

**ARIZONA GAME AND FISH DEPARTMENT
HABITAT PARTNERSHIP PROGRAM
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL**

PROJECT INFORMATION

Project Title: San Pedro Riparian National Conservation Area (SPRNCA) Wildlife Water Maintenance and Development, Phases 1, 2, 3, and 4		Project No. 11-501
Region/GMU: Region 5/GMUs 30B, 34B, 35A	HPC: Sierra Vista / Douglas	
Project Type: SPNCRA wildlife water maintenance and development, phases 1, 2, 3, and 4		
<p>Project Description: Located between the Huachuca and Mule Mountains of southeastern Arizona, and adjacent to Mexico, the San Pedro Riparian National Conservation Area (SPRNCA) is uniquely located for attracting a diversity of species from a wide variety of vegetative life-zones. This landscape phase project is located on the SPRNCA and will serve to provide water for the many wildlife species that occur here. Phase 1 consists of maintenance of existing wildlife waters at Contention and Palominas, and improvement of the wildlife waters at Palominas and Fairbank.</p> <p>Phase 2 (approximate years 2013-2015) involves development of new wildlife water sources at existing wells within SPRNCA. Phase 3 (about 2015-2017) consists of saturating those areas within SPRNCA with existing wildlife waters with additional water as secondary sources, and to provide water for those species that will not travel as far. Phase 4, if needed, would involve developing wildlife waters at existing wells within those areas of the San Pedro River that are expected to become intermittent in the future.</p> <p>Wildlife Species to Benefit: Mule deer, white-tailed deer, javelina, Gould's turkey</p>		
Possible Funding Partners:		
Implementation Schedule: Phase 1	NEPA Compliance: (if applicable)	
Beginning: 2012	Completed: Yes <input checked="" type="checkbox"/> (Phase 1) No <input type="checkbox"/>	
Completed: 2013	Projected Completion Date: 2012 (Phase 2-3)	

PROJECT FUNDING

SBG Funds Requested: \$4,400.00
Cost Share Funds: \$ BLM match: \$18,661.56 Friends of the San Pedro River funds: \$200.00
Total Project Costs: \$ 23,261.56

PARTICIPANT INFORMATION

Applicant: Bureau of Land Management (please print) Marcia Radke Telephone: 520 439-6428	Address: 1763 Paseo San Luis Sierra Vista, AZ 85635
AGFD Contact and Phone No. Marcia Radke (520) 439-6428 (If applicant is not AGFD personnel)	
Coordinated with: Brad Fulk (AGFD), Jon McClard (AGFD), SEAZ-HPC, Friends of the San Pedro River	Date: 07/12/12
Applicant's signature:	Date:

**SEND COMPLETED APPLICATIONS TO:
AZ Game and Fish Department**

**Attn: Game Branch
5000 W. Carefree Highway
Phoenix, AZ 85086**

@azgfd.

WAS PROJECT PRESENTED TO THE LOCAL HPC? YES X NO

HAS PROJECT BEEN SUBMITTED IN PREVIOUS YEARS? IF SO WAS IT FUNDED?

No, the project has not been submitted previously.

