

**Arizona Water Protection Fund
FY 2011 Grant Application Review**

Application # WPF0402 Applicant: University of Arizona

Title of Project: Russel Spring Restoration

Additional materials were submitted with this application that could not be reproduced and distributed for review. These materials may be reviewed in person at the Arizona Water Protection Fund offices at (3550 N. Central Avenue, 2nd Floor, Phoenix). The additional materials available are the following:

Maps
 Photographs
 Disk
 Other

RECEIVED

SEP 01 2010

WPF0402

Arizona Water Protection Fund
Application Cover Page
FY 2011

Water Protection Fund

Form containing project details: Title of Project (Russell Spring Restoration), Type of Project (Capital or Other), Stream Type (Perennial), Applicant Information (ABOR University of Arizona), Contact Person (Sherry L Esham), Grant Amount Requested (\$8913), Matching Funds Obtained and Secured (Total: 73,340.70), and Signature/Date fields.

Executive Summary

The goals of this project are to restore Russell Spring and associated riparian habitats and to educate and involve students and community in the process. This degraded spring represents an opportunity to show quick results with minimum input and demonstrates collaboration between University of Arizona research and extension, grazing permittee and federal agencies, with a potential to be replicated across the Coconino National Forest and Arizona.

Restoring geomorphic riffle structures will allow land managers to reverse the degradation of this perennial spring. Revegetation of native aquatic vegetation will provide necessary cover to stabilize and protect streambank resources needed to maintain this spring in proper functioning condition. Through our Range Rocks! youth program we plan to provide hands on opportunities to teach characteristics of proper functioning riparian ecosystems. Range Rocks! students assisted with the survey of this spring, recorded vegetation data and concluded the spring was in a degraded condition. These same students were surprised to find out through monitoring and data collection and analysis that the spring was not functioning properly. We hope to offer them the chance to restore this spring through this grant.

Community outreach will provide the opportunity for the public to see collaborative effort between the Forest Service, Natural Resources Conservation Service, University of Arizona V Bar V Ranch and the Verde Natural Resource Conservation District. Public participants will see firsthand a properly functioning riparian area after restoration. This project will also be presented at National and State Society for Range Management meetings.

Range Rocks! is a long term program that will benefit the community through hands on educational opportunities like this outdoor learning laboratory. Funding will include Range Rocks! t-shirts for students and volunteers and will provide opportunities for the participants to discuss their riparian restoration experience as they wear them in public. Increased awareness of the importance and susceptibility of riparian areas is a benefit of Range Rocks! and external funding is needed to increase its effectiveness. Feedback from students and staff has been extremely positive from this hands-on type educational program:

“Going into this I was not clear on the depth of the program the University of Arizona V Bar V Ranch was offering . . . I am extremely impressed with the research, management and outreach that’s going on at the V Bar V Ranch and it has inspired me to keep this program and location in mind for future partnership opportunities.”

Geneva Saint-Amour, Director,
Northpoint Expeditionary Learning Academy

Project Overview

Russell Spring is a perennial spring located in East Russell pasture of the Walker Basin Allotment on the Coconino National Forest. The University of Arizona V Bar V Ranch Agricultural Experiment Station has managed the allotment for the last 15 years. A rangeland research department was added to the V Bar V Ranch in 2008. Forest Service evaluations in 2008 and 2009 rated Russell Spring nonfunctional and in a downward trend for function – at risk, using a Bureau of Land Management (BLM), Proper Functioning Condition (PFC) standard checklist. In recent years a head-cut has developed just upstream from the spring area, and is of concern to land managers. In addition, lack of recruitment of seedling/sapling tree species is an item of note in the lack of proper function. A 2010 survey of Russell Spring additionally identified it as being in a degraded condition.

Community encroachment near the western boundary of the Coconino National Forest has led to an increase in OHV use of the surrounding area. This increase in OHV traffic has had an impact on the uplands within this watershed. Unmarked and unauthorized “trails” now lead directly to this and other drainages in the area. OHV tracks are often visible between the banks directly in the channel. Within the last year a new trail has been created and leads directly to a shelf ten feet above the spring. The trail ends at a small opening with a fire ring and enough of an area to turn an ATV around. Other trails lead from the main authorized road up hillsides, often making a direct path uphill. These trails are increasing the number and size of rills on the uplands and increasing the runoff into Russell Spring, contributing to its degraded condition.

The University of Arizona V Bar V Ranch Agricultural Experimental Station stands in the spotlight when it comes to land management on the Coconino National Forest, and leads in the implementation of solutions to difficult challenges. Range Rocks! is a youth program designed to get high school students out on the range to gain real-world science and work experience on a large public land range livestock operation. In this program, students learn range plant identification, various vegetation monitoring techniques, and see first-hand the effects of adaptive management on soil, plant, and animal resources. Riparian areas are fragile ecosystems in these vast rangelands and we now include this important piece of the puzzle to our program. As of July 2010, 95 agriculture and environmental science students (approximately 25% minority and 1.25 M : 1.0 F) from 3 local high schools have participated. This amounts to almost 1400 student hours spent in the field performing hands on learning activities.

The goals of this project are:

- To enhance and restore the channel function of Russell Springs.
- To use this restoration demonstration to involve and educate the community about restoration processes.

Objectives of this project are to:

- Restore the stability of Russell Spring stream channel while maintaining natural dynamic stream processes.
- Enhance and restore native riparian vegetation (sedges and rushes) on Russell Spring.
- Educate and involve community members in the restoration process. This will provide a positive example of collaboration between management entities working together to restore

degraded streams and habitat. An educated and involved community ideally will become long-term stewards and supporters of this and other riparian areas in Arizona and the Southwest.

Statement of Problems:

Russell Spring has been found to be in a nonfunctioning condition in accordance with BLM, PFC standard checklist in 2008 and 2009. The channel is entrenched and sinuosity and width/depth ratio are not in balance with landscape setting. A 2010 preliminary survey and associated vegetation assessment also indicated the spring channel was not in a proper functioning category, causing high sediment loads to be washed downstream into Beaver Creek and eventually into the Verde River. In addition invasive saltcedar trees have established and pose a risk to surrounding native flora.

Statement of causes of the problems:

Community encroachment on the western boundary of the Coconino National Forest has led to an increase in OHV use of the surrounding area which is East Russell pasture. This increase OHV traffic has had an impact on the uplands within this watershed. Unmarked and unauthorized “trails” now lead directly to this wash and the spring area from the authorized FS 9202Y. OHV tracks are often visible between the banks directly in the channel. Within the last year a new trail has been created and leads directly to a shelf ten feet above the spring. The trail ends at a small opening with a fire ring and enough of an area to turn an ATV around. Other trails lead from FS 9202Y up hillsides, often making a direct path uphill. These trails are increasing the number and size of rills on the uplands and increasing the runoff into Russell Spring, contributing to its degraded condition.

Increased flow has resulted in destruction of natural channel structure. Without these structures the channel had become incised and unstable. A headcut has developed and it moving upstream.

Statement of project-related remedies or solutions:

This project will consist of the reestablishment of natural riffles and native aquatic vegetation as detailed in the Russell Spring Restoration Plan. Reestablished and reinforced riffle structures at existing riffle locations will be constructed at a height to provide adequate energy dissipation and sediment build-up to historic stream bank levels. Existing materials within the channel and along the banks and uplands will be utilized to construct the riffle structures.

Vegetation will be transplanted where appropriate and available. Areas of large populations of aquatic vegetation will be used as transplants in new areas where aquatic vegetation does not currently exist. Grass species will also be transplanted in areas that show potential for maintaining a grass population. To assist the establishment of the grasses the tree canopy may need to be opened to allow adequate sunlight to reach the stream banks.

On November 2, 2005, the Forest Service announced final travel management regulations governing OHVs and other motor vehicle use on national forests and grasslands. Under the new rules, forests that do not restrict OHV travel to "designated roads-and-trails" must do so. And OHVs must remain on designated roads and trails systems while on the National Forest. The Coconino has begun the process to restrict OHV travel to authorized roads and trails.

Statement of project years of benefit:

This project will provide long-term benefits for the stream by restoring hydrologic function, improve floodplain function, and revegetate areas with native aquatic vegetation, include community members in the restoration process, and monitor to assess and evaluate project performance. Use of the natural channel processes designed to site conditions is intended to restore Russell Spring to a self-maintaining ecosystem that will persist for generations. Of special significance is the continuing use of Russell Springs as an outdoor learning laboratory for community schools (Prescott, Camp Verde and Flagstaff schools) as well as community volunteers.

