

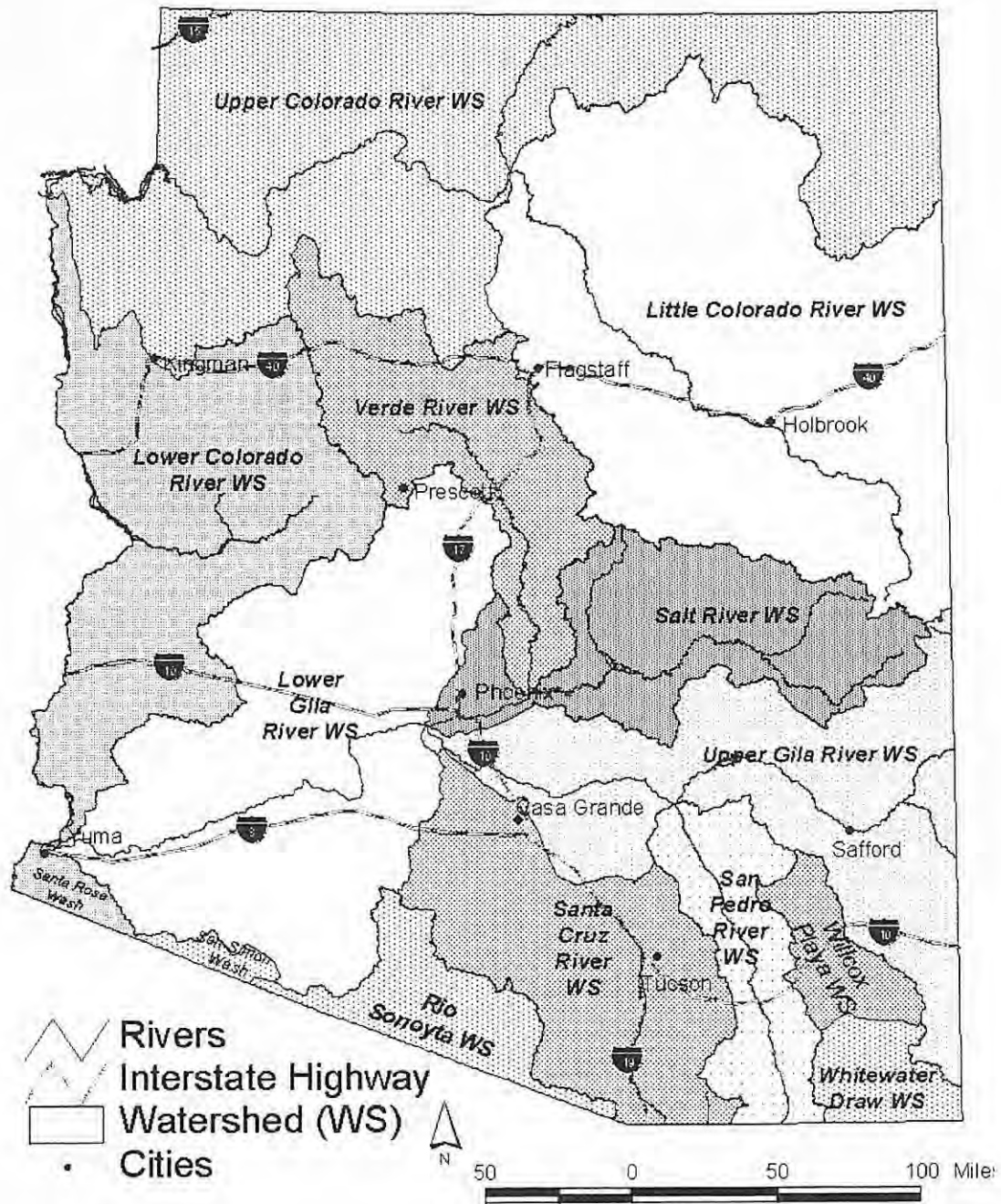
**Arizona Water Protection Fund  
Application Cover Page**

*WPF 0325*

<b>Title of Project:</b> Coal Mine Fence													
<b>Type of Project:</b> <input checked="" type="checkbox"/> Capital or Other <input type="checkbox"/> Water Conservation <input type="checkbox"/> Research	<b>Stream Type</b> <input checked="" type="checkbox"/> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral												
<b>Your level of commitment to maintenance of project benefits and capital improvements:</b> <input type="checkbox"/> < 5 years <input type="checkbox"/> 5-10 years <input type="checkbox"/> 11-15 years <input checked="" type="checkbox"/> 16-20 years													
<b>Applicant Information:</b> Name/Organization: Arizona Game and Fish Department Address 1: 2221 W. Greenway Address 2: City: Phoenix State: AZ ZIP Code: 85023 County: Maricopa Phone: 602/942-3000 Fax: 602/789-3299 Watershed: Santa Cruz River Tax ID No.: <span style="background-color: black; color: black;">Personal Identifying Information</span>													
<b>Inside an AMA:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>  <b>If yes, which AMA:</b> <input type="checkbox"/> Phoenix <input type="checkbox"/> Tucson <input type="checkbox"/> Prescott <input type="checkbox"/> Pinal <input checked="" type="checkbox"/> Santa Cruz													
<b>Type of Application:</b> <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation													
<b>Contact Person:</b> Name: Joan E. Scott Title: Habitat Program Manager Phone: 520/388-4447 Fax: 520/628-5080 e-mail: jscott@azgfd.gov													
<b>Any Previous AWPf Grants</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <b>If yes, please provide Grant #(s)</b>													
<b>Arizona Water Protection Fund Grant Amount Requested:</b>  \$181,751.00  If the application is funded, will the Grantee intend to request an advance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th align="center" colspan="2"><b>Matching Funds Obtained and Secured:</b></th> </tr> <tr> <th align="left"><u>Applicant/Agency/Organization:</u></th> <th align="right"><u>Amount (\$):</u></th> </tr> <tr> <td>1. Applicant</td> <td align="right">11,439.00</td> </tr> <tr> <td>2. National Resource Conservation Service</td> <td align="right">71,280.00</td> </tr> <tr> <td>3.</td> <td></td> </tr> <tr> <td align="right" colspan="2"><b>Total: 82,719.00</b></td> </tr> </table>	<b>Matching Funds Obtained and Secured:</b>		<u>Applicant/Agency/Organization:</u>	<u>Amount (\$):</u>	1. Applicant	11,439.00	2. National Resource Conservation Service	71,280.00	3.		<b>Total: 82,719.00</b>	
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<b>Total: 82,719.00</b>													
<b>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.</b>													
Duane L. Shroufe, Director, AGFD	Director: 602/942-3000												
Typed Name of Applicant or Applicant's Authorized Representative	Title and Telephone Number												
<i>X Duane L. Shroufe</i>	6/14/05												
Signature	Date Signed												

RECEIVED  
ARIZONA WATER PROTECTION FUND

## Arizona Watershed Map



Title of Project: Coal Mine Fence

## **Executive Summary**

Twelve miles of fence will be constructed along the boundary of the Coal Mine Spring property to keep trespass cattle off the property, to protect riparian habitat that is occupied by the federally listed Endangered Gila topminnow, and to protect watershed and riparian habitat important for other listed and sensitive wildlife species.

In December 2004, for a cost of \$2.25 million, the Arizona Game and Fish Department purchased the 2628-acre Coal Mine Spring property southwest of the Santa Rita Mountains and adjacent to and north of the Sonoita Creek State Natural Area. Protection of the Coal Mine Spring habitat is of paramount importance to the continued existence and recovery of the Gila topminnow. Seven federally listed species and 16 sensitive species benefit from the protection of this property. The property will be managed in perpetuity for the benefit of listed and sensitive wildlife and fish and for maintenance of riparian and wetland values. The Coal Mine Spring property will be managed as a native fish watershed; after appropriate evaluation and review, other native fish species may be reintroduced into pools and habitats on the property. AGFD has implemented an intergovernmental agreement with Arizona State Parks to jointly manage the property as part of the Sonoita Creek State Natural Area.

The Coal Mine Spring Property has been grazed historically; without fences, cattle will continue to access this important riparian habitat. Improperly managed grazing has caused removal of riparian vegetation, with direct negative impact on surface water flows and fish and wildlife habitat. Overgrazing is clearly evident in reaches of the canyon where vegetation has been reduced, resulting in channel instability, accelerated erosion, and channel widening. Improved management of riparian and watershed habitats for fish and wildlife values will result in increased vegetation, improved retention of stream flow, and channel characteristics that provide habitat and water depth, duration, and temperatures necessary for fish production.

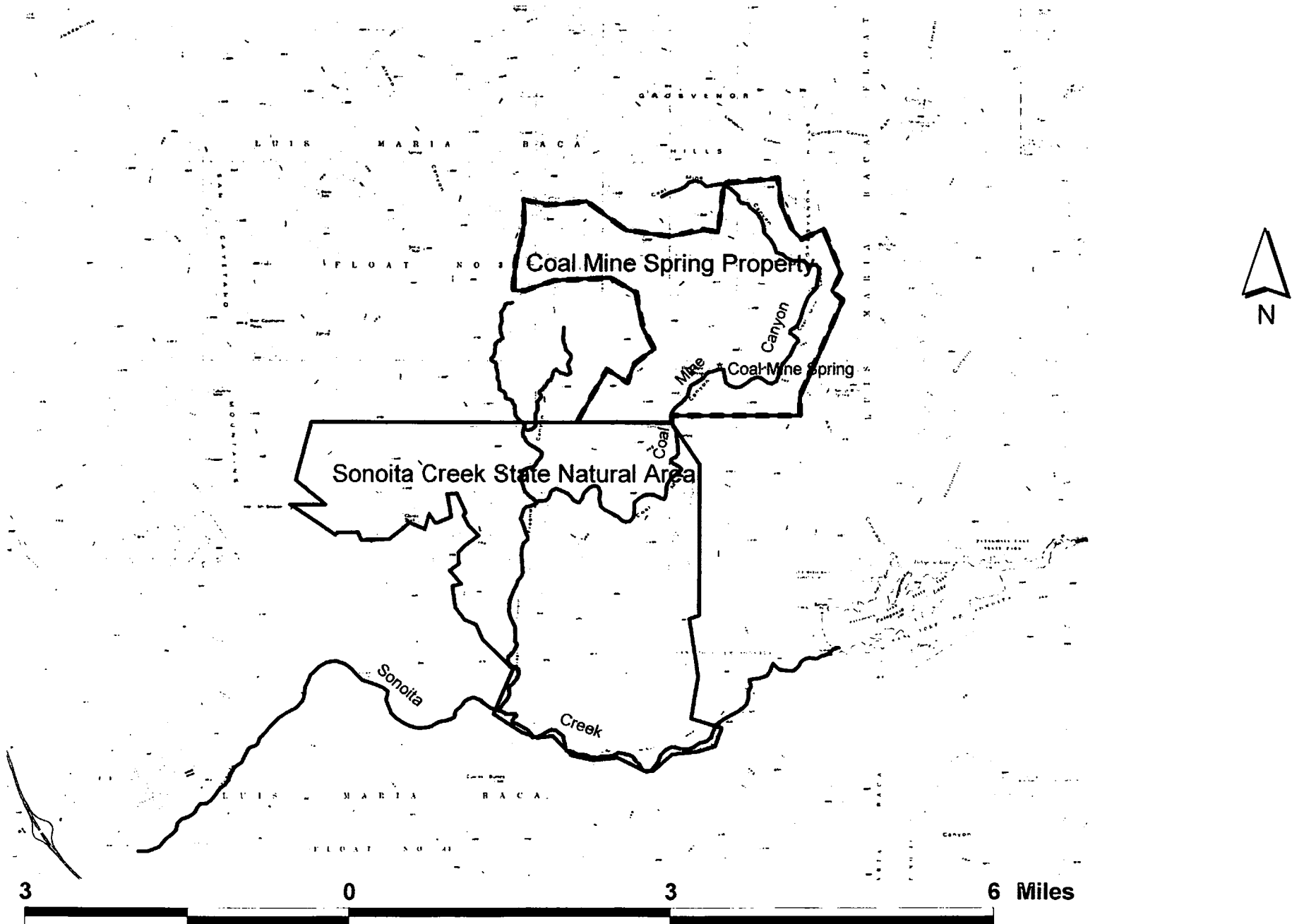
AGFD will contract for construction of a barbed wire fence to meet AGFD specifications for wildlife-friendly fencing, and therefore allow passage of wildlife into and through the property while excluding trespass cattle. AGFD will complete environmental compliance for the project and will contract an archaeological survey to obtain SHPO clearance. AGFD will monitor vegetation changes by repeat photography and will monitor avian and fish population changes by surveys.