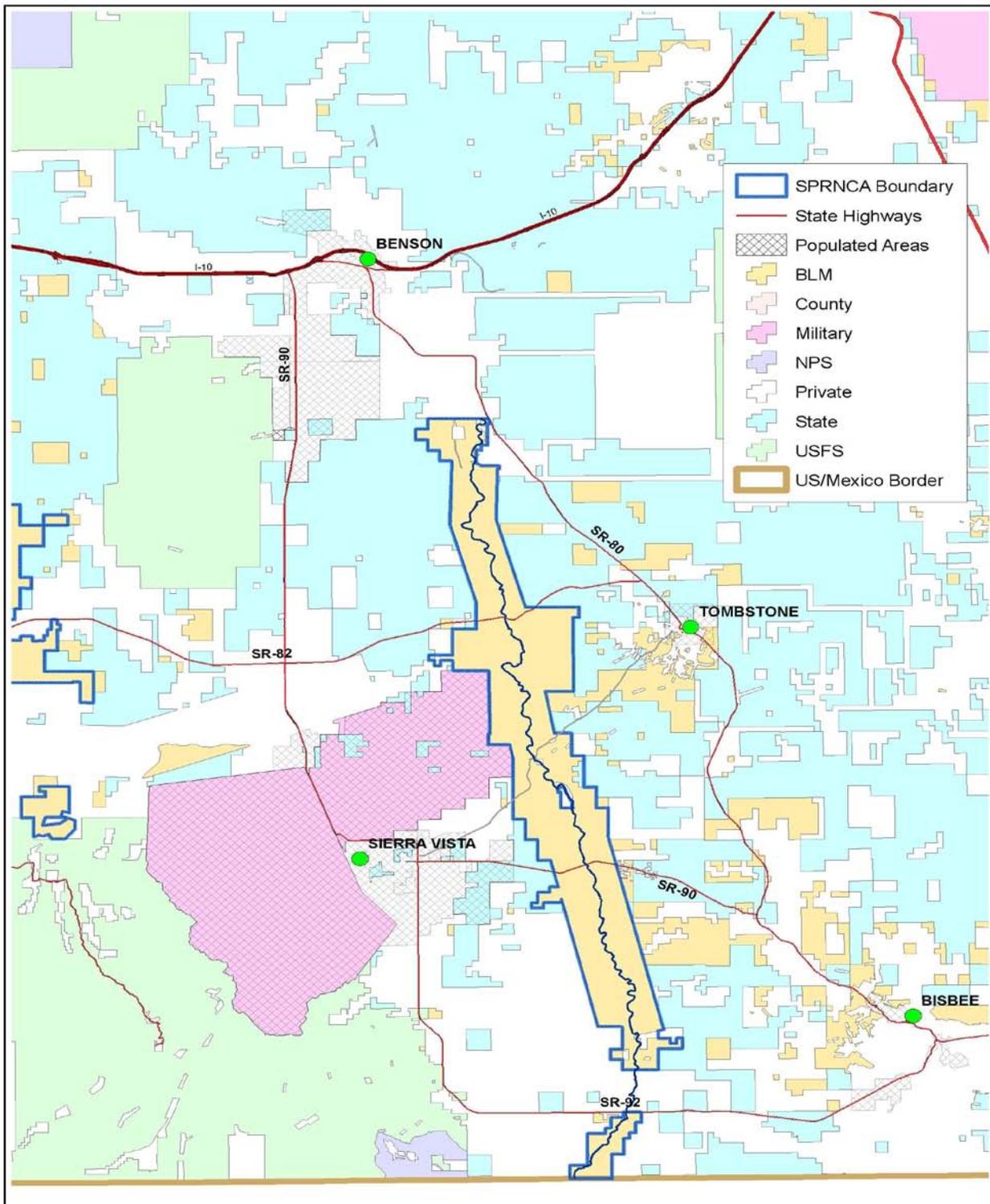
NEED STATEMENT/PROBLEM ANALYSIS:

History of SPRNCA and ownership: The San Pedro Riparian National Conservation Area (SPRNCA) was established by Public Law 100-696 during 1988 “in order to protect the riparian area and the aquatic, wildlife, archeological, paleontological, scientific, cultural, educational, and recreational resources of the public lands surrounding the San Pedro River...” SPRNCA is managed by the U.S. Bureau of Land Management (BLM) as part of the National Landscape Conservation System and, as such, serves as an open, undeveloped area as a showcase for BLM’s conservation side of its multiple-use mandate. SPRNCA contains approximately 57,000 acres along more than 40 river miles, ranging from approximately 3600’ in elevation south of I-10 at Saint David to 4300’ in elevation at the International Boundary (Figure 1). The free-flowing hydrology (i.e. undammed) and permanent water reaches of the San Pedro River are notable among other southwestern rivers. Numerous tributaries are ephemeral and surface flow in these washes is only in response to rainfall events. Influence from the Sierra Madre, Rocky Mountains, Sonoran, and Chihuahuan Deserts create a landscape of species richness in plants and animals.

