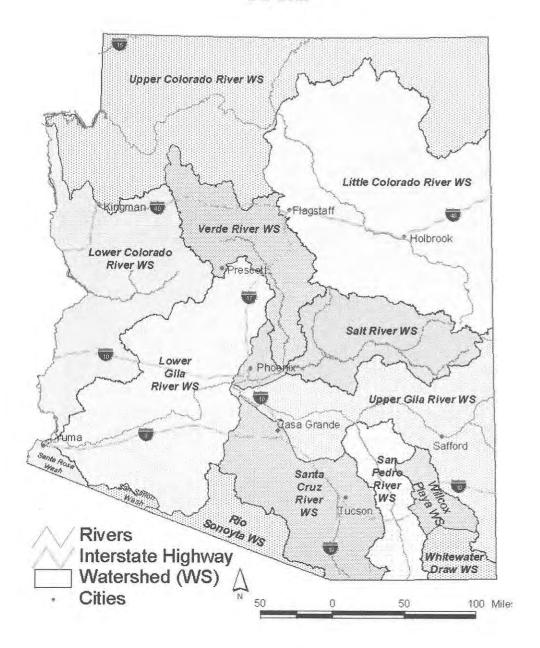
### Arizona Water Protection Fund Application Cover Page FY 2019

Title of Project: Davis Cattle	e Co. Grassland Restorat	ion	
Type of Project:  Capital or Other  Water Conservation  Research	Investment	enefits and capital in	years 11-15 years 16-20 years
Address 2: City: Phoen State: AZ ZIP Code: 85076	ox 50518 ix	vation Districts	Inside an AMA: Yes No No If yes, which AMA:    Phoenix Tucson Prescott Pinal Santa    Cruz Type of Application:   New Continuation
Contact Person:  Name: Steve Barker Title: Executive Dire Phone: 480-893-7652 Fax: e-mail: Steve.Barker@	ector Daacd1944.com		Any Previous AWPF Grants:  ☐ Yes ☐ No  If yes, please provide Grant #(s): 17-188
Arizona Water Protection Grant Amount Requested:		Matching Funds	Obtained and Secured:
\$341,626  If the application is funded, will intend to request an advance:	1. A 2. N	olicant/Agency/Organi Applicant	<u>Amount (\$):</u> \$10,000 130,303.00
Has your legal counsel or contr	acting authority reviewe	d and accented the Grant	Total: 140,303.00  : Award Contract General Provisions?
Yes □No □N/A			
applicant is true and accurate fraudulent information, or kn	application. Additional application. The undersigned ack nowingly concealing a most arizonal. The Arizonal applications.	lly, signature certifies t mowledges that intention naterial fact regarding to a Water Protection Fun	that all information provided by the onal presentation of any false or this application is subject to criminal ad Commission may approve Grant
Frank Krentz		President	
Typed Name of Applicant or Representative	Applicant's Authorized	Title and Telephone	Number
From R. Kill		9/4/18	811
Signature		Date Signed	

### Arizona Watershed Map FY 2019



Title of Project: Davis Cattle Co. Grassland Restoration

Location (include UTM's & Township/Range/Section): Cochise County on boundary of San
Pedro River and Whitewater Draw Watersheds. Parts of Sections 28, 29. 31, 32, and 33 in
T20S R24E and Parts or all of sections 4, 5, 6, 7, 8, 9, 16, 17, 18, 19, 29, and 30 in T21S R24E
(Location must include at least one Section delineation for large scale projects)

### **Executive Summary**

This 5346 acre grassland restoration project will restore mesquite invaded grasslands on the headwaters of Government Draw Wash that flows into the San Pedro River, and the headwaters of Gadwell Canyon that flows into Whitewater Draw. The mesquite will be treated using an aerial application of Sendero, Remedy, and Herbimax which has been shown to be a cost-effective treatment to control mesquite in this area. The cost of the treatment is \$84 per acre.