## Project Location & Environmental Contaminant Information

Project Location Information			
1. County: <u>Santa Cruz</u>	2. Section: <u>Secs. 2, 3, 10, 11, 14, 15</u>	3. Township: <u>22S</u>	4. Range: <u>14E</u>
5. Name of USGS Topographic Map where project area is located: <u>San Cayetano Mountains and Patagonia</u> 6. State Legislative District: <u>25</u> 7. Land ownership of project area: <u>Arizona Game and Fish Department</u> 8. Current land use of project area: <u>wildlife, native fish, and riparian conservation</u> 9. Size of project area (in acres): <u>2628</u> 10. Stream Name: <u>Coal Mine Spring and Canyon</u> 11. Length of stream through project area: <u>4 miles</u> 12. Miles of stream benefited: <u>4 miles</u> 13. Acres of riparian habitat: <u>approx 50 acres</u> will be: <div style="margin-left: 40px;"> <input checked="" type="checkbox"/> Enhanced  <input checked="" type="checkbox"/> Maintained  <input type="checkbox"/> Restored  <input type="checkbox"/> Created           </div>			
12. Provide directions to the project site from the nearest city or town. List any special access requirements: <p style="margin-left: 40px;">From the Town of Patagonia, go west on Hwy 82 approximatly 3 miles to the Salero Ranch Road. Turn north and go approximately 6 miles nw to the Montezuma Well Road. Turn south on the two track route and drive 5 miles to Coal Mine Spring. This road is for administrative use only; user must have combination to lock to drive down the Montezuma Well Road. Public access is by foot through the Sonoita Creek State Natural Area.</p>			
Environmental Contaminant Location Information			
1. Does your project site contain known environmental contaminants? <input type="checkbox"/> YES <input checked="" type="checkbox"/> 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? <input type="checkbox"/> YES <input checked="" type="checkbox"/> 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? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			

# Coal Mine Fence

-  Fence to Be Constructed
-  Coal Mine Spring Property
-  Streams and Canyon Bottoms
-  Sonoita Creek State Natural Area



## Project Overview

### Background

In December 2004 the Arizona Game and Fish Department purchased the 2628-acre Coal Mine Spring Property in Santa Cruz County with AGFD Heritage Funds (\$1.5 million) and an Endangered Species Act Section 6 Recovery Land Acquisition Grant from the U.S. Fish and Wildlife Service (\$750,000). [Note: These acquisition funds of \$2.25 million are not listed as part of the match for this fence proposal, but are above and beyond the described match.] This investment shows the commitment that AGFD has to the conservation of fish and wildlife habitat on this property.

The property was purchased to protect an existing natural spring and canyon with a population of Gila topminnow (*Poeciliopsis occidentalis occidentalis*), which is a federally listed endangered species. Six other federally listed species (see Table 1) may occur on the property, have potential to occur on the property, or could occur on the property through natural colonization or reintroduction. Another 16 sensitive species (see Table 2) already exist on the site, exist in the general area, or have the potential to inhabit the area through natural recolonization or reintroduction. This property was purchased for the purpose of recovery of listed species and to protect habitat of other sensitive species. According to the requirements of the acquisition funds (USFWS Recovery Land Acquisition Funds and AGFD Heritage Funds), this land must be managed in perpetuity for the benefit of listed and sensitive species. These wildlife species are dependent of the integrity of the riparian values of this land.

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Table 1. Federally listed species in the project area.

Species	Federal Status	Habitat on Project Area
Gila topminnow	Endangered	Occurs on the site
Gila chub	Proposed	Historic habitat, could be re-introduced
Desert pupfish	Endangered	Historic habitat, could be re-introduced
Western yellow-billed cuckoo	Candidate	Could exist or could recolonize site
Mexican spotted owl	Threatened	Property is natural corridor between PACs
Lesser long-nosed bat	Endangered	Foraging habitat present on site; roost nearby
Chiricahua leopard frog	Threatened	Historic habitat, could be re-introduced

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Table 2. Sensitive species in the project area.

Species	Habitat on Project Area
Lonfin dace	Exists in project area
Speckled dace	Exists in Sonoita Creek, could reintroduce to Coal Mine
Desert sucker	Exists in Sonoita Creek, could reintroduce to Coal Mine
Sonora sucker	Exists in Sonoita Creek, could reintroduce to Coal Mine
Rose-throated becard	Exists in area; protection of riparian habitat will improve habitat
Thick-billed kingbird	Exists in area; protection of riparian habitat will improve habitat
Northern gray hawk	Exists in area; protection of riparian habitat will improve habitat
Cave myotis	Exists in area; protection of riparian habitat will improve habitat
Mexican long-tongued bat	Foraging habitat on property
Bottae pocket gopher	Exists in area
Supine bean	Exists in area
Five-striped sparrow	Exists in area
Arizona metalmark	Exists in area
Wilcox fishhook cactus	Exists in area
Black-capped gnatcatcher	Exists in area
Mexican garter snake	Exists in area

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Coal Mine Canyon is a tributary southwest of the Santa Rita Mountains, feeding into Fresno Canyon, Sonoita Creek, and eventually into the Santa Cruz River. The property is within the Santa Cruz River Watershed (a subwatershed of the Gila River watershed) and is within Santa Cruz County. Elevation of the property ranges from a low of about 3,960 feet in the lowest section of Coal Mine Canyon to over 4,800 feet on some of the upland. Upland vegetation is Semidesert Grassland.

Coal Mine Spring consists of a permanent deep pool at the spring and a number of smaller interconnected pools below the spring to the southern property boundary, a distance of approximately one-half mile. Stream flow is continuous to intermittent between the spring and the southern property boundary, depending on time of year. Some of the pools hold water for extended periods but may go dry during drought. Riparian vegetation can be found the entire length of the canyon bottom upcanyon from Coal Mine Spring, and there are numerous deep bedrock pools that may persist in most years.

Vegetation in the perennial and semi-perennial canyon bottom consists of the Velvet Ash (*Fraxinus pennsylvanica* var. *velutina*) Association of the Interior Southwestern Riparian Deciduous Forest and Woodland. The overstory of this riparian vegetation association is

dominated by velvet ash. Netleaf hackberry (*Celtis reticulata*) and Arizona sycamore (*Platanus wrightii*) are important associated trees, and occasional cottonwoods (*Populus fremontii*) and willows (*Salix gooddingii*) are present. Deer grass (*Muhlenbergia rigens*) grows in stream channels, and sedges (*Carex* species) occur around the perimeter of rock pools with year-round or semi-permanent water. Dominant vegetation in seasonally dry reaches of the canyon includes velvet mesquite (*Prosopis velutina*), seepwillow (*Baccharis salicifolia*), desert broom (*B. sarothroides*), and cat-claw acacia (*Acacia greggii*).

Although the amount of seasonal stream flow in the watershed is primarily determined by annual rainfall, improperly managed grazing has caused removal of riparian vegetation, with direct negative impact on surface water flows. Overgrazing is evident in reaches of the canyons where vegetation has been reduced, resulting in channel instability, accelerated erosion, and channel widening. Improved management of riparian and watershed habitats for wildlife values will result in increased vegetation, improved retention of stream flow, and channel characteristics that provide habitat and water depth, duration, and temperatures necessary for fish production.

The Endangered Gila topminnow population in Coal Mine Canyon was discovered in 1997. The Coal Mine/Fresno Canyon population constitutes nearly a 20% increase in the extant populations of topminnow. The revised draft Recovery Plan for Gila topminnow counts Coal Mine Canyon and Fresno Canyon as 2 of only 14 naturally occurring extant populations and together they represent the second largest population, both numerically and spacially, of Gila topminnow left in existence. The Coal Mine population is upstream of the Fresno Canyon population, and may be the reason that the Fresno Canyon population persists, because Fresno Canyon is also occupied by exotic fish species. Protection of the Coal Mine Spring population is of paramount importance to the continued existence and recovery of Gila topminnow.

AGFD will manage the Coal Mine Spring property as a native fish watershed. In addition to Gila topminnow, longfin dace, a sensitive native fish species, has been documented in Coal Mine Spring and Canyon. Coal Mine Canyon is also a potential reintroduction site for several other species of native fish that were native to this area and probably historically occupied the habitat. These species include: Gila chub, desert pupfish, speckled dace, desert sucker, and Sonora sucker. Coal Mine Canyon is also an appropriate reintroduction site for the federally listed Threatened Chiricahua leopard frog.

The riparian habitat of Coal Mine Canyon also provides habitat that could be used by other listed and sensitive species, especially when the Canyon is restored to its full potential. Yellow-billed cuckoo, a Federal Candidate species, is found in the general area. Mexican spotted owl, a federal Threatened species, can use the riparian corridor to move between Protected Activity Centers in the Santa Rita Mountains and the Atascosa/Pajarita Mountains. Other sensitive species that will benefit from improved riparian habitat include rose-throated becard, thick-billed kingbird, northern gray hawk, cave myotis, black-capped gnatcatcher, and Mexican garter snake. Upland sensitive



wildlife that will benefit from improved condition of uplands include the Endangered lesser long-nosed bat, Mexican long-tongued bat, bottae pocket gopher, and five-striped sparrow.