Sportsmens’ access/hunting opportunities: The SPRNCA has twelve established parking areas/trailheads; Land Corral, Terrenate, Fairbank, Boquillas, Millville, Charleston, Escapule, Murray Springs, San Pedro House, Hereford, Lehner, and Palominas. Target shooting is prohibited, as well as discharge of firearms within ¼ mile of developed facilities. The area between Charleston Road and Hwy 92 is closed to the possession or discharge of firearms for the purpose of wildlife protection and public safety. However, subject to all rules and regulations of the Arizona Game and Fish Department, firearm discharge for the purpose of authorized and regulated hunting is permitted south of Land Corral to Charleston (including the Land Corral, Terrenate, Fairbank, Boquillas, Millville, and Charleston parking areas/trailheads), and south of Hwy 92 to the International Boundary (including the Palominas parking area/trailhead) from Sept. 1 through March 31. In addition, archery hunting and fishing is permitted throughout the SPRNCA, subject to all rules and regulations of the Arizona Game and Fish Department, and includes the additional Escapule, Murray Springs, San Pedro House, Hereford, and Lehner parking areas/trailheads. Trapping is prohibited at all times in the NCA. Species available for harvest include white-tailed deer, mule deer, javelina, mourning and white-winged dove, Gambel’s and scaled quail, cottontail and jackrabbit, and sport fish (large-mouthed bass, channel catfish, and black bullhead).

Management concerns/issues: Although the SPRNCA contains significant aquatic resources, long-term drought, groundwater depletion, and climate change have the potential of drying many of the previously permanent water sources along the San Pedro River, some of which are now intermittent reaches. Only approximately 15 of the 50 miles within the SPRNCA now have permanent water (approximately Waters Road boundary to just north of Charleston). In addition, the U.S./Mexico border fence has created difficulty for some wildlife species to travel traditional routes for water and/or food.

Figure 1. SPRNCA Vicinity Map



Map created June 13, 2011
Bureau of Land Management
Tucson Field Office



1:250,000



PROJECT OBJECTIVES:

This project is part of a larger phase strategy to provide permanent water for primarily mule deer, white-tailed deer, and javelina, at a minimum of 1.5 mile intervals throughout the San Pedro Riparian National Conservation Area. The project will also be of benefit to Gould's turkey, mourning and white-winged dove, and Gambel's and scaled quail, and numerous other small game and non-game species. The strategy will be to provide water in the northern and southern sections of the NCA that do not have perennial water, and progressively move inwards to the section of the NCA with perennial water in the San Pedro River. However, dryer upland areas east and west of the perennial reach of the river may also require water development, due to the distance from the river or as this reach becomes intermittent.

Phase 1-The project initiates with the maintenance of existing dedicated wildlife waters at Contention and Palominas, and water development for improved wildlife access at Fairbank and Palominas. Because of the loss of permanent natural water sources, the Contention wildlife water was initially installed in 1998, with installation of well pump, solar panels, buried pipeline, and storage tank. The pipe burst during below-freezing temperatures during winter 2011, and was repaired by BLM force account crew during April 2011. The Palominas water was initially installed during 2005, with installation of well pump, solar panels, pipe, trough, and wildlife ramp into an existing cistern. A solar panel was damaged (probably by wind) and was replaced by BLM force account crew during March 2011. Large mammals, such as deer and javelina, do not use the wildlife ramp into the cistern (which is deep and enclosed), although the cistern is heavily used by birds, including quail and dove. An additional water tank and drinker is required at this location for large mammals. The Fairbank potable water tank has had a leaking valve for several years, and wildlife have become accustomed to using this leak as a source of permanent water. The leak will be repaired, and the existing line will be tied into for a pipeline and a wildlife drinker approximately 500' north of the existing leak. The Summers wildlife water (03-5-001) was installed in 2003, is currently functional, and no maintenance is required at this time. The Boquillas wildlife water also does not require any maintenance at this time.