Fred Davis is the Chairman of the Whitewater Draw Natural Resource Conservation District. He continues to demonstrate the benefits of sound conservation on his ranch using a comprehensive approach to watershed restoration. This ranch has already treated just under 5100 acres of shrub invaded grassland using Spike to control whitethorn and creosotebush. The ranch worked with 3 other ranches to implement an Arizona Department of Environmental Quality 319 Grant to install 287 gabions on his ranch, and 973 total rock gabions in the drainages of the 4 ranches to reduce runoff, erosion and sediment on 65,000 acres. The ranch has also worked with NRCS, Arizona Game and Fish, Arizona Department of Agriculture, and BLM to install 10 miles of fence, 5 solar pumping plants, 12 miles of pipeline, 9 storage tanks and 9 water troughs to improve grazing management. The ranch has a conservation plan on file with NRCS, and a Coordinated Resource Management Plan with NRCS and the State Land Department that includes brush management.





### **Project Overview**

### **Background:**

This grassland restoration proposal is part of a larger watershed restoration partnership effort that started in 2010 in southeast Arizona. Over the first 6 years, the Arizona Association of Conservation Districts (AACD) helped to leverage \$2.5 million in BLM Healthy Lands funds with \$1.9 million in NRCS Environmental Quality Incentives Program, \$133,000 in Arizona Game and Fish funding, \$141,000 in Arizona Department of Agriculture grants, and \$496,000 in rancher funds to develop Coordinated Resource Management Plans on 24 ranches, and restore grassland on 50,439 acres. Fencing, water, and other improvements were installed to improve grazing management. Last year 4 ranches completed grassland restoration projects to control mesquite on 7850 acres using NRCS, BLM and rancher funding. Monitoring assistance was provided by the Arizona Association of Conservation Districts and by the UofA Cooperative Extension. This year 4 ranches applied for partnership funding.

### **Project Goals**

The Davis Cattle Co. Grassland Restoration proposal is the highest ranked project proposal evaluted by the local partnership for 2018. This 5345 acre grassland restoration project will restore mesquite invaded grasslands in southeatern Arizona.

### **Objectives**

The mesquite will be treated using an aerial application of Sendero, Remedy, and Herbimax which has been shown to be a cost-effective treatment to control mesquite in this area. The cost of the treatment is \$84 per acre. The planned treatment area includes 2527 acres of private land, and 2818 acres of State Trust lands. Treatment is planned for late May or early June, 2019.

#### **Project Purpose**

Most of the proposed project area is in the Whitewater Draw watershed, which includes the Douglas Irrigation Non-Expansion Area that was established by the 1980 Groundwater Management Act. The two slides in Appendix A are from an Arizona Department of Water Resources presentation by Director Michael J. Lacy dated October 15, 2014 titled "Groundwater Conditions in Southeast Arizona". The first slide shows the Douglas Irrigation Non-Expansion area. The irrigated agricultural lands in the Whitewater Draw watershed can be seen in the aerial photo. The 2<sup>nd</sup> slide shows the groundwater level changes, with the red dots indicating the drop in groundwater depth from 1993 to 2013.

Brush management is done on rangeland to maximize the capture of precipitation on every acre, providing the maximum long term water benefits for the watershed. Controlling invasive woody species increases available soil moisture, which allows perennial grasses and other herbaceous ground cover to become established on the treated areas. The increase in herbaceous ground cover increases precipitation capture by slowing down runoff, allowing more time for water to infiltrate into the soil and the adjacent washes. According to a Department of Water Resource groundwater study (HMS No. 26), "Recharge of groundwater in the upper alluvial deposists of the Douglas Basin occurs mainly in washes along the mountain fronts. Very little recharge is atributable to direct rainfall on the valley floor and /or seepage from irrigation (Coates and Cushman, 1955, p. 24, 28-29)"

This project area is on the headwaters of major washes between the Mule Mountains and Hay Mountain, where preciptation can be effectively captured on the uplands, and in these large washes. Retoring grasslands invaded by woody species reduces peak flows and downstream flooding in the watershed, helping to restore proper hydrological function and channel characteristics. It also reduces soil erosion on the uplands and streambank erosion, improves water quality, and increases the quality and quantity of forage for livestock and wildlife.

The benefits of brush mangement generally occur over a 2-5 year period following treatement, depending on precipitation. Typically there is a fairly quick intital response in herbaceous cover that includes a lot of annuals. During the next few years, new perrennial grasses are able to establish, and put out more seed. Good grazing management during these first few years is important to achieve the maximum benefits from the treatment.

