

1504

Arizona Water Protection Fund
Application Cover Page
FY 2015

Title of Project: Upper Verde Habitat Improvement Project

Type of Project: <input checked="" type="checkbox"/> Capital or Other <input type="checkbox"/> Water Conservation <input type="checkbox"/> Research	Stream Type: <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral	Your level of commitment to maintenance of project benefits and capital improvements: <input type="checkbox"/> < 5 years <input type="checkbox"/> 5-10 years <input type="checkbox"/> 11-15 years <input checked="" type="checkbox"/> 16-20 years
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Applicant Information: Name/Organization: Friends of Verde River Greenway Address 1: PO BOX 2535 Address 2: Cottonwood City: Cottonwood State: AZ ZIP Code: 86326 Phone: 928-301-4934 Fax: 928-634-6355 Tax ID No.: XXXXXXXXXX	Inside an AMA: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, which AMA: <input type="checkbox"/> Phoenix <input type="checkbox"/> Tucson <input type="checkbox"/> Prescott <input type="checkbox"/> Pinal <input type="checkbox"/> Santa Cruz
Type of Application: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation	

Contact Person: Anna Schrenk Name: Anna Schrenk Title: Program Manager Phone: 951-236-6652 Fax: 928-634-6355 e-mail: anna.schrenk@verdewrc.org	Any Previous AWPf Grants: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, please provide Grant #(s):
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Arizona Water Protection Fund Grant Amount Requested: \$ 169,325 If the application is funded, will the Grantee intend to request an advance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Matching Funds Obtained and Secured: <table border="1"> <thead> <tr> <th><u>Applicant/Agency/Organization:</u></th> <th><u>Amount (\$):</u></th> </tr> </thead> <tbody> <tr> <td>1. Applicant</td> <td>\$15,009</td> </tr> <tr> <td>2. Prescott National Forest</td> <td>\$21,000</td> </tr> <tr> <td>3.</td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;">Total: \$36,009</td> </tr> </tbody> </table>	<u>Applicant/Agency/Organization:</u>	<u>Amount (\$):</u>	1. Applicant	\$15,009	2. Prescott National Forest	\$21,000	3.		Total: \$36,009	
<u>Applicant/Agency/Organization:</u>	<u>Amount (\$):</u>										
1. Applicant	\$15,009										
2. Prescott National Forest	\$21,000										
3.											
Total: \$36,009											

Has your legal counsel or contracting authority reviewed and accepted the Grant Award Contract General Provisions?
 Yes No N/A

Signature of the undersigned certifies understanding and compliance with all terms, conditions and specifications in the attached application. Additionally, signature certifies that all information provided by the applicant is true and accurate. The undersigned acknowledges that intentional presentation of any false or fraudulent information, or knowingly concealing a material fact regarding this application is subject to criminal penalties as provided in A.R.S. Title 13. The Arizona Water Protection Fund Commission may approve Grant Awards with modifications to scope items, methodology, schedule, final products and/or budget.

Typed Name of Applicant or Applicant's Authorized Representative	Title and Telephone Number
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Signature 	Program Manager, 951-236-6652 Date Signed 5/14/15
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Executive Summary

Friends of Verde River Greenway (FVRG) is pleased to submit this proposal for a Capital Improvement Project to the Water Protection Fund Commission for funding in the 2015 grant cycle. Our proposal builds on a project funded by AWPf in 2007 (Grant # 07-149WPS), and on the work FVRG is currently leading in the Verde Watershed around habitat restoration and community engagement.

In 2010 stakeholders gathered to discuss how to cooperatively manage woody invasive plants on a watershed-scale in the Verde. The results of these meetings were the Verde River Cooperative Invasive Plant Management Plan (CIPMP) and a community-based public-private partnership called the Verde Watershed Restoration Coalition (VWRC). The purpose of CIPMP is to implement a strategic approach to controlling prioritized invasive plants in the riparian areas of the Verde Watershed while increasing stakeholder collaboration. VWRC is now in year three of implementing CIPMP, including monitoring and maintenance, which will continue beyond the life of this 5-year plan. CIPMP includes social, economic, and management goals- all directly related to the project tasks proposed here. The proposed activities will: decrease impacts of non-native species to riparian areas; improve riparian wildlife/fish habitat; create local employment; and inform communities. FVRG/VWRC will collaborate with four partner organizations: Arizona Conservation Corps (AZCC), Prescott National Forest (PNF), Coconino National Forest (CNF) and Verde Canyon Railroad. The three main components of the project are:

1. **Invasive Plant Removal:** The project area is located along the upper reaches of the Verde River within the Prescott National Forest, and the Coconino National Forest. While some portions of this area have been treated in the past, AWPf funds will support removal of prioritized woody invasives from the remaining 390 acres (7.3 miles); closing the gaps and resulting in a contiguous stretch of treated riparian area along the upper Verde River.
2. **Monitoring and Maintenance:** Past tamarisk removal projects have occurred along the Upper Verde, including projects funded by AWPf. To ensure that past investments are maintained, FVRG will secure a contract with AZCC to re-treat and monitor previously treated sites over the next three field seasons. **Year 1 (2015/2016)** (Red on map) AZCC will monitor/retreat 340 acres along the 12-mile stretch treated in 2008-2010 by the EcoResults/LMIPMT. Additionally, the crew will re-treat 95 acres (3.6 miles) initially treated in 2013/2014 by VWRC. **Year 2 (2016/2017)** (Blue on map) AZCC will monitor/re-treat 581 acres (11.1 miles) of the Verde River initially treated in 2014/2015 by VWRC. **Year 3: (2017/2018)** (Green on map) AZCC will monitor/re-treat the 390 acres (7.3 miles) initially treated in Year 1.
3. **Public Outreach:** VWRC will develop a postcard to provide the public with information about the project, AWPf, the impacts of invasive plants, and the functions and values of riparian systems. VWRC will distribute 2,000 postcards to Railroad customers and throughout local communities.

The overarching goal of this project is to improve riparian function and habitat on the Verde River, educate the public, and provide local young adults with job skills and experience.

Project Overview

Background: One of the most significant natural resources in Arizona is the Verde River and its diverse riparian forests. These riparian areas sustain a large regional wildlife population, provide habitat for migratory birds, and serve as a centrally important economic & recreational resource to local communities. Although the river corridor primarily supports native riparian vegetation, invasive species – particularly Tamarisk (*Tamarix spp.*), and tree of heaven (*Ailanthus altissima*)– threaten the health and sustainability of these communities on the Verde River.

The Verde Watershed Restoration Coalition (VWRC) is a public/private partnership working collaboratively to improve riparian health on a watershed-scale. In 2010 VWRC initialized the development of its Cooperative Invasive Plant Management Plan (CIPMP) to control priority invasive plants in the riparian areas of the Verde Watershed while increasing stakeholder collaboration. In 2007 the Arizona Water Protection Fund funded EcoResults to begin the labor-intensive task of managing tamarisk on the upper reaches of the Verde River on land managed by the Prescott National Forest. (Grant # 07-149WPF) The two main recommendations that resulted from this project were: 1) treat the additional 21 miles downstream and 2) follow a maintenance schedule and retreat every 3-5 years. Our proposal addresses both of those recommendations as well developing an outreach component.

Over the last three years VWRC has successfully completed three field seasons, treating over 3,500 acres along the Verde and its tributaries (see VWRC Project Area map). This includes initial treatment plus maintenance and monitoring on both public and private lands. VWRC was able to accomplish this through participation and financial support from our partners, including Arizona Conservation Corps, US Forest Service, Arizona State Forestry, Arizona Game and Fish Department, US Fish and Wildlife Service, AZ State Parks, local governments, local businesses such as The Vetraplex and Verde Valley Weed Control and over 200 private landowners, as well as dedicated volunteers.

Goals: The overarching goals of this proposed project are to continue to improve riparian habitat and function by managing invasive plants that threaten the biodiversity and long-term health of the Verde River through cooperative stakeholder participation. Three specific project goals are:

1. Reduce invasive woody plant species through integrated control methods within the riparian corridors of the Verde River and its tributaries.
2. Increase community and public understanding of why riparian areas are important ecologically, socially and economically, and how invasive plants can impact riparian areas.
3. Educate, train and employ local Conservation Corps members to safely and effectively perform restoration practices.

Objectives:

1. FVRG will secure a contract with AZCC to provide field labor to remove invasive plants from 390 acres along 7.3 miles of the Upper Verde River on land managed by the Prescott and Coconino National Forests.
2. FVRG will hire AZCC to provide field labor to maintain and monitor 1,406 acres of previously treated sites during years 1, 2 and 3.
3. FVRG and VWRC partners will develop and produce 2,000 informational postcards and distribute to Verde Canyon Railroad customers and people in our local area through community events.

Statement of Problem: Invasive plants, especially Tamarisk, can impact ecosystem function significantly by altering wildlife habitat, soils, flow and fire regimes, vegetation structure, river geomorphology and biodiversity. The Verde River is one of the most substantial free-flowing rivers in Arizona; an arid landscape where scarce surface water and riparian areas provide critically important resources for both humans and wildlife. Although the Upper Verde River corridor supports robust and diverse native riparian vegetation communities, invasive species — particularly tamarisk and tree of heaven — threaten the health and sustainability of these communities. The general public is typically unaware of invasive plant issues and the many values of a healthy river system.

Statement of solutions: This proposed project will provide trained field crew labor to address the increasing threat to our riparian areas from invasive plants, especially tamarisk and tree of heaven. Early detection and a rapid response to controlling these highly invasive non-native plants is essential to protecting and enhancing the native plant communities along the Verde River. VWRC projects are prioritized using site selection and species criteria, outlined in CIPMP. High priority areas include sites in the upper reaches of the watershed and tributaries that are a constant source of seed and propagules for downstream areas; areas with high wildlife value; sites with tamarisk and tree of heaven greater than 10% of the total canopy cover; and areas that are at high risk for fire.

Crews will use a variety of manual (hand pulling, loppers and hand saws), mechanical (chainsaws) and chemical methods to control tamarisk and tree of heaven in the previously untreated stretches of the Verde River (390 acres). The crews will use a cut stump method for tamarisk removal with the application of a solution of Imazapyr (Habitat) and a hack and squirt method on tree of heaven with the application of Glyphosate (Rodeo). Both chemicals are aquatically approved by the EPA. Prior to fieldwork, all Corps members will complete an Herbicide Handlers course administered by Arizona State Department of Agriculture, Environmental Services Division and a minimum of two Corps members shall hold current Arizona Commercial Applicator Licenses. Following the recommendations of the USFS and chemical labels for the herbicides being used, all treatment will occur during the dormant season (September to February), to ensure herbicide translocation is to the plants roots. These two invasive species are very tenacious and will require multiple years of monitoring and retreatment to meet our management goal. Crews will monitor and retreat 1,406 acres that have been treated during the past eight years. Biomass will be scattered, for both initial and retreatment projects, above the high water mark and/or habitat piles will be built for small mammal habitat. Post-treatment monitoring will provide important data to measure treatment effectiveness and to ensure native plant recruitment is occurring.

By increasing community awareness of the economic, social and ecological benefits a healthy river provides for wildlife and people, we will build a local base of support for the restoration of Arizona's river and riparian resources. By engaging citizens today, we hope to create future generations of stewards who will value and maintain Arizona's water resources.

Statement of Project Years of Benefit: The activities described in this proposal will have many years of ecological, social, and economic benefits in the project area and in the greater Verde watershed. This project will complete invasive species treatment along a 37-mile long contiguous reach of the Verde River, from its headwaters to Clarkdale. VWRC's organizational capacity and field-tested protocols will support on-going monitoring and project maintenance for many years into the future. The outreach that we will provide to local communities could also have a lasting effect on our community's support of watershed conservation and riparian restoration projects.

**Project Location & Environmental Contaminant
Information FY 2015**

Project Location Information

1. County: Yavapai 2. Section: various 3. Township: 18-19N 4. Range: 1W-3E

5. Watershed: Verde

6. 8 or 10 Digit Hydrologic Unit Code (HUC): 15060202

7. Name of USGS Topographic Map where project area is located: Hell Point, Perkinsville, Munds Draw and Clarkdale

8. State Legislative District: 4

(Information available at: <http://azredistricting.org/districtlocator/>)

9. Land ownership of project area: USFS

10. Current land use of project area: Multi

11. Size of project area (in acres): 1796 DIRECT

12. Stream Name: Verde

13. Length of stream through project area: 46

14. Miles of stream benefited: 140 miles

15. Acres of riparian habitat: 1796 acres will be:

- Enhanced
- Maintained
- Restored
- Created

16. General description and/or delineation for the area of impact of the project within the watershed.
The area within the 100 year FEMA floodplain for Yavapai County

17. Provide directions to the project site from the nearest city or town. List any special access requirements:
From Cottonwood drive towards Clarkdale on Main Street. Turn right onto Tuzigoot Road. After crossing the bridge turn left onto Sycamore Canyon Road. Continue down Sycamore Canyon road, it will turn to dirt. Turn left onto FS Road 9515, this is the downstream end of the project.

Environmental Contaminant Location Information

1. Does your project site contain known environmental contaminants? YES NO If yes, please identify the contaminant(s) and enclose data about the location and levels of contaminants:

2. Are there known environmental contaminants in the project vicinity? YES NO If yes, please identify the contaminant(s) and enclose data about the location and levels of contaminants:

3. Are you asking for Arizona Water Protection Fund monies to identify whether or not environmental contaminants are present? YES NO

Scope of Work

This proposed project is composed of three distinct action areas: 1) Monitoring previously treated areas along the Upper Verde River, 2) Treat and retreat priority invasive plants along the Upper Verde River, and 3) Develop, produce, and distribute outreach materials to the general public and Railroad customers. These actions will build upon the work completed in the past by others and VWRC, while accomplishing the common goal of cooperatively managing invasive plants.

Task 1: Permits, Authorization, Clearances, Contracts and Agreements

Task Description: FVRG shall work with both the Coconino and Prescott National Forests to obtain and submit to the project manager all permits, authorizations, clearances and agreements, and perform any consultations necessary to complete the tasks listed in this Scope of Work. This task will begin with a formal meeting with personnel from the Prescott and Coconino National Forests to discuss project implementation and compliance. Potential compliance triggers may include, but are not limited to:

- State Historic Preservation Office (SHPO) clearance
- Cooperative Agreement(s) between FVRG and USFS
- Endangered Species Act (ESA) Section 7 consultation with US Fish and Wildlife
- AZ Department of Environmental Quality Pesticide General Permit and filing a Notice of Intent

An Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA) of 1972, as amended, will not be necessary, as the Final EIS for Integrated Treatment of Noxious or Invasive Weeds for both forests was completed in 2005.

http://a123.g.akamai.net/7/123/11558/abc123/forestservic.download.akamai.com/11558/www/nepa/30_FSPLT1_013753.pdf

FVRG will secure a contract with AZCC to develop an agreement, which will stipulate that two members from AZCC shall hold a current Commercial Applicator License through the AZ Department of Agriculture. All field crews will take an EPA Herbicide Handlers Course administered by the state.

Task Purpose: To comply with all local, state and federal permit requirements, environmental laws and regulations, and to obtain legal access to the project areas. A contract with AZCC will ensure we have capacity to accomplish the project.

Deliverable Description: AZCC contract; Herbicide applicator licenses; Access agreements; SHPO clearance; Record of Decision/Weed EIS

Responsible personnel: Program Manager (Anna Schrenk), FVRG Program Assistant (Sara Van Marel), FVRG Program Administrator (Laurie Parker), USFS personnel (Laura Moser and Dorothy Baxter)

Deliverable due date: All project compliance will be completed prior to fieldwork activities.

Reimbursable cost: \$1,213

Task 2: Develop Project Plans

Task Description: FVRG will work with the USFS to develop three separate plans for work associated with implementation of monitoring; implementation of treatment/retreatment; and implementation of outreach. All plans will include a detailed description of the work to be implemented during the grant cycle for each action area: Implementation Monitoring, Implementation Treatment/Retreatment and Implementation Outreach.

Task Purpose: The purpose of this task is to develop plans that provide a clear picture of when and how the work is to be accomplished, to ensure successful outcomes.

Deliverable Description: Develop project plans for Implementation Monitoring; Implementation Treatment/retreatment; and Implementation Outreach.

Responsible personnel: Program Manager (Anna Schrenk), Field Supervisor/Program Assistant (Sara Van Marel), and USFS personnel (Laura Moser and Dorothy Baxter)

Deliverable due date: December 15, 2015

Reimbursable cost: \$1,076

Task 3: Implement Monitoring Plan

Task Description: FVRG will implement the monitoring plan developed under Task 2. This plan will use protocol currently being used to monitor other VWRC projects on Forest Service lands. The VWRC Monitoring Plan utilizes a tiered approach to monitoring, which includes both quantitative and qualitative elements. These approaches will provide: short-term monitoring data to evaluate whether actions are meeting management objectives and will provide indicators of whether modifications need to be made (adaptive management) during the process; long-term monitoring will provide data on changes within the riparian corridor, including native plant recruitment. Long-term information can be coupled with data on other changes within the riverine system and watershed to provide further insights into system health and function. Monitoring will occur during the growing season, prior to retreatment activities.

Task Purpose: Monitoring is an important part of invasive plant management that is often overlooked. Monitoring information is used to adapt management techniques to ensure the long-term success of the project and health of the riparian system.

Deliverable Description: An Annual Report will be developed and submitted to the AWP Project Manager after each field season. The report will include a summary of monitoring data and results, and a visual map of monitored sites. The final year of monitoring will be summarized in the Final Report under Task 6.

Responsible personnel: Field Data Coordinator (AmeriCorps), Field Supervisor/Program Assistant (Sara Van Marel), contracted AZCC crew, Program Manager (Anna Schrenk), Program Administrator (Laurie Parker)

Deliverable due date: Monitoring Reports: May 31, 2016, May 31, 2017, 2018 Monitoring Report shall be summarized in Final Report under Task 6.

Reimbursable cost: \$53,004

Task 4: Implement Treatment/Retreatment Plan

Task Description: FVRG shall implement the Treatment/Retreatment Plan developed under Task 2. The plan will include a detailed description of the work to be implemented during the grant cycle. In total FVRG and VWRC partners will treat 390 acres and retreat 1,406 acres, after monitoring occurs, along a 37-mile reach of the upper Verde River. Crews will use a variety of manual, mechanical and chemical control methods and techniques, which are currently being used by the Forest Service and conform to industry standards.

Task Purpose: To reduce tamarisk and tree of heaven infestations to less than 10% of the riparian zone within the project area.

Deliverable Description: 1,796 acres will be treated and/or retreated during the grant cycle. Results will be provided to AWPf Program Manager as part of Task 3 (Implement Monitoring Plan) and Task 6 (Final Report).

Responsible personnel: AZCC crew, Field Data Coordinator (AmeriCorps), Field Supervisor/Program Assistant (Sara Van Marel), Program Manager (Anna Schrenk)

Deliverable due date: March 30, 2018

Reimbursable cost: \$113,013

Task 5: Implement Outreach Plan

Task Description: FVRG shall implement the Outreach Plan developed under Task 2. Informational postcards will be designed, published and then distributed to Verde Railroad passengers as they board the scenic train with Verde Canyon Railroad. Postcards will provide a synopsis of the project, AWPf, the impacts of invasive plants, and the functions and values of riparian systems. They will also provide the FVRG web address, where more in-depth information is available. Passengers will then have the opportunity to drop their post card into a box as they disembark or mail it to FVRG with their contact information if they would like more information about the project, want to volunteer, or make a donation to help with future projects. Postcards will also be stocked in the FVRG office and be distributed to the public at the many community events FVRG and VWRC partners participate in throughout the year.

Task Purpose: Educate the public about the threats invasive plants have on river systems, especially in the Verde Watershed, the importance of riparian health, and project information. The goal is to create excitement about the Verde Watershed through education and encourage people to enjoy the Verde River and get involved.

Deliverable Description: A copy of the post card that is developed, a tally of the number of post cards distributed and how many responses we received requesting information and/or donating time or money shall be recorded and provided. Annual report.

Responsible personnel: Community Outreach Coordinator (Laura Jones), Field Supervisor/Program Assistant (Sara Van Marel), Program Manager (Anna Schrenk), Verde Canyon Railroad staff.