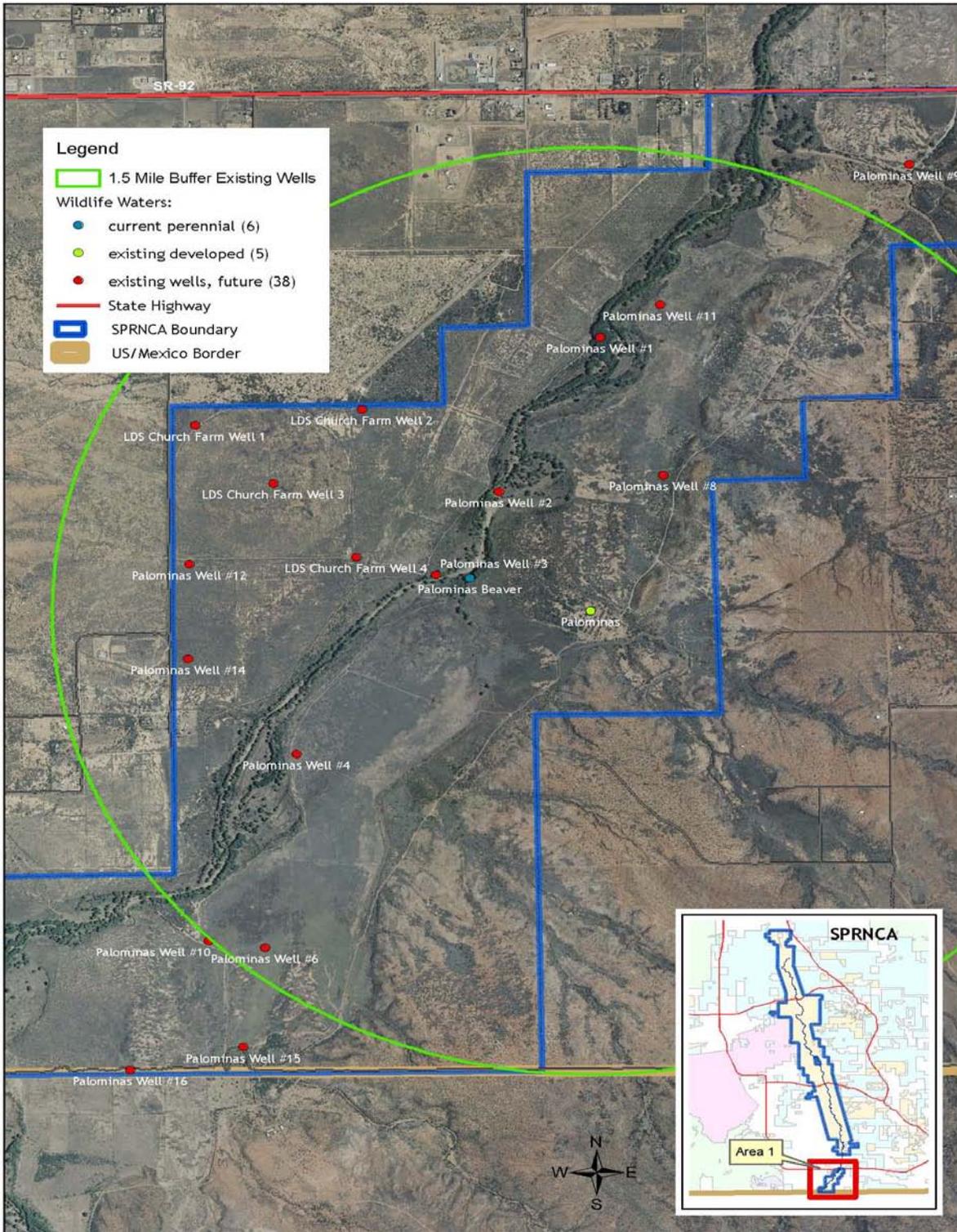
Existing wells are currently mapped (see area maps 1-6) for this project, and may be used in the future for installation of solar pumps, storage tanks, and drinkers in those areas where existing water is further than 1.5 mile apart (Phase 2). Additional wildlife waters as secondary sources, and for those species that will not travel as far (e.g. gestating/lactating deer), may be created through development of existing wells at intervals of closer than 1.5 mile (Phase 3). Lastly, development of wildlife waters at existing wells may occur within those areas of the San Pedro River that are expected to become intermittent in the future (Phase 4). Some areas, where wells do not exist, may require the construction of guzzlers. Additional phases of this multiphase plan will be applied for after completion of phase 1.

PHASE ONE PROJECT STRATEGIES: Maintain and improve existing wildlife waters.

- Area 1 (International Boundary to Hwy 92): Repair the solar panel at Palominas (maintenance completed by BLM force account crew March 2011). Install pipe, storage tank, and drinker at Palominas (to allow for water storage and accessibility for large mammals not using the current cistern).
- Area 6 (Hwy 82 to Land Corral): Repair the broken pipe at Contention and construct sanitary well seal as required by Arizona Dept. of Water Resources' regulations (maintenance completed by BLM force account crew April 2011). Repair leak at Fairbank, tie into existing line, install approximately 500' of pipeline and separate wildlife drinker.