#### **Wildlife Benefits**

The Whitewater Draw Wildlife Area is a critical roosing area for sandhill cranes and other waterfowl during the winter. Each year, 20,000 -40,000 cranes roost in the shallow water areas in this wildlife area, and feed on the corn and grain from the surrounding cropland. The area also attracks ducks, geese, heron, egrets, gulls, terns, and other shorebirds. Prarie and peregrine falcons hunt the grasslands in this watershed. Mule deer, javalina, bobcats, and coyotes are other common wildlife species that benefit from restoring healthy rangelands in the area.

#### Tasks

Task 1: The rancher will obtain a permit from the State Land Department for the treatment of the State Trust lands. The Arizona State Land Department has provided a letter indicating that no cultural resource clearances are needed for the project due to no ground disturbance.

Task 2: Crop Production Services will be contracted to arrange for the airplance, chemicals, and application to ensure that the chemical is applied according to the label. Monitoring done during application includes evaluating air temperature, wind speed, soil temperature, and soil moisture.

Task 3: Vegetation Monitoring will be done before and after treatment.

#### **Monitoring**

The treated area will have vegetation monitoring transects established before treatment, and follow-up monitoring will be done 1, 2, 3 and 5 years after treatment. The Conservation Districts, ranchers, and partner agencies in Arizona have a well established and accepted protocol for rangeland monitoring that was developed under the leadership of the Arizona Cooperative Extension. NRCS ecological sites are used to map the planning areas, and identify key areas for inventory and monitoring. Ecological site and soil maps are attached. Inventory methods being used include double sampling or dry-weight rank and comparative yield for evaluating current production and species composition. Photo points, with frequency, dry-weight rank, and point cover are used to monitor changes in plant community composition and ground cover over time.

### **Detailed Water Protection Fund Budget**

\$318,677 is being requested from the Arizona Water Protection Fund for the mesquite spraying, plus \$15,934 (5%) for grant administration.

The following funds are being requested from the Water Protection Fund Grant Program

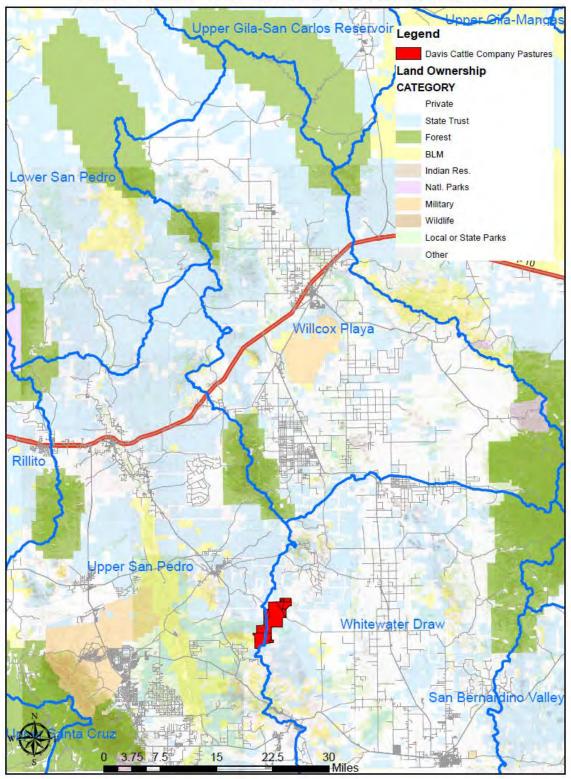
Item			Costs	
	Unit	Units	Total	WPF
	Cost		Cost	Requested
Outside Services: Arial application of chemicals for	\$84.00	5345	\$448,980	\$318,677
mesquite control		acres		
Grant Administration by AACD at 5%			\$15,934	\$15,934
Total				\$334,611