Phase One – Channel Habitat Assessment

This phase of work entails performing a complete channel assessment of physical and vegetative conditions. The physical surveys will be used to ascertain locations where rock riffle formations are to be installed as per Medina and Long (2004). The vegetation surveys will be performed to determine the pre-existing condition of the habitat. Information therefrom will be used to determine locations where native sedges and rushes will be transplanted. Water quality will be determined to establish a baseline reference for basic parameters. The pre-assessment surveys will be used to establish monitoring locations. The study reach will be monitored annually by repeating the surveys over the life of the project.

Physical Surveys – A longitudinal channel profile will be determined using laser levels to establish the pre-existing condition of the channel. Cross-channel profile surveys will be determined, using same methods, at multiple locations that coincide with proposed riffle formation locations. These data provide a quantitative estimate of relative changes in channel dimensions which lead to physical stability. Physical stability is essential to establishing a vegetation base that will further enhance the physical and biological integrity of the system.

Vegetation Surveys – Permanent 40m vegetation transects (5) will be established to establish pre-treatment vegetative conditions. Plant density will be determined for woody plants, and plant cover and frequency will be determined for herbaceous vegetation as per Medina (1986). These data provide quantitative estimates of the relative changes in vegetation across time and space.

Water Quality Surveys – Water quality will be determined for basic parameters to establish a base reference before any work is performed. Parameters of interest include ph, temperature, and conductivity. Water quality will be measured seasonally across the life of the project.

Phase Two – Channel Restoration

This phase of work entails three parts: (a) building riffle formations at pre-determined locations, and (b) transplanting native aquatic graminoids (e.g. sedges, rushes), and (c) removal of invasive plants, e.g. saltcedar.

Riffle Formations – Rock of assorted sizes and shapes will be to form channel riffles as per Medina and Long (2004) at pre-determined locations. Rock will be collected and imported

from adjacent hillsides. Additional rock will be imported from a local quarry. Rock will be of the same geology. Rock will be transported locally via pick-up trucks and wheel barrows.

Transplants – Native herbaceous vegetation, mostly sedges and rushes, will be collected from selected areas of the Verde River and transplanted in Russell Springs. Transplants will be buried in microsites that ample perennial water and armored by the riffle formations. The riffle formations provide protection from herbivores and channel erosion events.

Invasive Plant Treatments – Invasive vegetation, mostly saltcedar, will be removed by cutting and treating with appropriate herbicides by certified applicators. A few (<15) plants have established and pose high risk to the springs habitat. Plant surveys will identify other herbaceous plants, which can be physically removed using hand tools. Plants can be surveyed annually and removed before flowers are set. Woody plant brush will be trimmed and stacked on adjacent terraces to establish niches for ground dwelling wildlife, e.g. birds, small mammals.

Phase Three – Monitoring

This phase of work entails the collection of channel and vegetation data as described in Phase One. Channel and vegetation data will be collected once per year, typically in summer, over the course of the project. Students, teachers, and other community volunteers will be trained by scientists to assist in the data collection phase, so as to establish direct knowledge of survey methods, and perform subsequent analyses to determine the progress of the restoration, both physical and biological. A hands-on approach is planned to maximize information transfer.

Phase Four – Education and Community Outreach

This phase of work entails student participation in riparian restoration and subsequent monitoring. The scientific method will be stressed in all phases of this project. Students, teachers and community volunteers will learn ecosystem dynamics through participation in monitoring activities. Discussion of monitoring data analysis will be tied into ecosystem processes such as water, nitrogen and carbon cycles. Participants will learn how to identify a variety of native aquatic, herbaceous, and woody plant species. Collaboration with agriculture and science teachers will ensure discussions meet learning objectives for target audience.

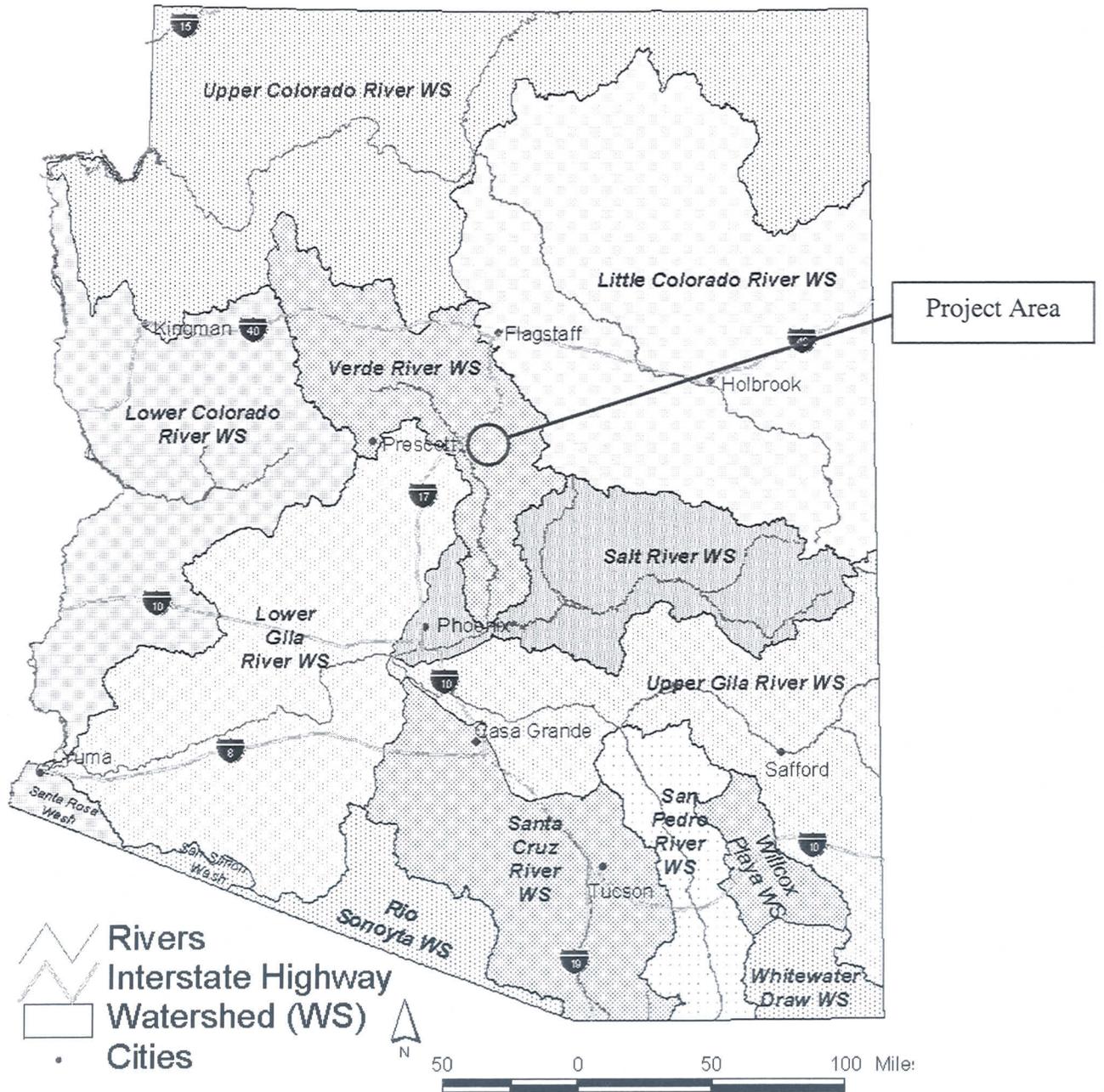
References

- Medina, A. L. and J. W. Long. 2004. Placing riffle formations to restore stream functions in a wet meadow. *Ecological Restoration* 22:120-125.
- Medina, Alvin L. 1986. Riparian plant communities and soils of the Fort Bayard Watershed in southwestern New Mexico. *Southwestern Naturalist* 31(3):345-359.