SPRNCA Wildlife Waters - Area 1

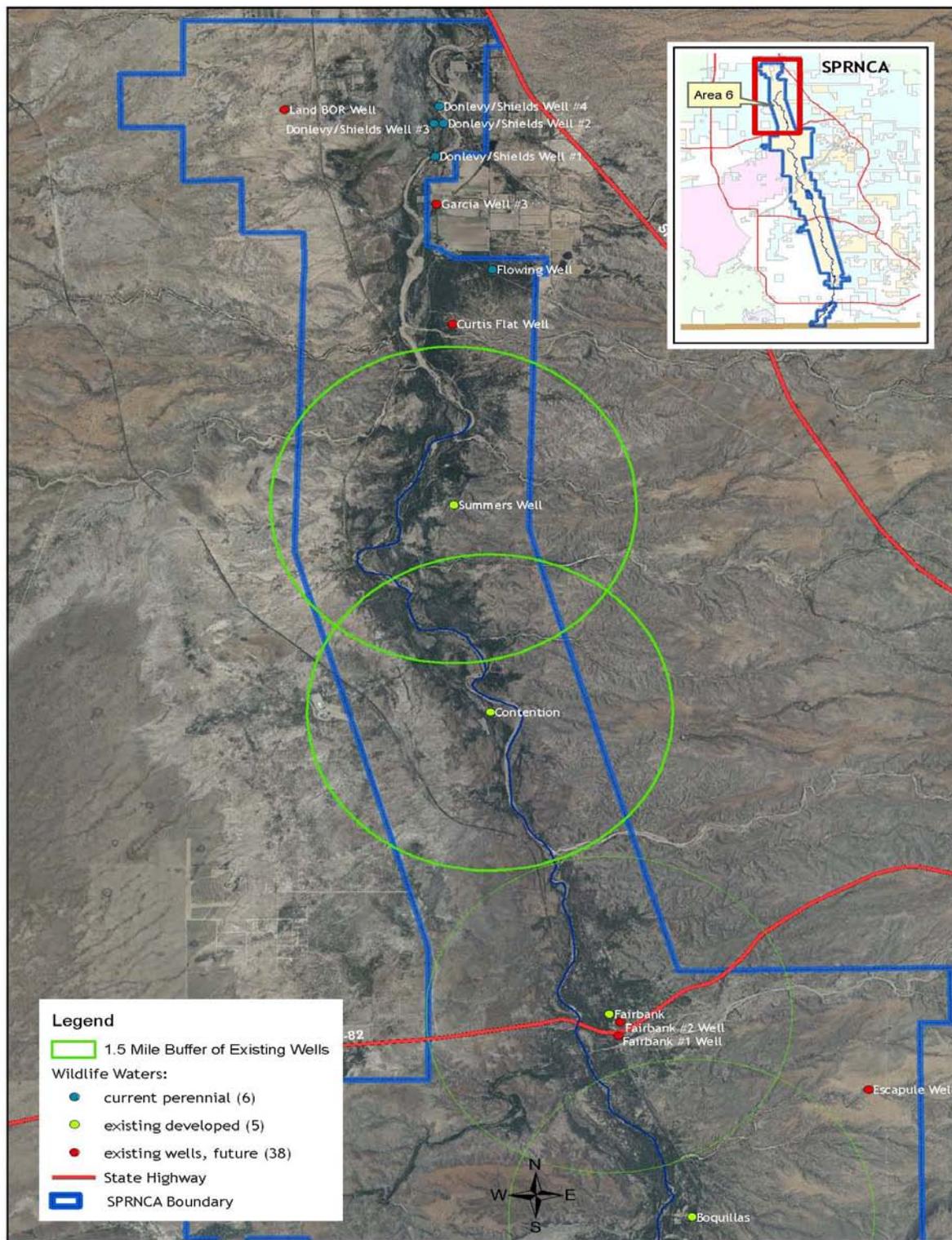


Map created May 9, 2001
Bureau of Land Management
Tucson Field Office

0 0.25 0.5 1 Miles

1:17,000

SPRNCA Wildlife Waters - Area 6



Map created May 17, 2011
Bureau of Land Management
Tucson Field Office

0 0.5 1 2 Miles

1:50,000

PROJECT LOCATION:

San Pedro Riparian National Conservation Area, Cochise County

LAND OWNERSHIP AT PROJECT SITE (Please state specifically if PRIVATE PROPERTY and provide landowner's name): USDI, Bureau of Land Management

IF PRIVATE PROPERTY, IS THERE A STEWARDSHIP AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT? Public land.