Deliverable due date: March 30, 2018

Reimbursable cost: \$1,512

Task 6: Final Report

Task Description: FVRG shall submit a final report to include discussion of all project activities undertaken over the course of the grant, including progress, outcomes and a financial report.

Task Purpose: The final report will document and summarize the entire project, communicating successes and lessons learned in such a way that our project is replicable.

Deliverable Description: Final Report

Responsible personnel: Field supervisor/Program Assistant (Sara Van Marel), Program Manager (Anna Schrenk), Field Data Coordinator (AmeriCorps) and Program Administrator (Laurie Parker)

Deliverable due date: May 31, 2018

Reimbursable cost: \$924

**Upper Verde Habitat Improvement Project
Detailed Budget Breakdown**

Task 1				
Permits, Authorizations and Agreements	Amount	Unit	Cost per Unit	Total Cost
Direct Labor Costs				
FVRG Field Supervisor/Program Assistant	20	hrs	\$ 19	\$ 380
Subtotal				\$ 380
Other Direct Costs				
Office Supplies and Postage	1	each	\$ 25	\$ 25
ADEQ Pesticide General Permit (Annual Fee \$500/year x 3 years = \$1500/2 (other half is paid by other grants) = \$750	0.5	fee	\$ 1,500	\$ 750
Subtotal				\$ 775
Task Subtotal				\$ 1,155
Administrative Costs (5%)				\$ 58
Task 1 Total				\$ 1,213
Task 2				
Develop Project Plans	Amount	Unit	Cost per Unit	Total Cost
Direct Labor Costs				
FVRG Field Supervisor/Program Assistant	40	hrs	\$ 19	\$ 760
FVRG Field Data Coordinator (AmeriCorps)	40	hrs	\$ 6	\$ 240
Subtotal				\$ 1,000
Other Direct Costs				
Office Supplies and Postage	1	each	\$ 25	\$ 25
Subtotal				\$ 25
Task Subtotal				\$ 1,025
Administrative Costs (5%)				\$ 51
Task 2 Total				\$ 1,076
Task 3				
Implement Monitoring Plan	Amount	Unit	Cost per Unit	Total Cost
Direct Labor Costs				
FVRG Field Supervisor/Program Assistant	120	hrs	\$ 19	\$ 2,280
FVRG Field Data Coordinator (AmeriCorps)	450	hrs	\$ 6	\$ 2,700
Subtotal				\$ 4,980
Outside Services				
Arizona Conservation Corps-Year 1 (RED ON MAP)	2	week	\$ 7,000	\$ 14,000
Arizona Conservation Corps-Year 2 (BLUE ON MAP)	3	week	\$ 7,000	\$ 21,000
Arizona Conservation Corps-Year 3 (GREEN ON MAP)	1.5	week	\$ 7,000	\$ 10,500
Subtotal				\$ 45,500
Task Subtotal				\$ 50,480

Administrative Costs (5%)				\$ 2,524
Task 3 Total				\$ 53,004

Task 4				
Implement Treatment/Retreatment Plan	Amount	Unit	Cost per Unit	Total Cost
Direct Labor Costs				
FVRG Field Supervisor	120	hrs	\$ 19	\$ 2,280
FVRG Field Data Coordinator (AmeriCorps)	225	hrs	\$ 6	\$ 1,350
Subtotal				\$ 3,630
Outside Services				
Arizona Conservation Corps-Year 1 (RED ON MAP)	8	week	\$ 7,000	\$ 56,000
Arizona Conservation Corps-Year 2 (BLUE ON MAP)	3	week	\$ 7,000	\$ 21,000
Arizona Conservation Corps-Year 3 (GREEN ON MAP)	1.5	week	\$ 7,000	\$ 10,500
Verde Valley Weed Control-Year 1- (RED ON MAP)	825	acres	\$ 9	\$ 7,384
Verde Valley Weed Control-Year 2 (BLUE ON MAP)	581	acres	\$ 8	\$ 4,648
Verde Valley Weed Control-Year 3 (GREEN ON MAP)	390	acres	\$ 8	\$ 3,120
Subtotal				\$ 102,652
Task Subtotal				\$ 106,282
Administrative Costs (5%)				\$ 5,314
Task 4 Total				\$ 111,596

Task 5				
Implement Outreach Plan	Amount	Unit	Cost per Unit	Total Cost
Direct Labor Costs				
FVRG Field Supervisor/Program Assistant	60	hrs	\$ 19	\$ 1,140
Subtotal				\$ 1,140
Other Direct Costs				
Printing	2000	each	\$ 0.150	\$ 300
Subtotal				\$ 300
Task Subtotal				\$ 1,440
Administrative Costs (5%)				\$ 72
Task 5 Total				\$ 1,512

Task 6				
Final Report	Amount	Unit	Cost per Unit	Total Cost
Direct Labor Costs				
FVRG Program Assistant	40	hrs	\$ 19	\$ 760
FVRG Field Data Coordinator (AmeriCorps)	20	hrs	\$ 6	\$ 120
Subtotal				\$ 880
Task Subtotal				\$ 880
Administrative Costs (5%)				\$ 44
Task 6 Total				\$ 924

Total Request from AWP			\$ 169,325
On the Ground Costs (field crews and supplies)	1796 acres	x 82.49 =	\$ 148,152
Capacity (Field Supervision, Planning, Reporting)			\$ 21,173

**Upper Verde Habitat Improvement Project
Detailed Matching Breakdown**

Task 1				
Permits, Authorizations and Agreements	Amount	Unit	Cost per Unit	Total Cost
Direct Labor Costs				
FVRG Program Manager	10	hrs	\$ 37	\$ 370
Subtotal				\$ 370
Other Direct Costs				
ADEQ Pesticide General Permit (Annual Fee \$500/year x 3 years = \$1500/2 (other half is paid by other grants) = \$750	0.5	fee	\$ 1,500	\$ 750
Subtotal				\$ 750
Task Subtotal				\$ 1,120
Task 1 Total				\$ 1,120

Task 2				
Develop Project Plans	Amount	Unit	Cost per Unit	Total Cost
Direct Labor Costs				
FVRG Program Manager	40	hrs	\$ 37	\$ 1,480
Subtotal				\$ 1,480
Other Direct Costs				
Travel	250	miles	\$ 0.575	\$ 144
Subtotal				\$ 144
Task Subtotal				\$ 1,624
Administrative Costs (5%)				\$ 81
Task 2 Total				\$ 1,705

Task 3				
Implement Monitoring Plan	Amount	Unit	Cost per Unit	Total Cost
Direct Labor Costs				
FVRG Program Manager	60	hrs	\$ 37	\$ 2,220
FVRG Field Data Coordinator (AmeriCorps Volunteer)	100	hrs	\$ 22	\$ 2,225
Subtotal				\$ 4,445
Other Direct Costs				
Travel	450	miles	\$ 0.575	\$ 259
Subtotal				\$ 259
Task Subtotal				\$ 4,704
Administrative Costs (5%)				\$ 235
Task 3 Total				\$ 4,939

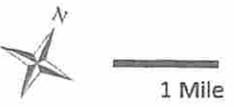
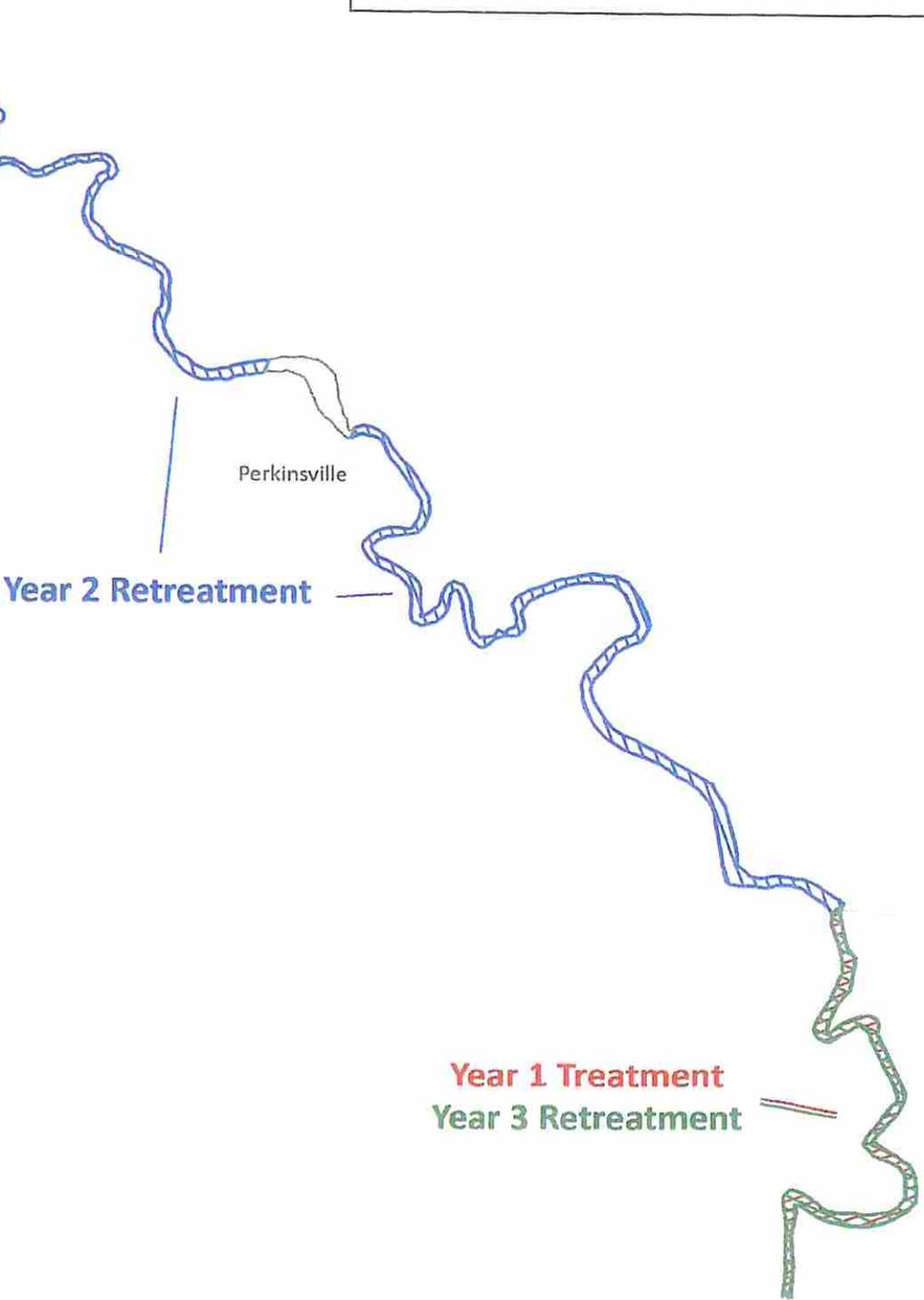
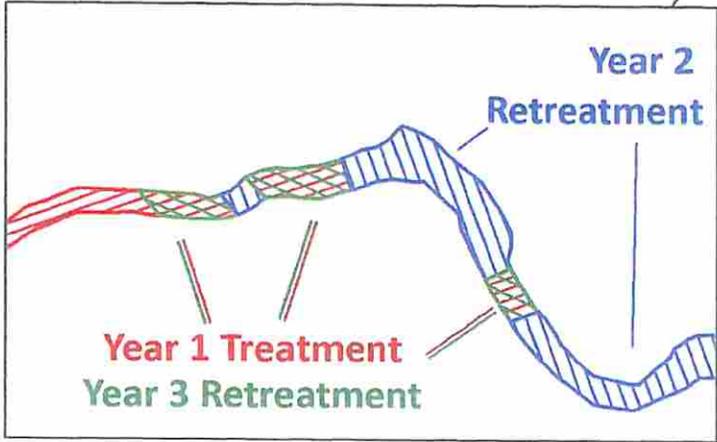
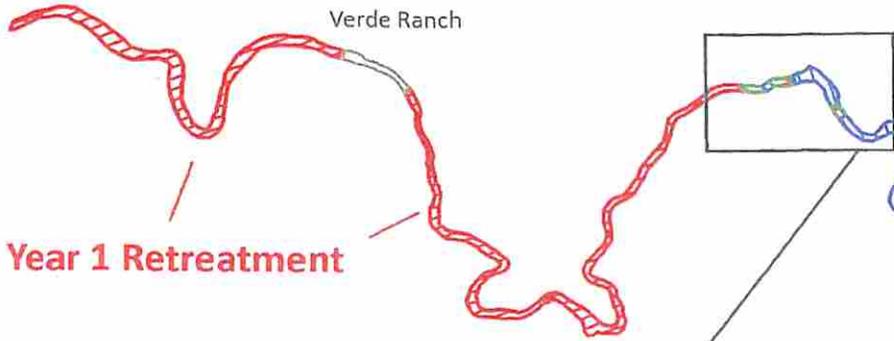
Task 4				
Implement Treatment/Retreatment Plan	Amount	Unit	Cost per Unit	Total Cost
Direct Labor Costs				
FVRG Program Manager	60	hrs	\$ 37	\$ 2,220
FVRG Field Data Coordinator (AmeriCorps Volunteer)	100	hrs	\$ 22	\$ 2,225
Subtotal				\$ 4,445
Other Direct Costs				
Travel	150	miles	\$ 0.575	\$ 86
Subtotal				\$ 144
Task Subtotal				\$ 4,589
Administrative Costs (5%)				\$ 229
Task 4 Total				\$ 4,818

Task 5				
Implement Outreach Plan	Amount	Unit	Cost per Unit	Total Cost
Direct Labor Costs				
FVRG Program Manager	30	hrs	\$ 37	\$ 1,110
FVRG Outreach Director	10	hrs	\$ 29	\$ 288
Subtotal				\$ 1,398
Task Subtotal				\$ 1,398
Administrative Costs (5%)				\$ 70
Task 5 Total				\$ 1,467

Task 6				
Final Report	Amount	Unit	Cost per Unit	Total Cost
Direct Labor Costs				
FVRG Program Manager	20	hrs	\$ 37	\$ 740
FVRG Field Data Coordinator (AmeriCorps)	5	hrs	\$ 6	\$ 30
Subtotal				\$ 770
Other Direct Costs				
Travel	220	miles	\$ 0.575	\$ 127
Subtotal				\$ 144
Task Subtotal				\$ 914
Administrative Costs (5%)				\$ 46
Task 6 Total				\$ 960

Matching Grant from Prescott National Forest for Field Crews	\$ 21,000
Matching Funds from Applicant	\$ 15,009
Total Matching Funds	\$ 36,009

Upper Verde Habitat Improvement Project





AWPF Proposed Project Area

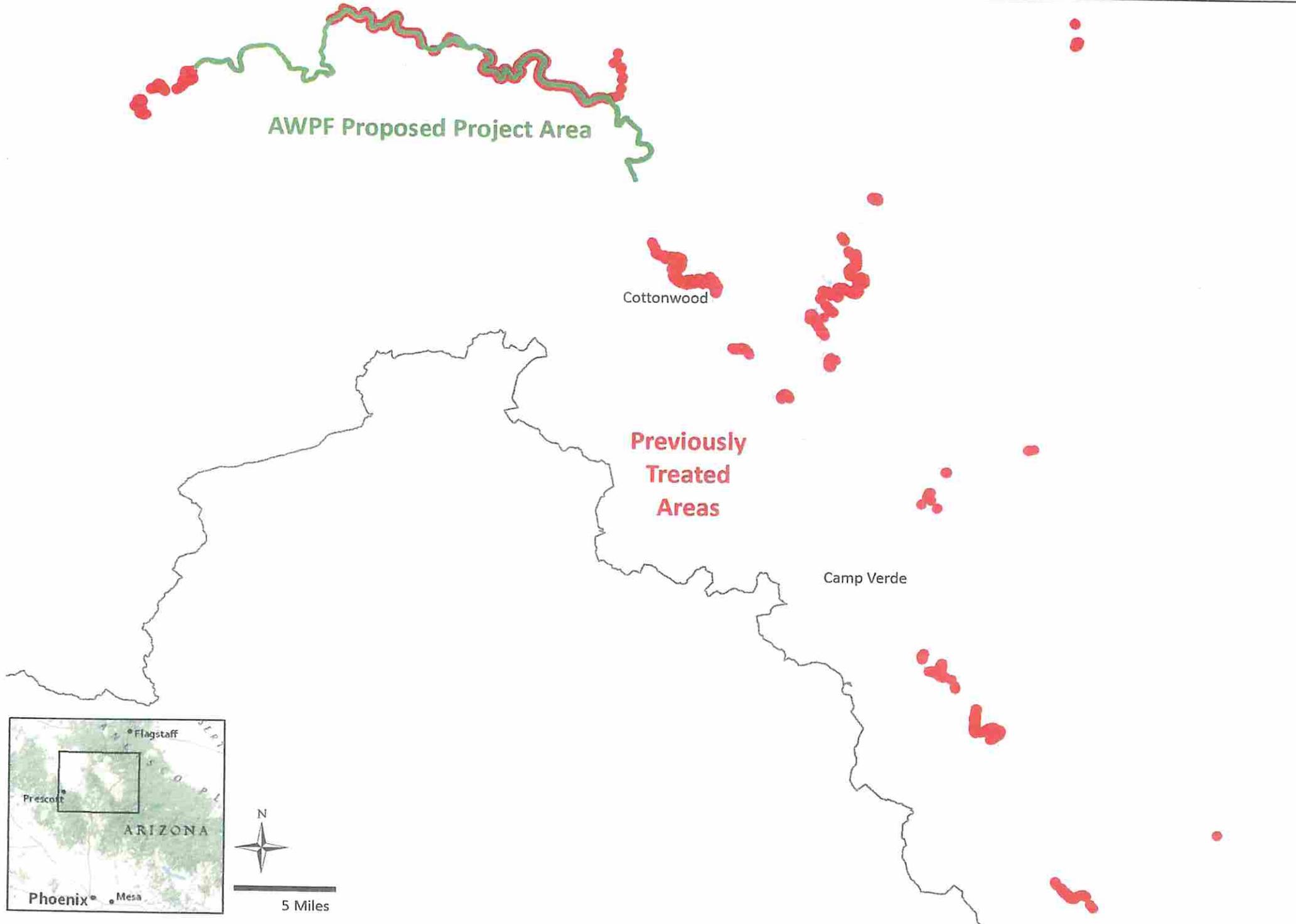
Cottonwood

Previously Treated Areas

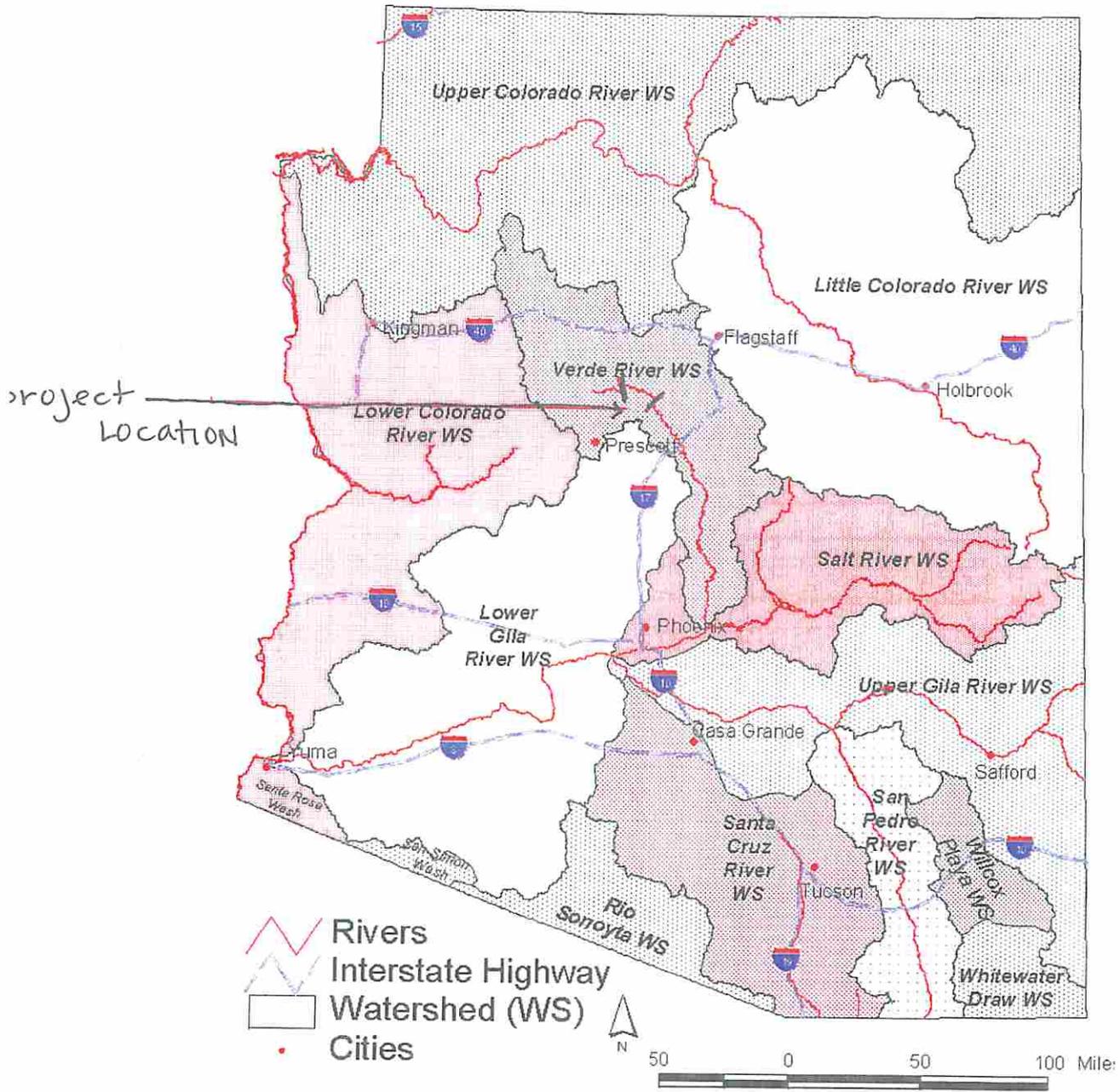
Camp Verde



5 Miles



Arizona Watershed Map FY 2015



Title of Project: UPPER VERDE Habitat improvement Project

SUPPLEMENTAL INFORMATION

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 FY 2015
2. Project Title: _____ Upper Verde River Habitat Improvement Project
Friends of Verde River Greenway
3. Applicant Name and Address: _____ PO Box 2535 Cottonwood, AZ 86326
4. Current Land Owner/Manager(s): _____ USDA, Prescott NF and Coconino NF
Upper Verde Watershed
5. Project Location, including Township, Range, Section: _____ T: 18-19 N and R: 1W-3E
6. Total Project Area in Acres (or total miles if trail): 1796
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: _____
The proposed project is a continuation of the invasive plant management that has occurred along the upper Verde River. Flood debris around invasive plants will be removed in order to reach the main stem of the plant, which will be cut. There will be no surface or subsurface impacts.

