Arizona Water Protection Fund
Application Cover Page
FY 2019

Title of Project: Post Kearny Fuels Reduction Re-vegetation of Gila River Riparian Area

Type of Project:
- ☒ Capital or Other
- ☐ Water Conservation
- ☐ Research

Stream Type:
- ☒ Perennial
- ☐ Intermittent
- ☐ Ephemeral

Your level of commitment to maintenance of project benefits and capital improvements:
☐ < 5 years ☒ 5-10 years ☐ 11-15 years ☒ 16-20 years

Applicant Information:

Name/Organization: Winkelman Natural Resources Conservation District
Address 1: PO Box486
Address 2:
City: Kearny
State: Arizona
ZIP Code: 85137
Phone: 520-560-0721
Fax:
Tax ID No.:

Inside an AMA: Yes ☒ No ☐

If yes, which AMA:
- ☐ Phoenix
- ☐ Tucson
- ☐ Prescott
- ☒ Pinal
- ☐ Santa Cruz

Type of Application:
- ☒ New
- ☐ Continuation

Contact Person:

Name: Kyle Thompson
Title: WNRCD District Coordinator
Phone: 928-368-7067
Fax:
e-mail: kylewthomp@gmail.com

Any Previous AWPF Grants:
☐ Yes ☒ No

If yes, please provide Grant #(s):

Arizona Water Protection Fund Grant Amount Requested:

$75,667.00

If the application is funded, will the Grantee intend to request an advance:
☒ **Yes** ☐ **No**

Matching Funds Obtained and Secured:

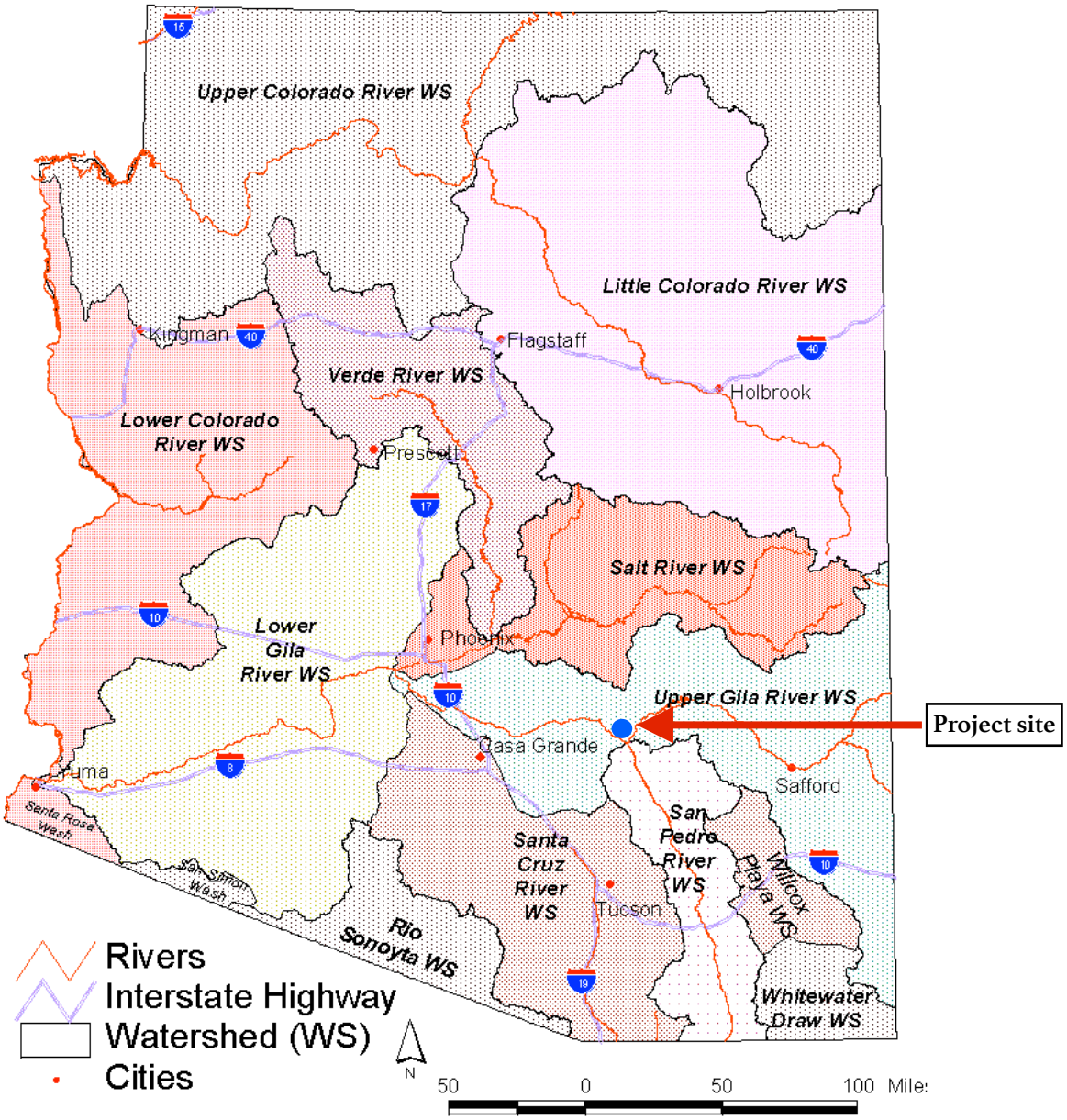
Applicant/Agency/Organization:	Amount ($):
1. Applicant	11,002.00
2.	
3.	
Total:	11,002