### **Detailed Matching Funds Budget**

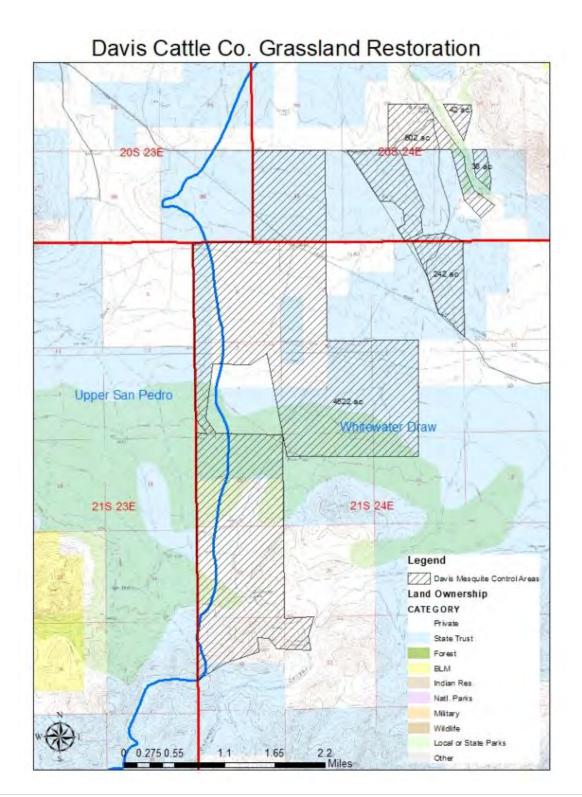
This grassland restoration project was recently approved for Environmental Quality Incentives Program (EQIP) funding that will provide \$130,303 of the \$481,929 total estimated cost. Davis Cattle Company and the Arizona Association of Conservation Districts will provide monitoring, and Davis Cattle Co. willl provide grazing management of the treated areas over a 5 year period following treatment.

		Costs		Planne	d Funding So	urce
Item	Unit Cost	Units	Total Match	AACD	NRCS EQIP	Davis Cattle Co
Direct Labor: Vegetation monitoring in years 0, 1, 2, 3, 5	\$300 per transect per year	2 transects, 1 time before and 4 times after treatment	\$3,000	\$3000		
Direct Labor: Manage livestock grazing on treated areas to maximize treatment benefits for at least 5 years	\$0.33 per acre per year	5345 acres for 5 years	\$7,000			\$7,000
Outside Services: Arial application of chemicals for mesquite control	\$84.00	5345 acres	\$130,303		\$130,303	
		Total	\$140,303			

The treated area can be reduced if only partial funding is available from the Watershed Protection Fund. The ranch will provide time and labor for overseeing implementation of the project, managing grazing on the area after treatment, and monitoring the project. Letters of support are attached.



The hashed areas on the map below idenify the areas planned for grassland restoration. The treatment area includes 2527 acres of private land, and 2818 acres of State Trust lands. The dark blue line is the watershed boundary between the Upper San Pedro and Whitewater Draw 8 Digit Watersheds. Land ownership is shown in the legend.



#### **Other Considerations**

The Arizona Conservation Partnership is a statewide partnership effort that includes 42 Conservation Districts, the Arizona Association of Conservation Districts, NRCS, BLM, USFS, USFWS, ARS, the Arizona State Land Department, Arizona Game and Fish Department, Arizona Department of Agriculture, Arizona Department of Forestry and Fire Management, and Arizona State Parks and Trails. The vision is to join forces and leverage resources to enhance Arizona's working landscape for ecological and economic prosperity. The Arizona Conservation Partnership is focused on watershed health, including water quality and quantity, aquatic and riparian health, forest and rangeland health, and wildlife habitat. The partnership supports working landscapes, that support sustainable agricultural production and biomass utilization.