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: _____
good, natural disturbance
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:

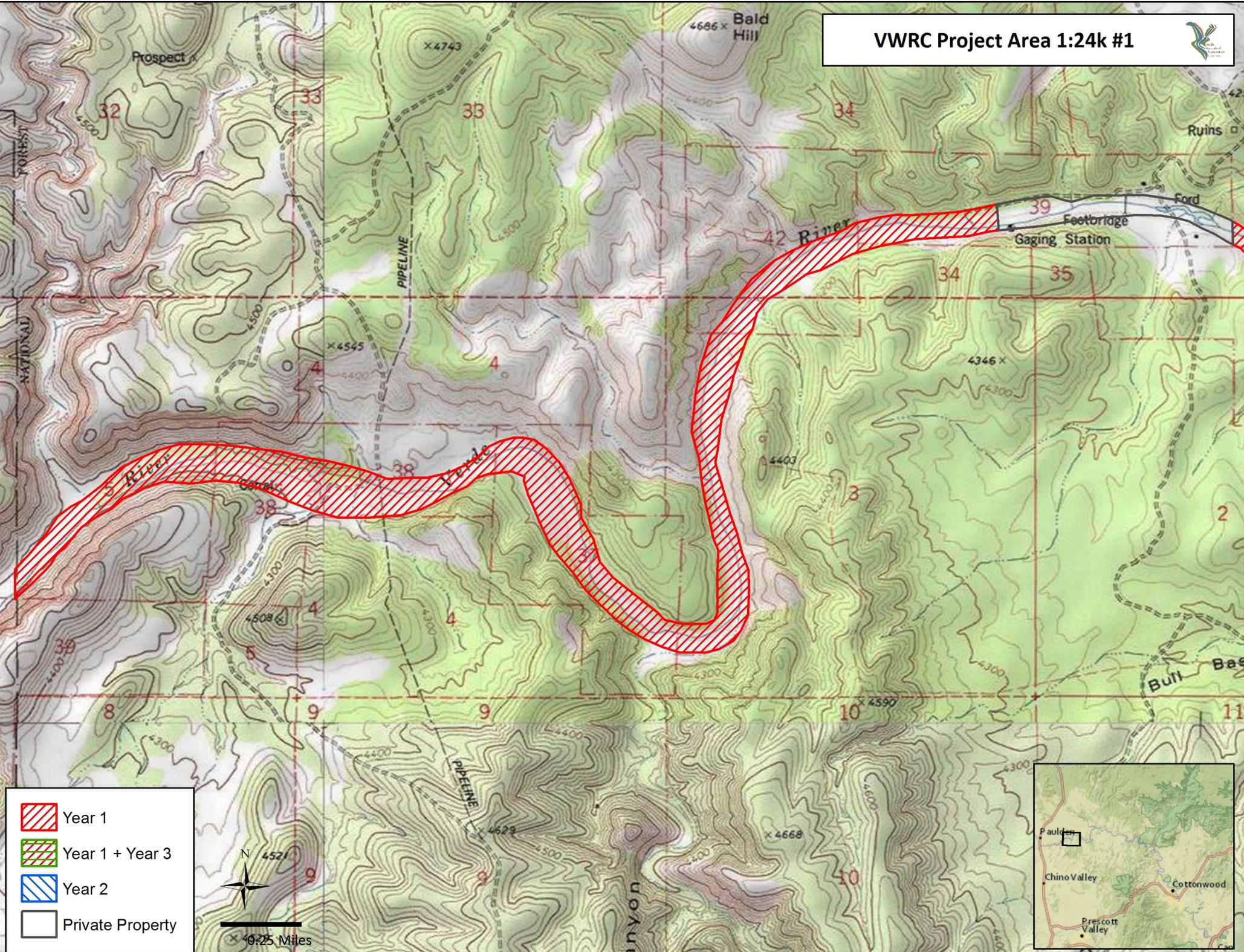
Please sign on the line below certifying all information provided for this application is accurate to the best of your knowledge.

[Signature] /Date
Applicant Signature

Anna Schrenk
Applicant Printed Name

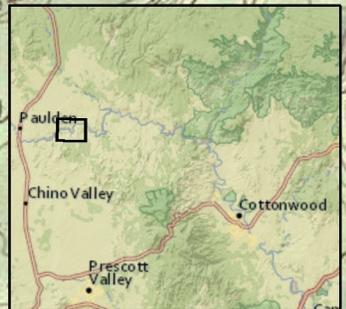
FOR SHPO USE ONLY	
SHPO Finding:	
<input type="checkbox"/> Funding this project will not affect historic properties.	
<input type="checkbox"/> Survey necessary – further GRANTS/SHPO consultation required (<i>grant funds will not be released until consultation has been completed</i>)	
<input type="checkbox"/>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

VWRC Project Area 1:24k #1

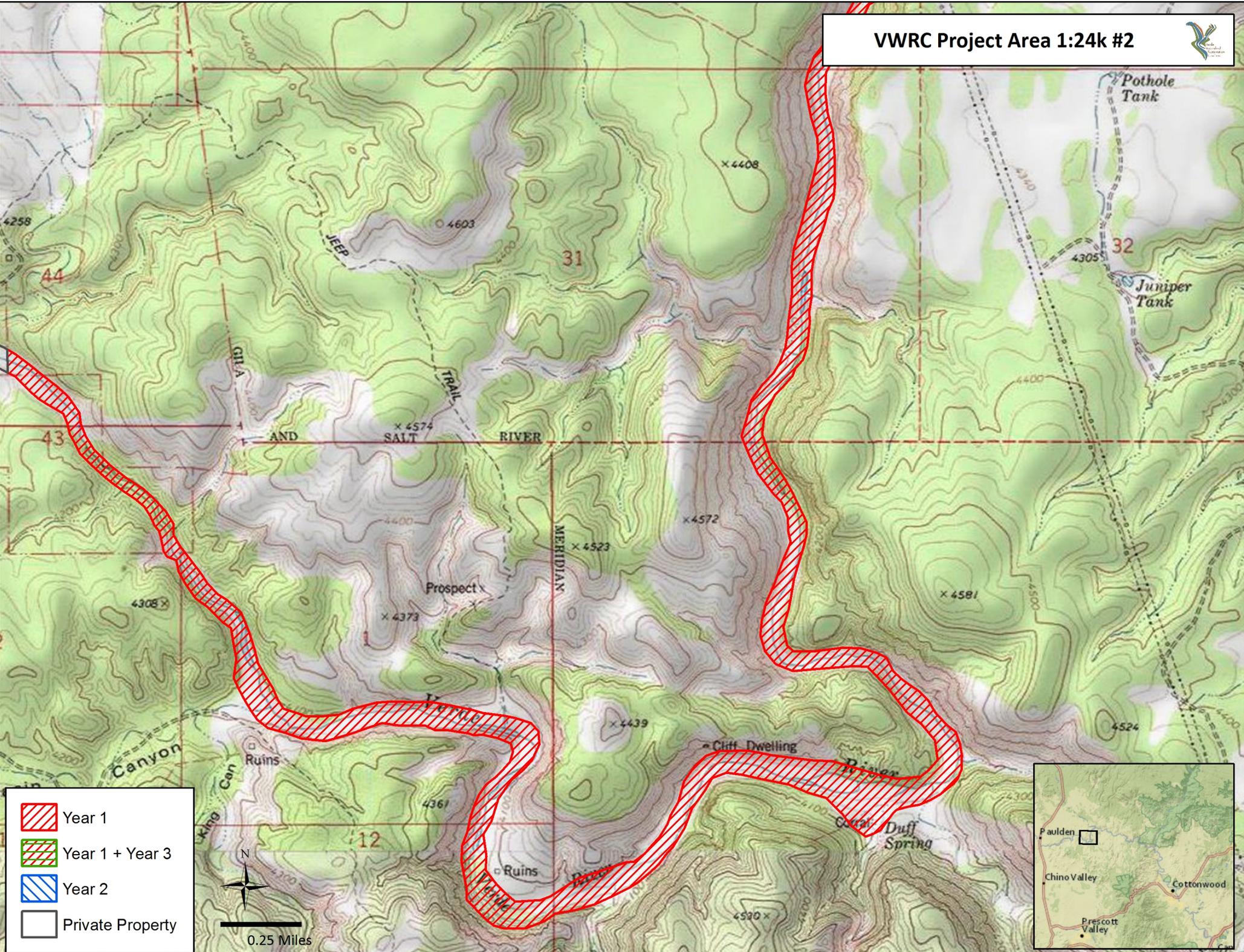


-  Year 1
-  Year 1 + Year 3
-  Year 2
-  Private Property

N
x 0.25 Miles

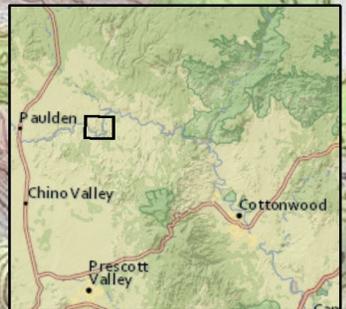


VWRC Project Area 1:24k #2

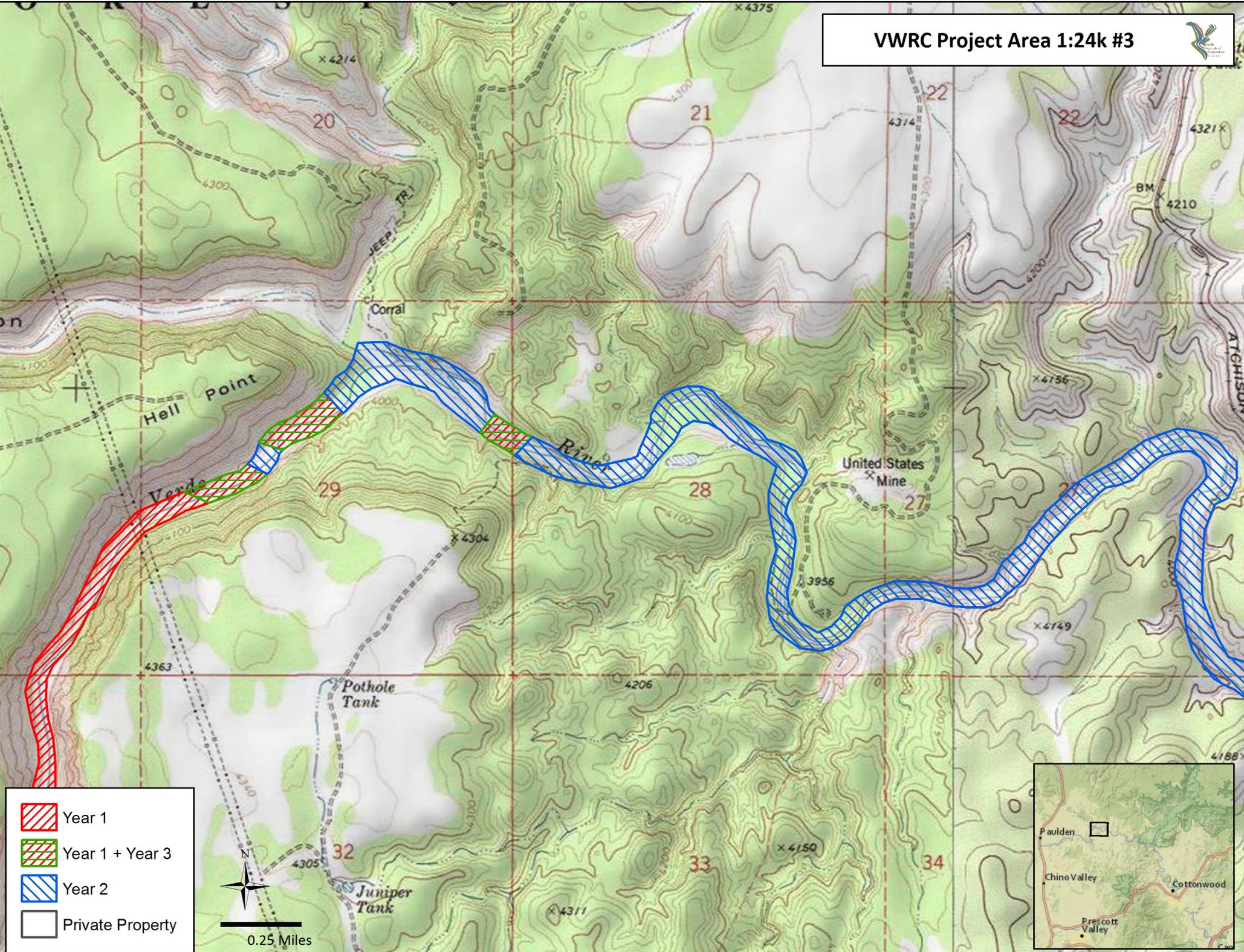


-  Year 1
-  Year 1 + Year 3
-  Year 2
-  Private Property

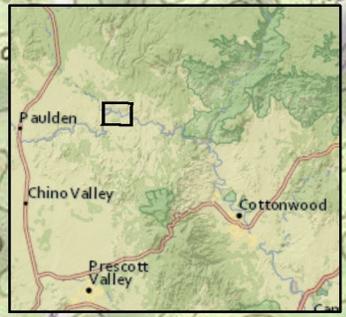
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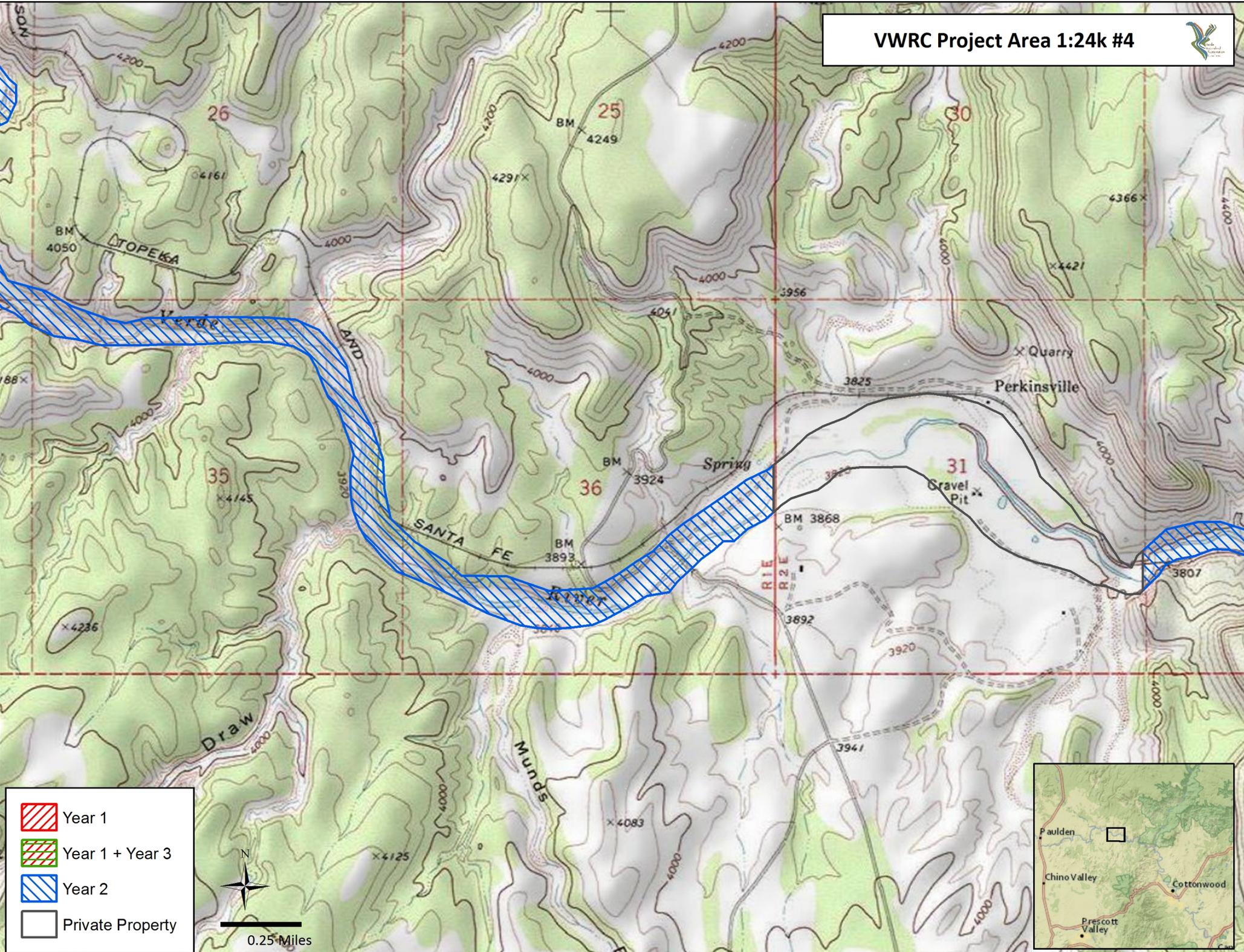
VWRC Project Area 1:24k #3