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.

Kyle Thompson	WNRCD District Coordinator 928-368-7067
Typed Name of Applicant or Applicant's Authorized Representative	**Title and Telephone Number**
Kyle Thompson	9-5-18
Signature	**Date Signed**

Arizona Watershed Map
FY 2019



Title of Project: **<u>Riparian Restoration Along Gila River Corridor Kearny, Arizona</u>**

Location (include UTM's & Township/Range/Section)**:** **<u>UTM: 12 N 508775 3658087</u>**
<u>Township 4S, Range 14E, Sections: 28, 33 and 34</u>
(Location must include at least one Section delineation for large scale projects)

Project Location & Environmental Contaminant Information
FY 2019

Project Location Information

1. County: Pinal County	2. Section(s): 28,33,34	3. Township: 4S	4. Range: 14E

5. Watershed: Gila River
6. 8 or 10 Digit Hydrologic Unit Code (HUC): 15050100
7. Name of USGS Topographic Map where project area is located: Kearny, AZ
8. State Legislative District: 08

   (Information available at: http://azredistricting.org/districtlocator/

9. Land ownership of project area: Private, Town of Kearny
10. Current land use of project area: None
11. Size of project area (in acres): 105 DIRECT
12. Stream Name: Gila River
13. Length of stream through project area: 2
14. Miles of stream benefited: 2 miles
15. Acres of riparian habitat: 105 acres will be:

☐ Enhanced
☐ Maintained
☒ Restored
☐ Created

16. General description and/or delineation for the area of impact of the project within the watershed.
Located along the Gila River riparian corridor adjecent (to the south) of the town of Kearny, AZ.

17. Provide directions to the project site from the nearest city or town. List any special access requirements:
The project site is directly south, adjacent to the town of Kearny along the Gila River.

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**

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 GRANT

2. Project Title: Riparian Restoration Along Gila River Corridor Kearny, Arizona

3. Applicant Name and Address: Winkelman Natural Resource Conservation District

4. Current Land Owner/Manager(s): Town of Kearny

5. Project Location, including Township, Range, Section: Township 4S, Range 14E, Sections: 28, 33 and 34

6. Total Project Area in Acres (or total miles if trail): 105

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: Planting of native trees and shrubs and seeding of nativie plants. The ground will be distrurbed from the digging and planting of the vegetation and the use of a mechanical seeder.

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: The entire project site has been surveyed for cultural and historic resources to complete a saltcedar removal project with heavy equipment including grubbing and mastication. This saltcedar removal project will be completed by March 2019.

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 ☐ UNKOWN

    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.