Project Location & Environmental Contaminant Information FY 2011

Project Location Information			
1. County: <u>Yavapai</u>	2. Section: <u>6</u>	3. Township: <u>14N</u>	4. Range: <u>6E</u>
5. Watershed: <u>Verde River</u> 6. 8 or 10 Digit Hydrologic Unit Code (HUC): <u>15060202</u> 7. Name of USGS Topographic Map where project area is located: <u>Camp Verde Quadrangle</u> 8. State Legislative District: <u>1</u> 9. Land ownership of project area: <u>Coconino National Forests Red Rock District</u> 10. Current land use of project area: <u>Multiple use</u> 11. Size of project area (in acres): <u>2</u> 12. Stream Name: <u>Russell Spring</u> 13. Length of stream through project area: <u>0.2 miles</u> 14. Miles of stream benefited: <u>0.2 miles</u> 15. Acres of riparian habitat: <u>2 acres</u> will be: <div style="margin-left: 400px;"> <input type="checkbox"/> Enhanced <input type="checkbox"/> Maintained <input checked="" type="checkbox"/> Restored <input type="checkbox"/> Created </div>			
16. Provide directions to the project site from the nearest city or town. List any special access requirements: From Camp Verde head north on Interstate 17. Take exit 293 Mcguireville/Montezuma Well and continue on Beaver Creek Road. Turn right onto N Montezuma Ave. Turn right onto Cayuga Ln. take 1 st left onto E Navajo Ln. Sharp right onto N Valancius Way take 1 st left onto E Smoke Signal Way. Turn left onto N Nachez drive, 1 st right onto Lavin Ln. At T turn right onto N Forestglen Rd. At Forest service boundary continue on FR 9202Y for approximately 1 mile. Park and hike southward into Russell Spring.			
Environmental Contaminant Location Information			
1. Does your project site contain known environmental contaminants? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
2. Are there known environmental contaminants in the project vicinity? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
3. Are you asking for Arizona Water Protection Fund monies to identify whether or not environmental contaminants are present? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			

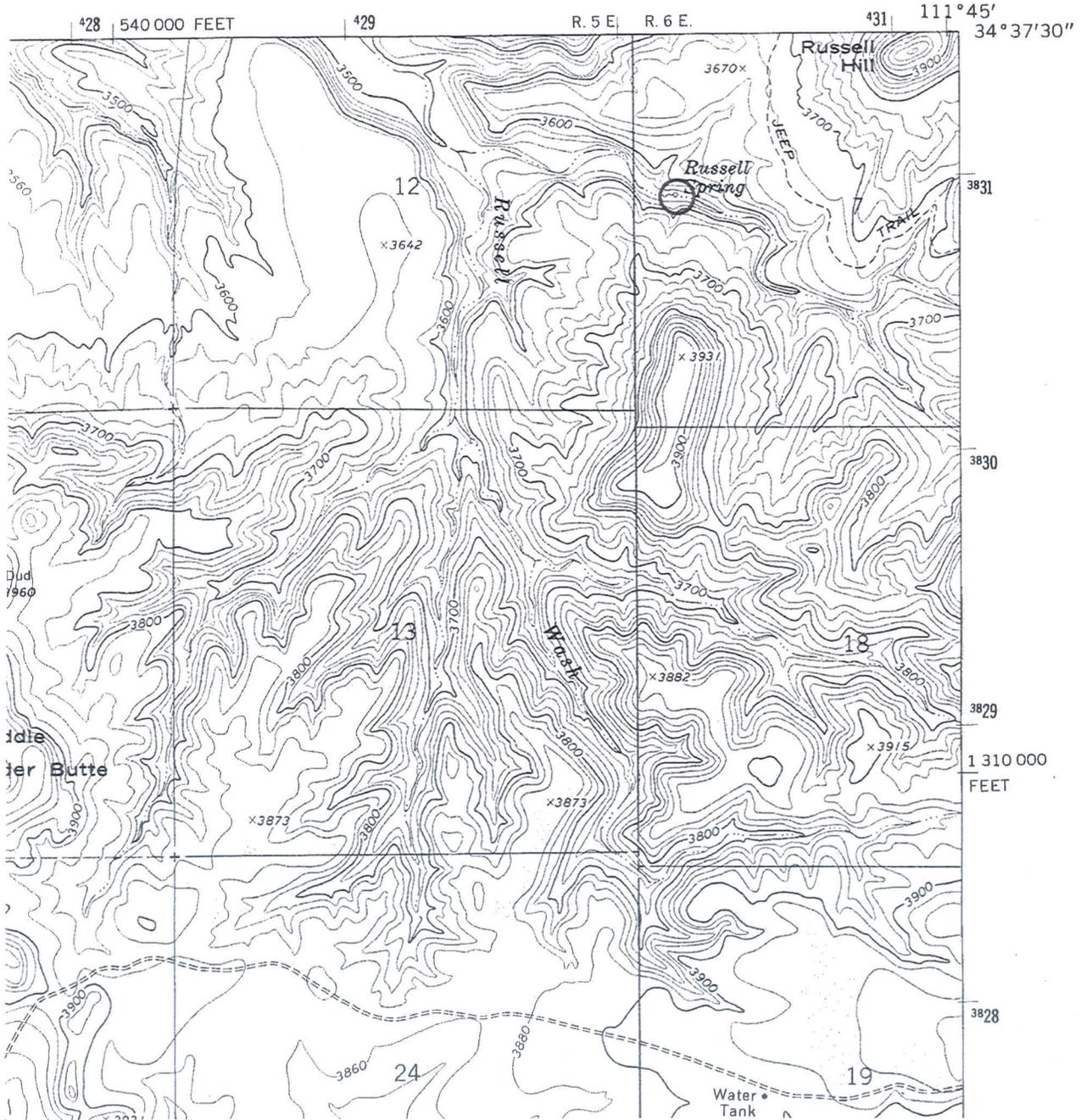
Arizona Watershed Map FY 2011



Title of Project: Russell Spring Restoration Project

CAMP VERDE QUADRANGLE
ARIZONA – YAVAPAI CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

3653 11 NW
(CASNER BUTTE)



Russell Spring

SCOPE OF WORK

Task #1: Permits, Authorizations, Clearances and Agreements

Task description: As applicant, University of Arizona V Bar V Ranch will secure all permits, authorizations, and environmental clearances necessary to complete the activities proposed in this application, including:

- A. A project implementation agreement between the V Bar V Ranch and the Red Rock Ranger District, that identifying all permitted actions relative to this project, including State Historic Preservation Office (SHPO) compliance/concurrence needs.
- B. Contract with a certified applicator in pesticide application to do all pesticide handling and application.
- C. An outreach plan that outlines the educational goals, objectives and implementation thereof.

Task Purpose/objective: to attain legal compliance for all project elements.

Deliverable description: Copies of permits, contracts, authorizations and clearances needed to implement activities of this proposal.

Deliverable due date: Prior to start date of proposed project.

AWPF reimbursable cost: \$0

Task #2: Plan Preparation

SubTask 1 Description: Develop detailed work plan.

Task Purpose/objective: Describe each work activity across a timeline to portray a consistent flow of work activity, provide a means for monitoring project progress and describe billing for the duration of the 3-year contract period.

Deliverable description: A detailed plan of work showing functional activities across the timeline for the project. The work plan will describe costs, billing, due dates, and other activities associated with project monitoring across the period of the project. Project evaluation criteria will be developed to assess the relative success of the project.

Deliverable due date: November 30, 2010.

AWPF reimbursable cost: \$0

SubTask 2 Description: Design and develop comprehensive monitoring plan.

Task Purpose/objective: A monitoring plan is needed to evaluate treatment effectiveness across 3 years.

Deliverable description: The monitoring plan (Title: Plan for Monitoring Russell Spring Restoration) will detail the sampling approach, background information, rationale for monitoring locations, data collection and analyses methods. The plan will detail how the following parameters will be measured: plant species, herbaceous plant cover, woody plant density. Daubenmire plots will be to monitor vegetation compositional changes over time. Permanent photo points will be established for each vegetation station and repeat photographs taken annually to depict individual and community plant responses as well as site response to treatments. An annual report will be produced containing all raw data, analysis, project evaluations and data interpretations.

Deliverable due date: November 30, 2010.

AWPF reimbursable cost: \$0

SubTask #3: Monitoring Studies

Task description: V-V Ranch, in cooperation with RMRS, will implement an approved monitoring plan and install permanent monitoring stations to evaluate pre and post treatment responses. Data analysis and interpretation will be performed by V-V Ranch under the guidance of RMRS. Studies will document the effectiveness of treatments and changes in habitat conditions using photo documentation methods. Permanent photo points will be established for each transect. Additional photos will be taken to illustrate plant and channel responses to treatments and for use in the educational outreach. Photo data will be archived on the V-V Ranch.

Task Purpose/objective: Installation of monitoring stations is needed to document pre and post treatment responses. This information is used to evaluate project success.

Deliverable description: An approved AWPF monitoring plan will be implemented as the plan's requisites. A detailed annual report will be produced that summarizes the status of project work for the current year. The annual report includes all information relevant to project monitoring. Site data will be collected and analyzed by V-V Ranch, students, and volunteers, under the guidance of RMRS.