-  Year 1
-  Year 1 + Year 3
-  Year 2
-  Private Property



VWRC Project Area 1:24k #4

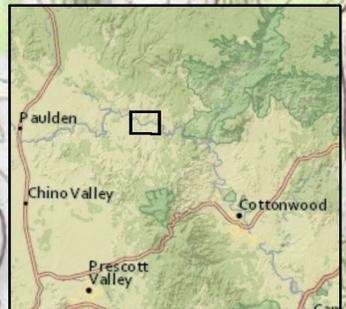


 Year 1

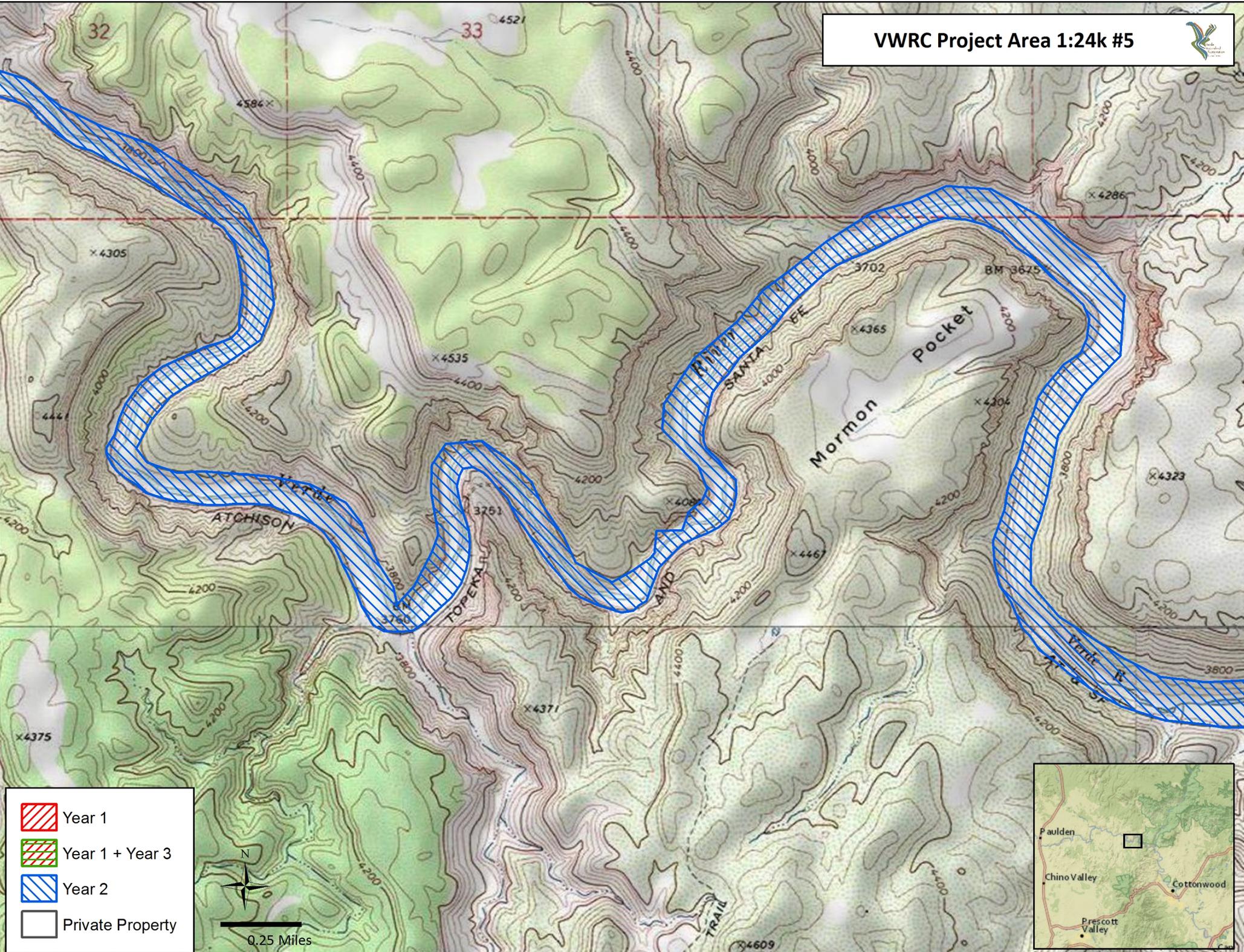
 Year 1 + Year 3

 Year 2

 Private Property



VWRC Project Area 1:24k #5

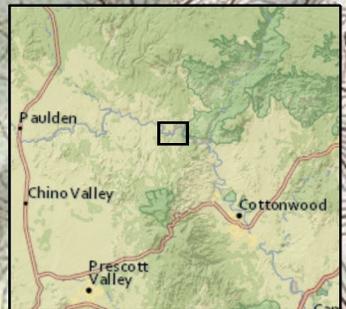
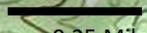


-  Year 1
-  Year 1 + Year 3
-  Year 2
-  Private Property

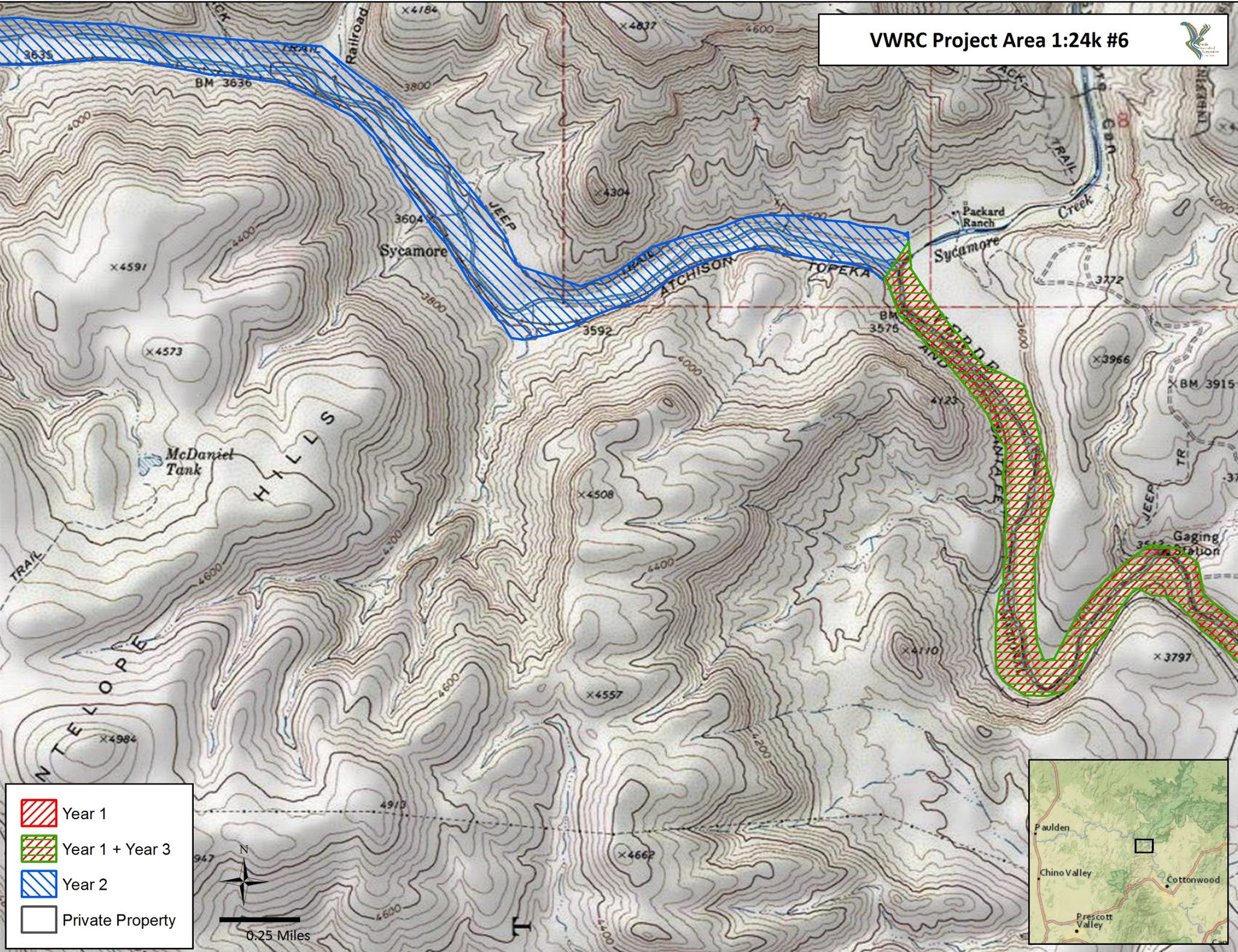
N



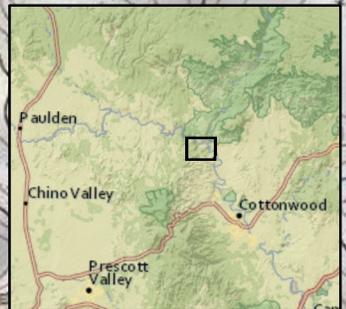
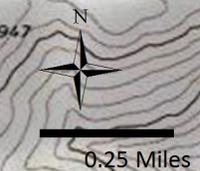
0.25 Miles



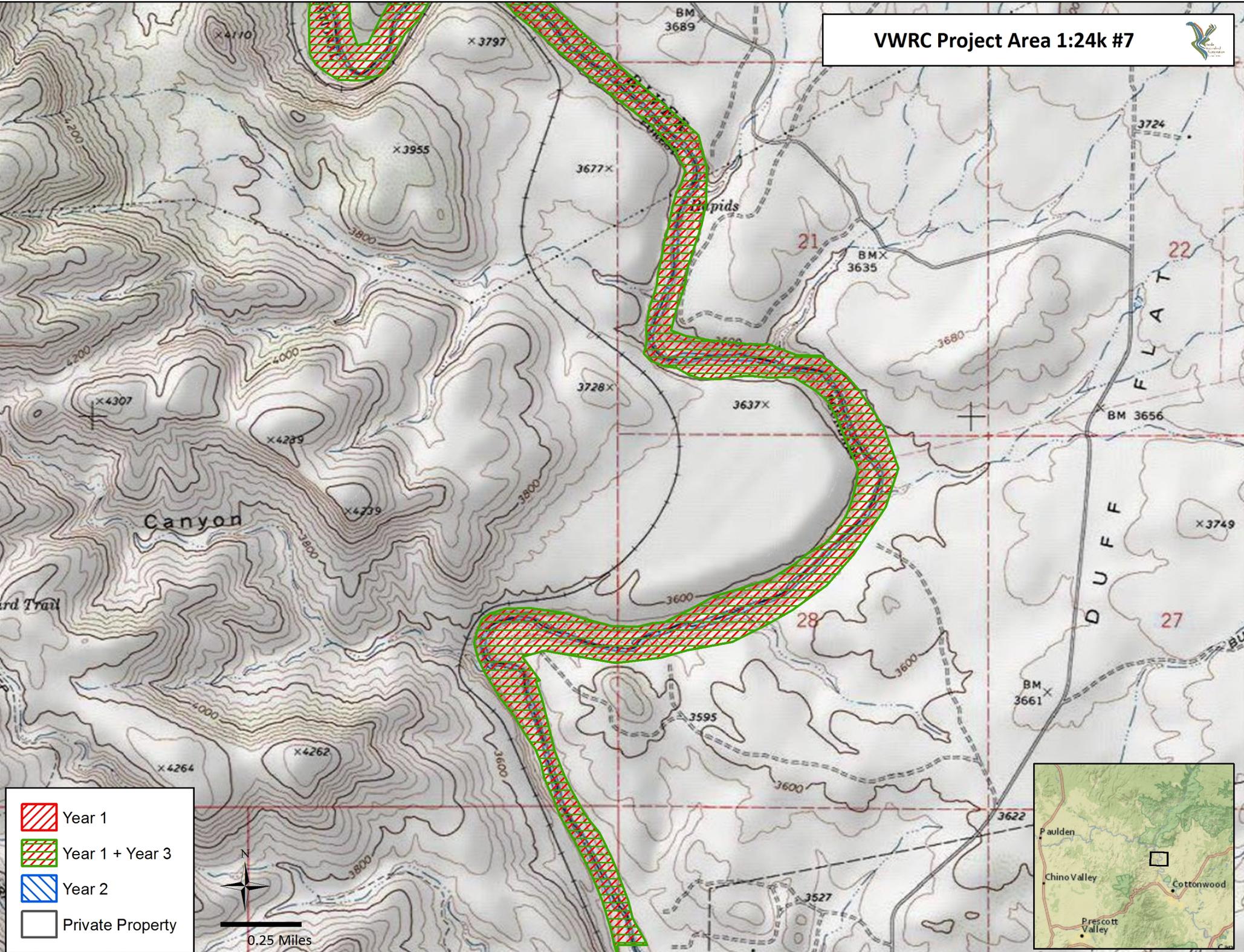
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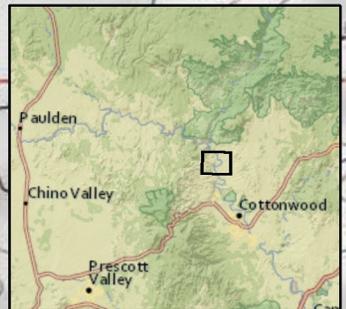
-  Year 1
-  Year 1 + Year 3
-  Year 2
-  Private Property



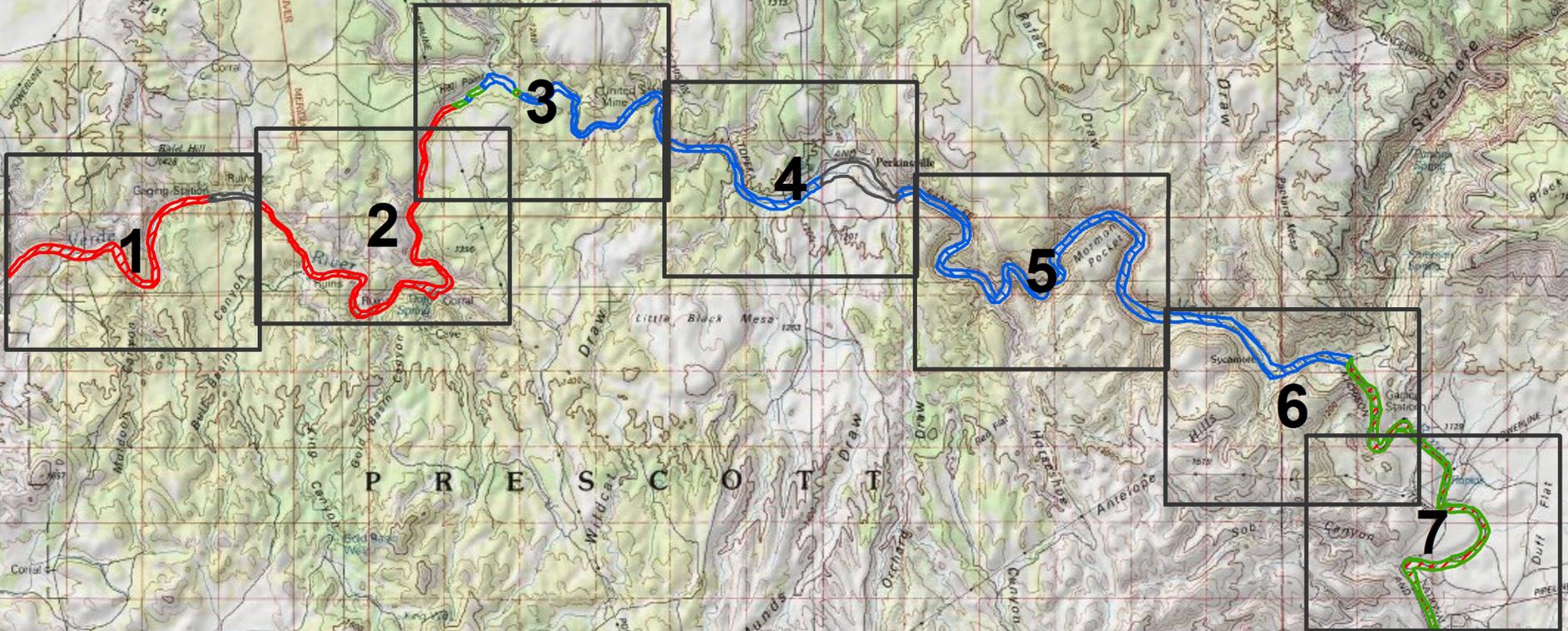
VWRC Project Area 1:24k #7



-  Year 1
-  Year 1 + Year 3
-  Year 2
-  Private Property



VWRC Project Area 1:24k Overview



-  Year 1
-  Year 1 + Year 3
-  Year 2
-  Private Property



Key Personnel

Anna Schrenk-Program Manager

Anna has over 15 years of experience working in the vegetation management field and implementing large-scale projects throughout the southwestern United States. As the Program Coordinator for VWRC, her knowledge, skills and abilities to coordinate the implementation of the Verde River Cooperative Invasive Plant Management Plan (CIPMP) comes from her years of experience working for the National Park Service where she managed large vegetation management projects and as a private contractor implementing Burned Area Emergency Response (BAER) Plans for the Bureau of Indian Affairs, National Park Service and US Fish and Wildlife Service. Anna has a B.A. in Plant Ecology from Prescott College.

Laurie Parker- Program Administrator

Laurie Parker has a Bachelor of Science Degree in Education with a minor in Business from Northern Arizona University. Her background includes over ten years of administrative experience with construction management companies whose clients include Department of Veterans Affairs, Army Corps of Engineers, Phelps Dodge, and the Navajo Nation. She has provided program administration service to FVRG for the last three years.

Laura Jones- Community Outreach Director

Laura has 20 plus years' experience in non-profit, human resources and volunteer management. Laura has a Master's in Counseling from Long Island University and a Non-Profit Management Certificate from Columbia University's Graduate School of Business. In addition to her work with FVRG, she is an active member of the Verde Valley community through volunteering with Big Brothers/Big Sisters and Made in Clarkdale.

Sara Van Marel-Field Supervisor

Sara has over five years of on-the-ground experience working for several conservation corps throughout the Southwestern US. She has lead field crew in the Verde on VWRC project for the last two years and is very qualified to train and support contract field crews while ensuring field protocols are being met.

Field Data Coordinator (AmeriCorps Volunteer)

FVRG's Field Data Coordinator is a year-long (September-August) AmeriCorps position through Community Counts. Each year the position is filled by someone with GIS and relevant field experience. Their duties include managing VWRC's database; creating base maps and preparing the tablets for the crews in the field.

Arizona Conservation Corps (AZCC)

AZCC has been training youth and young adults to address critical environmental and infrastructure needs on public lands since 1997. AZCC has partnered with several VWRC partners since their conception, providing a workforce for natural and cultural resource conservation needs in the Verde watershed. FVRG and VWRC have created a unique partnership with AZCC to provide trained and certified corps

members to treat invasive non-native plants throughout the watershed. AZCC is committed to recruiting local underserved youth for FVRG and VWRC projects.

Laura Moser, Coconino National Forest

Laura is the Invasive Species Program Manager for the Coconino National Forest. She has been implementing an integrated vegetation restoration plan on the Coconino NF in the Verde River corridor for ten years. Laura is on VWRC's steering committee as well as the planning/implementation and monitoring subcommittees. She brings 20 years of invasive weed management experience and forest health knowledge in northern Arizona to VWRC and is able to identify priority areas for the Coconino National Forest.

Dorothy Baxter, Prescott National Forest

Dorothy is the Invasive Weed Manager for the Prescott National Forest. She has served in other capacities with the forest for the past 19 years working as a recreation planner. She is interested in invasive weeds both personally and professional and has attended meetings at the West Yavapai Weed Coordination group. Her goal is to reduce most invasive weeds to a manageable level and try to prevent the introduction of new invasive plants. Dorothy is on VWRC's steering committee as well as sustainable funding subcommittee and with her support VWRC is able to recognize and treat areas that have been prioritized by the Prescott National Forest.



Photo taken from river right on the Verde River just upstream of the Perkinsville Bridge looking north; this is in the proposed retreat area during Year 2 (BLUE on UpperVerdeHabitatImprovement_Map), after this picture was taken this tamarisk was removed.



Photo taken from the Verde River looking upstream (NW) near Forest Service Rd 9515; this is in the proposed treatment area during Year 1 (RED on UpperVerdeHabitatImprovement_Map), notice the large tamarisk on the left of the picture



Picture taken on river right on of the Verde River looking upstream (west) just upstream of the Perkinsville Bridge; this area is proposed retreatment during Year 2 (BLUE on UpperVerdeHabitatImprovement_Map), after this picture was taken the rest of this tamarisk stand was removed.