	/ 9/5/18	Kyle Thompson
Applicant Signature	/Date	Applicant Printed Name

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

EXECUTIVE SUMMARY

The Town of Kearny, Arizona and surrounding areas along the Gila River have been heavily impacted by invasive species, especially saltcedar (*Tamarix* spp.). Riparian vegetation changes from native vegetation to saltcedar thickets cause increased water loss, increased fire hazards, and the loss of wildlife habitat. In both 2013 and 2015, wildfires burned along the Gila River next to the Town of Kearny. The 2015 Kearny River fire burned over 1,000 acres and resulted in property loss, evacuations and a federal declaration from FEMA. The Winkelman Natural Resource Conservation District (WNRCD) and the Town of Kearny, in partnership with the Arizona Department of Forestry and Fire Management (DFFM) will be removing invasive saltcedar from 105 acres along the Gila River in the Town of Kearny from October 2018 - March 2019. This project is funded by the Federal Emergency Management Agency (FEMA) through a Fire Management Assistance Grant (FMAG) to mitigate hazardous fuels. Currently there is no funding to follow this saltcedar removal with native vegetation planting. We propose to revegetate this riparian corridor with native trees and shrubs where saltcedar removal has taken place in order to provide direct benefits to the perennial Gila River. This project will have direct benefits by restoring native riparian area vegetation and habitat, restoring proper hydrologic conditions/functions, improve water quality or increase water quantity, and decrease negative social and economic impacts of unwanted wildfire in riparian areas.

PROJECT OVERVIEW

Background:

The loss of native riparian area vegetation to invasive species, such as saltcedar, is widespread throughout rivers in the southwest. The loss of these riparian ecosystems may cause increased water loss through non-native species, the loss of habitat for fish and wildlife species, changed hydrologic functioning of the system, and increased dangers such as severe wildfire. The Gila River has been heavily impacted by non-native, invasive species causing the loss of native vegetation in riparian areas (Stromberg et al. 2005; Stromberg et al. 2007). Successful efforts have been made to restore native habitat along the Gila River, primarily through the selective removal of non-native plant species such as saltcedar (Flood Control District of Maricopa County 2008; Shafroth et al. 2010). This has led to direct benefits for the watershed through the restoration of native flora and fauna, the increase in habitat for fish and wildlife species, and the decrease in negative impacts by non-native species such as increased water loss and increased wildfire hazard (Bay and Sher 2008).

Much of the Gila River corridor near Kearny, Arizona is inundated with invasive saltcedar that caused the 500-plus acre Shipman Fire in July, 2013 and the 1,400-plus acre Kearny River Fire in June, 2015. Saltcedar is an invasive species abundant in this area and forms dense thickets that exclude most other native riparian plant species. Saltcedar trees grow rapidly and have formed a monoculture throughout the Gila River in this area, as it has in other parts of Arizona and the Southwest. FEMA has awarded the WNRCD, Town of Kearny, and the Arizona DFFM a FMAG-Hazard Mitigation Grant to remove saltcedar from 105 acres along the Gila River in Kearny, Arizona. The Town of Kearny is the landowner of the subject land for this project. This grant funding does not fund the planting of native species following the removal of saltcedar. Planting native vegetation following the removal of saltcedar is imperative to improving watershed conditions that enhance water quality and water quantity, restoring habitat needs for wildlife, and restoring proper hydrologic conditions/functions.

Goals:

- Restore native plants along the Gila River corridor in Kearny, Arizona
- Reduce the likelihood of saltcedar returning
- Increase water in the Gila River by reducing water loss through saltcedar

Objectives:

1. Restore riparian area habitat where saltcedar has been removed by planting native trees and shrubs
2. Decrease water loss through evapotranspiration from the open water surface and water lost from the surface of saltcedar.
3. Restore native habitat for wildlife by improving the availability of food and cover

Statement of Problems/Causes:
Invasive saltcedar causes higher than normal water loss in riparian areas and increases the danger of severe wildfires. Invasive saltcedar will be removed along the Gila River on 105 acres of land owned by the Town of Kearny, Arizona, but there is currently no funding for follow-up planting of native species to keep saltcedar from reestablishing.

Statement of Solutions:
Planting and establishing native vegetation in the areas where saltcedar has been removed can reduce and slow the likelihood that saltcedar will return to the area. Water loss through evaporation along the Gila River can be reduced and wildlife habitat improved by adding desirable native vegetation.

Statement of Project Years of Benefit to the resource and general public:
Project benefit is expected to last approximately 10 years and longer with maintenance. Revegetation that takes place after non-native vegetation has been removed will not only provide direct benefits to the Gila River, but it will also decrease the chance non-native vegetation will re-establish itself, thereby decreasing the negative impacts associated with non-native vegetation encroachment. Upon completion of the proposed project, long-term benefits to the Gila River riparian area will ensue including, but not limited to:

- Long-term establishment of long-lived native vegetation (e.g., native desert trees), which may occur over decades.
- Long-term resistance to negative impacts by non-native plant species (e.g., non-native plant encroachment and fire risk), over several decades.