Deliverable due date:

Year One: December 30, 2011	\$269
Year Two: December 30, 2012	\$523
Year Three: December 30, 2013	\$523

AWPF reimbursable cost: \$ 1315

Task #4: Restoration Work

Task description: V Bar V Ranch will employ a series of activities to perform the Russell Spring restoration work as described in this proposal.

SubTask 1 description:

Purpose/objective: To remove invasive woody plants on Russell Springs.

Deliverable description: Removal of all visible tamarisk.

Deliverable due date: June 30, 2011.

AWPF reimbursable cost: \$400

SubTask 2 description: In year 1, V Bar V Ranch will install riffle formations.

Task Purpose/objective: to stabilize the channel.

Deliverable description: installation of riffle formations.

Deliverable due date: November 30, 2011.

AWPF reimbursable cost: \$3,600

SubTask 3 description: In years 1-3, V Bar V Ranch will employ a volunteer program to survey and remove invasive herbaceous plants from the project area using hand tools.

Task Purpose/objective: to survey and kill invasive herbaceous plants.

Deliverable description: removal of all visible invasive herbaceous plants.

Deliverable due date: September 30, 2013.

AWPF reimbursable cost: \$600

Task #5: Volunteers in Restoration Work

Task description: V Bar V Ranch will implement a broad-based public involvement and support program. We will work directly with community schools in the area and in contacting a broad diversity of area and regional volunteers (environmental groups, public school students and staff, university students and staff, ranchers, recreationists, etc.) to participate in the assessments, surveys, riffle construction, transplants, and observe and assist with project progress.

Task Purpose/objective: to involve a broad diversity of people in learning about the mechanics of performing a riparian restoration project, while gaining education and experience in stewardship of the spring ecosystem. They form the base of people to maintain the project goals for 20+ years.

Deliverable description: Reports of 1,696 hours of volunteer time in the first year and 432 in years 2 and 3, including supervision.

Deliverable due date: September 30, 2011, 2012, 2013.

AWPF reimbursable cost: \$ 0

Task #6: Education

Task Description: The Grantee will conduct Education Activities as described in the Education, Outreach and Monitoring Plan. A narrative report will be submitted annually to the Arizona Water Protection Fund Program Manager that includes all materials prepared for distribution, participant lists, and photographs. A summary of Education Activities activities will be included in the Final Report.

Task Purpose/Objective: To educate interested students and community members, and to provide opportunities for hands-on involvement in the restoration project. This will foster a sense of stewardship and help individuals understand how restored riparian ecosystems can benefit them personally.

Deliverable Description: Reports of activities including attendees for each event.

Deliverable Due Date: November 30, 2011, 2012, 2013

Reimbursable Cost: \$ 300

Task #7: Outreach

Task description: V Bar V will plan and coordinate outreach activities to increase awareness of riparian health and restoration possibilities as detailed in the Education, Outreach and Monitoring Plan.

Sub task 1 description: V Bar V will plan and coordinate outreach activities that include onsite visits demonstrating restoration and maintenance, monitoring and invasive herbaceous plant removal activities. Collaboration with Forest Service, Natural Resources Conservation Service, Natural Resources Conservation District and other environmental organizations will maximize participation of wide cross section of the community.

Task Purpose/Objective: maximize community awareness and involvement in riparian ecosystems

Deliverable descriptions: Reports of activities including attendees for each event.

Deliverable due date: September 30, 2012, 2013.

AWPF reimbursable cost: \$690

Sub task 2 description: V Bar V will present Russell Spring Project at annual meeting of the national Society for Range Management.

Task purpose/objective: share our restoration plan and collaboration with other professionals in range management across the nation.

Deliverable description: Report of activity, published abstract, poster.

Deliverable Due Date: September 30, 2012.

AWPF reimbursable cost: \$1380

Sub task 3 description: V Bar V will present Russell Spring Project as summer meeting of Arizona Section Society for Range Management.

Task purpose/objective: present restoration plan and collaboration with other state professionals in range management.

Deliverable due date: December 30, 2011.

AWPF reimbursable cost: \$205.

Task #8: Final Report

Task description: Produce a final report describing all activities, data summaries and evaluation of project success.

Task Purpose/objective: To account for all project activities, e.g. financial, operational, and outreach across all phases of work and timelines.

Deliverable description: The final report will include a concise summary of project activities across the project's timeline. The report will include an evaluation of project success and accounting for project activities and expenditures, monitoring summaries, volunteer program, and products and outcomes from the educational outreach program.

Deliverable due date: December 30, 2013

AWPF reimbursable cost: \$0

Detailed Budget

Budget

Item	Requested Cost \$	Cost Share \$
Personnel/Salaries	0	48,756.87
Fringe Benefits	0	7,009.18
Travel	1,255	0
Equipment	0	0
Supplies	3,005	0
Contract Costs	400	0
Other Costs	3,829	0
Indirect Costs	424	17,274.65
Matching Funds Committed	0	300
Grand Total	8,913	73,340.70

Personnel

Salary includes (\$1,000) Forest Service performing archeological survey, (\$9,680) Rocky Mountain Research Station, (\$18,860.87) University of Arizona V Bar V, and (\$19,216) volunteer labor.

Fringe Benefits

Includes University of Arizona V Bar V (\$7,009.18).

Travel

Travel includes (\$600) airfare, (\$385) lodging and (\$270) for meals while attending the Society for Range Management annual meeting in Spokane, WA in February 2012 to present project.

Supplies

Supplies include (\$2,000) for rock to build in stream structures, (\$1005) wheel barrow, gloves, shovels, flagging rebar and paint.

Contractual

Contract costs include the services of a certified chemical applicator to remove and treat invasive saltcedar trees (\$400).

Other Costs

Other costs includes trash liners, hand wipes, paper towels (\$130), printing of handouts/brochures posters materials for education/outreach purposes, mail/office/miscellaneous (\$850), t-shirts (\$1480), and water, sandwich fixings, granola and fruit snacks for volunteers (\$1369).

Indirect Costs

Arizona Water Protection Fund Commission AWPF restricts administrative costs to a maximum of 5% of the total AWPF project costs, as stated on page 3 of Arizona Water Protection Fund Commission Grant Application Manual, under the Eligible Applications criteria. (In this case \$424), UA indirect costs (\$17,274.65).

Matching funds

Matching funds include (\$300) Verde Natural Resources Conservation District.

STATE HISTORIC PRESERVATION OFFICE Review Form

In accordance with the State Historic Preservation Act (SHPO), A.R.S. 41-861 *et seq*, effective July 24, 1982, each State agency must consider the potential of activities or projects to impact significant cultural resources. Also, each State agency is required to consult with the State Historic Preservation Officer with regard to those activities or projects that may impact cultural resources. Therefore, it is understood that **recipients of state funds are required to comply with this law** throughout the project period. All projects that affect the ground-surface that are funded by AWPf require SHPO clearance, **including those on private and federal lands.**

The State Historic Preservation Office (SHPO) must review each grant application recommended for funding in order to determine the effect, if any, a proposed project may have on archaeological or cultural resources. To assist the SHPO in this review, the following information **MUST** be submitted with each application for funding assistance:

- A completed copy of this form, and
- A United States Geological Survey (USGS) 7.5 minute map
- A copy of the cultural resources survey report if a survey of the property has been conducted, and
- A copy of any comments of the land managing agency/landowner (i.e., state, federal, county, municipal) on potential impacts of the project on historic properties.

NOTE: If a federal agency is involved, the agency must consult with SHPO pursuant to the National Historic Preservation Act (NHPA); a state agency must consult with SHPO pursuant to the State Historic Preservation Act (SHPA),

OR

- A copy of SHPO comments if the survey report has already been reviewed by SHPO.

Please answer the following questions:

1. Grant Program: Arizona Water Protection Fund Commission
2. Project Title: Russell Spring Restoration
3. Applicant Name and Address: V Bar V Ranch, 4005 N Forest Rd 618 Rimrock, AZ 86335
4. Current Land Owner/Manager(s): Coconino National Forest Red Rock District
5. Project Location, including Township, Range, Section: T14NR6E7SWNW
6. Total Project Area in Acres (or total miles if trail): 2
7. Does the proposed project have the potential to disturb the surface and/or subsurface of the ground?
 YES NO
8. Please provide a brief description of the proposed project and specifically identify any surface or subsurface impacts that are expected: Restoration efdforts will include moving rocks from within the stream and outside of the stream to create riffle structures. Rocks will be moved by hand no heavy equipment will be used.
9. Describe the condition of the current ground surface within the entire project boundary area (for example, is the ground in a natural undisturbed condition, or has it been bladed, paved, graded, etc.). Estimate horizontal and vertical extent of existing disturbance. Also, attach photographs of project area to document condition: Current condition is mostly undisturbed, however OHV trails go through the

stream bed and lead to the stream in several areas. There is sign of frequent human recreational activity in many areas.