Verde River



Cooperative Invasive Plant Management Plan

Revised Plan

January 12, 2015



*Verde River
Cooperative Invasive Plant
Management Plan*

*Original Plan Prepared in 2011 by
Fred Phillips Consulting
401 South Leroux Street
Flagstaff, AZ 86001*



*Plan Updated and Revised in 2014 by the
Verde Watershed Restoration Coalition*



www.verdwrc.org

Acknowledgments

We would like to thank the following people for their contributions to this project:

- Chip Norton, for the incredible work and information that he has volunteered to initiate and sustain this important coordinated effort
- The Walton Family Foundation, for funding this program, and for supporting collaboration in the Verde watershed and beyond
- The VWRC Steering Committee, for their commitment to the process and for their continued support and cooperation
- All the participating stakeholders- Verde Watershed agencies, organizations, private landowners, businesses, and especially the Tamarisk Coalition for supporting this cooperative effort

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Executive Summary

Project Background

The Verde River is treasured for its wildlife habitat, water supply, recreational opportunities, and natural beauty. It is one of the most substantial free-flowing rivers in Arizona. Although the river corridor primarily supports native riparian vegetation, invasive plant species — particularly saltcedar (*Tamarix* spp.), Russian olive (*Elaeagnus angustifolia*), tree of heaven (*Ailanthus altissima*) and giant reed (*Arundo donax*) — threaten the health and sustainability of these communities.

This Cooperative Invasive Plant Management Plan (CIPMP) was developed to bring together federal and state agencies, local businesses, municipalities, non-profit organizations, and private landowners interested in a healthy Verde Watershed. In 2010, Friends of Verde River Greenway initiated the process and Fred Phillips Consulting was hired to develop this plan; stakeholders approved the final plan on April 27, 2011. The plan revision process was initiated in 2013 and the Verde Watershed Restoration Coalition (VWRC) updated the plan in 2014. The purpose of this management plan is threefold:

- To develop and implement a strategic approach for controlling invasive plants in the riparian corridors of the Verde River watershed — an approach that will enable stakeholders to prioritize, develop, and implement restoration actions
- To increase the level of trust, collaboration and communication among stakeholders, thereby enhancing information transfer, adaptive management, and basin-wide success
- To become one component of a more comprehensive restoration planning document that will address multiple system stressors affecting the diversity, sustainability and resilience of the Verde River and its tributaries within the Verde Watershed.

Implementation of the plan began in 2012, when Friends of Verde River Greenway (FVRG) took the lead role and hired staff to manage and coordinate the implementation of the plan and develop a restoration program of their own. Fieldwork began in 2011 with demonstration sites. Subsequent annual fieldwork seasons took place in fall 2012/winter 2013, fall 2013/winter 2014, and fall 2014/winter 2015. As of January 2015, nearly 10,000 riparian acres have been surveyed for prioritized invasive plant species and over 6,000 acres have been managed to control these infestations.

Throughout the plan, the status of action items are noted and can be referenced in the VWRC Accomplishment Table in Appendix F. Plan appendices were extensively updated and reorganized as a part of the 2014 revision process. Examples from the original plan for Inventory/Mapping, Monitoring and Treatment have been removed and replaced with actual plans developed by VWRC that represent actual protocols and current strategies. The Steering Committee understands that this plan is a living document; the plan will be updated annually to reflect changes in the status of goals and the completion of recommended actions. The partnership does not anticipate any major plan revisions during the final phases of implementation of this plan.

VWRC is starting the process of developing a restoration plan that addresses additional system stressors affecting the diversity, sustainability, and resilience of the Verde River and its tributaries.

Principal Vision and Guiding Principles

CIPMP's principal vision is:

The Verde River and its tributaries comprise a diverse, self-sustaining and resilient riparian ecosystem in which invasive plant species are controlled through cooperative stakeholder participation.

The Guiding Principles for the execution of the Vision include: 1) approach this work collaboratively, 2) select techniques and management practices that will provide successful results, 3) provide education and outreach for the local community and public, and 4) implement a system-wide approach.

Five-Year Goals

This plan establishes five-year ecological, social, economic, and management goals that address the management of invasive plants while promoting the social and economic values of a healthy riparian system to Verde Watershed community. VWRC understands there is more to consider than just invasive plants to maintain a healthy river system. This plan is a starting point and will become a part of the larger restoration plan in development. See Page 12 for the action items associated with each goal.

- **Ecological:** Manage invasive woody and herbaceous plant species through various control methods within the Coconino and Yavapai County FEMA floodplain. Eliminate seed sources to prevent further invasive plant species infestation, prevent new species from invading, allow native plant species

to thrive, and allow the riparian and wetland areas to become more naturally functioning, sustainable, and resilient to change.

- **Social:** Provide education and outreach to the local community and public. Teach them about the prevention and removal of invasive species, their detrimental effects, and the services and funding available for removing invasive species on their land. (See Appendix D for the Outreach, Education, and Engagement Strategic Plan.)
- **Economic:** Give the local community economic incentives and employment opportunities for managing invasive plant species in riparian areas on private and public lands.
- **Management:** Maintain a multi-stakeholder group to accomplish the ecological, social and economic goals and to monitor the project's long-term success.

Several ecological and anthropogenic stressors — water availability, ornamental plants, secondary weed invasion, absentee land ownership, biological control agents and bank erosion — may challenge the ability to remove invasive species. This plan outlines several actions to ensure that the 5-year goals can be met despite these stressors.

Recommendations

In order to fulfill the goals outlined in this plan within the 5-year time frame the continued cooperation, support and guidance from VWRC Steering Committee members is critical. The partnership should continue to use the site and species approaches to prioritize areas for removing invasive plants. Efforts should first focus on eradicating Russian olive and giant reed infestations that remain to be treated and then reducing saltcedar and tree of heaven to less than 10 percent of the existing canopy cover, removing or remediating biomass and developing and implementing site specific restorations plans (where appropriate and necessary). The following are recommendations for next steps needed to accomplish the goals in this 5-year plan:

- Maintain VWRC Steering Committee and Sub-Committees to support and guide the implementation of this plan and future projects
- Complete Demonstration Projects Areas 1 and 2, include informational kiosk at both sites, (See Appendix I – Demonstration Projects)

- Remove and treat approximately 1,096 acres annually during the next three treatment seasons to accomplish ecological goals (2014-15, 2015-16, 2016-17) to eliminate and control invasive plants
- Finalize and fully implement VWRC's Monitoring Plan which includes long-term maintenance and monitoring based on adaptive management
- Continue to implement VWRC's outreach, education, and engagement strategy
- Develop a strategy for annual listed wildlife species surveys, and federal and state permitting/compliance where applicable
- Continue to recruit private landowner participation
- Develop Volunteer Program that will support VWRC projects, long-term maintenance and monitoring, and other VWRC partner needs
- Develop site specific restoration plans with VWRC Partners that address multiple stressors affecting the site

Introduction

The Verde River is treasured for its wildlife habitat, water supply, recreational opportunities, and natural beauty. It is one of the most substantial free-flowing rivers in Arizona. Although the river corridor primarily supports native riparian vegetation, invasive species — particularly saltcedar (*Tamarix* spp.), Russian olive (*Elaeagnus angustifolia*), tree of heaven (*Ailanthus altissima*) and giant reed (*Arundo donax*) — threaten the health and sustainability of these communities. Other invasive plant species persist in the system with potential threat of expanding their range.

Project Background

The Verde River Greenway extends from Clarkdale to Beasley Flat, below Camp Verde. Since 2008, Friends of Verde River Greenway (FVRG) has organized and managed river cleanup and invasive plant removal projects along this reach of river. During 2009–2010, FVRG focused on cooperative management projects that involved partnerships between various agencies, communities, and organizations. After realizing that improving riparian habitat within the Greenway would best be accomplished under a broad, watershed-scale cooperative effort, FVRG sought and secured funding to develop and implement this management plan and since has provided the capacity to manage, coordinate, develop and administer this watershed-scale project. In 2011 FVRG received its 501(c)(3) status and is serving as a fiduciary agent for the Verde Watershed Restoration Coalition (VWRC), which includes applying for and managing grants and contracts, and reporting. FVRG is also leading and participating in several other community driven restoration and recreation projects.

The first Verde River Habitat Improvement Workshop was held on July 20, 2010, in Camp Verde. Stakeholders included federal and state agencies, private companies, and nonprofits. The goals of this workshop were to:

- Initiate a cooperative effort for identifying priority invasive species
- Develop methods for site and species prioritization
- Discuss the best management practices (BMPs) necessary for successful management of invasive plant species within the Coconino and Yavapai County FEMA floodplain areas of the Verde River watershed

This Verde River Cooperative Invasive Plant Management Plan (CIPMP) originated from that workshop. The plan was finalized and published in the spring of 2011. FVRG formulated a strategy for working with private

landowners to remove invasive plant species and in 2011 and a Community Outreach Director was hired to recruit private landowners to participate in this watershed-scale restoration program. As of 2014, over 200 private landowners are participating in the program.

The Nature Conservancy's AmeriCorps member Selena Pao and FVRG volunteers immediately started mapping the Demonstration Areas for priority invasive plants in preparation for a planned spring demonstration project.

A 19-member Steering Committee was created with representatives from the US Forest Service, National Park Service, AZ State Parks, AZ Game and Fish Department, US Fish and Wildlife Service, The Nature Conservancy, Verde Natural Resource Conservation District, Friends of Verde River Greenway, Yavapai-Apache Nation, Salt River Project, and Tamarisk Coalition. The purpose of this diverse Steering Committee is to oversee the implementation of this watershed-scale invasive plant management plan and the development of future projects. Tahnee Robertson, a professional facilitator, was hired to facilitate meetings and the planning processes. The 19-member Steering Committee meets ten times annually and hosts an Annual Stakeholders Meeting. Four subcommittees were created to further facilitate the implementation process. They include "Planning and Implementation", "Monitoring and Research", "Outreach, Educational and Engagement", and "Sustainable Funding". These subcommittees are co-chaired with 5-7 committee members each. These subcommittees have developed strategic plans, developed and implemented monitoring protocols, developed outreach tools, and identify and apply for grants as a part of a fundraising strategy to achieve the goals and actions outlined in this plan. The subcommittees make recommendations to the Steering Committee for approval.

In January 2012 the VWRC Steering Committee selected Anna Schrenk as the Program Coordinator, and she started immediately. Chip Norton, President of FVRG stepped in as Program Manager in a volunteer role, Laura Jones was hired as the Community Outreach Director and FVRG hired a Program Administer, Laurie Parker. The team has been rounded out with a full-time AmeriCorps member who served as our Field Data Coordinator and a part-time Field Crew Supervisor.

During the first formal Steering Committee meeting on January 21, 2014, the partnership was formally named the **Verde Watershed Restoration Coalition** (VWRC, pronounced "V-Work"). The consensus was that the "work" in VWRC would identify this partnership with on-the-ground restoration work and local job creation.

In fall 2012, VWRC launched its first full treatment season, hiring young adults through the Coconino Rural Environment Corps (currently Arizona Conservation Corps) and local Veterans through The Vetraplex (a local Veterans organization). VWRC has completed two full fieldwork seasons; with the third season (fall 2014-winter 2015) underway at the time of the 2014 plan revision. Approximately 6,000 riparian acres have been managed for the target invasive plants outlined in this plan. Adaptive management has been an integral part of implementation, which includes monitoring and retreatment. See the VWRC Accomplishment Table, in Appendix F, for a complete list of actions being tracked.

A task force was formed from members of the VWRC Steering Committee and Friends of Verde River Greenway staff to lead the plan revision efforts. The task force included federal, state, private, and non-profit partners. Feedback and comments were organized from stakeholders and brought before the Steering Committee for discussion and approval. The vision, guiding principles and goals remain the same.

Purpose of This Plan

- To develop and implement a strategic approach for controlling invasive plants in the riparian corridors of the Verde River watershed — an approach that will enable stakeholders to prioritize, develop, and implement restoration actions
- To increase the level of trust, collaboration and communication among stakeholders, thereby enhancing information transfer, adaptive management¹, and basin-wide success
- To become one component of a more comprehensive restoration planning document that will address multiple system stressors affecting the diversity, sustainability and resilience of the Verde River and its tributaries within the Verde Watershed.

Related Work

Although this Plan was developed primarily to control invasive plant species, VWRC partners recognize that a range of additional factors (system stressors) threaten the health and sustainability of the Verde River system. These factors include invasive invertebrate and vertebrate species, water diversion and over-allocation, water quality, secondary weed introduction, erosion, wildfire,

¹ Adaptive management is defined as a systematic process using monitoring and research to inform and adjust resource management, plans and approaches.

biological control agents, and climate change. Without a holistic approach, overall ecosystem health cannot be sustained. VWRC is starting the process of developing a more comprehensive restoration plan that CIPMP will become a part of when complete. Other efforts and plans within the Verde River watershed focus on the issues discussed above. This Plan is designed to complement and augment these projects, which are summarized below.

Table 1: Related Studies & Plans in the Verde Watershed

Group	Study or Plan
U.S. Fish & Wildlife Service (FWS), Arizona Ecological Services Office	Verde River Focus Area Plan
Salt River Project	Horseshoe and Bartlett Reservoirs Habitat Conservation Plan
FWS	Arizona Partners for Fish and Wildlife Program (focus areas)
Coconino, Prescott, & Tonto National Forests	Land & Resource Management Plan
Arizona Game & Fish Department (AGFD)	Comprehensive Wildlife Conservation Strategy
Coconino and Tonto National Forests	Verde River Wild and Scenic River Comprehensive River Management Plan
Arizona State Parks	Greenway Management Strategy
The Nature Conservancy (TNC)	Conservation Action Plan for the Verde River
Various	Interagency Fossil Creek Native Fish Repatriation Plan
FWS and AGFD	Stillman Lake Renovation & Native Fish Sanctuary Plans
FWS	Functions and Values of the Verde River Riparian Ecosystem and an Assessment of Adverse Impacts to these Resources
Yavapai-Apache Indian Community	Special Report on Water Supply Sources
Verde Watershed Association, Big Sandy, Chino Winds, Coconino, East Maricopa, Tonto, Verde Natural Resource Conservation Districts	Verde Cooperative River Basin Study
Various	Conservation agreements, assessments, strategies, and recovery plans for individual candidate species

About This Plan

This Plan was developed as a guiding document for VWRC, and a resource for Verde Valley land managers, including private landowners. It presents best management practices (BMPs) for invasive species management and native species recruitment, criteria for prioritizing sites, and strategies for adaptive management, outreach, education and engagement, and sustainable funding. In addition, this management plan has helped to promote partnerships between public land managers and private landowners where cooperative invasive species management efforts are being accomplished.

This Plan is a “living document” that will be updated annually to include results and status of ongoing efforts. The momentum of this partnership has continued for almost three years with active participation from a wide array of VWRC Partners. VWRC hosts annual stakeholder meetings to share techniques, successes and challenges, and results. The group publishes a quarterly e-newsletter called *The Otter*, which further informs Verde Valley residents and communities.

Partners

- Arizona Conservation Corps (Conservation Legacy)
- Arizona Department of Agriculture
- Arizona State Forestry
- Arizona State Parks
- Arizona Game & Fish, Regions II, III and VI
- Coconino National Forest
- Freeport McMoRan Copper and Gold
- Friends of Verde River Greenway
- Gila Watershed Partnership
- National Park Service
- Northern Arizona University
- Oak Creek Watershed Council
- Prescott College
- Prescott National Forest
- Private Landowners
- Salt River Project
- Tamarisk Coalition
- The Nature Conservancy
- Tonto National Forest
- U.S. Fish and Wildlife Service
- U.S.D.A. Forest Service Region 3,
- U.S.D.A. Natural Resource Conservation Service
- University of Arizona Cooperative Extension, Yavapai County
- USDA Animal Plant Health Inspection Services
- Verde Natural Resource Conservation District
- Verde River Basin Partnership
- Verde River Valley Nature Organization
- Verde Valley Land Preservation
- Walton Family Foundation
- Wildlife Habitat Council
- Yavapai County
- Yavapai-Apache Nation

Funding

Funding for VWRC has been provided by a diverse group of supporters. The Walton Family Foundation (WFF) has been the greatest supporter of this partnership, providing critical funding for the initial planning workshops, the development of this management plan, capacity building, and on-the-ground work. VWRC Partners, namely the USDA Forest Service (Coconino and Prescott National Forests), USFWS Partners for Fish and Wildlife Program, National Park Service and the Arizona Game and Fish Department have provided annual funding for on-the-ground work and equipment. FVRG has organized several fundraising campaigns, where donations from individual members of the public (private donor base) support VWRC and capacity within the organization. FVRG recently developed a fundraising plan that focuses on the development of sustainable funding sources to support its programs. In-kind contributions from VWRC Partners, including the Tamarisk Coalition (TC staff hours funded by WFF), Salt River Project, Arizona State Parks, Yavapai County, The Nature Conservancy, Community Counts (AmeriCorps), and private landowners have been critical to the on-going success of this partnership. Additional grant funding, awarded to FVRG, has allowed VWRC to accomplish the on-the-ground work completed to date, train crews and maintain capacity. Grantors include:

- Arizona Community Foundation-Yavapai Chapter
- Arizona Game and Fish Department
- Arizona State Forestry Division
- National Fish and Wildlife Foundation
- US Fish and Wildlife-Partners for Fish and Wildlife Program
- Yavapai County Rural Area Commission
- (As of January 2015, a grant from the Freeport McMoRan Foundation is pending.)

Funding Projections

The riparian areas in the Verde watershed have a variety of site conditions, such as steep canyons, limited road access, open floodplain, and minimal to dense invasive plant infestations, which require different logistics and methods for accessing and removing invasive plants. Because of these varying site conditions a single per acre cost for invasive plant removal in the Verde watershed is difficult to estimate. The table below breaks down costs based on density of invasive plant infestation and remoteness of the site. These estimated costs are an average of costs from current invasive plant removal efforts being conducting in the Verde watersheds by VWRC. Estimated costs include: accessing sites, equipment, transportation, a project supervisor, hiring

crews, and field crew time to conduct the removal efforts. Other costs that are required for project implementation, but are not included in the following estimates, include compliance and permitting; site-specific plan and design; grant writing; mapping and inventory; project management; long-term maintenance; and monitoring. For a further discussion on invasive plant removal costs see Appendix J.

Table 2: Project Cost Estimates

Invasive Plant Removal Type	Cost per acre for accessible sites (private land)	Cost per acre for accessible sites (Public land)	Cost per acre with follow-up treatment (private land)	Cost per acre with follow-up treatment (Public land)	Cost per acre with follow-up treatment in remote sites (Private land)	Cost per acre with follow-up treatment in remote sites (Public land)
Hand clear stands with low cover of invasive plants (10% and less invasives)	\$207	\$195	\$260	\$247	\$348	\$334
Hand clear stands with medium cover of invasive plants (10-50% invasive cover)	\$623	\$585	\$780	\$741	\$972	\$927
Hand clear monotypic stands of invasive plants (< 50% invasive cover) with revegetation	\$1141	\$1071	\$1427	\$1357	\$1750	\$1666
Mechanically clear monotypic stands of invasive plants	\$1000-\$2500	\$1000-\$2500	NA	NA	NA	NA

Vision & Guiding Principles

Vision

The Verde River and its tributaries comprise a diverse, self-sustaining and resilient riparian ecosystem in which invasive plant species are managed through cooperative stakeholder participation.

Guiding Principles

The guiding principles for executing this vision describe a collaborative, system-wide approach for developing and implementing BMPs that will provide successful results for invasive plant management. They also address the need for education and outreach to the local community and public.