Completed and Planned Tasks

- Coordination with Town of Kearny completed in May 2017
- Biological surveys (for plants and wildlife) completed in August 2017
- Cultural resource and historic property clearances completed in August 2017
- Endangered Species Act Section 7 consultation with U.S. Fish & Wildlife Service completed in August 2018
- Saltcedar removal to be completed by March 2019

If funded, this project could be close to shovel ready because cultural and biological clearances have been paid for and approved through the saltcedar removal project.

SCOPE OF WORK

Task 1: Permitting

Task Description: Obtain and submit all permits, authorizations, clearances and agreements. Endangered Species Act Section 7 consultation with U.S. Fish & Wildlife
Service has already been carried out for the purpose of saltcedar removal, biological surveys, and cultural and archaeological clearances have been obtained. Consultations with appropriate agencies will be made to ensure all permitting and authorizations are up to date and appropriate.

Task Purpose/Objective: To comply with all local, state and federal permit requirements, environmental laws such as NEPA, and obtain legal access to project area.

Responsible personnel: Winkelman Natural Resource Conservation District

Deliverable Description: Copies of all approved permits, authorizations, clearances and agreements.

Deliverable Due Date: January 1, 2020

Task Cost: $1,000

Task 2: Site Assessment and Planning

Task Description: The size, specific location, and ecosystem for re-vegetation is known, leaving desired vegetation composition type as the main objective of this task. Site visits will be carried out to determine what native plant species should be planted where, and in what density, to maximize overall benefit to the Gila River ecosystem, fish and wildlife in the area, minimize fire vulnerability, and maximize cost-effectiveness. Discussions with groups who have expertise in this subject area (e.g., the Gila Watershed Partnership) have already begun and quotes estimated.

Task Purpose/Objective: To assess the project area to determine vegetative composition that will maximize the benefit of the goals of the project.

Responsible personnel: Winkelman Natural Resource Conservation District

Deliverable Description: A list of plant species, including number of individual plants, as well as price per individual plant. This will include a sum of entire plant cost.

Deliverable Due Date: July 31, 2019

Task Cost: $2,436

Task 3: Plant and Seed Purchase and Delivery
Task Description: Once plant species composition is determined for the project site, plants will be purchased and delivered to the project site. Deliverable date is projected for the spring of 2020 to ensure enough time for planning and coordination.

Task Purpose/Objective: To purchase and deliver vegetation to the project site.

Responsible personnel: Winkelman Natural Resource Conservation District

Deliverable Description: Costs and number of each species of plants delivered to project site.

Deliverable Due Date: March 1, 2020

Task Cost: $53,625

Task 4: Project implementation
Task Description: Re-vegetation of native riparian and desert plants will be a coordinated effort between local volunteers, local expert organization, agencies, and WNRCD. Planting and seeding will be carried out through a combination of volunteers and conservation groups such as Arizona Conservation Corps. Trees and shrubs will be planted on 75 acres with 30 plants per acre. Seeding will be done on all 105 acres at approximately 2 pounds of seed per acre. Species will be decided upon after thorough consultation with local groups and agencies. Seeding and planting will be done to take advantage of seasonal rain and supplemental irrigation will take place if needed. Herbivore protectors will be used on planted trees to increase likelihood of success and follow-up maintenance to monitor unwanted weeds will be planned. Deliverable date is projected for the spring of 2020 to ensure enough time for planning and coordination and on-the-ground work may begin sooner if possible.

Task Purpose/Objective: To install/plant native vegetation at the project site to carry out the goals of the project (i.e., restore native riparian vegetation and habitat, restore habitat needs for wildlife, decrease negative impacts to area by non-native species).

Responsible personnel: Winkelman Natural Resource Conservation District

Deliverable Description: Number and species of plants installed/planted in the riparian area.

Deliverable Due Date: May 31, 2020

Task Cost: $13,272

Task 5: Final Report and Presentation of Deliverables and Findings

Task Description: Upon successful re-vegetation of the project site, a final report will be produced by WNRCD outlining the deliverables that were met, goals of the project that were accomplished, and lessons learned to possibly enhance future projects that are similar in nature. This report will be available to any interested parties, and an oral presentation will take place at the request of the grant funders.

Task Purpose/Objective: To create a final report of project deliverables, goals accomplished, findings that may improve future projects, and an oral presentation.