10. Are there any known prehistoric and/or historic archaeological sites in or near the project area? YES NO

11. Has the project area been previously surveyed for cultural resources by a qualified archaeologist? YES NO UNKNOWN

If YES, submit a copy of the survey report. Please attach any comments on the survey report made by the managing agency and/or SHPO

12. Are there any buildings or structures (including mines, bridges, dams, canals, etc.), which are 50-years or older in or adjacent to the project area? YES NO

If YES, complete an Arizona Historic Property Inventory Form for each building or structure, attach it to this form and submit it with your application.

13. Is your project area within or near a historic district? YES NO

If YES, name of the district:

Please sign on the line below certifying all information provided for this application is accurate to the best of your knowledge.

Applicant Signature /Date

Applicant Printed Name

FOR SHPO USE ONLY	
SHPO Finding: <input type="checkbox"/> Funding this project will not affect historic properties. <input type="checkbox"/> Survey necessary – further GRANTS/SHPO consultation required (<i>grant funds will not be released until consultation has been completed</i>) <input type="checkbox"/> Cultural resources present – further GRANTS/SHPO consultation required (<i>grant funds will not be released until consultation has been completed</i>)	
SHPO Comments	
For State Historic Preservation Office:	Date:

APPENDIX

SUPPLEMENTAL INFORMATION

- Key Personnel ----- A1
- Proper Functioning Condition Checklist 2008----- A2
- Proper Functioning Condition Checklist 2009----- A3
- Education, Outreach and Monitoring Plan ----- A4
- Evidence of Control and Tenure of Land Term Grazing Permit ----- A5

ADDITIONAL ATTACHMENTS

Letters of Support –

- Rocky Mountain Research Station
- US Forest Service, Red Rock Ranger District
- Verde Natural Resource Conservation District
- USDA, ARS Southwest Watershed Research Center
- Northpoint Expeditionary Learning Academy
- Mingus Union High School
- M Diamond Ranch

ATTACHMENT 1

Key Personnel

Project Manager: John Kava

Research Assistant in Rangeland Management, V Bar V Ranch

B.S. Occupational Education specializing in Technical Management, Wayland Baptist University

M.S. Natural Resources Management, North Dakota State University

Thesis: Secondary Succession of Mixed Grass Prairie Following Control of Leafy Spurge using *Aphthona* spp.

Coordinated and led two-week long in-residence high school intensive course covering range monitoring, riparian monitoring and assessment, grazing systems, ranch and cattle management. Fourteen Northpoint Expeditionary Learning Academy high school students, grade 9-11, participated.

At the V Bar V Ranch, I have demonstrated the Enhanced Quadrat Frequency vegetation monitoring method to High School students. Students also learn tips to identify native vegetation. By the end of the day, students were able to properly identify and record on data sheets, several native plant species, as well as quantify ground cover and dry weight rank of native vegetation.

Led 9th and 10th grade students in discussion of the ecological effects that noxious and invasive plants have on the different native vegetative zones in Arizona. I also led the students in field identification and the hand grubbing of several noxious plant species in a local park along a Granite Creek in Prescott.

Collaborator: Doug Tolleson

Ph.D. Rangeland Ecology and Management, Texas A&M University

Assistant Extension Specialist/Research Scientist in Rangeland Management

V Bar V Ranch

2657 S. Village Dr

Cottonwood, AZ 86326

dougt@cals.arizona.edu

<http://cals.arizona.edu/aes/vbarv/>

928-646-9113 x18

Current Position

As a rangeland management specialist, I provide information and educational opportunities on sustainable rangeland management to the ranching and natural resource management community in northern Arizona, including youth and other interested individuals. I conduct research on rangeland management topics; primarily dealing with rangeland monitoring techniques, as well as grazing and nutrition of livestock and wildlife. I specialize in portable near infrared spectroscopy to obtain research and management data and as a teaching tool to illustrate real-time compositional differences in biological materials. I have been with the U of A since January 2008. Accomplishments to date include: quarterly publication of a newsletter (*The Rimrock Report*), acquisition of \$7000 in grants and equipment awards, 1 senior and 3 junior authored abstracts, 7 extension presentations, and initiation of 4 field experiments. Two extension outreach programs (*Blue Collar Plants*, *Range Rocks!*) have been started. Scholarly activities include review of 3 journal articles for Rangeland Ecology and Management, and a doctoral thesis (for the Australian National University).

Previous Position

At Texas A&M University, I instructed graduate and undergraduate students in near infrared reflectance spectroscopy (NIRS) and nutritional monitoring techniques. I also trained international scientists (Australia, Argentina, Mexico, Mongolia, India, Israel, several African countries) in the operation of an NIRS laboratory, both domestically and in-country. As a member of the Nutbal Pro (nutritional balance analysis software) design team I served as Instructor or Co-instructor for Nutbal Pro clinics offered to private individuals and government agency personnel nationwide. As an Assistant Lecturer in the Department of Ecosystem Science and Management, I taught junior, senior and graduate level courses in rangeland ecology and management, including distance education classes via digital media. As PI, Co-PI, or support staff, I was involved in acquisition and deliverables of \$560,000 in contracts and grants. Research areas included monitoring nutrition and physiology of grazing animals using NIRS of feces and forage. Senior author of 6 and junior author of 16 journal articles (published and in review). Senior author of 31, and junior author of 53 abstracts. Senior author of 7, and junior author of 12 other popular or professional publications. July 1998 – January 2008.

Activities and Accomplishments

Director Team, Natural Resource Conservation Workshop for Arizona Youth. 2008
Director Team, Texas Youth Range Workshop. 1999-2003, 2006
Eagle Scout, Boy Scouts of America
Rangelands West Partnership
Member, Society for Range Management
Member, American Society of Animal Science
Tom Slick Graduate Fellowship, 2007/2008
Marion D. Wasko Graduate Fellowship, 2006/2007
2001 review panel for Grazinglands Technology Institute, USDA-NRCS, Ft. Worth, TX
Certified Professional in Rangeland Management. # CP01-524, Society for Range Management

Riparian Specialist

Alvin Medina –

Research Ecologist, USDA Forest Service Rocky Mountain Research Station.
2500 South Pine Knoll Drive, Flagstaff, AZ 86001
Phone: 928.853.1391
Email: almedina@fs.fed.us

- B. S. Wildlife Science, New Mexico State University, 1973
- M.S. Wildlife Science, New Mexico State University, 1978
- Graduate work in Range Management at University of Wyoming;
- Graduate work in Riparian Ecology at Arizona State University.

Experience 1991-present as Research Ecologist with RMRS; past experience as Research Range Scientist, Supervisory Range Conservationist, Remote sensing consultant and Wildlife Conservation Officer. He has written over 75 publications on range management, wildlife-livestock interactions, riparian ecology, and land use management. He is sought out regionally for his expertise in effects of livestock-elk grazing and forest management practices on riparian systems. He has over 25 years of experience with aquatic and riparian habitats, and factors influencing the development of southwestern stream systems, and 30 years working with rangelands and livestock-wildlife grazing interactions. He has developed several riparian restoration workshops for USDA Forest Service International Programs in Mexico.

Agriculture and Environmental Science Teachers

Northpoint Expeditionary Academy

Geneva Saint-Amour

- M.Ed. Northern Arizona University (plus administrative certificate hours)
- Currently, Director, Northpoint Expeditionary Learning Academy.
- Thirteen years classroom teaching
- Education Director of schools in Mexico and Costa Rica
- Elementary school administration experience

Amy Dolan – 10th & 11th grade Science

- Undergraduate degree is in biology
- M.S. Secondary Education
My teaching experience is varied, from traditional school classrooms to trails in Montana to the beaches of Georgia's barrier islands. I never tire of learning and experiencing new things, am very excited to have joined the Northpoint community.

Jeff Dyer – 9th & 12th grade Science

- Currently teaching 9th and 12th grade science.
 - Previous job, teaching environmental science for Sierra Nevada Journeys in northeastern California.
- M.A.T. in Secondary Education at Tufts University
- High school and middle school English Teacher in Massachusetts.
- B.A. in Music at Hamilton College New York.
- During my summers off from college, I led backpacking and canoeing trips for the Appalachian Mountain Club.
- I spent a year as a Watson Fellow researching traditional Khmer music in Cambodia, Thailand, and Vietnam.
 - I continue to work with Cambodian Living Arts, researching and promoting Khmer music.