- **Approach this work collaboratively.** Incorporate the knowledge and priorities of landowners, managers, and stakeholders into actions chosen for managing invasive species. In addition, incorporate adaptive management practices to respond to monitoring results and “lessons learned.”
- **Select techniques and management practices that will provide successful results.** Where possible, use known techniques and management practices that have been successful in controlling invasive species within the floodplain of the Verde River and its tributaries. For invasive species within these floodplains that have not yet been subjected to successful controls, use methods and management practices that have worked in other riparian systems. For all other invasive species, experiment with techniques that have worked in non-riparian systems — agriculture settings or roadsides, for example.
- **Provide education and outreach for the local community and public.** Use education and outreach to help involve the local community and public. These programs should explain the need to remove invasive species, to restore ecological function, to limit invasive weed introductions (including ornamental plants), and to limit human disturbances to project areas.
- **Implement a system-wide approach.** Because seeds and vegetative materials disperse via water, wind, people and animals, they will affect invasive plant removal in project sites that lie upstream and downstream. Therefore, remove invasive species throughout the system to control them on a watershed scale and promote more sustainable results.

Five-Year Goals

These goals incorporate a holistic approach to invasive plant management within the Verde River watershed and address ecological, social, economic, and management issues. They account for system stressors, use of site and species prioritization approach, and advance the Plan's vision.

- **Ecological** — Manage invasive woody and herbaceous plant species through various control methods within the Coconino and Yavapai County FEMA floodplain. Eliminate seed sources to prevent further invasive plant species infestation, prevent new species from invading, allow native plant species to thrive, and allow the riparian and wetland areas to become more naturally functioning, sustainable, and resilient to change.
- **Social** — Provide education and outreach to the local community and public. Teach them about the prevention and removal of invasive species, their detrimental effects, and the services and funding available for removing invasive species on their land. (See Appendix D for the Outreach, Education, and Engagement Strategic Plan)
- **Economic** — Give the community economic incentives and employment opportunities for managing invasive plant species in riparian areas on private and public lands.
- **Management** — Maintain a multi-stakeholder group to accomplish the ecological, social and economic goals and to monitor the project's success for the long term.

Ecological Actions

To accomplish the ecological goals of this Plan the following Action Steps are suggested. (See Appendix F, Accomplishment Spreadsheet, for complete list of Action Steps being tracked).

- Inventory and map invasive plant species infestation within the watershed.
- Conduct a workshop to establish an approach to inventorying and mapping. (Completed: August 3, 2011)
- Compile information on known existing invasive species infestations and create location maps. (Underway: May 2011-June 2014)

- Completely remove Russian olive and giant reed from the action area² using manual, biological, mechanical and/or herbicide control methods. See Appendix B for a discussion of the BMPs. (Underway: March 2012-Present)
- Reduce Tamarisk and Tree of Heaven to less than 10 percent of the action area. (Underway: March 2012-Present)
- Prioritize projects using these tools, “Criteria for Site Prioritization” and “Flow Chart for Species Prioritization” (See Appendix H, Species/Site Prioritization) to identify which species or sites to address first.
- Implement monitoring and maintenance plan to ensure long-term success. Monitoring will measure the natural recruitment, structure and composition of native plant species. (Draft Plan Complete: July 2014)
- In anticipation of the arrival of the Tamarisk Leaf Beetles (several species), develop site specific plans in areas with greater than 10% total cover of Tamarisk which include revegetation and bioengineering practices as necessary. (Underway: April 2014)

Social Actions

To accomplish the social goals of this Plan, the following actions are suggested.

- Implement VWRC’s Education, Outreach and Engagement Strategic Plan, see Appendix D for OEE Strategic Plan. (Plan Completed: June, 2013)
- Develop effective educational and outreach materials (website, social media, pamphlets, invasive species informational cards, etc.) to distribute to the local community and public. (Ongoing) The VWRC website (www.verdewrc.org/) was completed in 2012, and is regularly updated and maintained.
- Engage school aged children by supporting school programs, field trips, SciTech and BioBlitz festivals. Continue to host workshops for watershed partners and landowners on restoration practices. (Ongoing)
- Contact local community leaders and private landowners to initiate management strategies for controlling invasive ornamental plants that are providing a seed source for areas downstream. (Ongoing)
- Include community members and stakeholders in educational events to promote the health of the Verde River system. (Ongoing)

² *The action area is defined as the FEMA 100 year floodplain for Yavapai and Coconino Counties, with agriculture and developed areas removed.*

- Educate and train local conservation and veteran crews, agencies, and contractors in technical skills to promote their professional growth. (Ongoing)
- Improve aesthetic enjoyment and recreational opportunities for the public; promote their involvement and interaction with project sites by holding volunteer invasive species removal events on sites that are frequented by the public. (Ongoing)

Economic Actions

Consider the following when creating economic implementation plans:

- Employ and train local youth conservation corps and veterans crews to manage invasive species along the Verde River and its tributaries. (Ongoing)
- Provide economic opportunities to private landowners through grants and technical resources to remove invasive species on their land. (Ongoing)
- Increase employment opportunities for local young adults and veterans, agencies, contractors, and businesses in the Verde River watershed. (Ongoing)

Management Actions

To accomplish the management goals of this Plan, the following actions are suggested.

- Practice adaptive management by considering the lessons learned during restoration efforts and the rapid and long-term monitoring of treated areas to maintain invasive species cover at or below 10 percent. (Ongoing)
- Develop an approach for working with local communities to encourage them to value native plants, limit or eradicate invasive ornamental plants, and enhance the public's understanding of invasive plant removal and the value of a healthy river system. (Ongoing)
- Develop and implement a diverse sustainable fundraising strategy that includes private donors, agency support and other options. (Ongoing)

Invasive Species in the Watershed

High-Priority Species

VWRC stakeholders identified the following four invasive species as high priorities for control within the riparian areas of the Verde River watershed.

- Saltcedar (*Tamarix spp.*)
- Tree of heaven (*Ailanthus altissima*)
- Russian olive (*Elaeagnus angustifolia*)
- Giant reed (*Arundo donax*)

All four high-priority species impact ecosystem function significantly, altering wildlife habitat, flow and fire regimes, geomorphology, vegetation structure, and biodiversity. (See Appendix A for a more detailed discussion.) Saltcedar and tree of heaven have invaded the riparian corridors of the Verde River and its tributaries; controlling them will require an extensive, coordinated effort. The ecological goal will be to keep these two species at an infestation level of less than 10 percent of the total canopy cover of the riparian zone, thus allowing the river system to sustain ecosystem function and integrity.

Giant reed occurs in large densities along numerous reaches of Oak Creek and the Verde River, manual treatment is costly. Inventory and Mapping efforts of public and private lands have shown that the giant reed infestations are much greater than previously expected, thus more treatment hours and funding is required. Russian olive also occurs along the riparian corridor in lower densities and control will not be as time and resource-intensive. These species are highly invasive and have the potential to rapidly expand in range and outcompete native vegetation given the appropriate conditions — disturbed areas, catastrophic fire, or flood events. Therefore, Russian olive and giant reed were identified as “zero-tolerance” species, and efforts will focus on the removal of all individuals within the riparian corridors of the Verde River watershed. To date, VWRC has surveyed 9,334 acres for the four target invasive plants. Projections have been made, using existing survey data, which include acres added to reflect additional private property participation. Lands managed by the Tonto National Forest with greater than 10% tamarisk have been excluded from the ultimate target area due to constraints placed on the Forest Service in critical habitat for the Southwest Willow Flycatcher. VWRC will continue to work with the Tonto National Forest to develop restoration plans for areas with saltcedar in critical habitat areas. Based on the goals outlined in this plan, the total area targeted for treatment is approximately 8,904 acres. Table 3 illustrates the extent of the

invasive plant infestations and a projected timeline for competition. More discussion can be found in Appendix J – Cost Estimate Explanation.

Table 3 – VWRC Invasive Plant Management Projections

Total Riparian Acres in Project Area	Total Riparian Access w/ access	Infested acres (Acres with invasive present)	Total Treatment acres (Acres to be treated under CIPMP)	Acres Completed (2010-2014)	Acres to be Completed (2014-2017)	Treatment season 2014/2015	Treatment season 2015/2016	Treatment season 2016/2017
31,065	26,032	16,603	8904	5617	3287	1096	1096	1095

Lower-Priority Species

The role of VWRC in regards to secondary invasive species within the project area encompasses early detection, public education, and presence/absence data collection as a component of the Monitoring Protocol (Appendix C). Contract treatment crews receive plant identification training as a component of the annual crew training. Field crews, volunteers, and interns serve as the “eyes on the ground”, observing and reporting secondary invasive species as they are detected in the field. This information is available to private landowners and government land managers throughout the project area, each of which can address secondary invasive plant management according to their own distinct land management goals and mandates.

- Siberian Elm (*Ulmus pumila*)
- Uruguayan Pampas grass (*Cortaderia selloana*)
- Himalayan Blackberry (*Rubus armeniacus*)
- Yellow star thistle (*Centaurea solstitialis*)
- Malta star thistle (*Centaurea melitensis*)
- Dalmatian toadflax (*Linaria dalmatica*)
- Yellow sweet-clover (*Melilotus officinalis*)
- Mexican fireweed or Kochia (*Bassia scoparia*)
- Russian knapweed (*Acroptilon repens*)
- Spotted knapweed (*Centaurea stoebe*)
- Sahara mustard (*Brassica tournefortii*)
- Cheat grass (*Bromus tectorum*)
- Red brome (*Bromus rubens*)
- Creeping waterprimrose (*Ludwigia peploides*)
- Eurasian watermilfoil (*Myriophyllum spicatum*)
- Water lily (*Nymphaea* spp.)

Project Area Features

This Plan covers the Verde River from its headwaters, near Paulden, to Sheep's Crossing above Horseshoe Dam, where flow decreases or ceases and all of the Verde's major perennial tributaries. The watershed spans 3,757,137 acres, three counties, two congressional districts, two National Monuments, tribal land, and four National Forests. The project area is delineated by the FEMA floodplain of the Verde River and its tributaries, all major agriculture and upland areas have been removed from the project area. In total, it includes 31,065 acres on 459.2 miles of stream (Figure 1) — 336.1 miles of federal land, 20.8 miles of state lands, 4.2 miles of Tribal land, and 98.1 miles of private land. The project area is further delineated into three major reaches:

- Reach 1: Headwaters near Paulden to Clarkdale (Figure 3)
- Reach 2: Clarkdale to Beasley Flats (Figure 4)
- Reach 3: Beasley Flats to Sheep's Crossing (Figure 5)

Reach 1: Headwaters (near Paulden) to Clarkdale

Ownership. Reach 1 contains lands that are primarily managed by TNC, AZGFD, Prescott National Forest, State Trust lands, and 15 private landowners. It lies primarily within Yavapai County, although a portion of Sycamore Creek is in Coconino County. Populated areas include Chino Valley, Paulden, Perkinsville, and Clarkdale. The Prescott National Forest manages most of the public land. Sycamore Creek, a tributary to the Verde River, include designated wilderness.

Listed Species. Because of its unique and irreplaceable nature, AGFD considers this reach a resource Category 1. It supports the following:

- Eight federally listed endangered species
- Two federally listed threatened species
- One federally proposed threatened species
- Three federal candidate species
- Four state endangered species
- Six state threatened species
- Eight state candidate fish and wildlife species



Geology. The geology of this Reach is characterized by mostly sedimentary rocks. They include Tertiary sedimentary rock overlain in places with volcanic rocks and alluvium in the Chino Valley, Redwall limestone and Martin Formation west of Perkinsville, Coconino Sandstone and Supai Formation between Perkinsville and Sycamore Canyon, and the Verde Formation downstream of Sycamore Canyon (Krieger 1965, Owen-Joyce and Bell 1983, Sullivan and Richardson 1993). The permeable nature of these sedimentary rocks facilitates groundwater flow to the river. The active channel through this reach is confined primarily by steep, narrow basalt and limestone canyons, with a narrow floodplain that widens around Perkinsville and at the confluence of Sycamore Creek (Sullivan and Richardson 1993).

Hydrology. The Verde River originates at the confluence of Big Chino Wash and Williamson Valley Wash. Sullivan Lake was created at the confluence of these washes for use as a stock-watering pond. Other inflow sources into the river include Sycamore Creek, various intermittent streams (Granite Creek, Hell Canyon, M.C. Canyon, Bear Canyon, and small ephemeral drainages), and springs (Sullivan and Richardson 1993). Riffles are short and shallow, except during flood events, and the stream gradient is low.

Vegetation. The dominant vegetation in the wider floodplain areas includes Fremont's cottonwood (*Populus fremontii*), Goodding's willow (*Salix gooddingii*), velvet mesquite (*Prosopis velutina*), desert willow (*Chilopsis linearis*), and saltcedar (*Tamarisk spp.*). The dominant vegetation in the narrow canyon includes velvet ash (*Fraxinus velutina*), Utah juniper (*Juniperus osteosperma*), box elder (*Acer negundo*), seep willow (*Baccharis salicifolia*), and desert willow (*Chilopsis linearis*). The prominent invasive species of concern in this reach include saltcedar, Russian olive, Tree of Heaven, Giant reed, Himalayan blackberry, and Siberian elm.

Reach 2: Clarkdale to Beasley Flats

Ownership. Reach 2 includes lands owned or managed by both private and public entities, they include the Yavapai-Apache Nation, Coconino and Prescott National Forests, National Park Service, State Trust, The Nature Conservancy, Arizona State Parks and an estimated 800 private landowners. It occurs within Yavapai and Coconino counties. Reach 2 has the highest density of private lands within the project area and includes the towns of Clarkdale, Jerome, Cottonwood, Cornville, Sedona and Camp Verde and several unincorporated communities. Beaver Creek and West Clear Creek, both tributaries to the Verde, include designated wilderness areas.

Listed Species. The Arizona Audubon Society has designated the area that includes Peck’s Lake, Tavasci Marsh, and the main stem Verde River adjacent to these areas as well as the Bubbling Springs on Oak Creek as “important bird areas”. This reach supports a diversity of neo-tropical and resident nesting birds, including the federally listed endangered southwestern willow flycatcher and yellow-billed cuckoo and the state-listed threatened species common Blackhawk, osprey, and yellow-billed cuckoo. Reach 2 supports the following:

- Six federally listed endangered species
- Three federally listed threatened species
- One federally proposed threatened species
- Three federal candidate species
- Four state endangered species
- Six state threatened species
- Eight state candidate fish and wildlife species



Geology. This reach is characterized by a broad floodplain with broad low terraces of coarse gravel. The close proximity of the active channel, make sand the primary substrate for riparian vegetation (Sullivan and Richardson 1993).

Hydrology. Reach 2 includes some of the major tributaries that contribute to the Verde River’s instream flow — Oak Creek, Dry and Wet Beaver Creeks, and West Clear Creek. The floodplain is broader than in Reaches 1 and 3. The river has low water velocities with shallow riffles that increase during flooding. The primary substrates in the active floodplain are primarily sand and small cobble. Peck’s Lake is the only natural oxbow lake along the Verde River. Surface water is diverted during the summer months, reducing flows in this reach.

Vegetation. The dominant vegetation along the floodplain includes Fremont’s cottonwood, Goodding’s willow, velvet ash, Arizona sycamore (*Platanus wrightii*), box elder, saltcedar, and tree of heaven. The primary invasive species of concern include saltcedar, tree of heaven, Russian olive, giant reed, Siberian elm. In the fallow agricultural fields or other disturbed areas, the invasive species of concern include kochia, yellow star thistle, malta star thistle, Uruguayan pampas grass, Russian knapweed, spotted knapweed, Sahara mustard, cheat grass, and red brome. Eurasian milfoil and water lily are priority aquatic invasive species for Peck’s Lake.

Reach 3: Beasley Flats to Sheep's Bridge

Ownership & Designations. Reach 3 is managed primarily by the Coconino, Prescott, and Tonto National Forests. Private lands include the small towns of Strawberry and Pine in the Fossil Creek watershed. The reach from Beasley Flats to Red Creek, including Fossil Creek, is designated as Wild and Scenic under the authority of the 1968 Wild and Scenic Rivers Act; the Scenic area extends from Beasley Flats to below Childs, and the Wild area extends from Childs to Red Creek. The Wild section flows through the Mazatzal Wilderness. Fossil Creek, one of the tributaries in this Reach, has a designated wilderness area.

Listed Species. Reach 3 provides nesting habitat for the bald eagle, a protected species under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, and for the common Blackhawk and osprey, which are state-listed threatened species. Five bald eagle breeding areas occur along the Verde River and are closed to vehicular and foot traffic.

- Eight federally listed endangered species
- Five federally listed threatened species
- One federal proposed threatened species
- Four federal candidate species
- Four state endangered species
- Six state threatened species
- Eight state candidate fish and wildlife species



Geology. The terrain in this reach becomes more rugged, and basalt cliffs and steep mesas are the primary geologic features (Sullivan and Richardson 1993). Cobble and sand are the dominant substrate type within the active floodplain, but large cobbles and boulders become more prevalent downstream. The floodplain is narrow, limiting the width of the riparian corridor.

Hydrology. Fossil Creek and the East Verde River contribute flow to this reach. Other intermittent creeks include Houston Creek, Gap Creek, Coldwater Canyon, Red Creek, Wet Bottom Creek, Tangle Creek, and Sycamore Creek. The gradient of the river increases in this reach and riffles become more frequent.

Vegetation. The dominant plant species occurring within the riparian corridor in this Reach include Fremont's cottonwood, velvet mesquite, Goodding's

willow, seep willow, burrobrush (*Hymenoclea monogyra*), broom baccharis (*Baccharis sarothroides*), desert willow, giant reed, and saltcedar. The primary invasive species of concern in this stretch include dense stands of saltcedar, and small populations of Russian olive, and giant reed.

Plan Components

System Stressors & Proposed Actions

It is important for this Plan to consider existing and potential system stressors, which include ornamental plants, secondary weeds, river flow, grazing, wildfire, biological control agents, bank erosion, aquatic invasives and other unknown stressors. These stressors influence whether native or invasive plant species will dominate the Verde watershed. Nevertheless, restoration goals may still be achieved if appropriate steps are taken to address these system stressors. These stressors may also factor in to the process of site prioritization.

These and other system stressors are being addressed through other projects in the Verde watershed (see the “Related Work” section).

Ornamental Plants

Many of the invasives within the Verde watershed, particularly in Reach 2, have originated from ornamental plants on surrounding private and municipal lands. They will continue to persist unless measures are taken to control them.

PROPOSED ACTIONS

- Maintain VWRC Outreach, Education and Engagement Subcommittee and continue to implement strategic plan for education and outreach in the public and private sectors on alternative native landscaping materials. (Ongoing)
- Discuss removing invasive ornamental plants with local politicians, residents, and nurseries and provide alternative native plant options. (Ongoing)
- Provide information on funding programs and labor options for invasive plant removal. (Ongoing)

Secondary Weed Invasions

Many plants, particularly herbaceous and grass species, can invade a site after a natural or anthropogenic disturbance — a flood, the removal of other invasive species, recreational or development activities. Seeds may be brought

in through equipment, floods, animals, horticultural or agricultural plant and seed materials, and wind. Disturbed areas provide an opportunity for rapidly colonizing species to invade. Such species include yellow star thistle, Malta star thistle, Dalmatian toadflax, yellow sweet-clover, kochia, Russian knapweed, spotted knapweed, Sahara mustard, cheat grass, and red brome.

The role of VWRC in regards to secondary invasive species within the project area encompasses early detection, public education, and presence/absence data collection as a component of the Monitoring Plan (Appendix C). Contract treatment crews receive plant identification training as a component of the annual crew training. Field crews, volunteers, and interns serve as the “eyes on the ground”, observing and reporting secondary invasive species as they are detected in the field. This information is available to private landowners and government land managers throughout the project area, each of which can address secondary invasive plant management according to their own distinct land management goals and mandates.

PROPOSED ACTIONS

- Maintain Monitoring and Research Subcommittee to implement a strategy for secondary invasive species prevention and monitoring at restored or disturbed sites. (Ongoing)
- During site-specific restoration efforts, plant native plant materials where appropriate to outcompete secondary weeds and stabilize soils. (Ongoing)
- Share information on secondary weed species detected, and control techniques with project site landowners and/or land managers. (Ongoing)

Bank Erosion

Some invasive plant species, primarily saltcedar and giant reed, were introduced to the Verde watershed to prevent bank erosion where land was cleared for agriculture, pasture, development, or recreation. If these invasive species are targeted for removal, bank erosion may occur. In 2014, VWRC hosted a Streambank Stabilization workshop, where stakeholders learned techniques and methods to prevent erosion using native plant materials. This project site will be used as Demonstration Project to display erosion control techniques to private landowners, and to provide an ongoing source of data to inform adaptive management.

