenting this study on paper and on the internet, see their Facebook page.
11. **Grant match**. 44 % matching: \$3,600 out of the \$8,248 requested, see following table and budget.
12. **Project budget**. following

## Grant Match

<b>Match amount to be provided:</b>	<b>\$3,600</b>					
<b>Match details:</b>	<p>Please provide the form of your matching funds. If match is made up of both cash and in-kind, fill in both sections. Match is:</p> <table border="1" data-bbox="456 375 1419 562"> <tr> <td data-bbox="456 375 586 449">Cash</td> <td data-bbox="586 375 1419 449"><b>\$ 0</b></td> </tr> <tr> <td data-bbox="456 449 586 562">In-kind</td> <td data-bbox="586 449 1419 562"><b>\$ 3,600</b> Note: Provide an itemized breakdown of volunteer match in your budget with rationale.</td> </tr> </table> <p>For the cash portion of your match, is the funding already being held by the applicant for this project? Yes ___ No ___</p>		Cash	<b>\$ 0</b>	In-kind	<b>\$ 3,600</b> Note: Provide an itemized breakdown of volunteer match in your budget with rationale.
Cash	<b>\$ 0</b>					
In-kind	<b>\$ 3,600</b> Note: Provide an itemized breakdown of volunteer match in your budget with rationale.					
<b>Description of matching funds/in-kind donations:</b>	<p>Volunteer hours were estimated at the lower number. A total of 360 volunteer hours is estimated at the reduced volunteer rate of \$10 per hour. Volunteers will be seeding and collecting, analyzing and documenting data. They will also present results in a public setting to the City and School Board.</p>					

### Aerial map



**Russian Knapweed**



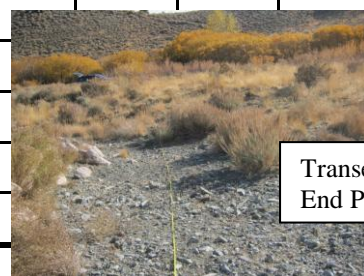
**Location photo with students setting up a transect**



**Location photo with students working on a transect**

**Data collected last October**

Transect 1 2013											
Species	Plot 1	Plot 2	Plot 3	Plot 4	Plot 5	Plot 6	Plot 7	Plot 8	Plot 9	Plot 10	Total
Russian knapweed	1	2	1		3				2	1	10
Bunch grasses	8	2	2	10	1		4				27
Cheat grass			x	x	x		x	x	x		0
Forbs (various)				2	3						5
Rabbit brush											0
Wood's rose											0
Sagebrush	1					2					3
Bitterbrush											0
Willow sp.											0





## Project Budget

Russian Knapweed Eradication - Quill Canyon				
Budget Item Description*	DT \$	Other Funding Name**	Match \$	Total
Phase I Starting October 2014				
Labor--paid				
Teaching Aid (2 days)	\$ 160			\$ 160
Labor—Volunteer		40 Students, three hours, \$10/hr	\$ 1,200	\$ 1,200
Materials				
Inventory materials	\$ 100			
Seed	\$ 900			\$ 900
Other --Bussing (2 days)	\$ 250			\$ 250
Contractor herbicide application	\$ 900			\$ 900
Phase II Starting October 2015				
Labor--paid				
Teaching Aid (2 days)	\$ 160			\$ 160
Labor—Volunteer		Students - 40 two days, \$10/hr	\$ 1,200	\$ 1,200
Materials				
Seed	\$ 450			\$ 450
Other --Bussing (2 days)	\$ 234			\$ 234
No herbicide application				
Phase III Starting October 2016				
Labor--paid				
Teaching Aid (2 days)	\$ 160			\$ 160
Labor—Volunteer		Students - 40 two days, \$10/hr	\$ 1,200	\$ 1,200
Materials				
Seed	\$ 300			\$ 300
Other --Bussing (2 days)	\$ 234			\$ 234
Contractor herbicide application	\$ 900			\$ 900
Total	\$ 4,748		\$ 3,600	\$ 8,248