Responsible personnel: Winkelman Natural Resource Conservation District

Deliverable Description: The final report and oral presentation.

Deliverable Due Date: September 30, 2020

Task Cost: $1,730

BUDGET

BUDGET ITEM DESCRIPTION - REQUESTED	COMPUTATION		Quantity type	Total Cost
	$/unit	Quantity		
Task 1. Permitting				
WNRCD District Coordinator	$25.00	40	$25/hour	$1,000
Task 2. Site Assessment and Planning				
WNRCD District Coordinator	$25.00	80	$25/hour	$2,000
Mileage for site visits	0.545	800	.545 / mile	$436
Task 3. Plant Purchase and Delivery				
Trees and woody shrubs	$10.00	2,250	$10/tree	$22,500
Delivery	15%	22,500		$3,375
Herbivore protectors	$10.00	2,250	$10/tree	$22,500

Native Seed	$50.00	105	$50/acre	$5,250
Task 4. Project Implementation				
WNRCD District Coordinator	$25.00	160	$25/hour	$4,000
Mileage for site visits	0.545	1,600	.545 / mile	$872
Contractor - seeding	$40.00	210	$40/hour	$8,400
Task 5. Report Writing and Presentation				
WNRCD District Coordinator	$25.00	64	$25/hour	$1,600
Travel for Presentation	0.545	240	.545 / mile	$131
TOTAL DIRECT COSTS				$72,064
INDIRECT COSTS	5%	72,064		$3,603
TOTAL ESTIMATED PROJECT COSTS				$75,667

BUDGET ITEM DESCRIPTION - MATCH	**COMPUTATION**		**Quantity type**	**Total Cost**
	$/unit	**Quantity**		
Task 4. Project Implementation				
Volunteer Labor	$10.50	320	$10.50/hour	$3,360
Mileage by Volunteers	0.545	800	.545 / mile	$436
INDIRECT COSTS	10%	72,064		$7,206
TOTAL IN-KIND COSTS				$11,002

LITERATURE CITED

Bay, R.F., and Sher, A.A.. 2008. Success of active revegetation after *Tamarix* removal in riparian ecosystems of the Southwestern United States: A quantitative assessment of past restoration projects: Restoration Ecology, v. 16, p. 113–128.

Flood Control District of Maricopa County, 2008, Gila River revegetation project set to transform brush fire site, December 29, 2008: Flood Control District of Maricopa County, AZ, 2 p.

Shafroth, P.B., Brown, C.A., and Merritt, D.M., eds. 2010. Saltcedar and Russian olive control demonstration act science assessment: U.S. Geological Survey Scientific Investigations Report 2009–5247, 143 p.

Stromberg, J., Lite, S., and Paradzick, C. 2005. Tamarisk and river restoration along the San Pedro and Gila Rivers. In: Gottfried, Gerald J.; Gebow, Brooke S.; Eskew, Lane G.; Edminster, Carleton B., comps. Connecting mountain islands and desert seas: biodiversity and management of the Madrean Archipelago II. Proc. RMRS-P-36. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station: p. 302-307.

Stromberg, J.C., Lite, S.J., Marler, R., Paradzick, C., Shafroth, P.B., Shorrock, D., White, J.M., and White, M.S. 2007. Altered stream-flow regimes and invasive plant species: the *Tamarix* case: Global Ecology and Biogeography, v. 16, p. 381–393.

Douglas A. Ducey
Governor

Office of the State Forester

Arizona Department of Forestry and Fire Management

Jeffery C. Whitney
State Forester

September 5, 2018

Arizona Water Protection Fund Commission
Arizona Department of Water Resources
1110 W. Washington, Suite 310
Phoenix, AZ 85007

Re: Support for the Winkelman NRCD Arizona Water Protection Fund Application

Dear Arizona Water Protection Fund Commission:

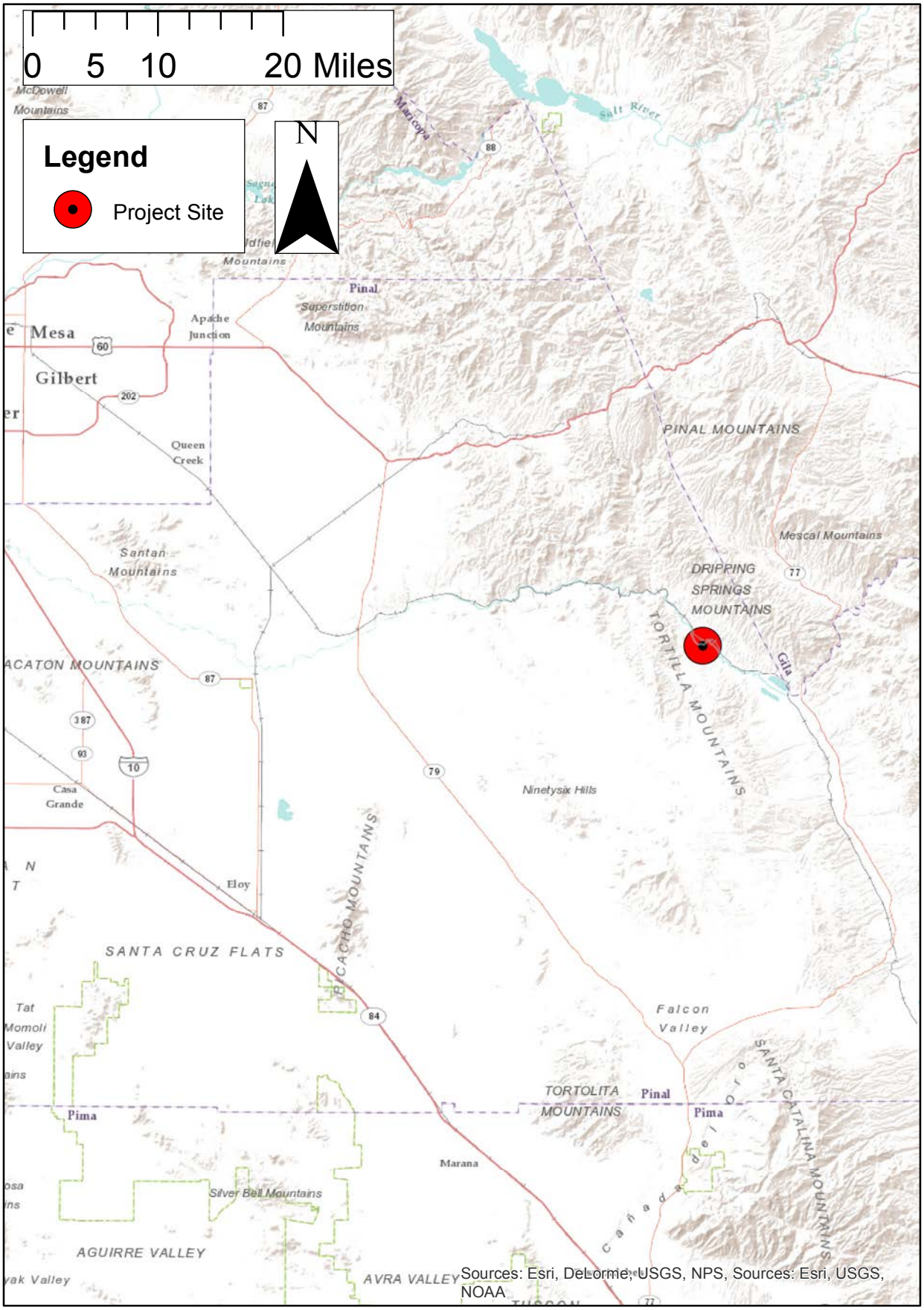
The Arizona Department of Forestry and Fire Management (DFFM) has worked closely with the Town of Kearny and Winkelman NRCD to mitigate hazardous fuels along the Gila River corridor. In 2015, the Kearny River Fire threatened the Town of Kearny and led to mandatory evacuations and property loss. The Kearny River Fire burned over 1,000 acres of saltcedar-dominated riparian area, along with native riparian plant species.

Because of a FEMA-State Agreement for the Fire Management Assistance Grant Program (FMAG), DFFM will be providing financial and technical assistance to remove saltcedar on Town of Kearny lands. This saltcedar removal project will begin this fall and end in the spring of 2019. With the assistance of state grant funding, the Winkelman NRCD can effectively revegetate these treated areas with desirable native plant species. DFFM is proud to be supportive of this Arizona Water Protection Fund application to protect and restore riparian area habitat along the Gila River.