PROPOSED ACTIONS

- Collect pre-treatment site information about erosion potential and plan treatment accordingly if potential exists. See Appendix C for VWRC Monitoring Plan (Ongoing)
- Coordinate/implement bank stabilization with partners as needed on potential bank line erosion and prevention projects. (Ongoing)
- Provide information and technical services to landowners on prevention, treatment and long-term maintenance of invasive plants (Ongoing)
- Identify native plants that will quickly colonize and stabilize banks and establish these plants where appropriate, during low flows. (Ongoing)
- Compile information and host training workshop (4/16-17/2014) on streambank stabilization techniques, and where and how to procure native plant materials for revegetation of disturbed sites (Completed 4/18/2014)

Adaptive Management

VWRC is taking an adaptive management approach to the implementation of this plan by using monitoring and research data to inform and adjust resource management, plans, and approaches accordingly. As lessons are learned from treatment and project sites, methods can be adjusted to improve the effectiveness and efficiency of both re-treatment and future removal efforts.

Riparian restoration actions are fundamentally experimental endeavors governed by watershed- and site-specific processes and variables. As an experimental venture, restoration benefits from an organized “adaptive management” approach to developing and establishing a program of action. Adaptive management differs from “learning by doing” in that it is a science-based process through which a program plans, predicts, implements and evaluates interventions, and redirects efforts as necessary to achieve a desired outcome. Adaptive management involves taking action with acknowledged uncertainties, carefully monitoring outcomes, transparently assessing progress and redirecting efforts when necessary. Adaptive management involves the review of observed outcomes relative to predicted outcomes, establishing causal relationships, and determining corrections necessary to achieve desired outcomes. It applies to all aspects of a restoration project; i.e., the restoration actions themselves, management, funding, monitoring, stakeholder interaction, etc.

Adaptive management practice requires the prediction of outcomes and the definition of trigger and endpoint indicators to evaluate outcomes and inform ongoing management. Trigger indicators provide a mechanism for establishing

when corrective action is necessary to redirect a project if it is not performing as expected. Endpoint indicators provide a mechanism to establish when a predicted outcome has been achieved. Conceptual models are useful in identifying what processes and outcomes will best achieve desired outcomes and those that need to be monitored to inform adaptive management decisions.

Conceptual models are working hypotheses about the processes and variables influencing system form and function. They play a critical role in understanding the target system and in communicating restoration and monitoring procedures. Conceptual models (a) formalize current understanding of system processes and dynamics, (b) identify linkages of processes across disciplinary boundaries, and (c) identify the bounds and scope of the system of interest, including gaps in our knowledge. Conceptual models are a critical first step because without it, it is uncertain how well the system being restored is understood and thus a restoration action may be inadequate or fail. (Skidmore, Patten 2013).

By completing two to three demonstration projects with adequate monitoring and applying adaptive management, VWRC has been able to refine our techniques and processes to ensure effective, timely, and efficient treatment of targeted areas.

PROPOSED ACTIONS

- Collect monitoring data as outlined in VWRC Monitoring Plan (Ongoing)
- Analyze monitoring data to determine if management plans and approaches need to be adapted for better effectiveness. (Ongoing)

Approach for Prioritizing Actions & Sites

A two-pronged approach was developed to prioritize actions for invasive species removal. This approach entails first prioritizing sites and then prioritizing the species within the site. (See Appendix H - VWRC Prioritization Methods for more discussion). The criteria for prioritizing sites and species are primarily driven by the ecological goal although the social, economic, and management goals will influence how this work is implemented and how the sites are managed.

Five criteria dictate whether a site can be successfully restored. For restoration to proceed these criteria must be met at any of the sites prioritized by the site or species approach.

- **Funding is available** to complete the project, includes pre and post treatment monitoring and maintenance.
- **The landowner/manager is willing.** Commitment, cooperation, communication, and common goals with the landowner/manager are required to implement actions, monitoring, and long-term maintenance.
- **Permits are obtained.** Permits are required on all public lands where invasive plant species will be removed to comply with the National Environmental Policy Act (NEPA), Section 404 of the Clean Water Act, Section 106 of the National Historic Preservation Act (NHPA), and Section 7 of the Endangered Species Act (ESA). Habitat Improvement agreements with individual private landowners are secured. Some activities on private lands may require permitting.
- **Capacity is available** to conduct the work. A trained work force and logistic plan is necessary to implement a successful, timely invasive species removal effort.
- **The site is accessible.** Site accessibility will affect the cost of restoration. The difficulty or ease of accessing the site to remove invasive species, conduct monitoring, and maintain it over the long term must be considered.

Implementation Strategy for 2012-2018

Ecological Goals

The tasks outlined below represent steps for implementing a successful restoration effort. Many of these action items have been completed, and many are ongoing tasks.

- **Map and inventory invasive species.** A workshop should be conducted to establish an approach for how and where to initiate this work and to consolidate existing mapping efforts. (Completed: 8/2011)

As of December, 2014, VWRC has surveyed 9,334 acres. Additional private property will be mapped as Habitat Improvement agreements are secured.

- **Apply the site and species approaches.** Actions should be prioritized using the site and species approaches, along with data from the inventory and mapping effort. (Ongoing)
- **Define the total acreage of priority invasive plant control efforts.** The mapping information has identified 16,603 acres that harbor the four target

species outlined in this plan. A majority of these acres have less than 10% cover of tamarisk and tree of heaven. To accomplish the ecological goals to reduce woody invasive to less than 10% of the riparian area and illuminate Russian olive and giant reed, it has been estimated that 8,904 acres need to be treated. (Completed: 6/2014)

- **Remove sites that are not feasible for restoration.** Areas where restoration is infeasible (sites which not meet one or more of the 5 criteria which dictate whether or not a site can be successfully restored) have been removed from the estimated total acreage targeted for treatment (approximately 8,904 acres- see below). (Completed: 10/2014)
- **Determine how many acres per year must be treated to achieve the 5-year goals (2012-2018).** Approximately 8,904 acres. As of September 2014, VWRC partners have treated 5,617 of those acres. An estimated 3,287 acres remains to be treated based on mapping data. Approximately 1,096 acres will need to be treated annually during the next three field seasons (2014/15, 2015/16, 2016/17) to achieve these goals. Removal costs have been roughly estimated based on site accessibility, density of infestation, and methods. (See Appendix K for cost estimates.) (Completed: 6/2014)
- **Initiate implementation processes.** Work to acquire permits, secure Habitat Improvement agreements with landowners, secure funding, and build capacity to support annual implementation. (Ongoing)
- **Initiate three distinct demonstration projects in the Verde Valley.** These projects were selected by the stakeholders to provide public and landowner outreach and educational opportunities, obtain public support for the broader goals of the Plan, and employ, and train youth corps and veterans crews. Demonstration projects also yield information about the distribution of invasive species, efficacy of removal methods, project costs, and monitoring protocols. Of the three sites originally selected as demonstration sites, treatment has been underway at two since 2012. (Initiated 3/2012)

Despite the ongoing efforts of VWRC staff and leadership, the third proposed demonstration site failed to meet the second criterion under *Approach for Prioritizing Actions and Sites*: “the landowner/manager is willing”. In 2013, in response to evolving and expanding restoration challenges, the partnership selected an alternative location for the third demonstration site, which provided the opportunity to manage priority invasive plants and implement the first streambank bioengineering project to re-establish native vegetation and reduce erosion. Phase 1 of Demonstration Project 3 was completed in spring 2014. (See Appendix J for descriptions of Demonstration Projects 1-3)

Plan Implementation Structure

The following actions are also recommended.

- **Formalize the partnership.** Formalize the Verde River Watershed Restoration Coalition partnership with a Memorandum of Understanding (MOU), signed by all organizational partners involved in this restoration effort. Currently seventeen partners have signed the VWRC MOU (Appendix E). As new organizations become involved, VWRC requests that they formalize their commitment to the partnership by signing the MOU. (Ongoing)
- **Create a steering committee.** Create a multi-stakeholder steering committee to develop the structure for implementing future projects. (Completed: 12/2012) A 19-Member Steering committee was established and has been meeting ten times per year since January 2012. This diverse committee has representation from 15 different organizations, business and agencies, including a private landowner. They are committed to Plan vision and goals and play a critical role in the success of this watershed-scale project.
- **Maintain Capacity- secure funds to maintain staff, facilitation, overhead.** Grant funding is currently supporting the majority of FVRG's overhead. (See Appendix G, Sustainable Funding Background and Approach)
- **Develop an education and outreach strategy.** The steering committee developed a strategy for public education and outreach that targets the Verde watershed community. (Completed: 6/2013)
- **Develop a site monitoring and maintenance strategy.** VWRC's Research and Monitoring Subcommittee developed strategies for monitoring treated sites and for long-term maintenance. These strategies address:
- **Collect short and long-term monitoring** to provide information that will inform adaptive management. (Draft Plan Completed: 2/2014)
- **Continue long-term maintenance** to ensure that goals are being met. (Initiated: 3/2012)



Legend

-  Cities
-  Reach Boundary
-  Verde River
-  Tonto Forest
-  Prescott Forest
-  Coconino Forest
-  Counties



Designed By:
Fred Phillips Consulting, LLC
 401 S. Leroux St.
 Flagstaff, AZ
 86001
 (928) 773-1530



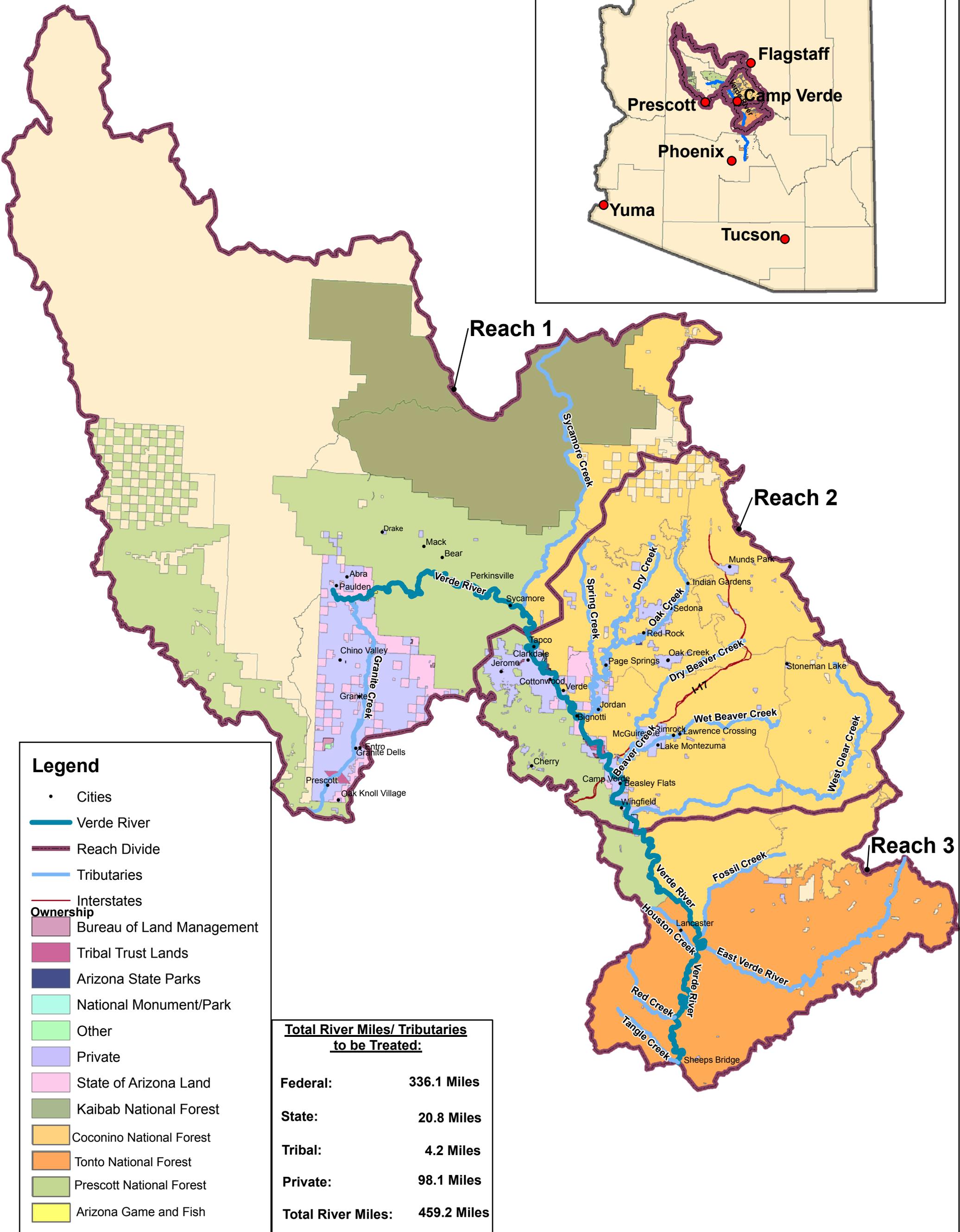
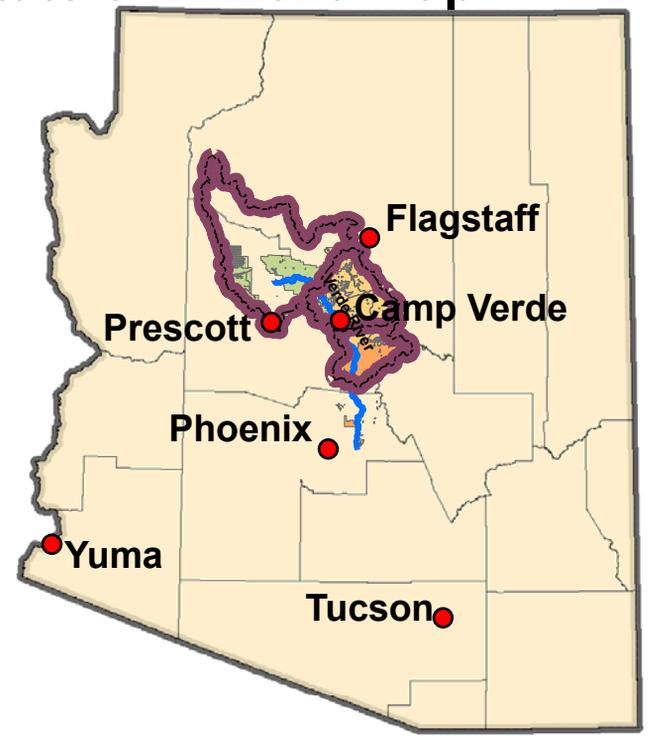
Designed For:
Friends of the Verde River Greenway
 PO Box 2535
 Cottonwood, AZ
 86326

VERDE RIVER RESTORATION PLAN LOCATION MAP



APRIL 2011
CONCEPT PLAN LOCATION MAP
FIGURE 1

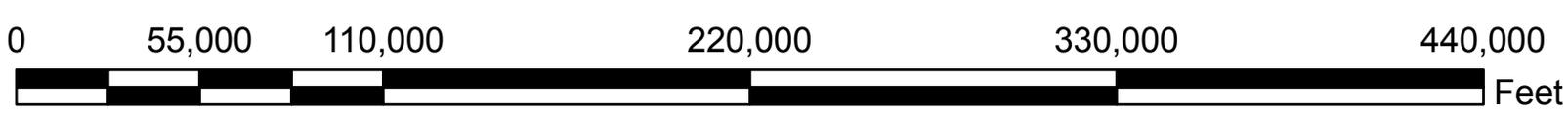
State of Arizona Map

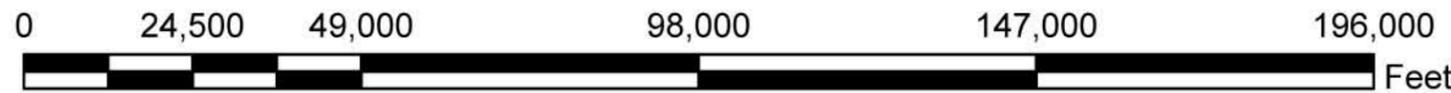
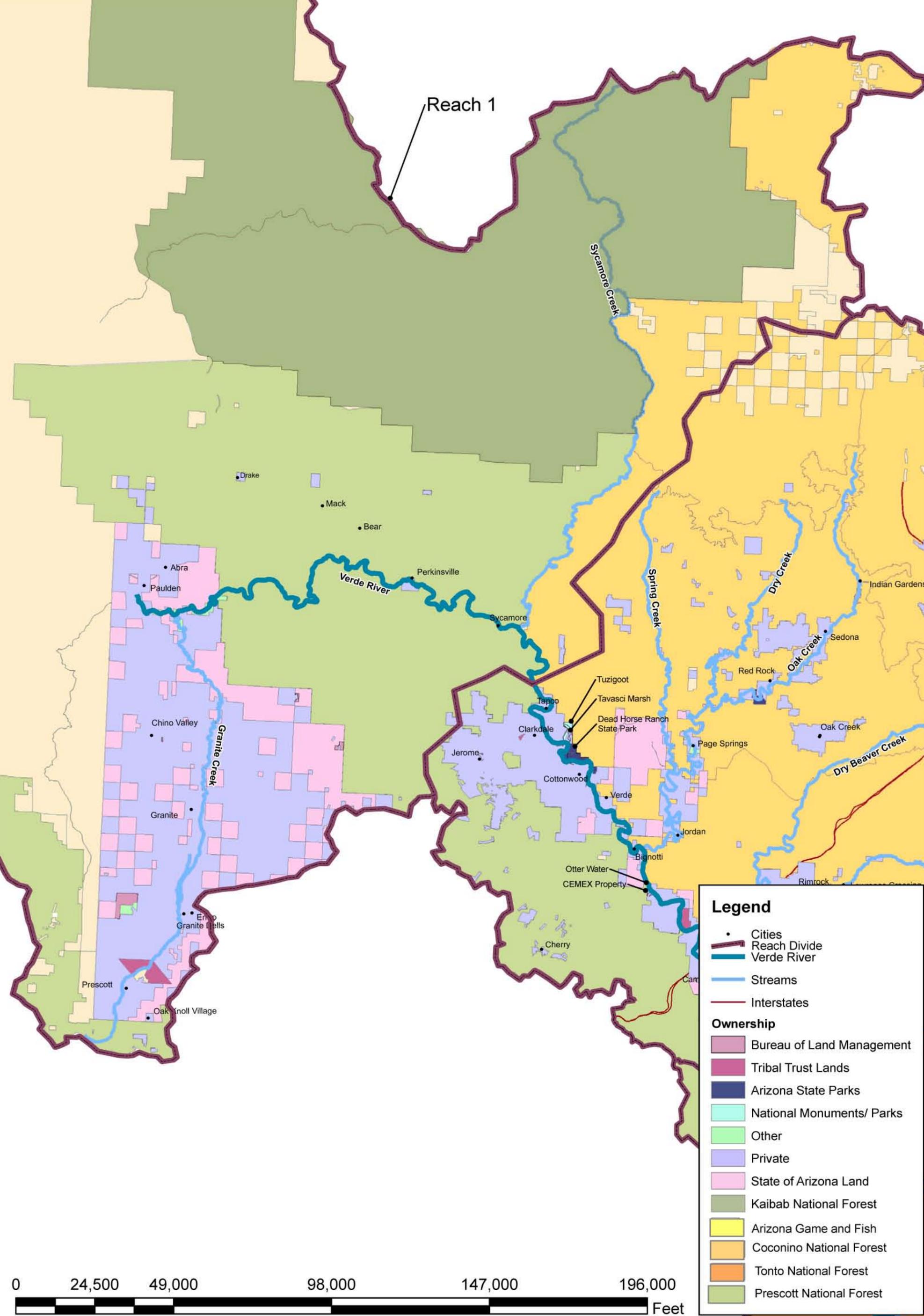


Legend

- Cities
- Verde River
- Reach Divide
- Tributaries
- Interstates
- Ownership**
- Bureau of Land Management
- Tribal Trust Lands
- Arizona State Parks
- National Monument/Park
- Other
- Private
- State of Arizona Land
- Kaibab National Forest
- Coconino National Forest
- Tonto National Forest
- Prescott National Forest
- Arizona Game and Fish