AGFD has entered into an Intergovernmental Agreement with Arizona State Parks to cooperatively manage the Coal Mine Springs property as part of the adjacent Sonoita Creek State Natural Area. This agreement directs both agencies to manage the Coal Mine Spring property to conserve the area's natural resources, including the Gila topminnow, and to maintain natural surface water flow regimes. Arizona State Parks will manage the recreation and public use of the property, and AGFD will manage the wildlife and fisheries resources. The two state agencies have an excellent working relationship, and field personnel are in contact regularly regarding planning and management issues. State Parks personnel patrol the property as part of the Sonoita Creek State Natural Area and lead public hikes to the property. Their visits are estimated to be approximately weekly or biweekly. AGFD will visit the property for wildlife monitoring several times annually. The two agencies will be in contact if any problems are noticed.

The Coal Mine Spring Property was purchased from a private property owner and has historically been used for cattle grazing. There are no fences surrounding the property, and fences are needed to keep trespass cattle off the land. Fencing cattle out of the riparian habitat and watershed will allow faster recovery of the habitat and restoration of riparian vegetation, functions, and values.

The acquisition and management of the Coal Mine Spring property has been a cooperative effort. The Arizona Game and Fish Department and the U.S. Fish and Wildlife Service funded the acquisition of the property. The Trust for Public Land facilitated the acquisition and contributed staff and resources to the acquisition. Arizona State Parks is managing public use and recreation of the property as a part of the Sonoita Creek State Natural Area through a cooperative agreement with AGFD. The private property land owner has worked cooperatively with the Trust for Public Land and AGFD to sell this property for environmental protection.

AGFD been awarded a WHIP grant from the Natural Resource Conservation Service for a percent of the funding for 12 miles of fence around the Coal Mine Spring Property. The WHIP grant will pay \$1.125/foot, or \$5,940/mile toward the fence, for a total grant award of \$71,280. It is estimated that the cost of the fence will be approximately \$3.00/foot, or \$15,840/mile. Thus, the WHIP grant will pay for 37.5% of the expected fence cost. With this proposal, AGFD is seeking matching funds for 62.5% of the expected fence cost: \$1.875/foot, or \$9,900 per mile, or a total of \$118,800. Additionally, AGFD is seeking funding for the archaeological survey necessary to complete the fence and for 3 years of monitoring.

#### **Overall Goal(s)**

The goal of this project is to protect riparian and wetland habitat by constructing a barbed wire fence along the boundary of the Coal Mine Spring Property to prevent trespass cattle from grazing on the subject property. The goal of this fencing is to increase the functions

and values of the riparian areas so as to increase the persistence and quality of stream flow and to create more and better habitat for native fish and other listed and sensitive species.

### **Objective(s)**

1. Restore riparian values by constructing approximately 12 miles of barbed wire fence along the boundary of the Coal Mine Spring property to exclude trespass cattle. The fence will allow maintenance and recovery of riparian vegetation in the canyon and will protect habitat of Gila topminnow and other listed and sensitive wildlife species. Fencing will a) meet game fencing standards and allow wildlife passage in and through the subject property; b) protect and restore stream habitat, native riparian vegetation, and wildlife habitat; c) restore proper hydrologic conditions and functions; d) restore proper stream geomorphology and channel characteristics; and e) restore floodplains and wetlands. Public foot access will be allowed by entry through the Sonoita Creek State Natural Area on the south. Public vehicle access will not be provided, which will further protect riparian vegetation and native fish and wildlife populations.

This fence project will benefit riparian connectivity, because Coal Mine Canyon is a tributary to Fresno Canyon, which flows into Sonoita Creek and to the Santa Cruz River. Coal Mine Canyon below the subject property, Fresno Canyon, and Sonoita Creek are already protected by the Sonoita Creek State Natural Area. This whole area is important to wildlife because of the perennial riparian habitat.

Coal Mine Canyon is in relatively good ecological condition, as evidenced by the existing native fish population. One is struck by the presence of deergrass in the canyon bottom, even in places where water is not perennial. Wetter areas have stands of sedges. However, periodic overuse by trespass cattle is degrading the riparian habitat, slowing riparian recovery, and threatening the Endangered Gila topminnow. This fencing project will increase the functions and values of the riparian areas so as to increase the persistence and quality of stream flow and to create more and better habitat for native fish and other listed and sensitive species. The canyon already shows signs of recovery, due apparently to better cattle management in recent years. Many of the riparian trees in the canyon appear to be only 5-10 years old. With further protection of the canyon, we believe that longer stretches of the canyon will be perennial and fish and wildlife habitat will increase.

2. Conduct necessary archaeological studies to obtain SHPO clearance for construction of the above fence. Evaluate the ecological impacts of the fence project through completion of an Environmental Assessment Checklist.

3. Collect data to monitor the success of the project, as follows:

- a. Collection of repeated photopoints 2 times per year for 3 years to demonstrate changes in riparian vegetation. Riparian recovery will increase over time. Three years of monitoring will show short-term changes and will provide a good baseline for riparian condition. AGFD already has a series of photos of the riparian area before acquisition.

- b. Surveys for avian species presence and abundance 2 times per year for 3 years to demonstrate avian species diversity. Because little baseline data is available for this property, the 3 years of surveys will help to establish that baseline. Avian species habitat recovery will be more evident after more than three years, but avian monitoring will at least show short-term changes in abundance and diversity after the fence is constructed.
- c. Surveys for fish species presence and abundance 2 times per year for 3 years to demonstrate changes over time as a result of the fencing project. It is expected the fish habitat will increase over time. At present, AGFD has fish survey data from a few surveys before and a few surveys since acquisition. The monitoring proposed here will help establish a stronger baseline and look for short-term changes after the fence is constructed. Additionally, AGFD will be evaluating native fish reintroductions in Coal Mine Canyon, and the monitoring will help evaluate the success of any reintroduction efforts.

#### **Problem(s) the Proposal is Addressing**

Cattle use of the Coal Mine Spring property has been historic. Overgrazing has degraded the riparian habitat and adversely impacted wildlife species that use the riparian area. Trespass cattle continue to access the area purchased by AGFD and will do so until cattle are excluded by fences. An archaeological study will be needed to obtain SHPO clearance and to avoid any impacts to archaeological or historic sites. An Environmental Assessment Checklist will need to be completed to address NEPA requirements. Contracts will need to be administered to complete these projects. Monitoring is needed to document the success of the project.

#### **Cause(s) of the Problem(s)**

Overgrazing of the riparian area has degraded the riparian habitat and decreased the value of the habitat for listed and sensitive wildlife. There are no fences to exclude cattle from the Coal Mine Spring property.

#### **Solution(s)**

The solution to this problem is to construct a fence along the property boundary. An archaeological clearance will be needed before the fence can be constructed. An EA Checklist will need to be completed to address NEPA compliance. AGFD personnel will need to administer contracts for the archaeological and construction contracts. Monitoring is needed to document the success of the project.

#### **Number of Years of Benefit, with Justification for Estimate**

As required by the funding sources used to purchase this property (AGFD Heritage Funds and USFWS ESA Recovery Land Acquisition Grant), this property must be managed in perpetuity for conservation of listed and sensitive fish and wildlife and for riparian and wetland values. AGFD is committed to managing the fence and the property in perpetuity to maintain wetland and riparian values. As outlined in the Intergovernmental Agreement, Arizona State Parks manages the recreation and public use of the property as part of the Sonoita Creek State Natural Area. AGFD manages the wildlife and fish resources on the property. The two agencies have a good cooperative relationship.

whereby each agency keeps in regular contact with the other to discuss management and plans. State Parks personnel are on-site at the Sonoita Creek State Natural Area, and during their regular patrols they visit the Coal Mine property each week or two. If personnel from AGFD or Arizona State Parks discover that the fence is breached and cattle are entering the property, AGFD will be responsible for repairing the fence.

## State Historic Preservation Office (SHPO) Certification

This certification is required by regulations implementing the State Historic Preservation Act (A.R.S. 41-861 *et seq.*), effective July 24, 1982. It is understood that **recipients of state funds are required to comply with this law** throughout the project period. The State Historic Preservation Act mandates that all State agencies consider the potential of activities or projects to impact significant cultural resources. 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. All projects that affect the ground-surface that are funded by AWPf require SHPO clearance, **including those on private and federal lands.**

Project Title: Coal Mine Fence

Please answer the following questions, which provide information about the potential of the project to impact cultural resources:

1. Does the project have the potential to disturb the surface and/or subsurface of the ground?  
☒ **YES** ☐ **NO**
2. Are there any buildings or structures (including mines, bridges, dams, canals, etc.) which are 50 years or older within the project area that have the potential to be disturbed by the proposed activity?  
☐ **YES** ☒ **NO**
3. Are there any known prehistoric and/or historic archaeological sites within the project area?  
☐ **YES** ☒ **NO**
4. Are you aware of any archaeological investigations that have been performed within one (1) mile of the project area?  
☐ **YES** ☒ **NO**

If you answered "**NO**" to all of the above questions, please sign on the line below certifying that the activity or project is in compliance (and will remain in compliance throughout the project period) with the State Historic Preservation Act. **YOU MUST SUBMIT THIS FORM WITH YOUR COMPLETED APPLICATION.**

---

Authorized Applicant Signature

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Date

If you answered "**YES**" to any of the above questions, please answer the questions on the following page.

## SHPO Certification

If you answered yes to question #1, specifically identify any surface or subsurface impacts that are expected.

Fence poles will be pounded into ground. Some mechanical use (e.g. ATV) may be used along the fence route to access the area and to carry in fence supplies and equipment.

If you answered yes to question #1, describe the current ground surface condition within the entire project area boundary (i.e. is the ground in natural undisturbed condition, or has it been bladed, paved, graded, used for agriculture, etc.).

Natural undisturbed condition

If you answered yes to question #2, list the sites, their names, and provide a brief description of the sites.

Has the project area been previously surveyed for cultural resources by a qualified Archaeologist?

☐ YES ☒ NO

☐ DON'T KNOW

If yes, submit a copy of the Archaeologist's report with your application.

If you answered any questions on this page, please sign on the line below certifying that you will take all of the necessary steps to comply with the State Historic Preservation Act for all project activities and will remain in compliance throughout the project period. **YOU MUST SUBMIT THIS FORM WITH YOUR COMPLETED APPLICATION.**

x Quane S. Shoup  
Authorized Applicant Signature

x 6/14/05  
Date

## Scope of Work

### **Task #1: Permits and Clearances**

**Task Description:** AGFD shall obtain all permits, authorizations, clearances and agreements necessary to conduct the work described in this Scope of Work, including but not limited to an AGFD Environmental Evaluation Checklist and a contracted archaeological report to comply with the State Historic Preservation Act.

**Task Purpose/Objective:** Compliance with regulations, including NEPA and SHPO

**Deliverable Description:** Copy of archaeological subcontract, archaeology report, paid bills from archaeological subcontract, copy of SHPO clearance, copy of signed AGFD Environmental Evaluation Checklist, copy of AGFD statewide monitoring and handling permit from US Fish and Wildlife Service.