Sincerely,

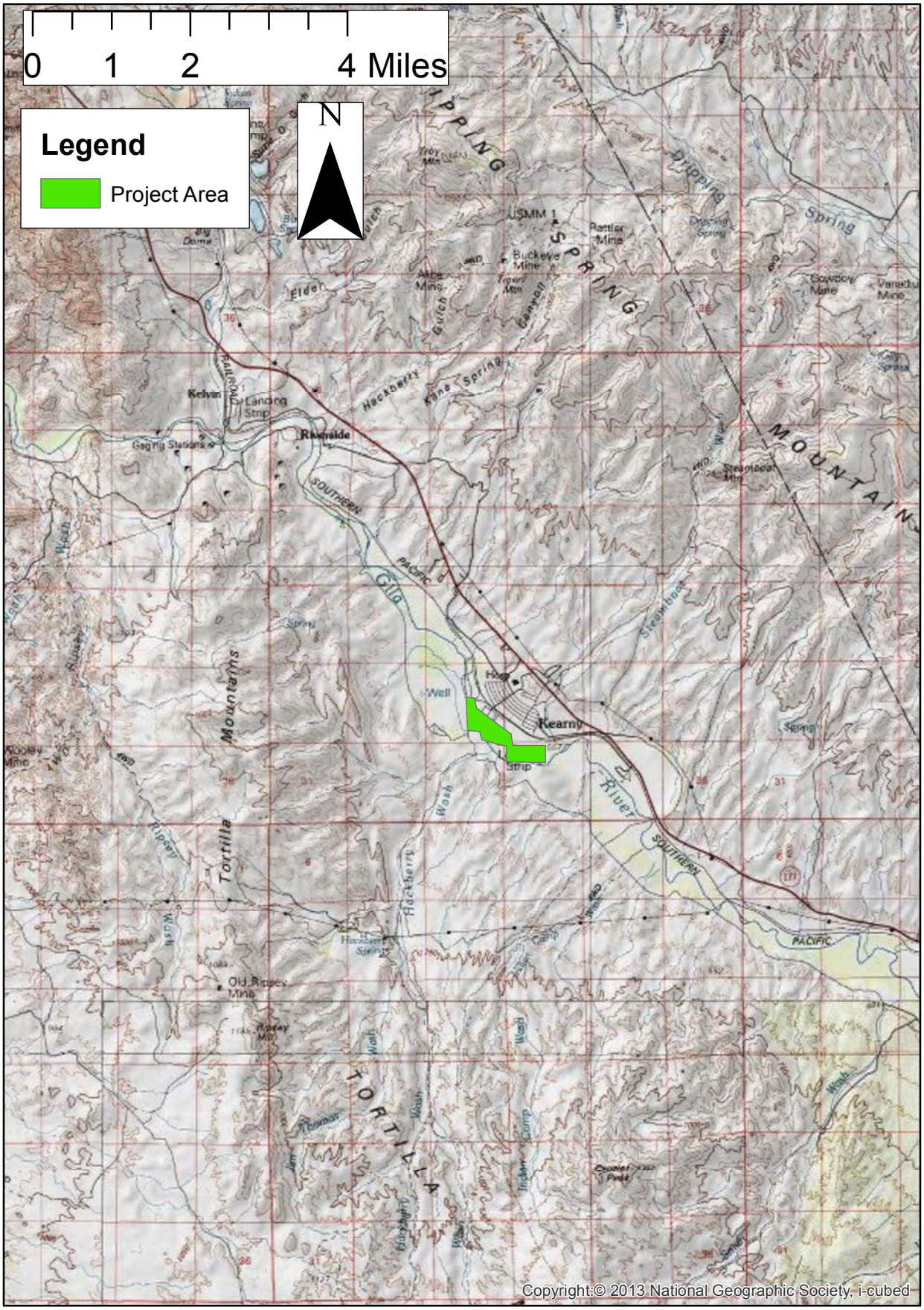
Jeffery C. Whitney
Arizona State Forester