<u>Total River Miles/ Tributaries to be Treated:</u>	
Federal:	336.1 Miles
State:	20.8 Miles
Tribal:	4.2 Miles
Private:	98.1 Miles
Total River Miles:	459.2 Miles





Legend

- Cities
- Reach Divide
- Verde River
- Streams
- Interstates

Ownership

- Bureau of Land Management
- Tribal Trust Lands
- Arizona State Parks
- National Monuments/ Parks
- Other
- Private
- State of Arizona Land
- Kaibab National Forest
- Arizona Game and Fish
- Coconino National Forest
- Tonto National Forest
- Prescott National Forest



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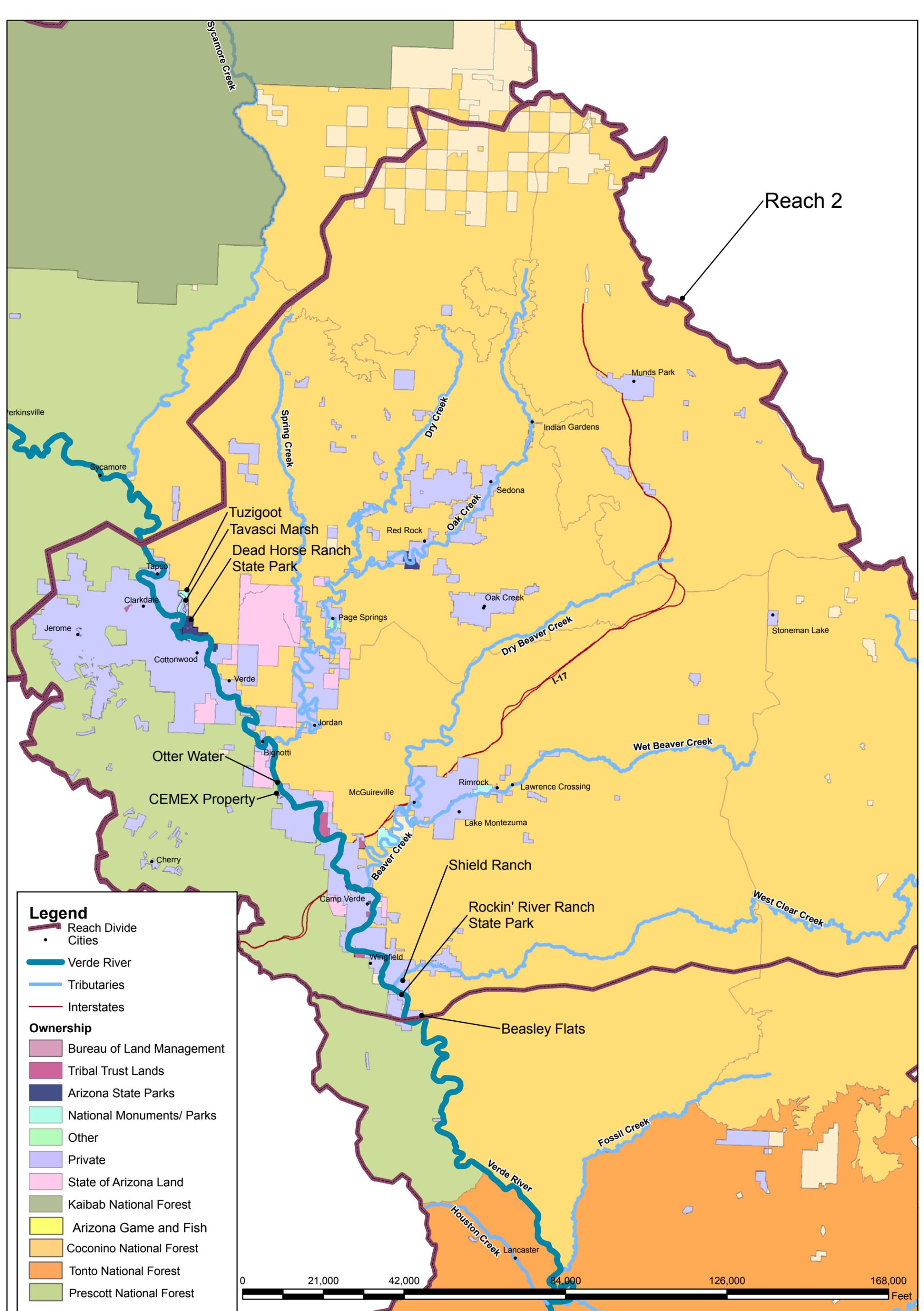


Designed For:
Friends of the Verde River Greenway
 PO Box 2535
 Cottonwood, AZ 86326

VERDE RIVER RESTORATION PLAN REACH 1



APRIL 2011
CONCEPT PLAN
FIGURE 3



Legend

- Reach Divide
- Cities
- Verde River
- Tributaries
- Interstates

Ownership

- Bureau of Land Management
- Tribal Trust Lands
- Arizona State Parks
- National Monuments/ Parks
- Other
- Private
- State of Arizona Land
- Kaibab National Forest
- Arizona Game and Fish
- Coconino National Forest
- Tonto National Forest
- Prescott National Forest



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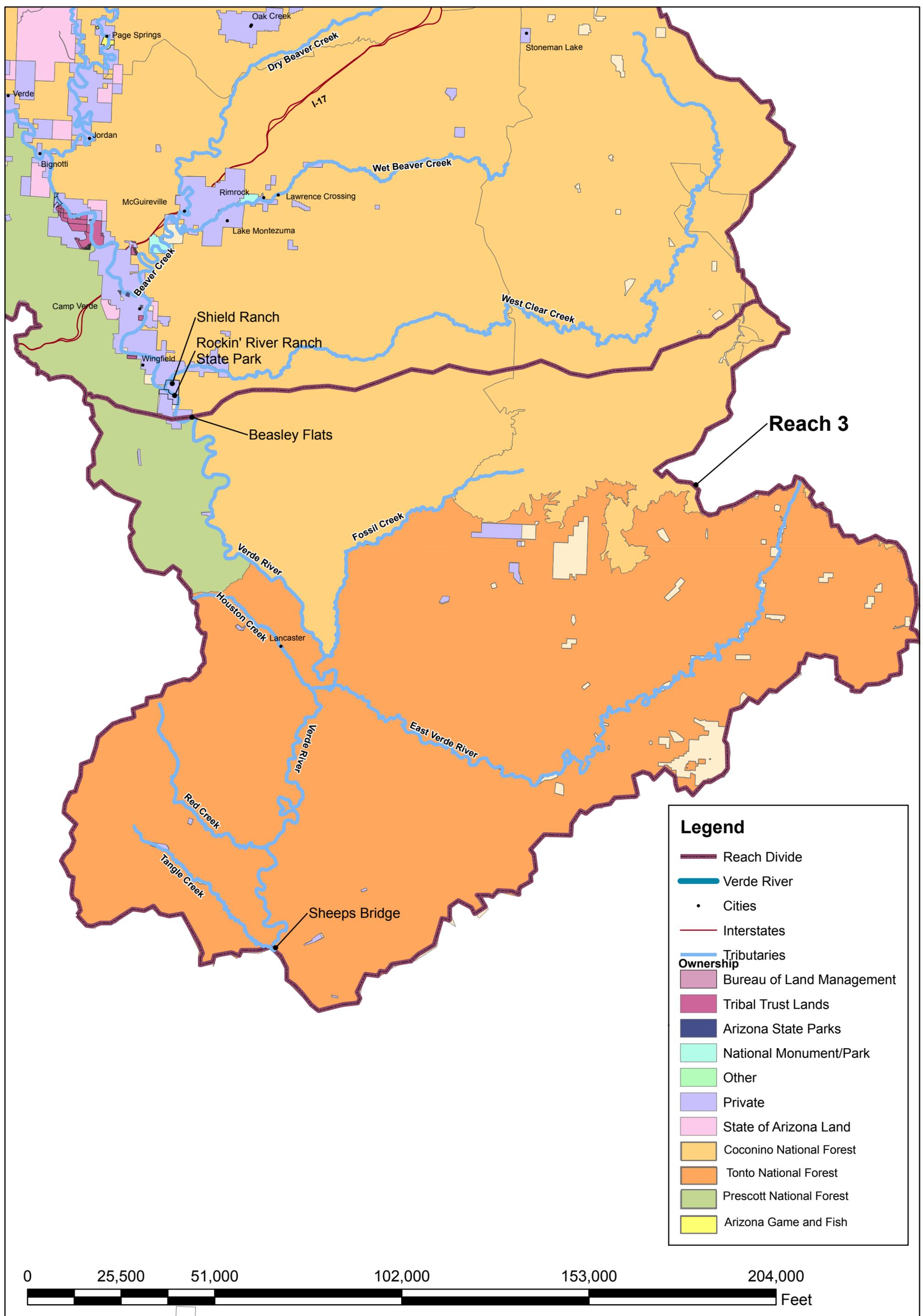


Designed For:
Friends of the Verde River Greenway
 PO Box 2535
 Cottonwood, AZ 86326

VERDE RIVER RESTORATION PLAN REACH 2



APRIL 2011
CONCEPT PLAN
FIGURE 4

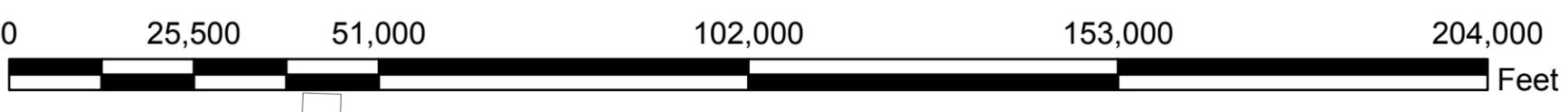


Legend

- Reach Divide
- Verde River
- Cities
- Interstates
- Tributaries

Ownership

- Bureau of Land Management
- Tribal Trust Lands
- Arizona State Parks
- National Monument/Park
- Other
- Private
- State of Arizona Land
- Coconino National Forest
- Tonto National Forest
- Prescott National Forest
- Arizona Game and Fish



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Designed For:
 Friends of the
 Verde River Greenway
 PO Box 2535
 Cottonwood, AZ 86326

**VERDE RIVER
 RESTORATION PLAN
 REACH 3**



APRIL 2011
 CONCEPT PLAN
 FIGURE 5

File Code: 2900
Date: May 15, 2015

Arizona Water Protection Fund Commission
AWPF Commissioners
3550 N Central Ave, Suite 200
Phoenix, AZ 85012

RE: Friends of Verde River Greenway/Verde Watershed Restoration Coalition - AWPf 2015 Proposal

Dear AWPf Commissioners,

Friends of Verde River Greenway (FVRG) as part of the Verde Watershed Restoration Coalition (VWRC) is proposing a habitat restoration project on the upper reaches of the Verde River. This project is located on both Prescott and Coconino National Forests along the Verde River starting at the western boundary of Prescott National Forest and continuing downstream to the Sycamore creek confluence and continuing onto Coconino National Forest (CNF) lands to the downstream boundary with private property upstream of Clarkdale, AZ. As a partner of VWRC the Coconino National Forest supports this project which will treat identified and mapped tamarisk and tree of heaven populations on 170 acres along 3.1 miles of river. The forest is committed to monitoring and maintenance of these sites to ensure long-term success. CNF has successfully partnered with FVRG/VWRC before and is in full support of this project to remove tamarisk and tree of heaven to improve this watershed.

FVRG and VWRC partners share a common interest in accomplishing the ecological and social goals outlined in the Verde River Cooperative Invasive Plant Management Plan, while providing economic opportunity for our local communities. Coconino National Forest is committed to working collaboratively with VWRC partners on programs to promote watershed restoration, outreach, education and opportunities for young adults and veteran employment. Thank you for your consideration.

Sincerely,

SCOTT RUSSELL
Acting Forest Supervisor

cc: John Buehler, Nicole Branton, Debbie Hom, Laura Moser, Janie Agyagos, Amina SenaJanie Agyagos, Amina Sena





File Code: 2900
Date: May 13, 2015

Arizona Water Protection Fund Commission
3550 N. Central Ave. Suite 200
Phoenix, AZ 85012

RE: Friends of Verde River Greenway/Verde Watershed Restoration Coalition
AWPF 2015 Proposal

Dear AWPF Commissioners:

Friends of Verde River Greenway (FVRG) as part of the Verde Watershed Restoration Coalition (VWRC) is proposing a habitat restoration project on the upper reaches of the Verde River. This project is located on the Prescott National Forest (PNF) along the Verde River from the western Forest Service boundary near Paulden downstream to the private property upstream of Clarkdale, AZ. As a partner of VWRC the Prescott National Forest supports this project which will treat identified and mapped tamarisk and tree of heaven populations on 220 acres, and monitor and retreat 1016 acres previously treated for invasive plants during the last five years. The Forest is committed to monitoring and maintenance of these sites to ensure long-term success. The PNF and FVRG have successfully partnered in the past to complete invasive plant management projects along various stretches of the Verde River.

FVRG and VWRC partners share a common interest in accomplishing the ecological and social goals outlined in the Verde River Cooperative Invasive Plant Management Plan, while providing economic opportunity for our local communities. The Forest is committed to supporting VWRC in its endeavors to apply for additional funding to continue restoration work within the Verde Watershed. The Forest is also committed to working collaboratively with VWRC partners on programs to promote restoration, outreach, education, and opportunities for young adults and veteran employment. Thank you for your consideration.

Sincerely,

TERESA A. CHASE
Forest Supervisor





U.S. Fish and Wildlife Service
Arizona Partners for Fish and Wildlife
Arizona Ecological Services Field Office
2321 W. Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
602-242-0210 602-242-2513 Fax



May 7, 2015

Arizona Water Protection Fund
3550 North Central Avenue
Phoenix, Arizona 85012

RE: FY 2015 Grant Application by Friends of Verde River Greenway

Dear Grant Review Committee:

On behalf of the US Fish and Wildlife Service's (USFWS) Partners for Fish and Wildlife Program I want to extend my support of the project proposal submitted to the Arizona Water Protection Fund by the Friends of Verde River Greenway (FVRG). We have worked with FVRG for several years on their Cooperative Invasive Plant Management Plan and participate on the Verde Watershed Restoration Coalition (VWRC) steering committee.

We have provided funds to the Friends of Verde River Greenway for the past four years to remove non-native vegetation from riparian areas under private ownership. The Verde River is known for its wildlife habitat, water supply, and recreational opportunities. It is one of the most substantial free-flowing rivers in Arizona. Although the river corridor primarily supports native riparian vegetation, invasive species — particularly saltcedar (*Tamarix* spp.), Russian olive (*Elaeagnus angustifolia*), tree of heaven (*Ailanthus altissima*) and giant reed (*Arundo donax*)—are a concern. Gila topminnow, southwestern willow flycatcher, loach minnow, spikedace, razorback sucker, Colorado pikeminnow, roundtail chub, Northern Mexican gartersnake, and yellow-billed cuckoo are known to occur in and near the Verde River. We have been working closely with the FVRG to address concerns about impacts to listed species from the work.

The USFWS supports the Friends of Verde River Greenway goal to maintain and enhance the wildlife habitat that is provided within the Verde River. The FVRG and VWRC bring a wealth of natural resource management expertise and strong ties to the communities and landowners along the Verde River. We will continue to work with the FVRG and VWRC in achieving the project goals and objectives so that their efforts at conserving wildlife habitat and water resources can be attained.

We have had a productive relationship with the FVRG and VWRC, working on watershed improvement and community involvement projects. The project goals reducing invasive woody plant species and increasing community and public understanding of why riparian areas are important ecologically, socially, and economically and how invasive plants can impact riparian areas. This effort will not only improve habitat for threatened and endangered species, but will galvanize the community to promote conservation ethics in the Verde River Watershed.

Arizona Water Protection Fund Commission
3550 North Central Avenue, Suite 200
Phoenix, AZ 85012

April 27, 2015

RE: Friends of Verde River Greenway / Verde Watershed Restoration Coalition
AWPF 2015 Project Proposal

Dear Grant Review Committee,

Tamarisk Coalition, a nonprofit organization working with riparian and watershed restoration practitioners across the western US, has a mission to advance the restoration of riparian lands through collaboration, education, and technical assistance.

Please accept this letter of support for Friends of Verde River Greenway's (FVRG) application to the Arizona Water Protection Fund, 2015 funding cycle. Tamarisk Coalition staff have worked closely with FVRG and the Verde Watershed Restoration Coalition (VWRC) for 4 years now, through 4 riparian restoration fieldwork seasons that consistently exceeded management goals. Over 200 private landowners participate in the VWRC riparian invasive plant management and habitat improvement program. FVRG/VWRC's capacity and commitment to long-term maintenance is excellent- with protocols in place for inventory, mapping, treatment, monitoring and maintenance, and a GIS database where data is stored in perpetuity. Data informs adaptive management, and is shared with other watershed partnerships across Arizona and regionally.

With AWPf support, FVRG will be able to treat and re-treat priority woody invasive plants on a contiguous portion of the Upper Verde River. These upper reaches are an important source of flows for the rest of the system, and they are currently a source of invasive plant seeds and propagules as well. The Verde River provides drinking water to over 3 million Arizonans. The proposed project is critically important for restoring and maintaining healthy, functioning riparian lands in the Verde Watershed- for both wildlife and people.

If you have any questions please feel free to contact me at any time.

Sincerely,

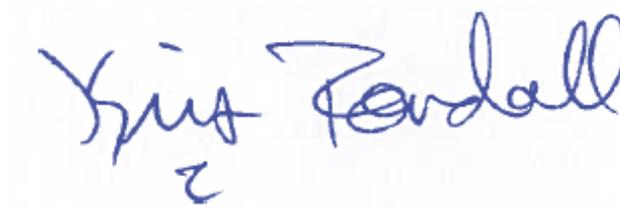


Stacy Kolegas Beagh, Executive Director



Please contact me at 602-242-0210 x250 if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Kris Randall". The signature is written in a cursive style with a small mark below the "K".

Kris Randall
State Coordinator
Partners for Fish & Wildlife

PERKINS RANCH, INC.

P. O. Box 403
Chino Valley, AZ 86323
(928) 636-2543

May 1, 2015

TO: The Arizona Water Protection Fund

It is our understanding that the Verde Watershed Restoration Coalition ("VWRC") is applying for funding from your grant program in order to remove tamarisk along the stretch of the Verde river from the Sycamore confluence downstream to private property, as well as to retreat everything from the Fish and Game property downstream to the Sycamore confluence.

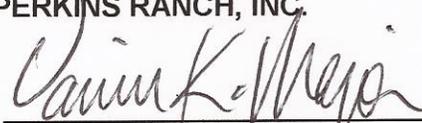
We have been private landowners for over 100 years at Perkinsville, Arizona, which land is located on both the north and south sides of the Verde River. We have had a huge problem with the invasion of tamarisk and other noxious weeds along the Verde. Initially, VWRC contacted us asking permission to park on our private property in order to gain closer access to the area of the Verde River it was treating at that time. We had inquired as to whether VWRC could treat private lands along the Verde, also, for these invasive plants. VWRC indicated that, with written permission, it could do so. We gave VWRC that written permission and, during the week of February 9, 2015, its crew treated 77.22 acres of our private lands for the extremely invasive tamarisk, along with some other noxious weeds. VWRC now desires to retreat the property upstream from ours (where we noticed the start of tamarisk in our area many years ago). We strongly believe that that retreat will positively impact our property by reducing the seed source.

As private landowners, we are very much in support of the removal of tamarisk and other noxious weeds, because their removal improves our and other riparian areas substantially. Furthermore, we feel that removal is better served by those who have experience in identifying and removing tamarisk and other noxious weeds, such as VWRC. VWRC was very professional to deal with and its crew was very respectful to our private lands. We are thankful for VWRC's time and efforts and we wholeheartedly support VWRC's mission, including its improvement of riparian areas. We hereby request that you strongly consider VWRC's grant application so that it can continue its much needed efforts in restoring the beauty and vitality of the Verde Watershed.

Thank you for your consideration.

Sincerely,

PERKINS RANCH, INC.

By: 

Daniel K. Major, Ranch Manager

DKM:lm