**AWPF Task Cost:** \$10,500

### **Task #2: Prepare and Submit Plans**

**Task Description:** AGFD shall prepare and submit plans for fence construction, photopoint and avian survey monitoring, and fish monitoring.

**Task Purpose/Objective:** Planning and approval of plans for fence construction and monitoring.

**Deliverable Description:** Fence construction plan, photopoint and avian survey monitoring plan, fish monitoring plan.

**AWPF Task Cost:** \$4,725

### **Task #3: Construct Fence**

**Task Description:** AGFD will administer a contract to construct the Coal Mine Fence. Contractor will complete the fence as specified.

**Task Purpose/Objective:** To protect the riparian area and wildlife habitat by excluding trespass cattle from the property.

**Deliverable Description:** Copies of fencing subcontract, copies of paid bills for fence construction, photos of installed fence, fencing completion report

**AWPF Task Cost:** \$124,740

### **Task #4: Monitoring**

**Task Description:** Twice annually for 3 years, AGFD will take digital photos to monitor changes in riparian habitat and will conduct avian and fish surveys.

**Task Purpose/Objective:** Monitoring to ensure that project is meeting objectives of keeping cattle out of property, improving quality of riparian habitat, increasing habitat for fish and avian species

**Deliverable Description:** Electronic and printed copies of digital photos. annual monitoring reports and final monitoring report.

**AWPF Task Cost:** \$41,786

**Task #5: Final Report**

**Task Description:** AGFD shall prepare and submit a comprehensive final report, including the outcome of all tasks.

**Task Purpose/Objective:** Demonstration of completion of project.

**Deliverable description:** Final project report

**AWPF Task Cost:** \$0



## Project Budget Form – AWPf Funds

TASK # and short description	AWPF FUNDS REQUESTED						
	A	B	C	D	E	F	G
	DIRECT LABOR COSTS	OTHER DIRECT COSTS	OUTSIDE SERVICES	CAPITAL OUTLAY	TOTAL PROJECT COSTS	ADMIN COSTS	TOTAL AMOUNT REQUESTED
Task 1: Cultural Resources Inventory and Clearance			\$10,000		\$10,000	\$500	\$10,500
Task 2: Prepare and submit plans for fence construction 40 hr @\$37.50/hr	\$1500				\$1500	\$75	\$1575
Task 2: Prepare and submit plans for survey of avian species and photopoint monitoring 40 hr @ \$37.50/hr	\$1500				\$1500	\$75	\$1575
Task 2: Prepare and submit plans for survey of fish species 40 hr @ \$37.50/hr	\$1500				\$1500	\$75	\$1575
Task 3: Fence Construction 12 miles @ \$9,900/mi (62.5% of cost)			\$118,800		\$118,800	\$5940	\$124,740
Task 4: Monitoring of riparian habitat with 3 years of photo points and 3 year of surveys for avian species Includes annually for 3 years: Project Biologist for 1 week, Wildlife Specialist for 3 weeks, Wildlife Technician for 2 weeks, mileage, travel expenses, equipment and supplies	\$21,339				\$21,339	\$1067	\$22,406
Task 4: Monitoring of fish populations Includes annually for 3 years: 2 Wildlife Specialists for 2 weeks, mileage, travel expenses (22% admin. costs)	\$15,885				\$15,885	\$3495	\$19,380
<b>AWPF TOTALS</b>	<b>\$41,724</b>		<b>\$128,800</b>		<b>\$170,524</b>	<b>\$11,227</b>	<b>\$181,751</b>

## Project Budget Form – Matching Funds

TASK # and short description	OTHER FUNDS (MATCHING) (4)						
	A	B	C	D	E	F	G
	DIRECT LABOR COSTS	OTHER DIRECT COSTS	OUTSIDE SERVICES	CAPITAL OUTLAY	TOTAL PROJECT COSTS	ADMIN COSTS	TOTAL MATCHING FUNDS
Task 1: Administer Contract for Cultural Resources Inventory and Clearance (40 hours @\$37.50/hr)	\$1500				\$1500	\$75	\$1575
Task 1: Complete AGFD EA Checklist to comply with NEPA requirements (40 hours @ \$37.50/hr)	\$1500				\$1500	\$75	\$1575
Task 3: Administer Contract for Fence Construction (80 hours @ \$37.50/hr)	\$3000				\$3000	\$150	\$3150
Task 3: Fence Construction 12 miles @ \$5,940/mi (37.5% of cost) NRCS WHIP grant			\$71,280		\$71,280	\$3,564	\$74,844
Task 4: Final Report (40 hours @ \$37.50/hr)	\$1500				\$1500	\$75	\$1575
<b>MATCHING TOTALS</b>	<b>\$7,500</b>		<b>\$71,280</b>		<b>\$78,780</b>	<b>\$3,939</b>	<b>\$82,719</b>

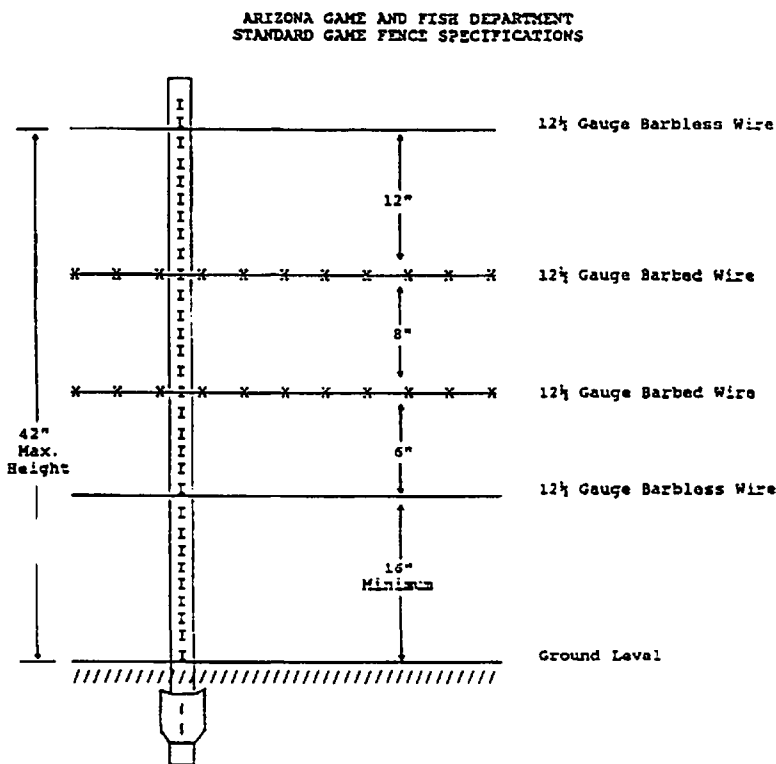
## Supplemental Information

### Key Personnel

Joan Scott is the AGFD lead for this fence project. She has a M.S. in Biological Sciences and has been working for AGFD for 18 years. She has been the Habitat Program Manager in the Tucson AGFD office for more than 11 years. Ms. Scott was the regional lead on the acquisition of the Coal Mine property and is very familiar with the resource values of the area. Ms. Scott will be working with numerous AGFD personnel, including the AGFD Habitat, Development, Lands, and Fisheries Programs, to see that the fence project is completed and that the goals and objectives of the project are accomplished.

### Project Schematic Drawing

The fence will be constructed around the property boundary, as shown on the included map. The fence will be constructed to AGFD Standard Game Fence Specifications, as below.



**Additional Specifications:**

- 20 - 25 feet between T-posts.
- At least 3 equally spaced stays between each post.
- Modifications to this design may be requested for fencing anticipated to be routinely encountered by elk, bighorn sheep or pronghorn.

## **Plans**

AGFD will subcontract for construction of a fence along the boundary of the Coal Mine Spring property. No fencing is required along the portion of the southern boundary that abuts the Sonoita Creek State Natural Area, as this area is not grazed. Fencing will be done to wildlife standards to allow passage of wildlife into and through the subject property. The fence will be constructed per the description provide under Project Schematic Drawing, and along the alignment shown on the map provided.

AGFD been awarded a WHIP grant from the Natural Resource Conservation Service for a percent of the funding for 12 miles of fence around the Coal Mine Spring Property. The WHIP grant will pay \$1.125/foot, or \$5,940/mile toward the fence, for a total grant award of \$71,280. It is estimated that the cost of the fence will be approximately \$3.00/foot, or \$15,840/mile. Thus, the WHIP grant will pay for 37.5% of the expected fence cost. With this proposal, AGFD is seeking matching funds for 62.5% of the expected fence cost: \$1.875/foot, or \$9,900 per mile, or a total of \$118,800. Additionally, AGFD is seeking funding for the archaeological survey necessary to complete the fence and for 3 years of monitoring.

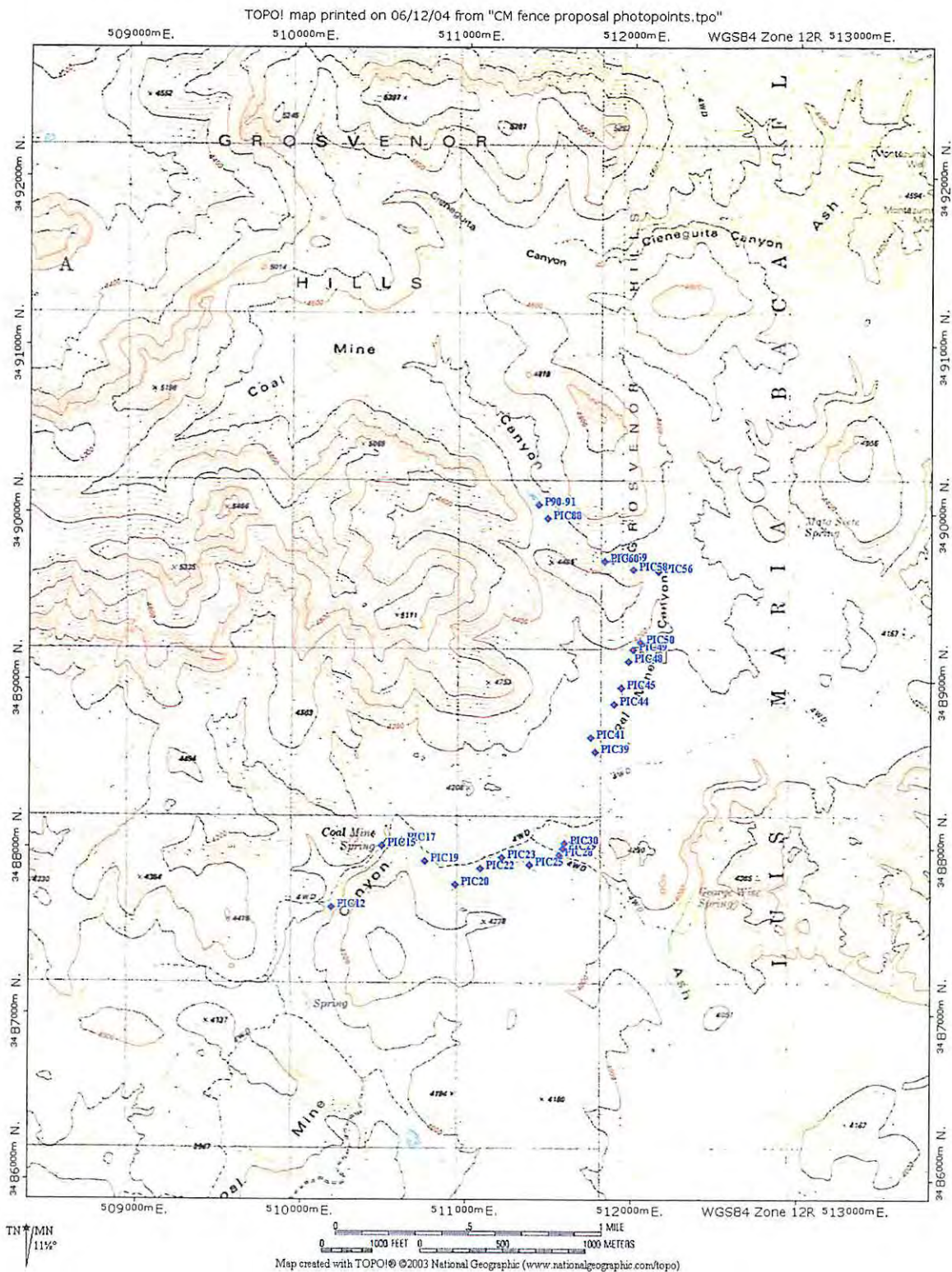
AGFD shall obtain all permits and clearances to complete the project, will subcontract for an archaeological survey and fence construction, will complete NEPA compliance documents, will prepare plans for fence construction and monitoring, and will accomplish 3 years of monitoring on the property. Complete plans for fence construction and monitoring will be developed as part of the proposal.