HABITAT DESCRIPTION:

Chihuahuan Desertscrub vegetation covers the largest area within the SPRNCA, and is characterized by long-lived shrubs such as creosote (*Larrea tridentata*), acacia (*Acacia spp.*), tarbush (*Flourensia cernua*), and mesquite (*Prosopis velutina*). The "river of green" is the cottonwood (*Populus fremontii*)/Goodding's willow (*Salix gooddingii*) gallery forest, which occurs along the entire length of the SPRNCA, but is invaded in increasing numbers by tamarisk (*Tamarisk ramosissima*) from roughly Fairbank north to Land Corral. Mesquite bosque occurs in transition from cottonwood gallery forest to terrace vegetation, and these terraces may include netleaf hackberry (*Celtis reticulata*), graythorn (*Ziziphus obtusifolia*), littleleaf sumac (*Rhus microphylla*), four-wing saltbush (*Atriplex canescens*), and golden eye (*Viguiera dentata*). Sacaton (*Sporobolus wrightii*) grasslands cover large areas of the terraces in areas not previously cleared for agriculture, but is voluntarily returning in many fields where it has not already been seeded. Mesquite and sacaton uplands occur in many locations throughout SPRNCA. Average elevation is approximately 3900'. The San Pedro River cottonwood gallery forest is approximately ¼ mile from the Contention, Palominas, Fairbank, Summers, and Boquillas wildlife water developments. However, the San Pedro River is now intermittent in these areas and does not usually contain permanent water. The SPRNCA contains permanent water from roughly Waters Road to Charleston Road.

ITEMIZED USE OF FUNDS:

PHASE 1: Phase 1 would involve the improvement and maintenance of existing wildlife waters at Palominas and Fairbank wells. All wells that would be planned for wildlife water development would require a sanitary well seal through Arizona Dept. of Water Resources' regulations. The sanitary well seal at Contention wildlife water was constructed in conjunction with the broken pipe repair during April 2011. Total cost to BLM was \$6,220.52 for labor, per diem, vehicles, and equipment (see itemized project cost estimate); any wildlife water development at new wells (or existing wells without sanitary seals) would require this cost-share match from BLM, including the existing Palominas well.

- Area 1 (International Boundary to Hwy 92): Repair the solar panel at Palominas (maintenance completed by BLM force account crew March 2011 with estimated BLM cost-share of \$400 for solar panel and \$800 for labor). Install pipe, storage tank, and drinker at Palominas (to allow for water storage and accessibility for large mammals not using the current cistern). This dedicated wildlife water currently has a wildlife-friendly barbed wire fence around three sides (north, east, and south), in order to prohibit off-road vehicle use. Livestock grazing is not legally allowed on SPRNCA at the present time. Installation using BLM cost-share Gila District force account crew: \$6,220.52, plus sanitary well seal using Gila District force account crew: \$6,220.52.
- Area 6 (Hwy 82 to Land Corral): Repair the broken pipe at Contention and construct sanitary well seal as required by Arizona Dept. of Water Resources' regulations (maintenance completed by BLM force account crew April 2011 with BLM cost-share of \$6,220.52). Repair leak at Fairbank, tie into existing line, install approximately 500' of pipeline and separate wildlife drinker. Installation using BLM cost-share (Wildlife Biologist and Gila District force account crew): \$6,220.52.



Material	Fairbank	Palominas
500 feet Polypipe	\$200.00	Not needed
1" PVC pipe schedule 40	Not needed	\$100.00
Misc. plumbing supplies (float, primer, cement, couplers, escape ramp, etc.)	\$200.00	\$200.00
300 g. Above-ground Water Trough plus Shipping (e.g. HCP-W-300 from tank-depot.com)	\$700.00	Not needed
1500 g. Underground Water Cistern plus Shipping (e.g. ACT1500-LPB from tank-depot.com)	Not needed	\$3,000.00
Wedge Drinker	Not needed	Supplied by BLM (BLM match)
Installation (BLM Labor)	\$6,220.52 (BLM match)	\$6,220.52 (BLM match)
Sanitary Well Seal (BLM Labor and Materials)	Already Present	\$6,220.52 (BLM match)
Total SBG Funds Requested	\$1,100.00	\$3,300.00
Total BLM Match	\$6,220.52	\$12,441.04

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

Friends of the San Pedro River has pledged \$200.00, and possible volunteer labor for maintenance and/or installation of the projects.

BLM cost-share match for labor to construct sanitary well seal at Palominas and installation of each development at Fairbank and Palominas.