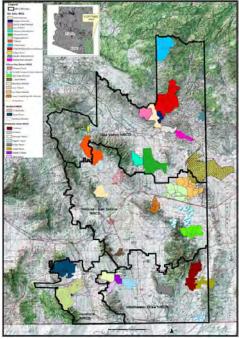


Figure 1: SE Arizona ranches assisted 2010 - 2016

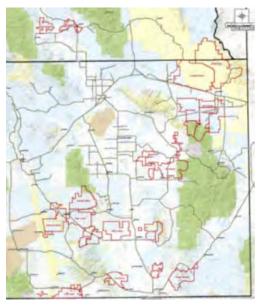


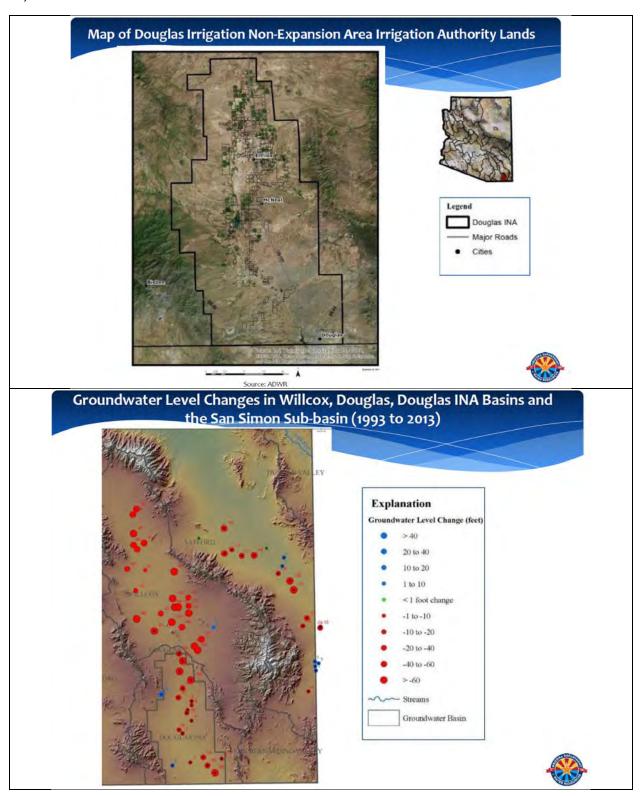
Figure 2: SE Arizona ranches with proposed projects 2017-2018

The participants in this southeast Arizona partnership efforts include the following Conservation Districts agencies and organizations.

- Hereford Natural Resource Conservation
   District
- Whitewater Draw Natural Resource Conservation District
- Gila Valley Natural Resource Conservation
   District
- Willcox San Simon Natural Resource Conservation District
- San Pedro Natural Resource Conservation District
- Arizona Association of Conservation Districts

- Arizona State Land Department
- Arizona Department of Agriculture
- Arizona Game and Fish Department
- Cochise County
- USDI Bureau of Land Management
- USDA Natural Resource Conservation Service
- USDA Forest Service
- Agricultural Research Service, Walnut Gulch Watershed
- Fort Huachuca
- Arizona Land and Water Trust

**Appendix A:** "Groundwater Conditions in Southeast Arizona", ADWR Director Michael J. Lacy, October 15, 2014



# Project Location & Environmental Contaminant Information FY 2019

Project Location Information			
1. County: <u>Cochise</u>	2. Section(s): <u>28, 29.</u> <u>31, 32, 33 &amp; 4, 5, 6, 7,</u> <u>8, 9, 16, 17, 18, 19,</u> <u>29, 30</u>	3. Township: <u>20S &amp; 21S</u>	4. Range: <u>24E</u>
<ul><li>5. Watershed: <u>Upper San Pedro</u></li><li>6. 8 or 10 Digit Hydrologic Unit</li></ul>		5080301	
7. Name of USGS Topographic N			· Mountain
8. State Legislative District: 14	p	various <u>ilay widanami, i bito</u>	Wountain
(Information available at: http://	/azredistricting.org/districtl	ocator/	
9. Land ownership of project area		18 ac	
10. Current land use of project are			
11. Size of project area (in acres):	5345 DIRECT		
12. Stream Name: Government D	raw Wash, San Pedro River	, Gladwell Canyon, Whitewa	nter Draw
13. Length of stream through proje	ect area: 5		
14. Miles of stream benefited: 5 n	niles		121
15. Acres of riparian habitat: 5 acr	res will be:		
		nhanced	
		aintained estored	
	□C <sub>1</sub>	reated	
16. General description and/or deli	neation for the area of impa	ct of the project within the w	vatershed.
This 5346 acre grassland restoration San Pedro River, and the headwater	n project benefits the heady	vaters of Government Draw	Wash that flows into the
larger grassland restoration partner	ship effort by the Arizona (	Conservation Partnership that	started in 2010 The
Davis Ranch has already treated ju	st under 5100 acres to contr	ol other woody species such	as creosotebush and
whitethorn. Last year 4 nearby ran	ches completed grassland re	estoration projects on 7850 ac	cres using NRCS, BLM
and rancher funding.			
17. Provide directions to the project	t site from the nearest city of	or town. List any special acc	ess requirements:
The project is located 12 miles east Arizona.	a of Tomostone, on both \$10	ies of Davis Koad, between I	omostone and McNeal
Environmental Contaminant	Location Information		1 1

oes your project site contain known environmental contaminants? ontaminant(s) and enclose data about the location and levels of con			If yes, please identify the
e there known environmental contaminants in the project vicinity? ntaminant(s) and enclose data about the location and levels of cont			If yes, please identify the
e you asking for Arizona Water Protection Fund monies to identify	whether o	or not	environmental contaminants