The proposed monitoring will include:

1. Collection of repeated photopoints 2 times per year for 3 years to demonstrate changes in riparian vegetation. Riparian recovery will increase over time. Three years of monitoring will show short-term changes and will provide a good baseline for riparian condition. AGFD already has a series of photos of the riparian area before acquisition.
2. Surveys for avian species abundance and presence 2 times per year for 3 years to demonstrate avian species diversity. Because little baseline data is available for this property, the 3 years of surveys will help to establish that baseline. Avian species habitat recovery will be more evident after more than three years, but avian monitoring will at least show short-term changes in abundance and diversity after the fence is constructed.
3. Surveys for fish species presence and abundance 2 times per year for 3 years to demonstrate changes over time as a result of the fencing project. It is expected the fish habitat will increase over time. At present, AGFD has fish survey data from a few surveys before and a few surveys since acquisition. The monitoring proposed here will help us to establish a stronger baseline and look for short-term changes after the fence is constructed. Additionally, AGFD will be evaluating native fish reintroductions in Coal Mine Canyon, and the monitoring will help evaluate the success of any reintroduction efforts.

# Photos of Coal Mine Canyon with UTM locations

# Map of Photo Points.





Picture 12 – Two big shallow pools in rock below Coal Mine Spring.  
(12 0510184mE 3487642mN).



Picture 15 – Coal Mine Spring. Notice cattle prints in sand around pool. Arizona Ash.  
(12 0510490mE 3488013mN).

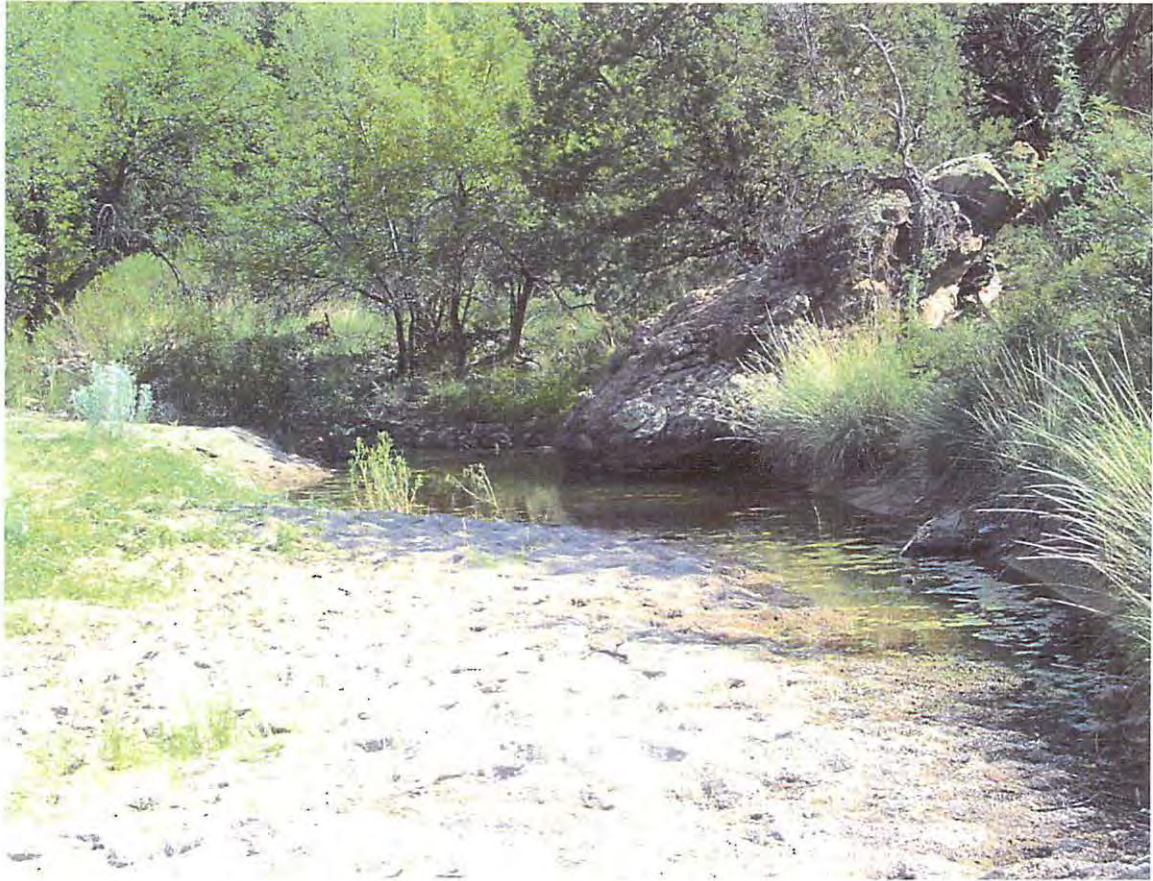




Picture 17 – Big pool with Arizona Ash, sedges, and deergrass.  
(12 0510606mE 3488041mN).



Picture 19 – Area above Coal Mine showing cattle use of canyon bottom.  
(12 0510750mE 3487921mN).





Picture 20 – Arizona Ash, Arizona walnut, seep willow.  
(12 0510930mE 3487777mN).



Picture 22 – Cottonwood in the canyon bottom.  
(12 0511085mE 3487877mN).

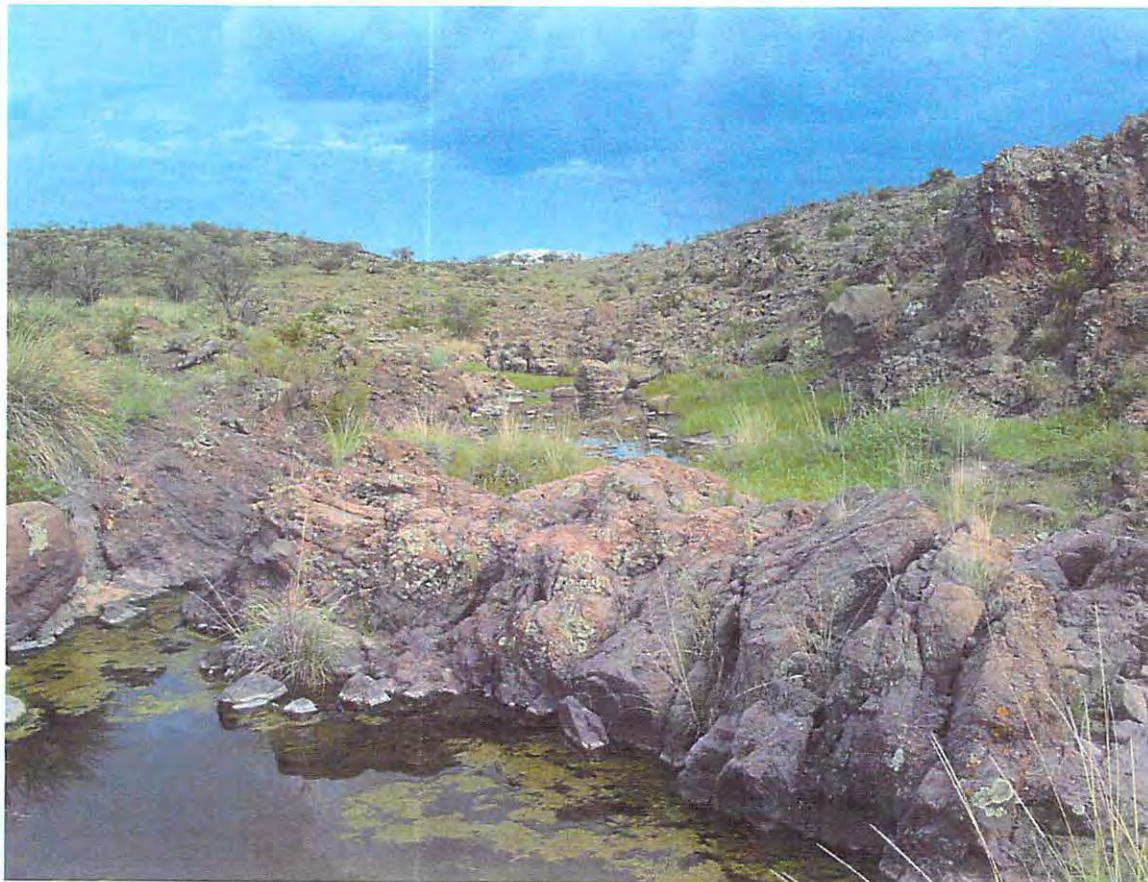




Picture 23 – Small pools in rocks, small Arizona ash, deergrass, seep willow.  
(12 0511215mE 3487942mN).



Picture 25 – Two big pools in rocky canyon bottom.  
(12 0511378mE 3487897mN).





Picture 28 – Pool in canyon bottom showing cattle use.  
(12 0511562mE 3487959mN).