PROJECT MONITORING PLAN:

The BLM Wildlife Biologist will monitor the projects for maintenance of water availability and for documentation of wildlife use. Wildlife cameras may be installed to document species using the water developments.

PROJECT MAINTENANCE:

The BLM Wildlife Biologist will routinely check each of the water developments and complete necessary force account request forms for maintenance by the BLM Gila District force account crew.

PROJECT COMPLETION REPORT TO BE FILED BY:

BLM Wildlife Biologist Marcia Radke

WATER DEVELOPMENT PROJECTS (see attached worksheet):

TREE SHEARING (AGRA-AXE, PUSH) PROJECTS (see attached worksheet):

**ARIZONA GAME AND FISH DEPARTMENT
WATER DEVELOPMENT WORKSHEET**

PROJECT NAME: San Pedro Riparian National Conservation Area

1) **Is the water development listed as a priority in the most recent “Wildlife Water Development Annual Implementation Schedule?”**

No.

2) **Please list the Development Branch personnel and date coordinated with for this project.**

Brad Fulk, 2/22/11

SE Arizona HPC, 07/12/11

3) **What is the estimated annual inches of precipitation for the area? (mark one)**

 2-4 4-6 6-8 8-10 10-12 X 12-14 14-16 >16

4) **Is there a perennial water source available to big game within four miles of this project?**

 X YES (please complete #5 below) NO (skip #5 below)

5) **For the accessible, perennial water source nearest this project:**

Name of water source: For the Fairbank wildlife water, there is perennial water at the developed wildlife water at Contention (3 miles), and at the developed wildlife water at Boquillas (2 miles). There is currently perennial water at the “beaver hole” approximately 0.4 mile west of the developed Palominas wildlife water.

Type of water source (catchment, spring, dirt tank, etc.): Contention is a developed solar well with underground storage tank, Boquillas is a developed well with stock tank, and the “beaver hole” is natural, deep pool on the San Pedro River (may go dry in some years).

Ownership of water source: BLM for all

Distance in miles from project: Contention – 3 miles, Boquillas – 2 miles, San Pedro River beaver hole – 0.4 mile.

- 6) **Is the target wildlife species a result of transplant efforts?** YES NO
Gould's turkey are present on the SPRNCA and were documented as nesting during April 2010. They have been documented as far north as St. David Diversion Dam and Hwy 82 bridge, as far south as 1.5 miles north of the International Boundary, near the Lehner trailhead, and as nesting approximately 0.4 mile west of the Palominas wildlife water (April 2010).
- 7) **Please list any special land management status for the project site (i.e. Wilderness, National Park, National Monument, etc). If private land, list landowner.**
National Conservation Area (San Pedro Riparian)
- 8) **Please provide the following information about access to the proposed site:**
Type of access (mark one): 2x4 vehicles 4x4 only foot only**
**If foot access only: Distance in miles: Approx. hiking time:
Vehicular access is available on administrative roads.
-- Does access to this site require crossing private or tribal lands? YES NO
-- Please describe any restrictions to public access:
See Sportsmens' access/hunting opportunities described above.
- 9) **Please list below (or on a separate sheet) the material type and dimensions of each component proposed to be added, modified, or repaired.**
See proposal above.
- 10) **Was a site visit completed?** Yes No
If Yes, please list personnel that attended and date.
Dunlavey wetlands with Brian Fulk and Jon McClard on 02/22/11, Fairbank wildlife water and Boquillas with Jon McClard on 02/22/11.

ARIZONA GAME AND FISH DEPARTMENT
TREE SHEARING WORKSHEET

PROJECT NAME: _____

- 1) **What is the estimated acreage of the project?**

- 2) **How are the trees going to be cleared? (agra axe, chain saw, push):**

- 3) **What is the estimated number of trees per acre?**

- 4) **Describe trees to be cleared (species, estimated diameter, single stem, multi-stem):**

- 5) **Describe terrain (slope, soil type, rocks, etc.)**

- 6) **Please list any special land management status for the project site (i.e. Wilderness, National Park, National Monument, etc). If private land, list landowner.**

- 7) **Please provide the following information about access to the proposed site:**
Type of access (mark one): ___2x4 vehicles ___4x4 only ___foot only**
**If foot access only: Distance in miles: Approx. hiking time:

Does access to this site require crossing private or tribal lands? ___YES ___NO

Is the site relatively accessible for tree shearing equipment? _____YES ___NO

Please describe any restrictions to public access:

PROJECT COMPLETION REPORT

(Please complete the report and forward to Game Branch
within 30 days of the completion of the project. THANK YOU!)