Mingus Union High School

Heather Mulcaire

- B.S. Agriculture Education. The University of Arizona, 2000
- M.E. Educational Leadership. Northern Arizona University (in progress)
- Coached 20 FFA National Convention Teams
- Advisor of 4 FFA State Officers
- Advisor of 30 American Degree recipients
- Nominating Committee Advisor, FFA State Officer Elections, 2008
- Eight years teaching agriculture at Mingus Union High School
- Yavapai County Tech Prep Internship, Bedrock Landscape

ATTACHMENT 2

Standard Checklist

Walker Basin Allotment

Name of Riparian-Wetland Area: Russell Wash - East Russell Pasture

Date: 5/12/2008 Segment/Reach ID: not mapped in RASES

Miles: .2 Acres: _____

ID Team Observers: R. Steinki, D. Renner, Shaula Hedwell, Robert Barbara, Colin

entrenched
near spring
entrance
Ret. high

Yes	No	N/A	HYDROLOGY
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1) Floodplain above bankfull is inundated in "relatively frequent" events
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2) Where beaver dams are present they are active and stable
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3) Sinuosity, width/depth ratio, and gradient are in balance with the landscape setting (i.e., landform, geology, and bioclimatic region)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4) Riparian-wetland area is widening or has achieved potential extent
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5) Upland watershed is not contributing to riparian-wetland degradation

35%
bank

Yes	No	N/A	VEGETATION
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6) There is diverse age-class distribution of riparian-wetland vegetation (recruitment for maintenance/recovery)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7) There is diverse composition of riparian-wetland vegetation (for maintenance/recovery)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8) Species present indicate maintenance of riparian-wetland soil moisture characteristics
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9) Streambank vegetation is comprised of those plants or plant communities that have root masses capable of withstanding high-streamflow events
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10) Riparian-wetland plants exhibit high vigor
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11) Adequate riparian-wetland vegetative cover is present to protect banks and dissipate energy during high flows
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12) Plant communities are an adequate source of coarse and/or large woody material (for maintenance/recovery)

2' entrance
hole
active

Yes	No	N/A	EROSION/DEPOSITION
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13) Floodplain and channel characteristics (i.e., rocks, overflow channels, coarse and/or large woody material) are adequate to dissipate energy
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14) Point bars are revegetating with riparian-wetland vegetation
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15) Lateral stream movement is associated with natural sinuosity
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16) System is vertically stable
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17) Stream is in balance with the water and sediment being supplied by the watershed (i.e., no excessive erosion or deposition)

partly 22%

(Revised 1998)

PFC Standard Checklist

District: RRRD Topo Quad(s) _____ Non-riparian? _____
 Name of Riparian-Wetland Area: Russell Wash
 Date: 2/18/09 Area/Segment ID: T14 NRGES7 Miles: .5-1 mile
 ID Team Observers: Savago, Sena SWNW

Yes	No	N/A	HYDROLOGIC
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1) Floodplain inundated in "relatively frequent" events (1-3 years)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2) Active/stable beaver dams
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3) Sinuosity, width/depth ratio, and gradient are in balance with the landscape setting (i.e., landform, geology, and bioclimatic region)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4) Riparian zone is widening or has achieved potential extent <i>see satellite photo 2/17/09</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5) Upland watershed not contributing to riparian degradation <i>along roads</i>

Yes	No	N/A	VEGETATIVE
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6) Diverse age-class distribution (recruitment for maintenance/recovery)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7) Diverse composition of vegetation (for maintenance/recovery) <i>no grasses - forbs only</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8) Species present indicate maintenance of riparian soil moisture characteristics
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9) Streambank vegetation is comprised of those plants or plant communities that have root masses capable of withstanding high streamflow events <i>lack of herbaceous cover</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10) Riparian plants exhibit high vigor
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11) Adequate vegetative cover present to protect banks and dissipate energy during high flows
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12) Plant communities in the riparian area are an adequate source of coarse and/or large woody debris

Yes	No	N/A	SOILS - EROSION DEPOSITION
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13) Floodplain and channel characteristics (i.e., rocks, overflow channels, coarse and/or large woody debris) adequate to dissipate energy <i>can flood</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14) Point bars are revegetating
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15) Lateral stream movement is associated with natural sinuosity <i>can move</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16) System is vertically stable
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17) Stream is in balance with the water and sediment being supplied by the watershed (i.e., no excessive erosion or deposition)

Vegetation Species List	
Riparian:	Upland:
<u>Bermuda Grass</u>	

Remarks

lots of green algae - eutrophication
 blind weirs - oxygen deficient conditions
 lower most section Functional At Risk
 upper sections non functional
 Consider fencing off non function section
 to help herbaceous vegetation recover.
 Older riparian species present,
 regeneration is lacking.
 Very limited riparian herbaceous vegetation

Summary Determination

Functional Rating:

Proper Functioning Condition _____
 Functional -- At Risk _____
 Nonfunctional _____
 Unknown _____

Trend for Functional -- At Risk:

Upward _____
 Downward Active
 Not Apparent _____ Headcut

Problem(s):

Multiple roads and heavy OHV use could be
 magnifying peak flows, adding to the problem
 with the headcut.

Recommendation:

Consider Fencing
 Improve upland watershed conditions by closing roads

Time to fix: _____ Riparian width: _____

DFC:

Are factors contributing to unacceptable conditions outside agency's control or management? Yes _____ No

If yes, what are those factors?

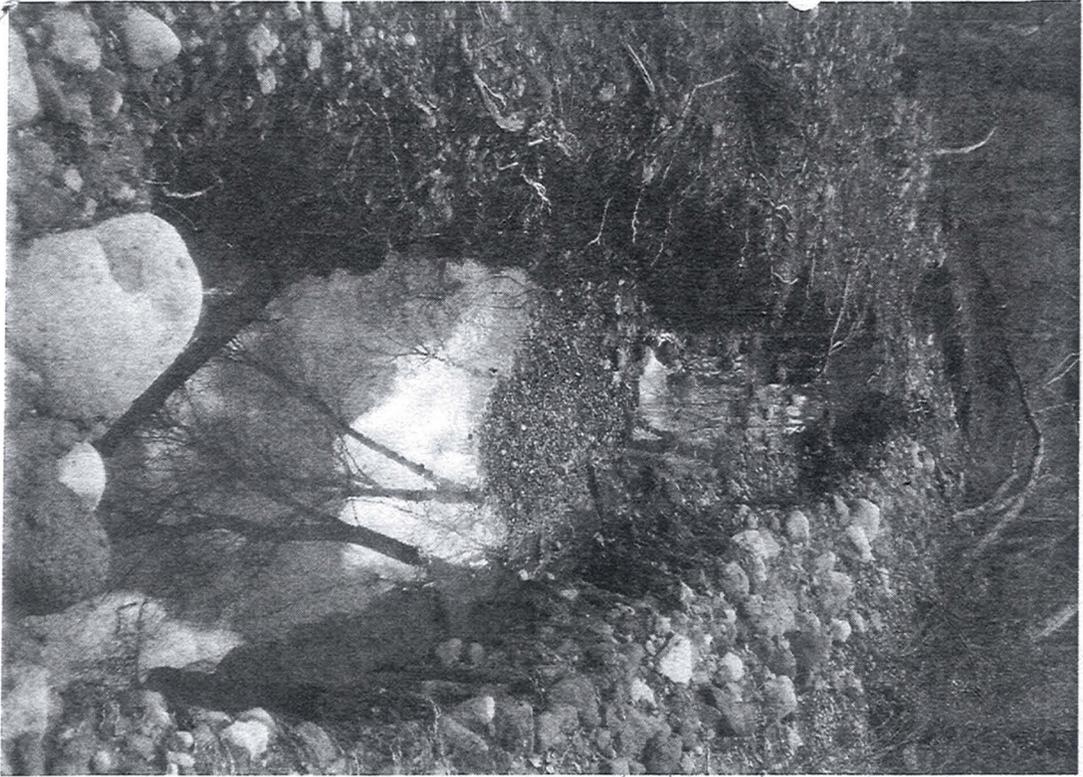
Flow regulations _____ Mining activities _____ Upstream channel conditions _____
 Channelization Road encroachment _____ Oil Field water discharge _____
 Augmented flows _____ Other (specify) _____



Roads enter stream



Upper Headcut



Upper Headcut looking Downstream



Upper Headcut

ATTACHMENT 4

Education Outreach and Monitoring Plan/Schedule

Education will primarily target high school students through participation in monitoring and assessment of Russell Springs. We will use the scientific method approach to our quantitative monitoring, and also discuss and practice qualitative assessments. Education events will be from 1 – 5 days in length, depending on participating school programs. Participants in educational program will receive “Range Rocks!” T-shirt.