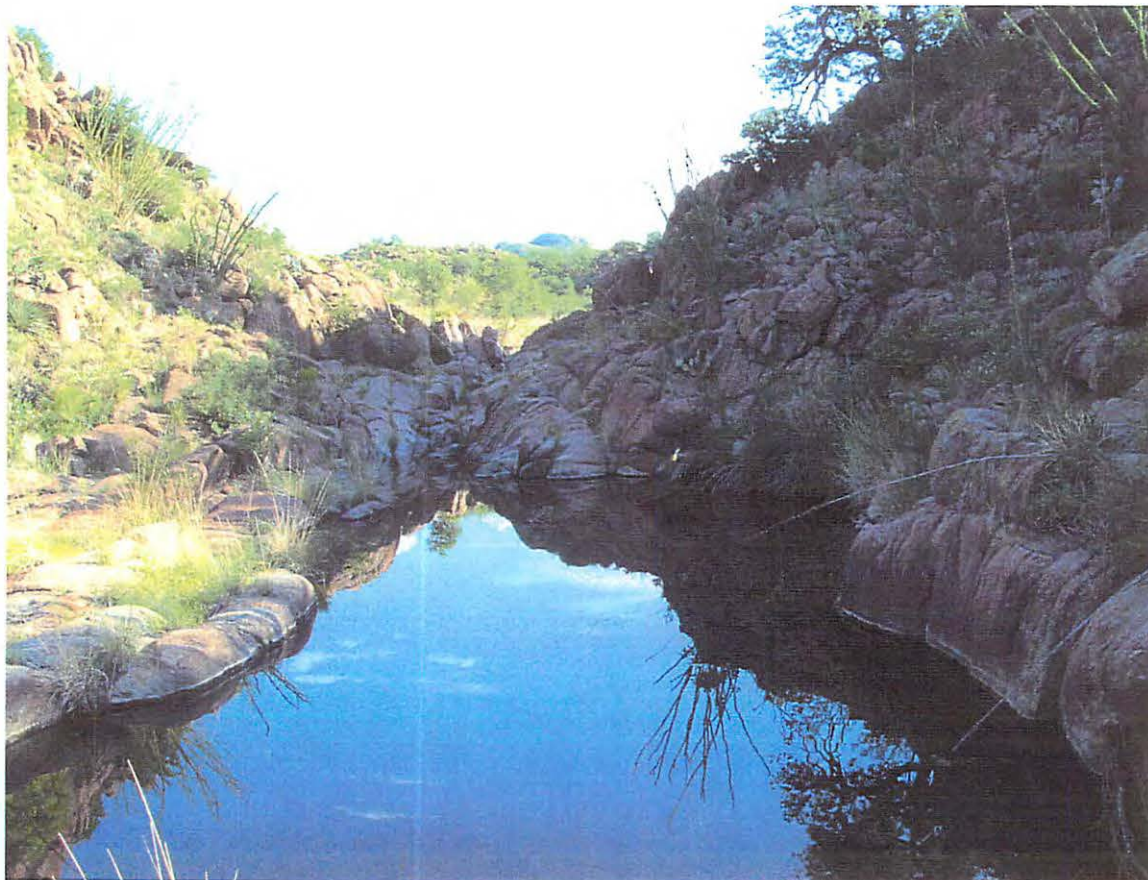


Picture 29 – Pool in bottom with deergrass.  
(12 0511579mE 3487998mN).

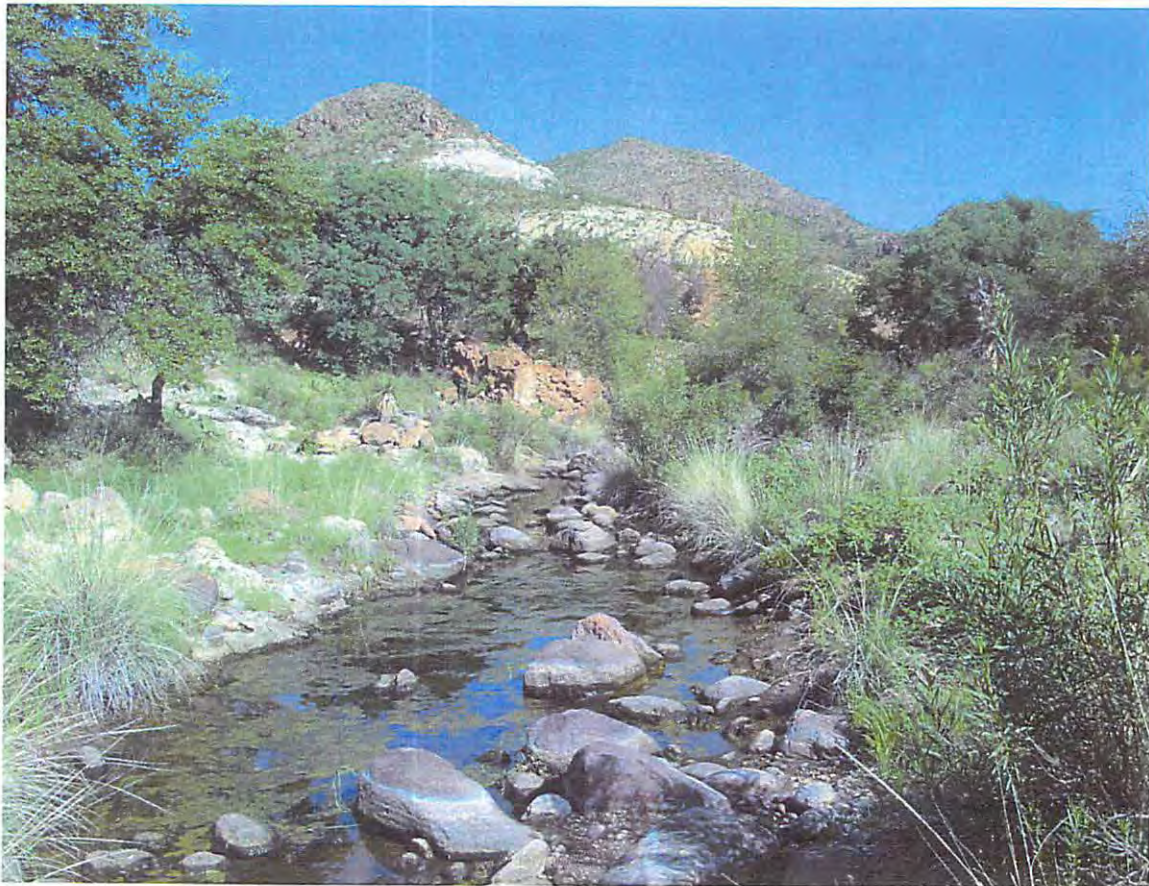




Picture 30 – Large rock pool with deergrass, sedges.  
(12 0511590mE 3488027mN).



Picture 39 – Long narrow shallow pool with deergrass, Arizona Ash, seep willow, sedges.  
(12 0511776mE 3488578mN).





Picture 41 – Canyon bottom with lots of Arizona Ash. Most of the trees are the same size. Seep willow and deer grass.  
(12 0511750mE 3488661mN).

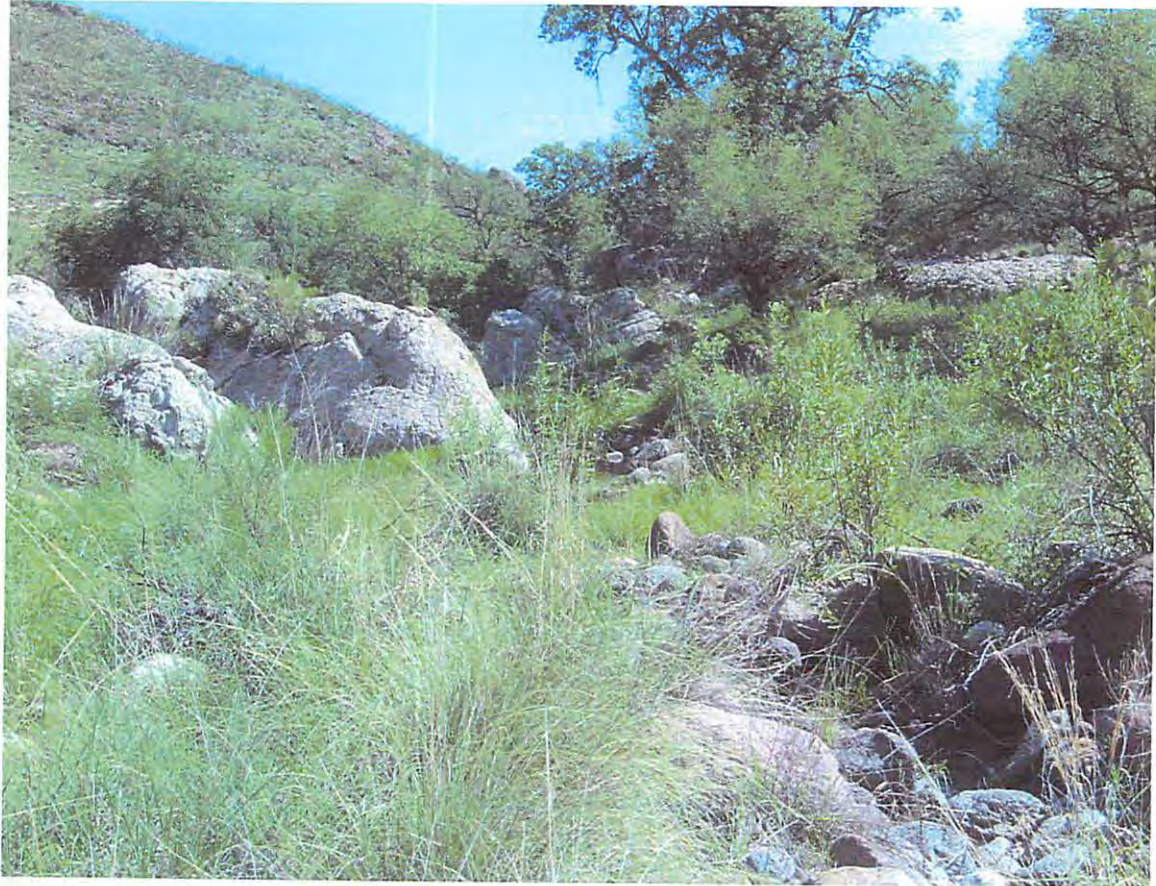


Picture 44 – Big pool, sedges, seep willow, deergrass. Note cattle prints in water and on shore on left front of photo.  
(12 0511886mE 3488864mN).