Riparian Restoration Kearny, Arizona

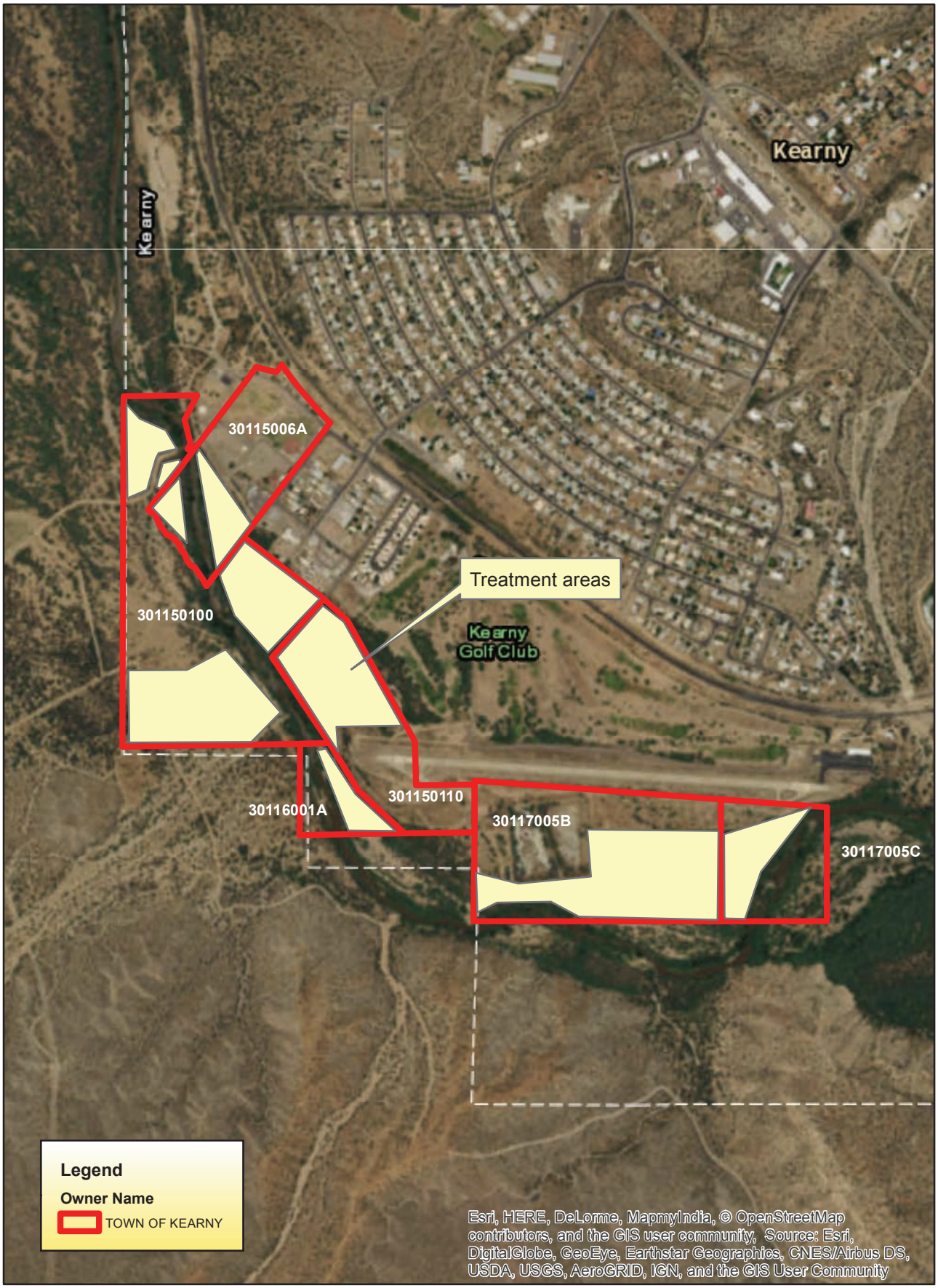


Sources: Esri, DeLorme, USGS, NPS, Sources: Esri, USGS, NOAA

Riparian Restoration Kearny, Arizona



Riparian Restoration Along Gila River Corridor Kearny, Arizona



Riparian Restoration Along Gila River Corridor Kearny, Arizona

Table 1. Parcels for Native Vegetation Planting

Pinal Co. parcel no.	Land owner	Total parcel acres	Treatment acres (approximate)	Treatment area
301-15-006A	Kearny	25.23	10	Both sides of river; south of ball fields
301-15-0100	Kearny	46.33	35	Both sides of river; south of industrial area
301-15-0110	Kearny	25.17	20	North side of river; northwest of airport
301-16-001A	Kearny	5.66	5	North side of river; south and west of airport
301-17-005B	Kearny	41.00	25	North side of river; south of airport
301-17-005C	Kearny	16.02	10	North side of river; south of airport
	Total:	159.41	105	