Outreach will consist of a community awareness day open to the public. Natural Resources Conservation Service, Forest Service, University of Arizona and Verde Natural Resources Conservation District will be represented at this event highlighting the Russell Springs restoration project.

This project will also be presented at the national Society for Range Management Annual meeting in February 2012, and at the Arizona Section SRM summer meeting in August 2011.

Monitoring will be both quantitative and qualitative. Quantitative data will be collected on the vegetation present and channel cross section. Qualitative monitoring will be accomplished using the University of Arizona researchers will accomplish all monitoring with the assistance of students and in collaboration with the US Forest Service Red Rocks District.

- Summer 2011
 - Outreach – AZ Section SRM Summer meeting at V Bar V Ranch.
- Fall 2011, 2012 & 2013
 - Education/Monitoring - Mingus Union and/or Northpoint - Vegetative and channel cross section
 - Monitoring - Forest Service – Proper Functioning Condition
- Spring 2012 & 2013
 - Education/Monitoring - Northpoint, Vegetative and channel cross section (16) - \$128
 - Outreach - NRCDC Community Awareness Day (12) - \$96
- Fall 2012 & 2013
 - Education/Monitoring - Mingus Union and/or Northpoint Vegetative and channel cross section (16) - \$128
 - Monitoring - Forest Service – Proper Functioning Condition
- Winter 2013
 - Outreach - Presentation of project at National Society for Range Management

ATTACHMENT 5

USDA-Forest Service FS-2200-10 (12/99)

TERM GRAZING PERMIT - PARTS 1 AND 2 (Reference FSM 2230)	Page 1 of 29
	Permittee Number 04-057
	Permit Number 04-1225

PART 1

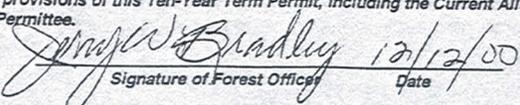
Arizona Board of Regents, on Behalf of of 314 Forbes Building, hereinafter
 University of Arizona College of Agriculture
Agricultural Experiment Station U. of A., Tucson AZ 85721
(Name of Permittee) (Post Office Address, Including Zip)

called the permittee, is hereby authorized to graze livestock owned by the permittee upon designated lands administered by the Forest Service within the Coconino National Forest (X appropriate box)
 National Forest National Grassland under the following terms and conditions:

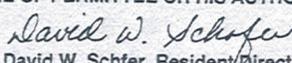
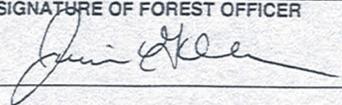
- Description of range. The livestock shall be grazed only upon the area described as follows: described on attached page and/or delineated on the attached map dated February 09, 1990, which is part of this permit. (Strike out item or items not applicable.)
- The number, kind, and class of livestock, period of use, and grazing allotment on which the livestock are permitted to graze are as follows, unless modified by the Forest Service in the Bill for Collection:

NUMBER	LIVESTOCK	KIND	CLASS	PERIOD OF USE		GRAZING ALLOTMENT
				FROM	TO	
543	Cattle			1/1	12/31	Walker Basin
7	Horses			1/1	12/31	Walker Basin

- It is fully understood and agreed that this permit may be suspended or cancelled, in whole or in part, after written notice, for failure to comply with any of the terms and conditions specified in Parts 1, 2, and 3 hereof, or any of the regulations of the Secretary of Agriculture on which this permit is based, or the instructions of Forest officers issued thereunder; or for knowingly and willingly making a false statement or representation in the permittee's grazing application, and amendments thereto; or for conviction for failure to comply with Federal laws or regulations or State and local laws relating to livestock control and to protection of air, water, soils and vegetation, fish and wildlife, and other environmental values when exercising the grazing use authorized by the permit. This permit can also be cancelled, in whole or in part, or otherwise modified, at any time during the term to conform with needed changes brought about by law, regulation, Executive order, allotment management plans, land management planning, numbers permitted or seasons of use necessary because of resource conditions, or the lands described otherwise being unavailable for grazing. Any suspension or cancellation action may be appealed pursuant to 36 CFR 251, Subpart C.
- This permit supersedes permit issued on February 09, 1995 to Arizona Board of Regents
University of Arizona

I have reviewed the provisions of this Ten-Year Term Permit, including the Current Allotment Management Plan with the Grazing Permittee.

 Signature of Forest Officer Date 12/12/00

I HAVE REVIEWED AND ACCEPT THE TERMS OF THIS PERMIT

SIGNATURE OF PERMITTEE OR HIS AUTHORIZED AGENT		DATE	
 David W. Schfer, Resident Director		12/12/00	
SIGNATURE OF FOREST OFFICER	NAME (PRINT)	TITLE	DATE
	JIM GOLDEN	FOREST SUPERVISOR	12/12/00



United States Department of Agriculture – Forest Service
Rocky Mountain Research Station



August 30, 2010

RE: AWPFC Grant

John Kava
Research Specialist
V Bar V Ranch
Rimrock, AZ 86335

Dear Mr. Kava:

In regards to your AWPFC grant application, I have estimated that my in-kind contribution to the proposed "Russell Springs Restoration Project" is \$9680.00. This estimate of cost is based on the amount of work hours that will be volunteered over the course of the project, both in training personnel and volunteers and in assisting in the design and implementation of the project.

I highly recommend this project as it contains strong elements of working with multiple partners, and of great value to the community and schools of the area. Thank you for the opportunity to participate in union with the University of Arizona Extension. Feel free to contact me regarding any questions you may have at (928)-853-1391.

Sincerely,

Isi Alvin L. Medina

Rocky Mountain Research Station
2500 S. Pine Knoll Drive
Flagstaff, AZ 86001

Cc: File



United States
Department of
Agriculture

Forest
Service

Coconino National Forest
Red Rock Ranger District

PO Box 20249
Sedona, AZ 86341

File Code: 2230

Date: August 26, 2010

Mr. David W. Schafer
Resident Director
V Bar V Ranch Agricultural Research Station
University of Arizona
4005 N. Forest Service Rd. 618
Rimrock, AZ 86335

Dear Mr. Schafer;

I am writing in reference to the Arizona Water Protection Grant you are applying for to fund restoration efforts in Russell Wash. Portions of the Russell Wash area were determined non-functioning and others functioning-at-risk in the current Walker Basin Range Allotment NEPA Analysis. We agreed that restoration efforts were in order. Approval for these actions, however, is pending final analysis and a signed decision following the Walker Basin Range Allotment NEPA process. Implementation, as with all other actions approved through the NEPA decision, would have to await finalization of the appeal period for that decision.

I too am committed to promoting desired conditions in Russell Wash. Hence, the Forest Service will commit to funding all archaeological clearances for specific elements of the restoration effort you have developed, should they be approved in the final NEPA decision. I and my hydrology staff understand that you need to utilize rocks occurring on-site as part of the process.

I appreciate your efforts in promoting desired conditions throughout Russell Wash.

Sincerely,
Mike Chaveas

ACTING DISTRICT RANGER
RED ROCK RANGER DISTRICT



John A. Kava

From: Travis S Bone [tbone@fs.fed.us]
Sent: Monday, August 02, 2010 5:14 PM
To: John A. Kava
Cc: Robert M Garcia; Amina Sena
Subject: Re: AZ Water Protection Fund Grant
Attachments: AZ WPF SHPO review form.doc

John,

The area you show on the map has not been surveyed. Section 12 was surveyed in the 1970s, and a fair number of sites were found there. Since there have been no previous surveys, it looks to me like you have the attached form filled out correctly (minus the legal description). My read of what you sent indicates that SHPO will require a survey and clearance from us before the grant is funded. I would guess that an area this small could be surveyed, any sites recorded, and all the paperwork completed on my end in 3 days. I would estimate the cost for me to do that archaeological work and consultation with SHPO to be approximately \$1,000.

Hope that info helps. Let me know if you have other questions.

-T

Travis Bone
District Archaeologist
Red Rock Ranger District, Coconino National Forest
PO Box 20429
Sedona, AZ 86341
928-203-7527
928-203-7539 fax

"John A. Kava" <jakava@cals.arizona.edu>

07/30/2010 03:45 PM

To <tbone@fs.fed.us>

cc

Subject AZ Water Protection Fund Grant

Travis,

Here is the forms I was talking about when I left you a voice message.

There are actually two parts the State Historic Preservation office review form and Historic Property Inventory form. I believe if there is no property the second is not filled out.

Could you review the SHPO review form and let me know if it is accurate?