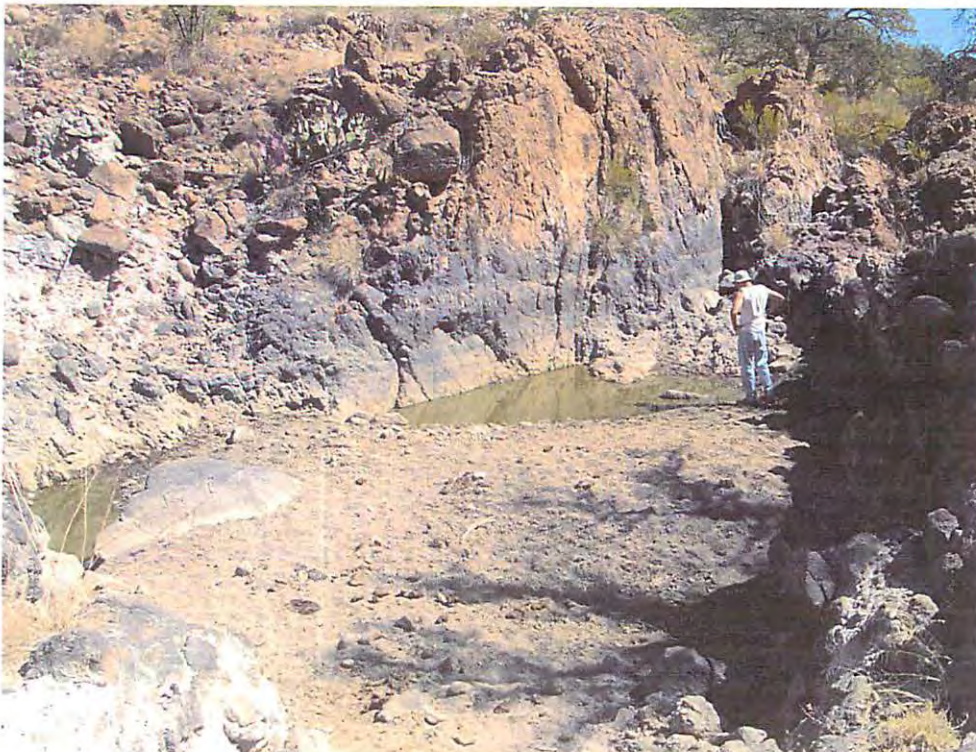


Picture 45 – Canyon bottom with deer grass, seep willow, few pools mixed in among grass and rock.  
(12 0511928mE 3488958mN).





Picture 48 – Comparison photos on one pool before and after heavy cattle use.  
(12 0511976mE 3489121mN).





Picture 49 – Open bottom, sedges.  
(12 0512002mE 3489189mN).



Picture 50 – Canyon bottom with few pools, lots of Arizona ash of different sizes.  
(12 0512047mE 3489231mN).



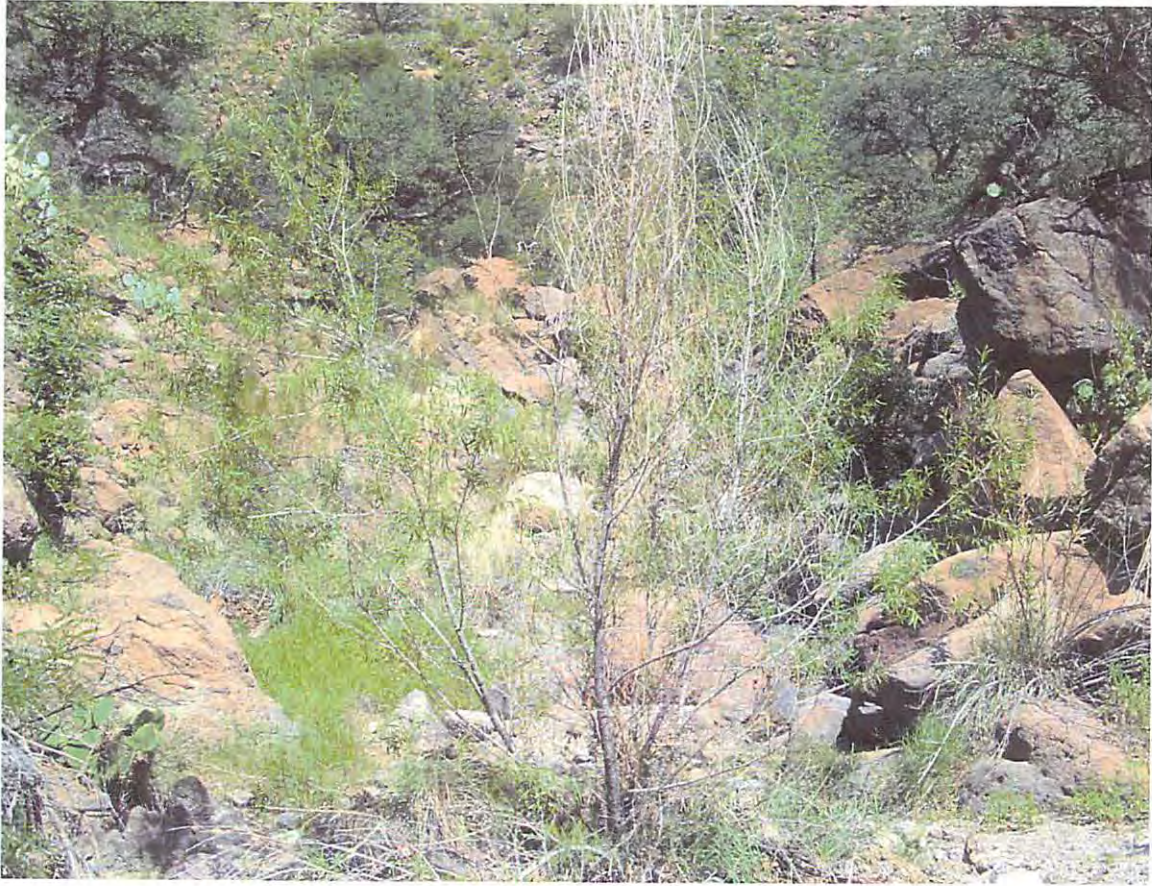


Picture 56 – Arizona walnut, Arizona Ash in canyon bottom.  
(12 0512150mE 3489654mN).



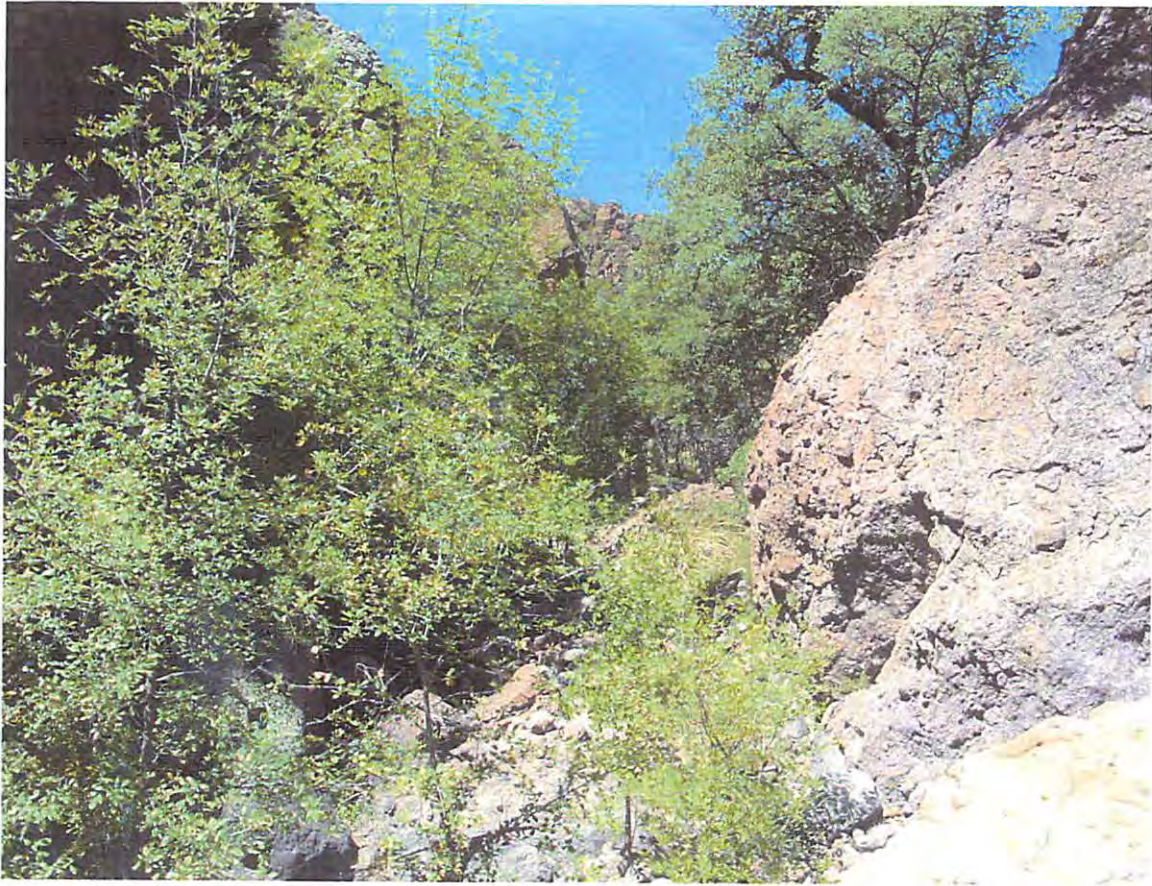


Picture 58 – Goodding willow.  
(12 0511998mE 3489664mN).



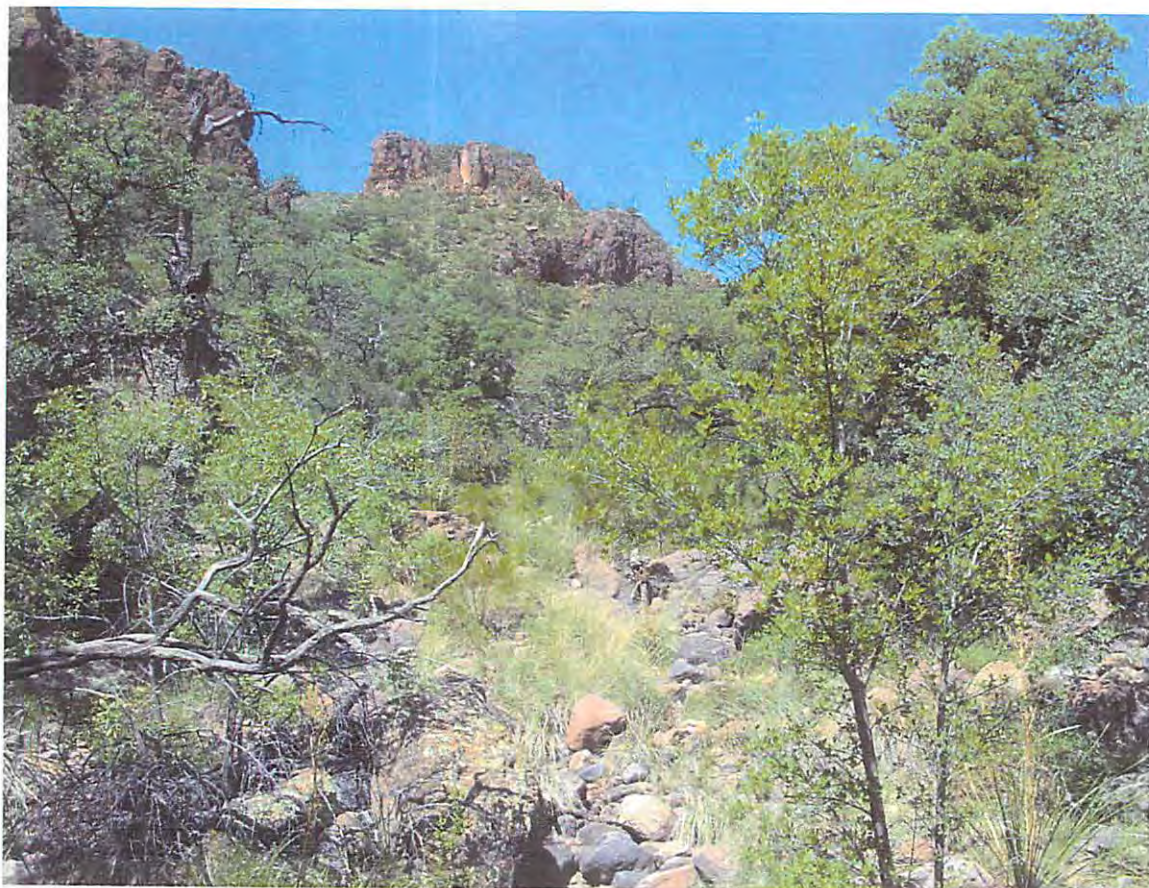


Picture 59 – Group of Arizona Ash, all different sizes.  
(12 0511874mE 3489717mN).