### 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
- 2. Project Title: Davis Cattle Co. Grassland Restoration
- 3. Applicant Name and Address: Arizona Association of Conservation Districts
- 4. Current Land Owner/Manager(s): Davis Cattle Co. LLC, State Trust Land
- 5. Project Location, including Township, Range, Section: Parts of Sections 28, 29, 31, 32, and 33 in T20S R24E and Parts or all of sections 4, 5, 6, 7, 8, 9, 16, 17, 18, 19, 29, and 30 in T21S R24E
- 6. Total Project Area in Acres (or total miles if trail): 5345 ac

	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 will not include any ground disturbance. A combination of Sendero, Remedy and Herbimax will be applied aerially to control mesquite invasion on grasslands. Crop Production Services will be contracted to aerially apply the chemicals according to label directions, including checking soil moisture, wind speed, and temperature during applications. Vehicle travel for all related activities will be on existing ranch and county roads.
	9.	Describe the condition of the current ground surface within the entire project boundary area (for example, is the ground in a natural undisturbed condition, or has it been bladed, paved, graded, etc.). Estimate horizontal and vertical extent of existing disturbance. Also, attach photographs of project area to document condition: Current ground surface is native rangeland, and it will not be disturbed by the project
	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:
y0	ur k	sign on the line below certifying all information provided for this application is accurate to the best of nowledge.    Applicant Printed Name   Date   Applicant Printed Name   Printed N
		FOR SHPO USE ONLY
SH	Fun Surv Con	Finding: ding this project will not affect historic properties.  Yey necessary – further GRANTS/SHPO consultation required (grant funds will not be released until sultation has been completed)  The project will not be released until sultation has been completed (grant funds will not be released in the consultation has been completed)  The project will not be released until sultation has been completed (grant funds will not be released in the consultation has been completed)

SHPO Comments:		
To Govern the company of the company		
For State Historic Preservation Office:	Date:	

### STATE OF ARIZONA HISTORIC PROPERTY INVENTORY FORM

Please type or print clearly. Fill out each applicable space accurately and with as much information as is known about the property.