Also, What are going to be the costs of getting an Archeological Clearance to do some work in Russell Spring? It is estimated to be about 2 acres total with 2 tenths of a mile stretch of riparian area. I want to include this manpower cost in the grant budget.

I have a due date of 1 September to the Commission and have to have it to the University a week before that, so if I could get this information by August 18th I would appreciate it.

John A. Kava

From: Jodi Allen [verdeinvasives@gmail.com]
Sent: Tuesday, August 10, 2010 7:20 PM
To: John A. Kava
Subject: Re: AZ WPFC Grant support

Hi John,

We just had our monthly meeting and discussed your request. We think its a great idea to restore Russell Springs and working with students. We would be proud to help sponsor the Tshirts. We would like to request our logo be printed on them. Our Ed Center Director has all the info on that and can be reached at, @ 928-649-6004. I am hoping that the tshirts don't run more than expected as I thought it was the \$300 request but am sure we can cover \$352.

Lets keep in touch,
Jodi Allen
Verde NRCD

On Mon, Aug 2, 2010 at 11:28 AM, John A. Kava <jakava@cals.arizona.edu> wrote:

Jodi,

I am putting a Grant proposal together to restore Russell Spring, which is located on the Walker Basin allotment. I thought the NRCD might be interested in providing a letter of support, and maybe participating in a Community Awareness Day.

If interested you could also provide some funds for us to add to our Matching funds amount. Right now we only have "ghost" funds like salary, and expertise.

We are looking at the work being done in May of 2011 with monitoring in the Fall and Spring for the next 4 yrs. Most monitoring will be done with students. A Community Awareness Day could be done in the spring in coordination with NRCD, if interested.

Basically the costs we are asking for the Commission to provide will cover t-shirts and refreshments for the students and any community volunteers. Right now I am estimating about \$352 for forty four t-shirts and approximately \$300 for refreshments for one year – that would encompass Spring and fall events.

I have attached the basics of the grant proposal. If you have any questions please ask. My deadline to submit through the University is Aug 25th.



United States Department of Agriculture

Research, Education and Economics
Agricultural Research Service

August 31, 2010

To Whom it May Concern,

This letter is written in support of the project proposed to restore Russell Spring. The resource improvement, education, and collaboration goals incorporated in this project provide a strong suite of benefits. Collaboration with the University of Arizona brings strength to the technical and monitoring components of the proposed project as well as a direct connection to current research. This project has the potential to serve as a model for riparian restoration at degraded sites in Arizona.

Sincerely,

A handwritten signature in cursive script that reads "Mary Nichols".

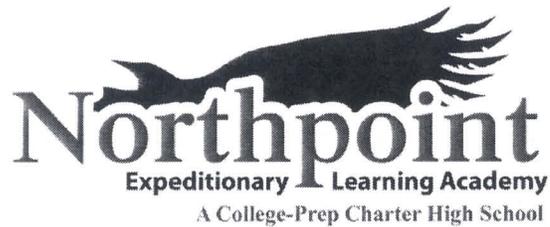
Mary Nichols, Ph.D.

Research Hydraulic Engineer
USDA-ARS Southwest Watershed Research Center
2000 E. Allen Rd.
Tucson, AZ 85719



Southwest Watershed Research Center
2000 E. Allen Rd. Tucson, AZ 85719
Voice: 520.670.6380 x161 E-mail: mary.nichols@ars.usda.gov

Agricultural Research - Investing in Your Future



July 26, 2010

Proposal Review Team
Arizona Water Protection Fund Commission

Dear Proposal Review Team:

Our school is submitting support for the proposed program being presented by The University of Arizona V Bar V Ranch Agricultural Experiment Station. Our school was fortunate to participate this past year in offering an elective course in cooperation with the ranch, and hope to do so again! It was an outstanding experience for staff and students. This proposal for the Russell Spring Restoration project may allow us that opportunity.

Northpoint Expeditionary Learning Academy is currently in a transition stage, as we leave Prescott Unified School District and become an independent charter school in Yavapai County. However, through this transition, our mission, services and programming will remain the same. We will also retain our affiliation with the national organization of Expeditionary Learning Schools Outward Bound (www.elschools.org). Additionally we will continue to offer our students unique, provocative, and most importantly relevant learning experiences. Our school goals continue to focus on offering engaging high quality academic classes that include field experiences which will promote and prepare students for careers in the applied sciences.

The opportunity to educate interested students and to participate in hands-on involvement in the restoration project will foster a sense of stewardship for our students as it demonstrates the science concepts being covered in their courses. Working in this type of program will also help student understand how restored riparian ecosystems can benefit them personally.

The teachers at our school understand that not only will they receive benefits in the form of educational opportunities for their students from the proposed program, but that they will be expected to provide supervision of their respective students, administer pre-trip assignments, active instructional practices in the field and participate in evaluation of the students learning experiences as described in the proposal. We believe this commitment of time and resources will result in better-informed students and more experienced teachers with respect to natural resource issues that are very important to residents of the state of Arizona.

Thank you for this opportunity to partner with our community and your facility to help our students experience the world of applied sciences.

Sincerely,
Geneva Saint-Amour
Geneva Saint-Amour
Director
Northpoint Expeditionary Learning Academy

551 First Street | Prescott, Arizona 86301 | 928-717-3272 | Fax 928-541-2294 | www.NorthpointAcademy.org

Governing Board

Dr. John Tavasci, President

MEMBERS:

Mr. James Ledbetter, Clerk
Mr. Andrew Grosseta
Mr. Mike Mulcaire
Mrs. Brenda Zenan

MINGUS UNION HIGH SCHOOL

1801 East Fir Street
Cottonwood, AZ 86326
928-634-7531
www.mingusunion.com



July 22, 2010

Arizona Water Protection Fund Commission
Arizona Department of Water Resources
3550 North Central Avenue
Phoenix, AZ 85012

Dear Arizona Water Protection Fund Commission:

I am writing to confirm our support in the grant proposal submitted by Mr. John Kava with the University of Arizona in regards to the restoration of Russell Springs. The Agriculture Science Department at Mingus Union High School strongly promotes the involvement of science -based hands on activities. Freshman and sophomore students participate in plant and environmental science curriculum which directly prepares them for the AIMS exam. As instructors, we feel it essential that students are able to apply textbook information to real world applications.

By participating in the Russell Springs Restoration Project, students' experiences would directly relate to the following curriculum standards:

- 1.0 Demonstrate laboratory procedures and safety practices
- 3.0 Describe basic principles of plant nutrition
- 4.0 Examine the interaction of biological systems within the environment
- 5.0 Describe basic principles of plant growth production
- 10.0 Describe group dynamics and leadership
- 11.0 Demonstrate communication in a business situation

Mingus Agriculture Teachers will use fieldwork opportunities with Mr. Kava to gain industry knowledge that can be integrated into daily instruction and practices. Not only will we supervise our students, we will properly prepare them for the activities and use various evaluation tools to promote success for all students. We believe this commitment of time and resources will result in better informed students and more experienced teachers with respect to natural resource issues that are very important to residents of the state of Arizona.

Most Respectfully,

Heather Mulcaire

Heather Mulcaire
Mingus Union Agriculture Science Teacher

Superintendent
Mr. Tim Foist
634-8640

Principal
Mrs. Tamara Addis
649-4415

Dean of Students/Ast. Principal
Mr. Allen Mitchell
649-4471

Phone (928) 634-7531

A^t - *Academics, Athletics, Activities, Appreciation*

Fax (928) 639-4236

August 26, 2010

Proposal Review Team
Arizona Water Protection Fund Commission

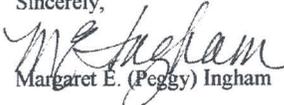
Dear Proposal Review Team:

As a fellow producer we support the University of Arizona V Bar V Ranch in their effort to provide hands-on educational opportunities to local students and community volunteers. The value of this type of in the field learning is priceless in this day of fewer and fewer people growing up connected to the land and its resources. Sustainable agriculture is an important part of this region and the educational programs provided by the V Bar V Ranch are key to keeping the public informed.

This past spring, we provided horseback trail rides for fourteen students and their teacher attending a Range Rocks! in resident educational program at the V Bar V. These rides are valued at \$900.

Water is a valuable resource in Arizona and protection and restoration of our riparian areas are key to maintaining healthy ecosystems and wildlife. We support and commend the University in their effort of collaboration with the Forest Service, Natural Resources Conservation Service, Rocky Mountain Research Station and community to restore a valuable riparian resource.

Sincerely,



Margaret E. (Peggy) Ingham

M Diamond Ranch
Rimrock, AZ