Picture 60 – Canyon bottom, Arizona Ash.  
(12 0511828mE 3489714mN).



Picture 88 – Large open grass bottom with lots of deergrass and sedges. Mexican blue and Emory Oak on side of canyon. Three big pools among the grass; water flowing through all the grass.  
(12 0511546mE 3489769mN).





Picture 90 – Water in large tank, almost to top of dam.  
(12 0511424mE 3490076mN).

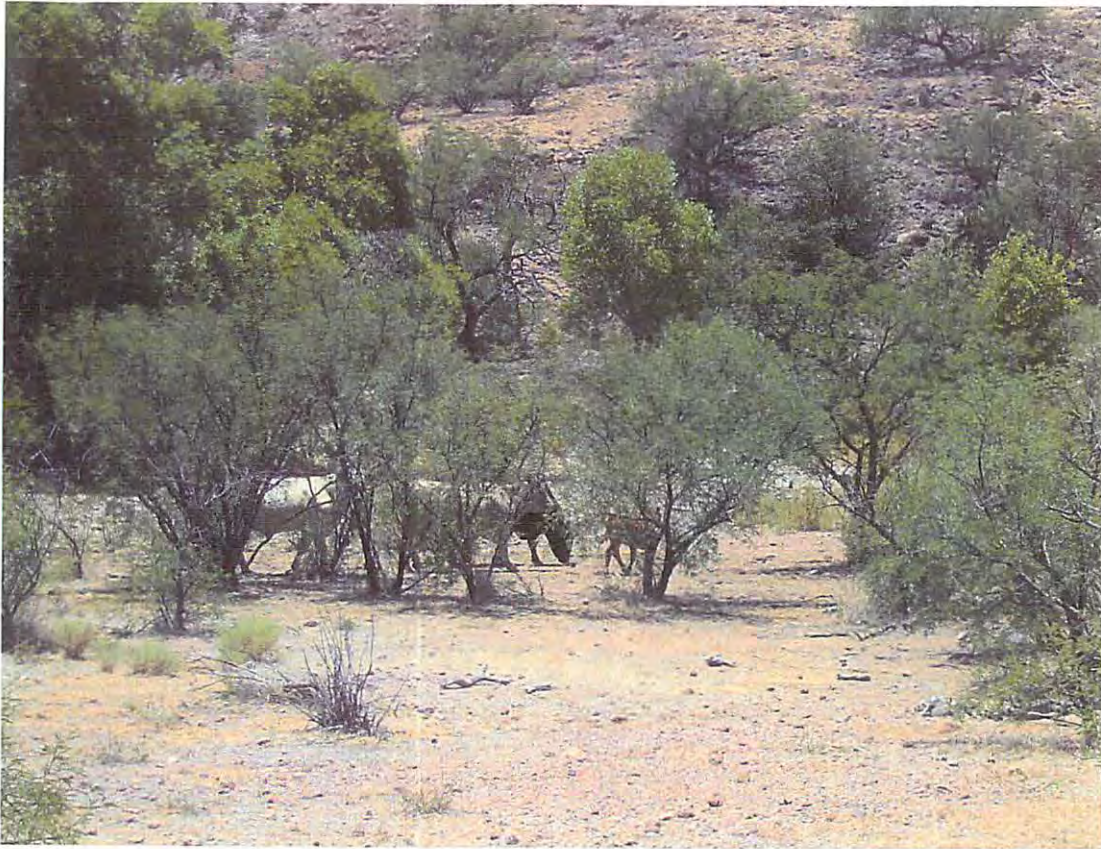


Picture 91 – Looking up the tank from same dam as Picture 90, willow, seep willow, sedges.  
(12 0511424mE 3490076mN).





Cattle in Coal Mine Canyon.





## **Letters of Support**

1. Arizona State Parks – adjacent landowner (Sonoita Creek State Natural Area) and joint manager with AGFD
2. First United Realty – seller and adjacent landowner
3. Trust for Public Land – cooperator in acquisition and supporter of riparian protection
4. U.S. Fish and Wildlife Service (letter may arrive after submission of proposal)
5. Board of Supervisors, Santa Cruz County

There are no leases or use-permits for this land.

June 4, 2005

Arizona Water Protection Fund Commission  
Arizona Department of Water Resources  
500 North Third Street  
Phoenix, AZ 85004

Janet Napolitano  
Governor

State Parks  
Board Members

Chair  
Elizabeth Stewart  
Tempe

William C. Porter  
Kingman

William Cordasco  
Flagstaff

Janice Chilton  
Payson

William C. Scalzo  
Phoenix

John U. Hays  
Yarnell

Mark Windelman  
State Land  
Commissioner

Kenneth E. Travous  
Executive Director

Arizona State Parks  
1300 W. Washington  
Phoenix, AZ 85007

Tel & TTY: 602.542.4174  
www.azstateparks.com

800.285.3703 from  
(520 & 928) area codes

General Fax:  
602.542.4180

Director's Office Fax:  
602.542.4188

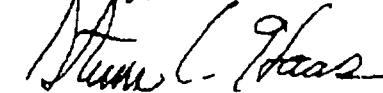
Subject: Fencing for the Coal Mine Springs Property

Dear Sirs:

Sonoita Creek State Natural Area supports the protection of the Coal Mine Spring property by the Arizona Game and Fish Department (AGFD). In December 2004, AGFD purchased the Coal Mine Spring property. The property will be managed by Arizona State Parks as part of the Sonoita Creek State Natural Area. Sonoita Creek State Natural Area supports the AWPf application from the Arizona Game and Fish Department to fence the Coal Mine Spring property. The fence will keep cattle from trespassing into the Coal Mine Spring property and delineate the public AGFD land from private adjacent land.

Thank you for considering this proposal.

Sincerely,



Steven C. Haas

Arizona State Parks

Unit Manager

Sonoita Creek State Natural Area

HC 2 Box 273

Nogales, AZ 85621

 FIRST UNITED REALTY, INC.

June 2, 2005

Arizona Water Protection Fund Commission  
Arizona Department of Water Resources  
500 North Third Street  
Phoenix, AZ 85004

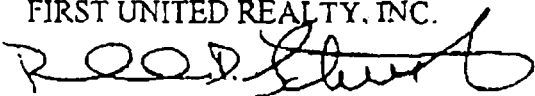
Dear Sirs:

First United Realty, Inc. recently sold the Coal Mine Spring property to the Arizona Game and Fish Department and retains land adjacent to the property. As an adjacent landowner, we support the AWPFC application from the Arizona Game and Fish Department to fence the Coal Mine Spring property. The fence will keep cattle from trespassing onto the Coal Mine Spring property and delineate the public AGFD land from private adjacent land.

Thank you for considering this proposal.

Sincerely,

FIRST UNITED REALTY, INC.

  
Richard D. Schust  
President

ns:RDS

THE  
TRUST  
for  
PUBLIC  
LAND



June 3, 2005

Santa Fe Office  
418 Montezuma Ave.  
Santa Fe, NM

87501  
T 505-988-5000  
F 505-988-5947  
www.tpl.org  
Arizona Water Protection Fund Commission  
Arizona Department of Water Resources  
500 North Third Street  
Phoenix, AZ 85004

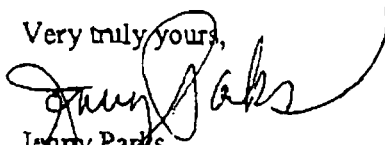
**RE: Grant Proposal Submitted by Arizona Game and Fish -  
Coal Mine Springs, Santa Cruz County, Arizona**

Gentlemen:

The Trust for Public Land (TPL) recently had the pleasure of working in partnership with Arizona Game and Fish to acquire and protect the 2,600-acre Coal Mine Springs property. The permanent protection of this property will be of great benefit for critical wildlife habitat, including protection of the endangered Gila Top Minnow and a number of other federally and state listed species. In addition to having high natural resource and scenic values, the property is an important watershed for Sonoita Creek and the Santa Cruz River - protection of these riparian corridors has become a very important priority for Santa Cruz County over the past year, and is also a high priority for conservation organizations like TPL.

TPL strongly supports AGFD's application to AWPF for a grant that will enable this conservation property to be fenced and properly protected, and which will maximize the benefits of Arizona's Heritage fund investment in this important property.

Very truly yours,

  
Jenny Parks  
Arizona State Director



## Board of Supervisors Santa Cruz County

JOHN MAYNARD  
SUPERVISOR, District 3

June 10, 2005

Arizona Water Protection Fund Commission  
Arizona Department of Water Resources  
500 North Third Street  
Phoenix, Arizona 85004

Dear Sirs:

I am writing you in support of the AWPFC application from the Arizona Game and Fish Department to fence the Coal Mine Springs property located in Santa Cruz County. In December 2004, ACPD purchased Coal Mine Spring and is working collaboratively with Arizona Parks Department to manage this part of the Sonoita Creek State Natural Area.

As the County Supervisor representing this District of Santa Cruz County, I believe fencing will greatly benefit this valuable Arizona habitat. I fully support the protection of Coal Mine Spring by the Arizona Game and Fish Department. The fence will keep cattle from trespassing onto Coal Mine Spring and delineate the public AGFD land from private adjacent land.

Thank you for considering their proposal.

Sincerely,

John Maynard  
Supervisor  
Santa Cruz County

---

Santa Cruz County Complex

\* 150 North Congress Drive \* P.O. Box 1150 \* Nogales, Arizona 85621 \*

\*(520) 373-7812 \* FAX (520) 761-7843 \* TDD (520) 761-7816