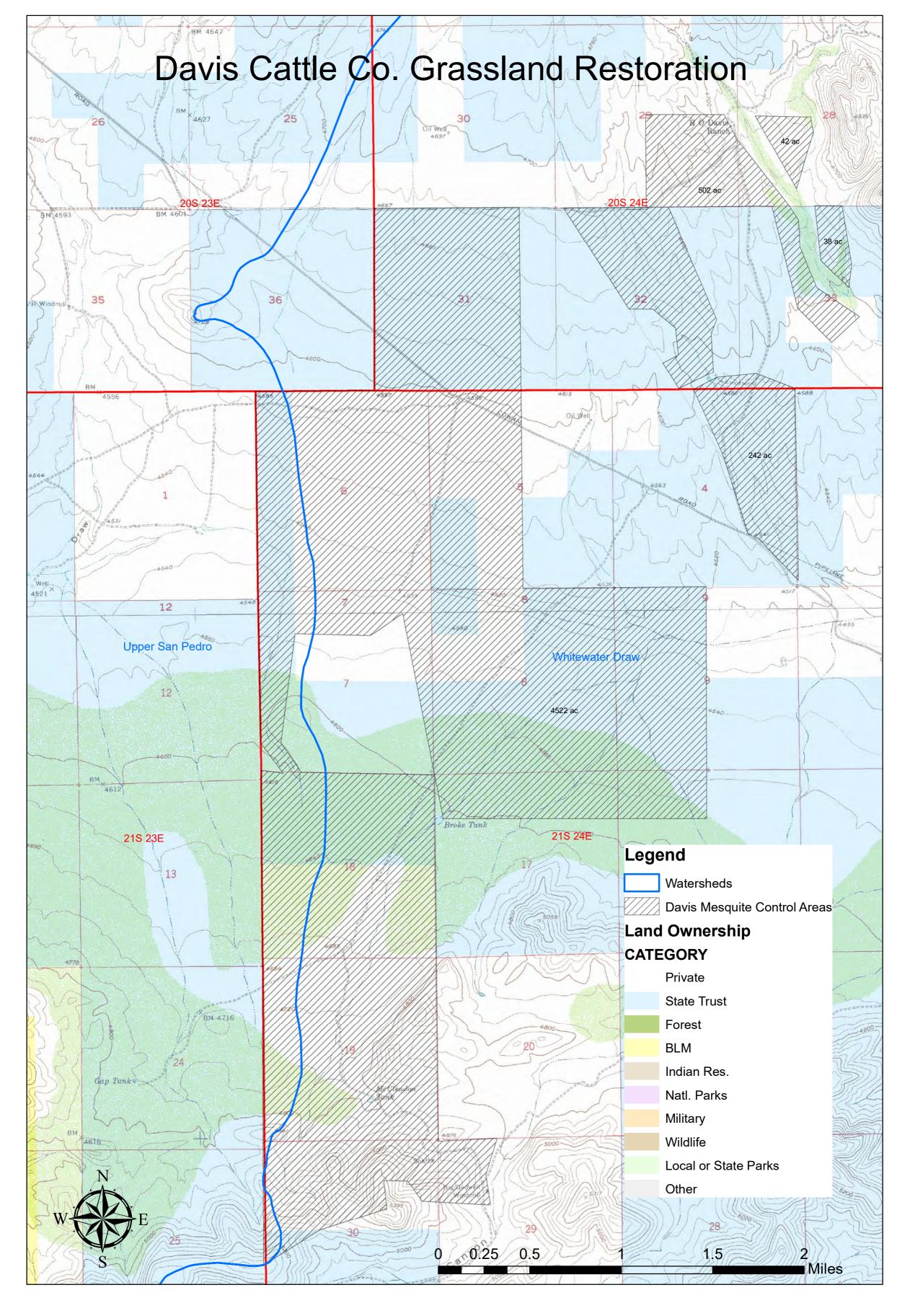
For properties identified through survey: Site No	Survey Area:
Historic Names (enter the name(s), if any that best rej	flect the property's historic importance):
Address:	
City or Town: Vicinity County:	Tax Parcel No.:
Township: Range: Section:	Quarters: Acreage:
Block: Lot(s): Plat (Addition):	Year of plat (addition):
UTM Reference – Zone: Easting: N	Northing:
USGS 7.5' quadrangle map:	
ARCHITECT: not determined know	wn Source:
BUILDER: not determined known	Source:
CONSTRUCTION DATE: known	estimated Source:
STRUCTURAL CONDITION Good (well maintained; no serious problems appared) Fair (some problems apparent) Describe:	rent)
Poor (major problems; imminent threat)  Ruin/Uninhabitable	
USES/FUNCTIONS	
Describe how the property has been used over time, beginning with the original use:	Attach a recent photograph of property in this space. Additional photographs may be appended.
Sources:	
PHOTO INFORMATION	
Date of photo: View Direction (looking towards):	

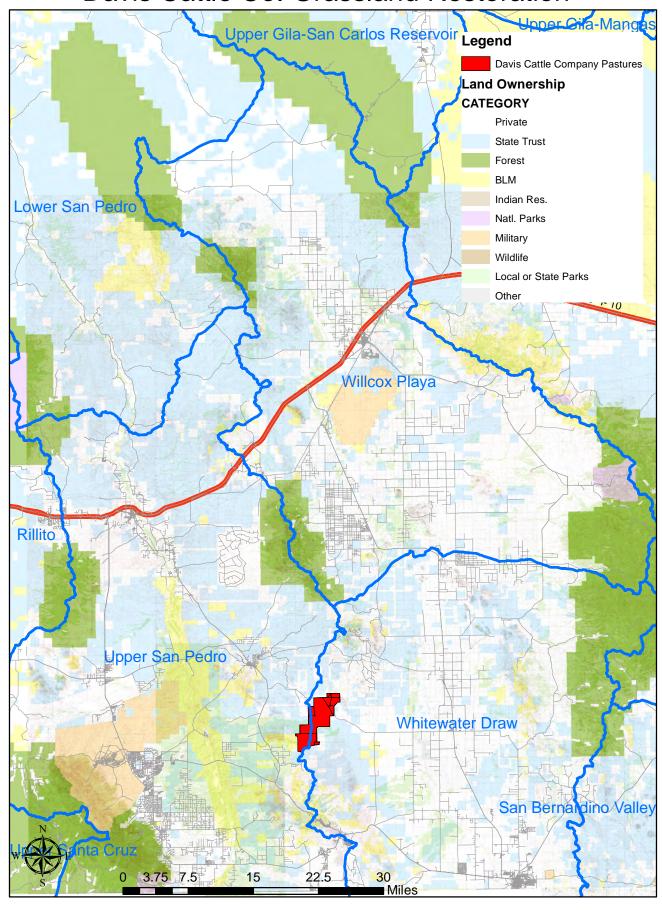
### **SIGNIFICANCE**

To be eligible for the National Register, a property must represent an important part of the history or architecture of an area. The significance of a property is evaluated within its historic context, which are those patterns, themes, or trends in history by which a property occurred or gained importance. Describe the historic and architectural contexts of the property that may make it worthy of preservation.

A. HISTORIC EVENTS/TRENDS – Describe any historic events/trends associated with the property:
B. PERSONS – List and describe persons with an important association with the building:
C. ARCHITECTURE – Style: no style
Stories: Basement Roof Form:
Describe other character-defining features of its massing, size and scale:
INTEGRITY  To be eligible for the National Register, a property must have integrity (i.e. it must be able to visually convey its importance). The outline below lists some important aspects of integrity. Fill in the blanks with as detailed a description of the property as possible.
Location - Original Site Moved: Date: Original Site:
DESIGN Describe alterations from the original design, including dates:
MATERIALS  Describe the materials used in the following elements of the property:
Walls (structure):
Walls (sheathing):
Windows:
Roof:
Foundation:
SETTING  Describe the natural and/or built environment around the property:
How has the environment changed since the property was constructed?
WORKMANSHIP
Describe the distinctive elements, if any, of craftsmanship or method of construction:
NATIONAL REGISTER STATUS (if listed, check the appropriate box)
☐ Individually Listed; ☐ Contributor; ☐ Non-contributor to Historic District

consultan		ATIONS ON NATIONAL REGISTER ELIGIBILITY (opinion of SHPO staff or surve
Property	is	is not eligible individually.
Property	is	is not eligible as a contributor to a listed or potential historic district.
More	informati	ion needed to evaluate.





### **Ecological Sites Map**

Customer(s): DAVIS CATTLE COMPANY LLC

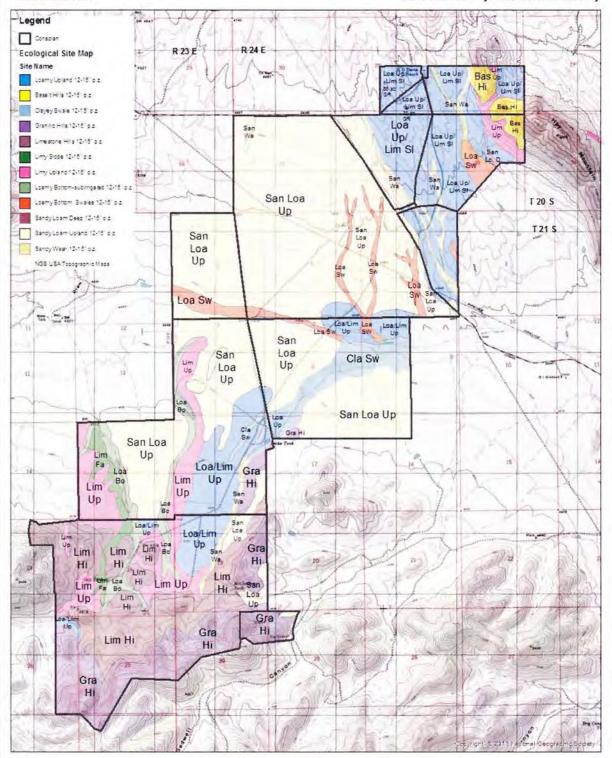
District: WHITEWATER DRAW NRCD

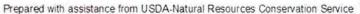
Approximate Acres: 9346

Date: 2/3/2017

Field Office: DOUGLAS Agency: USDA NRCS

Assisted By: DUSTY GLIDEWELL State and County: AZ, Cochise County











DAVIS COHLE Company brossland Restoration

### Soils Map

Customer(s): DAVIS CATTLE COMPANY LLC

District: WHITEWATER DRAW NRCD

Approximate Acres: 9346

Date: 2/3/2017

Field Office: DOUGLAS Agency: USDA NRCS

Assisted By: DUSTY GLIDEWELL State and County: AZ. Cochise County