Project Title: _____

Project number: _____

GMU: _____

Project Coordinator (IF NOT APPLICANT): _____

Agency: _____

Address: _____

Phone: _____

Email: _____

Project Completion Date _____

COOPERATING AGENCIES AND/OR CONSERVATION GROUPS, LANDOWNERS, ETC.:

PROJECT ACCOMPLISHMENTS:

PROJECT RESULT ACTIONS:

(List practices implemented as a result of project, i.e. area rested from grazing for 2 yrs., season recommendations revised based on new distributions, data received from project, etc.)

COMMENTS ABOUT THE PROJECT:

(Please list updates, reports, concerns, suggestions)

MAINTENANCE/MONITORING SCHEDULE (from this point on): WHO and WHEN?

PHOTO: (Please attach)

MAIL COMPLETED PROJECT COMPLETION FORM TO:

Arizona Game and Fish Department

Attn: Game Branch

5000 W. Carefree Highway

Phoenix, AZ 85086

[@azgfd.gov](mailto:azgfd.gov)

Contention Wildlife Water Sanitary Well Seal

PROJECT COST ESTIMATE:

6/10/2011

WRACE #:

Charge Code: G000-1652-IM

<u>LABOR</u>	hrly-rate	ESTIMATED		ACTUAL		Description
		Hrs	Cost	Hrs	Cost	
Operator- M	\$46.34	0	\$0	30	1,390.20	
Operator- P	\$46.34	0	\$0	30	1,390.20	
Operator- R	\$43.21	0	\$0	0	0.00	
Park Ranger -S	\$32.73		\$0		0.00	
TOTAL LABOR			\$0	60	2,780.40	

<u>VEHICLES</u>	lisc. No.	Rate	ESTIMATED		ACTUAL		Description
			Use	Cost	Hrs	Cost	
Dodge-Reynolds	G630601F	\$0.60	0	\$0	0	0.00	Personell Transport
San Pedro Ford FB	G630844A	\$0.52	0	\$0	125	65.00	Personell Transport
Crew cab -Peru	G6313620	\$0.59	0	\$0	0	0.00	
San Pedro Int'l FB	G7100146	\$0.66	0	\$0	0	0.00	
Ford 450 - FA	G710624B	\$0.70	0	\$0	360	252.00	Personell Transport
Blue dump	G8206555	\$2.73	0	\$0	0	0.00	
Red dump	G820654B	\$2.15	0	\$0	240	516.00	
CAT grader	I154938	\$11.00	0	\$0	0	0.00	
Old SP tractor	I160476	\$31.08	0	\$0			
CAT D4	I162816	\$41.58	0	\$0	0	0.00	
CAT backhoe	I256331	\$37.57	0	\$0	16	601.12	
F350-Sherrod	I277009	\$0.69	0	\$0	0	0.00	
J Deere loader	I420691	\$45.05	0	\$0	0	0.00	
San Pedro backhoe	I423874	\$37.57					
	OLD TAG #'s I420692						
	I421970	\$29.03	0	\$0	0	0.00	
Water truck	I420711	\$40.49	0	\$0	0	0.00	
SP forklift	I422918	\$16.86					
San Pedro tractor	I422919	\$35.74	0	\$0	0	0.00	
Dan truck- Ford F250	G6307944	\$0.60	0	\$0			
TOTAL VEHICLE				\$0		1,434.12	

<u>OPERATIONS</u>	PER DIEM - Days	Motel Rate	Meals Rate	ESTIMATED		ACTUAL		Description
				Days	Cost	Days	Cost	
	Total rate			0	\$0	2	218.00	M
	\$109	\$70	\$39	0	\$0	2	218.00	P
	\$109	\$70	\$39	0	\$0			R
Contract				0			0.00	
Contract								
Contract								
Contract								
Other- Landfill							95.00	
Other - Waste Management								
Other- Project Contingency								
Other- Overhead/Management								
Other-Maintenance/Supplies							1,475.00	Concrete \$125, Replacement Solar Pump (Gov Storage) \$700.00, Replacement Solar Panel \$550.00 :Pipe, Fittings, conduit 100
TOTAL OPS					\$0		2,006.00	

GRAND TOTAL	\$0	6,220.52
	ESTIMATED	ACTUAL

Comments: