

ANNUAL REPORT
2008
Roosevelt Habitat Conservation Plan
Salt River Project



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¹Locations of endangered species are sensitive data considered confidential by U.S. Fish and Wildlife Service and therefore are omitted from this report. Management agencies requiring this information can contact SRP or the Arizona Ecological Field Services Office of U.S. Fish and Wildlife Service to receive this information.

²Property boundaries overlaid on aerial photographs are approximate due to slight distortions on the aerial photography.

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CERTIFICATION

Under penalty of law, I certify that, to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of this report, the information submitted is true, accurate, and complete.

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I. INTRODUCTION

In February 2003, the U.S. Fish and Wildlife Service (FWS) issued an Incidental Take Permit (ITP) pursuant to Section 10(a)(1)(B) of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended, to Salt River Project (SRP) for southwestern willow flycatcher (*Empidonax traillii extimus*) (“flycatcher”), yellow-billed cuckoo (*Coccyzus americanus*) (“cuckoo”), bald eagle (*Haliaeetus leucocephalus*) and Yuma clapper rail (*Rallus longirostris yumanensis*) (“clapper rail”). The activity covered by the ITP is the continued operation by SRP of Roosevelt Dam and Lake up to an elevation of 2,151’. The ITP is conditioned upon SRP’s implementation of the Roosevelt Habitat Conservation Plan (“Roosevelt HCP”) (Salt River Project 2002).

The Roosevelt HCP provides measures to minimize and mitigate incidental take of the four species listed above “to the maximum extent practicable and ensures that incidental take will not appreciably reduce the likelihood of the survival and recovery of these species in the wild” (FWS 2002). Mitigation efforts focus primarily on the acquisition and management of riparian habitat. Additional habitat conservation measures include the protection and management of habitat at Roosevelt Lake, acquisition of water rights for maintenance of riparian habitat and acquisition of buffer lands to benefit riparian habitat.

II. ANNUAL REPORTING COMPLIANCE

Obligation: SRP is required to submit an annual report to FWS, Bureau of Reclamation (USBR) and the Tonto National Forest (TNF) describing all Roosevelt HCP activities occurring during the past year. A draft report must be sent to FWS prior to the annual meeting in October/November of each year. The report is to be finalized by February 1st of the following year.

Actions: SRP submits this report to FWS, USBR and the Tonto Basin District Office of the TNF to fulfill the annual reporting requirement. The report covers all activities relating to the Roosevelt HCP from November 1, 2007 through October 31, 2008, including a summary of reservoir operations, management activities, monitoring results, status reports and planned future activities.

III. ROOSEVELT LAKE AREA COMPLIANCE

A. Summary of Reservoir Operations - Water Year 2008

Obligation: Data on reservoir elevations are used in conjunction with habitat monitoring information to determine permit compliance. Impacts to covered species will primarily occur from effects on occupied vegetation resulting from changes in water levels and duration of inundation or desiccation in Roosevelt Lake.

Action: SRP monitored lake levels throughout the year to evaluate impacts and ITP compliance.

Discussion

The surprisingly productive La Nina winter provided the largest influence on Salt and Verde reservoir operations this past water year. Water Year 2008 was a productive runoff year ultimately requiring over 166,000 acre feet of water to be released over Granite Reef Diversion Dam. The seasonal river swap from the Salt System to Verde System was initiated on September 29, 2008 due to maintenance requirements at Horse Mesa Dam. Indications for this coming winter are for ocean conditions to be in a near neutral pattern offering little guidance for the upcoming winter. SRP's reservoir system was near capacity in May allowing for a full allocation of surface water for the remainder of 2008 and 2009. Monsoon activity on the Salt and Verde watersheds did little to boost water supply although monsoon precipitation was above normal.

Winter Precipitation

Sea surface temperatures across the Equatorial Pacific during the Fall of 2007 were cooler than normal indicating that the Southern Oscillation was in a weak-to-moderate La Nina phase going into the Winter of 2007/2008. This condition is typically associated with below normal cool-season precipitation across the Southwestern United States, and October and November 2007 were indeed dry months across the Salt/Verde Watershed with barely a quarter-inch of precipitation or 8% of normal recorded on average. The weather pattern over the Western United States changed significantly in late November as the first of four strong storm systems that affected Arizona from early December through January approached.

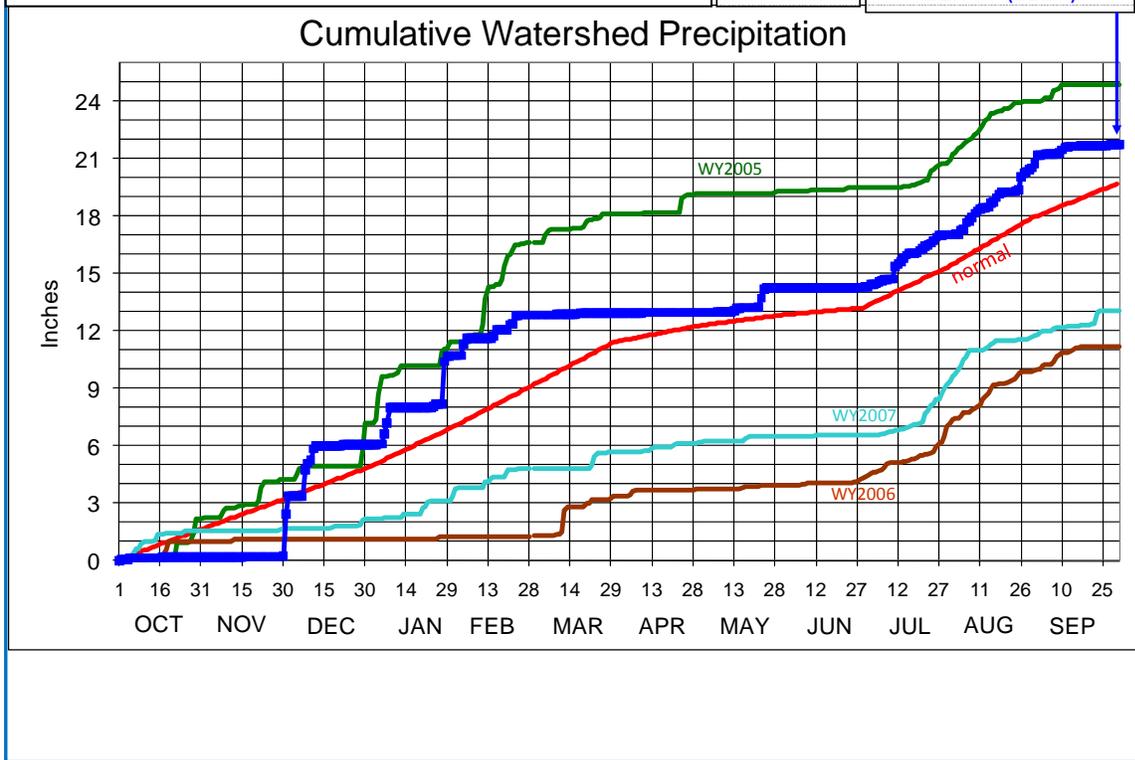
After the first significant storm of the season passed, an average precipitation accumulation in excess of 3.0" was tallied across the Salt/Verde Watershed. Average precipitation totals on the watershed equaled or exceeded 2.0" with the other three storm systems passing during this time frame. Several less intense but productive low-pressure systems passed during February and combined for a monthly average watershed total in excess of 2.0", but significant changes in the regional weather pattern during March prevented that month's watershed average accumulation from exceeding a tenth of an inch. All totaled for December 1, 2007 through March 31, 2008, the average Salt/Verde Watershed accumulation equaled 12.66" or 153% of normal. By basin during this winter time frame, the Salt Watershed received an average accumulation of 13.67" or 166% of normal and was slightly favored compared to the Verde Watershed which received 11.68" or 142% of normal.

Summer Precipitation

After an anomalously strong low-pressure system tracked over Arizona in late May, producing an average accumulation near one inch across the Salt/Verde Watershed, high pressure rebuilt aggressively over the Southwestern United States in June, leading to weak westerly flow aloft over the region by the latter part of the month. In early July, the prevailing winds aloft over Arizona shifted from west to east and deep sub-tropical moisture surged into the state and set the stage for widespread thunderstorms and significant precipitation. Although widespread, heavy rainfall fell on only one or two days before the first monsoon "break" began in late July. Persistent daily rounds of thunderstorms pushed the monthly average accumulation across the Salt/Verde Watershed to nearly three inches with the bulk once again falling on the Salt River basin. This first monsoon "break" was relatively short-lived before easterly flow aloft and ample moisture for thunderstorms returned shortly after August 1st, and with the exception of another

Figure 1. Cumulative Watershed Precipitation, October 1, 2007 through September 30, 2008

Verde 18.8"	WY08: Oct 1–Sep 30:
Salt 24.8"	21.73" (111%)



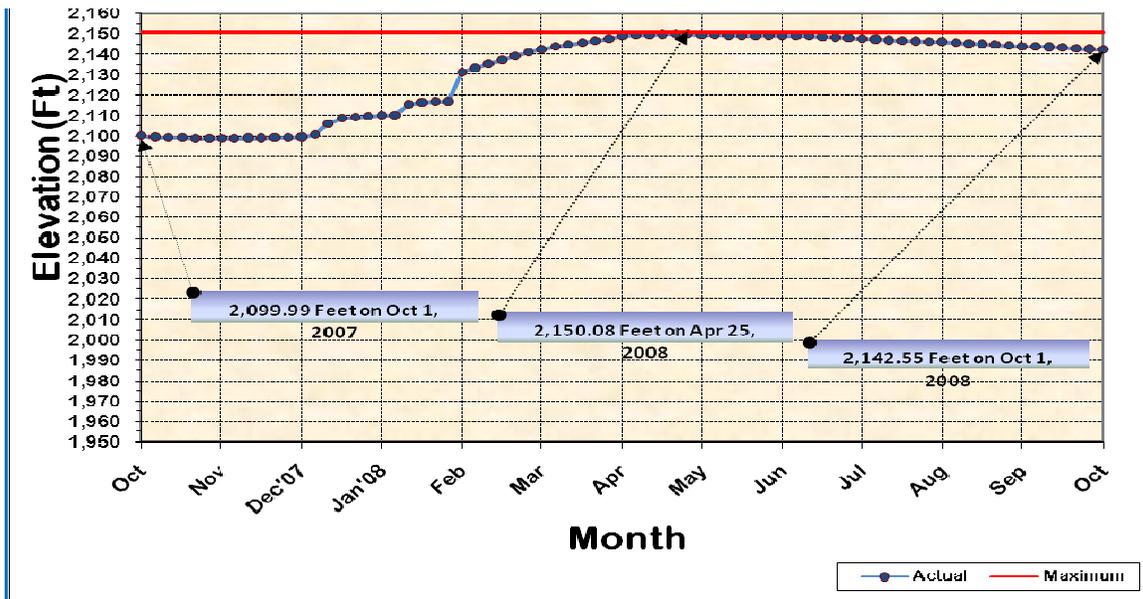
short break after mid-month, conditions favoring widespread thunderstorms persisted until westerly flow aloft returned to the region at the very end of the month. Occasional incursions of moisture interacting with disturbances in the westerlies led to a couple of episodes of widespread, significant precipitation during September which brought the July-September average Salt/Verde Watershed accumulation up to 7.42" or 116% of normal. By basin during this time frame, the Salt Watershed received an average accumulation of 9.06" or 141% of normal which was significantly more than the Verde Watershed which only received 5.92" or 92% of normal.

For the water year, October 1, 2007, through September 30, 2008, the Salt/Verde Watershed average accumulation was 21.73" or 111% of normal with the Salt side receiving 24.82" or 126% of normal versus the Verde's 18.83" or 96% of normal.

Reservoir Status

In late November, total reservoir storage was 49 percent full with little prospect of improvement during a La Niña winter. After 4 major storms and several small events, runoff dramatically increased reservoir storage. From November 30, 2007 through April 15, 2008, storage increased by 1,132,517 acre feet. In water year 2007, total inflow to the reservoirs was just 211,000 acre feet. The Verde reservoirs were near capacity from February through April. Roosevelt Lake recorded the highest elevation in history this runoff season at 2150.08 feet on April 25, 2008.

Figure 2. **Roosevelt Lake Elevation Water Year 2008**



Roosevelt Operations

Roosevelt operations were influenced by a maintenance project at Mormon Flat Dam. USBR requires regular inspections and repair, if necessary. The project resulted in a 50-foot drawdown at Canyon Lake from October 2007 into January 2008. The majority of the water used to refill Canyon Lake was from local runoff from the rainfall events in January. About 30,000 acre feet

Figure 3. **Roosevelt Lake Elevations, January 1996 - October 2008 - End of month**

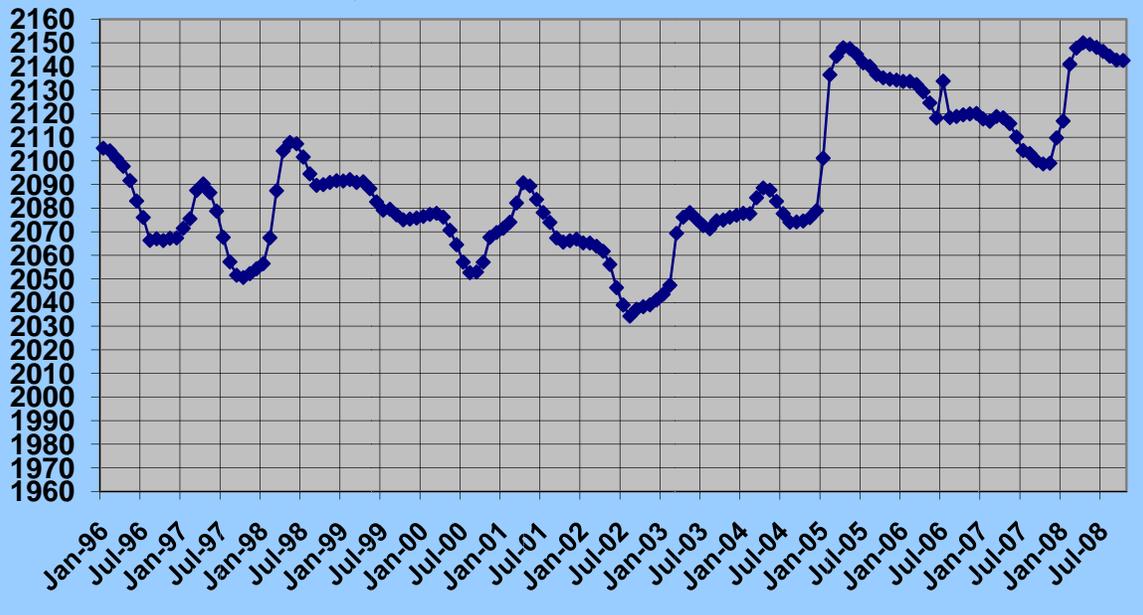
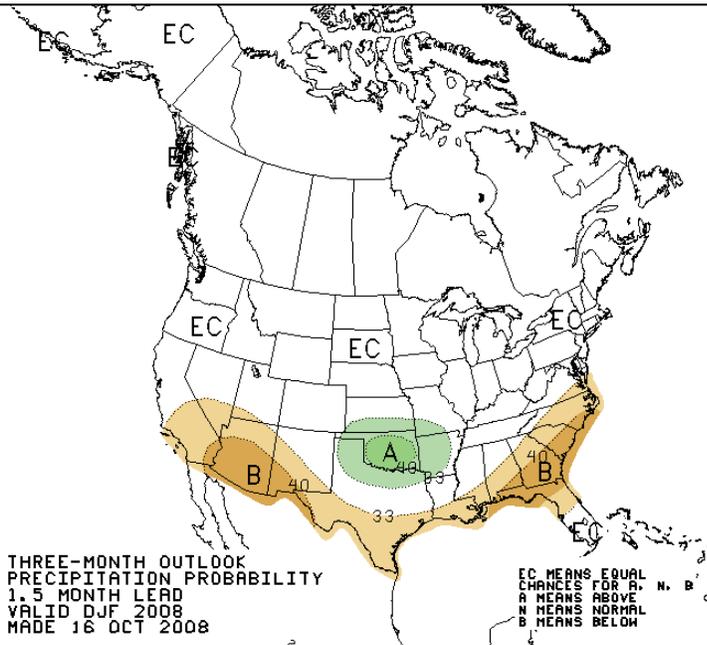


Figure 4: Three-Month Precipitation Outlook for the United States (Dec – Feb)



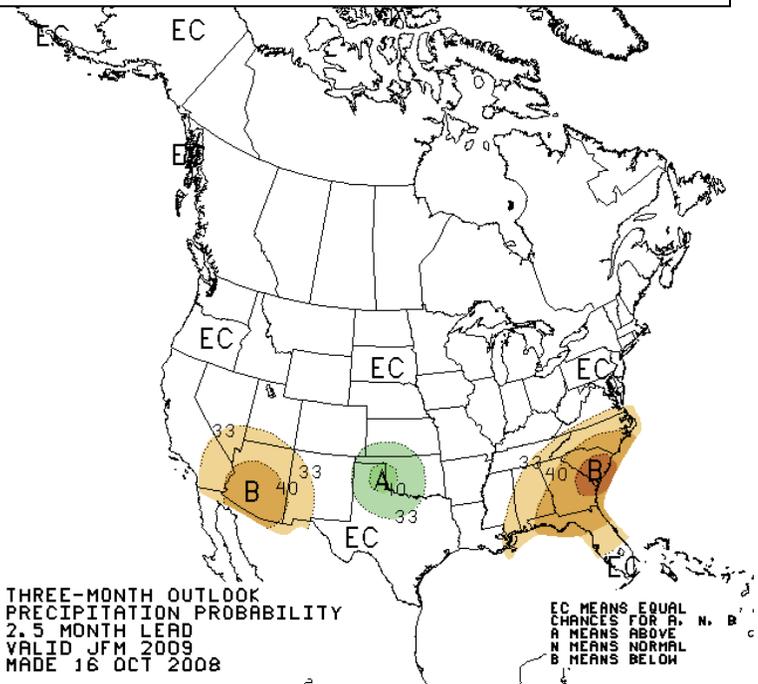
of water would have been released from Roosevelt Dam to refill Canyon Lake without the local runoff. Normal winter operations resumed once the project was completed although a portion of the water order remained on the Verde system due to near capacity reservoirs. Typical operations call for the water order to be switched from the Verde system to the Salt system in May leaving Bartlett release at minimum. Water stored behind Horseshoe Dam is also typically moved downstream to Bartlett reservoir to reduce the amount of loss from seepage and evaporation. The water order may be switched sooner depending on the winter runoff. However, a deviation from typical operations

was necessary and a portion of the water order remained on the Verde system due to the reservoirs being near capacity in May. Because Roosevelt Lake continued to gain storage within the New Conservation Storage pool, Verde releases were stepped down as inflow receded in order to maintain total SRP storage capacity. Once Roosevelt Lake inflow fell below demand, increased releases on the Verde could be reinstated.

Weather Outlook

The Climate Prediction Center latest seasonal outlooks for temperature and precipitation are similar for both the December-January-February season and the January-February-March season (Figures 4 and 5). The outlook suggests average temperatures in the Valley and on the watershed have equal chances of being below, near, or above normal with the highest chances for total precipitation for below normal. The equatorial eastern Pacific sea surface temperatures are near normal after recovering from several months of La Niña

Figure 5: Three-Month Precipitation Outlook for the United States (Jan – Mar)



(cooler than normal) conditions. This favors near-normal to below normal winter precipitation in Arizona. The pattern over the North Pacific has warmer than normal water in the central and west and cooler than normal water off the west coast of North America. This favors drier winters in the state.

B. Incidental Take Permit (ITP) Compliance Monitoring

The Roosevelt HCP states that SRP will periodically collect and evaluate information on occupied habitats and population status of flycatchers, clapper rails, cuckoos and bald eagles at Roosevelt Lake to monitor compliance with the ITP. Vegetation monitoring is to be conducted to ensure that adaptive management thresholds or permit limits are not exceeded. In addition, populations of flycatchers, cuckoos and rails will be monitored for ITP compliance and to identify long-term trends using appropriate field survey techniques or protocols.

1. Habitat Monitoring

a. Obligation: To ensure that permit limits or adaptive management thresholds are not exceeded, SRP will monitor riparian vegetation at the Salt River and Tonto Creek arms of Roosevelt Lake on an annual basis beginning in 2007, continuing for the life of the permit. SRP will use a method to estimate tall dense vegetation likely to be occupied by flycatchers using satellite imagery information (calculations of relative density of vegetation). Annual vegetation mapping will allow SRP biologists to monitor the ever-changing mosaic of probable suitable breeding habitat as lake waters rise and recede.

Action: SRP continued to work with U. S. Geological Survey, Columbia River Research Laboratory (USGS CRRL) to further refine the application of a multi-scaled flycatcher breeding habitat model (“habitat model”) to the project area.

b. Obligation: The extent of cattail marshes will be monitored by helicopter survey each year that more than 3 acres of marsh exist below elevation 2,151’. Yuma clapper rail surveys will be conducted to determine ITP compliance.

Action: High water levels in the lake eliminated any development of cattail marsh below 2151’ in 2008. Clapper rail surveys were not conducted because of the lack of any suitable habitat.

c. Obligation: Periodic surveys for flycatchers, cuckoos and clapper rails will be conducted to determine ITP compliance.

Action: No surveys were conducted by SRP in 2008 because the reservoir was nearly full. Based on habitat monitoring results from 2007, SRP estimates that no more than 150 acres of potentially suitable flycatcher and cuckoo breeding habitat were inundated in 2008 (see Table 1; estimated 182 acres in 2007 minus 32 acres in 2009). The following section discusses the 2009 habitat monitoring results in more detail.

2. Habitat Monitoring Results

In 2008, USGS CRRL researcher, Jim Hatten, ran the multi-scaled habitat model on the Salt River and Tonto Creek arms of Roosevelt Lake using a Landsat TM satellite image taken on June 8, 2008. The model identifies potential breeding habitat using four predictor variables: (1) width of floodplain, extracted from a digital elevation model; (2) relative density and biomass of green riparian vegetation within 900-m² cells, NDVI; (3) amount of densest vegetation within 4.5 ha (11.1 acre) neighborhoods, and (4) variation in vegetation density within 4.5 ha neighborhoods. The GIS-based model produces in a spatially explicit manner the probability of flycatcher breeding site occurrence (1-98%) for each cell.

CRRL provided SRP with a copy of the output files (ArcView shapefile polygons, grid cells) identifying breeding habitat probability classifications (1 through 5) along with a summary table of acres within each probability class for the Tonto Creek and Salt River arms (Figure 6; Table 1). Code 1 grid cells identify areas with the lowest probability for locating flycatcher breeding areas, whereas Code 5 grid cells indicate areas with highest probability.

Model results were overlain with 2008 flycatcher survey detection locations as reported by Tonto National Forest biologists. The resulting images were field checked by flying the areas in a helicopter. No ground-truthing was conducted this year because the lake was nearly full and very little habitat remained below 2151' elevation. We felt we could adequately verify model results from the air.

Table 1. Multi-scaled Southwestern willow flycatcher breeding habitat model results, 2007 and 2008

Habitat Probability Class	Acres Below 2151' Elevation					
	Salt Arm		Tonto Arm		Total Acres	
	2007	2008	2007	2008	2007	2008
1	624.74	377.27	215.98	149.41	840.72	526.69
2	106.39	19.6	11.03	10.72	117.42	30.32
3	99.97	15.3	16.53	6.88	116.50	22.18
4	36.11	8.3	1.78	0.71	37.89	9.01
5	27.80	0.85	0.00	0	27.80	0.85
Total Classes 3 thru 5	163.88	24.45	18.31	7.59	182.19	32.04
Total Classes 4 and 5	63.91	9.15	1.78	0.71	65.69	9.86

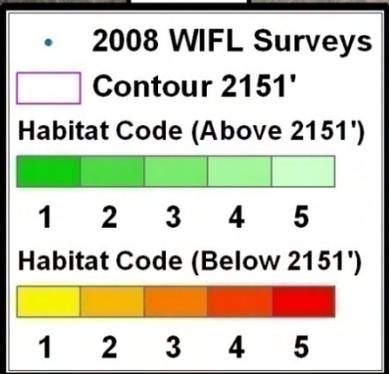
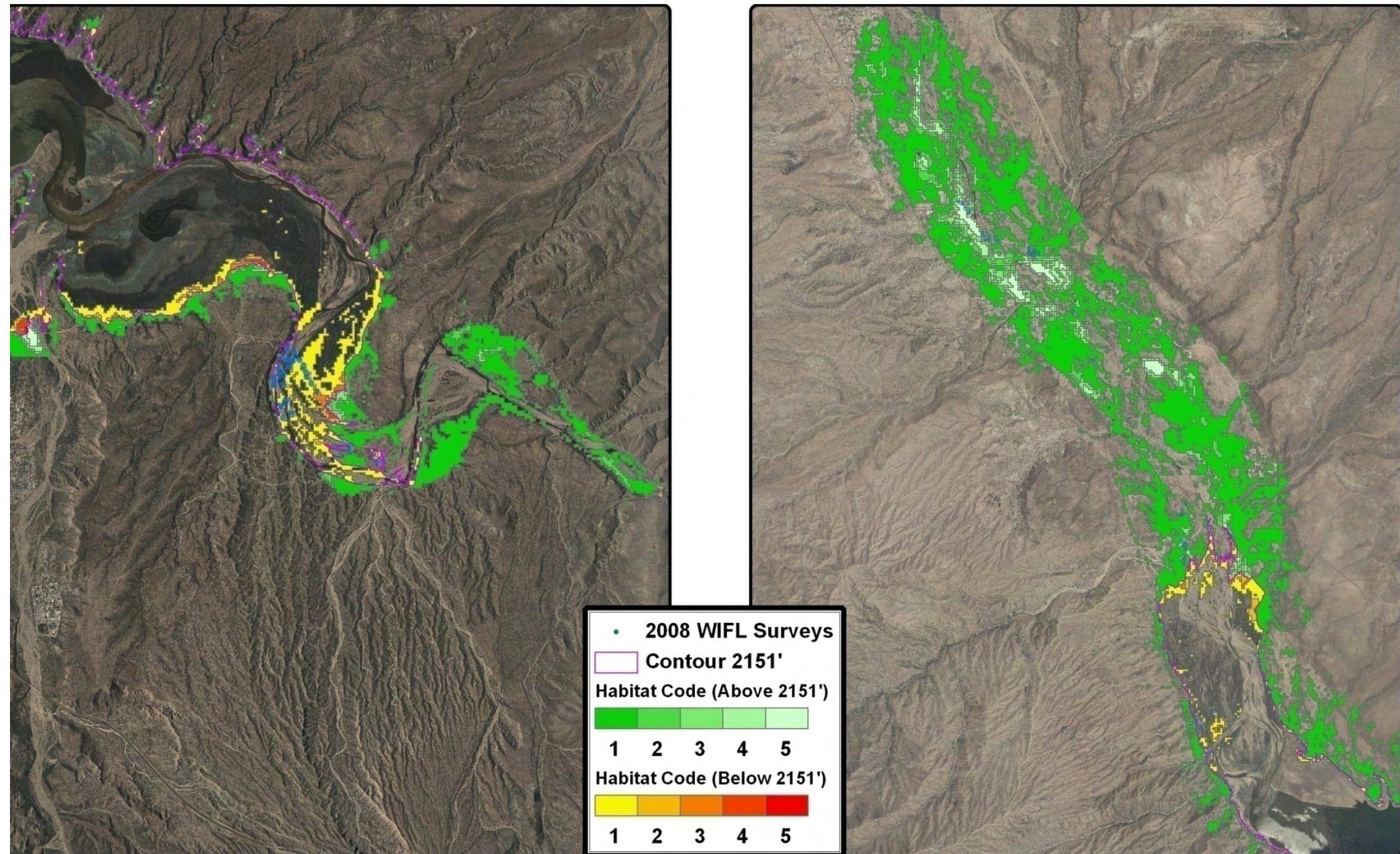


Figure 6. Salt River and Tonto Creek arms of Roosevelt Lake showing 2008 flycatcher habitat model results

In 2007, we found that much of the code 3 habitat was clustered around code 4 or 5 patches and was likely being utilized by breeding flycatchers. As a result, we included codes 3 through 5 in our estimates of potentially occupied habitat. In reviewing the 2008 results, we believe that this situation continues to be true.

This past year, SRP and USGS CRRL attempted to refine the model by applying it to October 2007 imagery and comparing the results to June 2007 model results. Unfortunately, Landsat 5 was not working in October, so the latest image available was in September. We hoped to see a reduction in the green reflectance of ground cover vegetation that was showing as high quality flycatcher habitat, when in reality it was not. We did see many of these areas being correctly identified as low quality habitat in the September results. However, other areas of ground cover that grew in response to monsoon rains were incorrectly identified as good quality flycatcher habitat. We still needed to supplement the results with ground-truthing and/or aerial evaluation. We would like to find an approach that would eliminate the need for much of the supplemental field work. First, we plan to run the model on April 2007 imagery and compare results across the time sequence to see if we can correctly differentiate the tall dense vegetation that serves as high quality flycatcher habitat, a phenological approach that may be more telling. We also plan to investigate the use of LIDAR to see if these data will assist with the differentiation between tall dense vegetation and herbaceous/shrubby components.

3. Bald Eagle Program

- a. Obligation:* SRP is required to provide annual funding for a pair of seasonal bald eagle nest watchers through an existing Arizona Bald Eagle Nestwatch Program.

Action: A total of \$18,400 was paid to AGFD in 2008 to fund a pair of nest watchers for the breeding season.
- b. Obligation:* Each year, SRP will assist with three Occupancy and Reproduction Assessment and nest search helicopter events and will provide funding for coordination and attendance by existing bald eagle management personnel.

Action: SRP provided flights totaling \$14,050 worth of helicopter service to the AGFD during this period.
- c. Obligation:* SRP will provide a maximum of three annual helicopter flights for rescue or management efforts.

Action: No rescue efforts occurred during this reporting period.
- d. Obligation:* SRP will develop a coordinated plan with AGFD and FWS to rescue any bald eagles, eggs or nestlings at Roosevelt Lake that may be threatened by rising reservoir levels.

Action: Notification plan and protocols were last updated in the SRP-160 Emergency Reservoir Operations Manual in October 2008.

2007 Breeding Status

AGFD monitors bald eagle productivity at five breeding areas (BA) associated with Roosevelt Lake. The results of the 2008 breeding season are shown in Table 2.

Two chicks hatched successfully from the Tonto nest but were later killed when the branch that held the nest broke during a windstorm. On the evening of April 16, high winds blew through the Tonto Basin. The nest branch broke and both nest and hatchlings fell into the water below the tree. AGFD salvaged the bodies. SRP views the cause of these hatchling deaths to be outside the realm of the ITP because it was caused by a natural event – the breakage of a tree limb during a windstorm. AGFD stopped banding eaglets in this nest tree in 2003 because the tree branches were so brittle they posed a safety issue (K. Jacobsen, pers. comm. 5/22/08). Extreme drought conditions that were occurring in this region since 1999 likely contributed to the decadent condition of the tree.

Table 2. Comparison of bald eagle breeding productivity, 2006 - 2008, Roosevelt Lake

Breeding Area	2006		2007		2008	
	# of Eggs	# Fledged	# of Eggs	# Fledged	# of Eggs	# Fledged
Dupont @ Sierra Anchas	0	0	0	0	Unoccupied	
Pinal	2	0	0	0	2+	2
Pinto	2+	2	2	0	2+	2
Rock Creek	0	0	0	0	Failed	
Tonto	2+	2	2	2	2+	0
TOTALS	6+	4	4	2	6+	4

Source: Unpublished data, Southwest Bald Eagle Management Committee, AGFD (2006, 2007, 2008)

E. Tonto Forest Protection Officer (FPO)

Obligation: SRP will fund a Forest Protection Officer to protect, enhance and manage habitat at Roosevelt Lake in support of the Roosevelt HCP, including posting and maintaining signs and fences in restricted areas, contacting individuals found in those areas and issuing citations, public education and planning and implementing management activities in regard to threatened and endangered species.

Actions: TNF reported the following FPO activities to SRP for the period from November 1, 2007 through October 31, 2008.

Enforcement Activities

Roosevelt Lake levels reached an all-time high this year, which helped eliminate some illegal access points. Seasonal rains created more maintenance issues than in past years because signs were washed out or buried and had to be replaced in Tonto and Pinto Creeks as well as several other drainages.

Meddler Point was still not an area of huge concern this year. The minimal activity that does occur happens after dark. On average, the FPO found fresh tracks leading into the closure area once or twice a month. Two citations were issued for violations of the closure. The roads in the vicinity of Meddler Point were less passable and seemed to deter people from driving down into the closure.

More boulders were placed in Meddler Wash (on the north side of restriction area off Highway 288) to curb illegal vehicle access to the Salt River. Arizona Department of Transportation blocked the area in 2007 with debris, but illegal users removed the debris.

The FPO reports that there are ongoing problems near Pinto Creek and the Roosevelt Mound. Its proximity to Roosevelt Estates and Resort makes it more accessible to motorized vehicles and therefore difficult to patrol. ATV riders are the primary violators. Often, signs are removed, broken off, or run over. The high water level this year has hindered vehicle use in Pinto Creek, but as the water drops, the area is becoming more susceptible to ATV use, thus negatively impacting emergent riparian vegetation.

The FPO issued 26 citations this year. Eleven citations were for having campfires during seasonal restrictions, nine citations were issued to individuals driving into closed areas (ATV Hill, Old Haul Road, 333 Road, Old Canal Road) or for driving off Forest Service roads and six tickets and numerous warnings were issued to visitors and campers littering on the river. The remaining tickets cited visitors for resource damage, cutting trees without a permit, and for failing to extinguish a fire properly before leaving it.

Bald Eagles

The FPO worked closely with the AGFD Nest watchers to ensure protection of the bald eagle nest closure areas. The Tonto Basin Ranger District also provided transportation and storage of AGFD motorboats during the breeding season.

AGFD personnel placed closure buoys around the Tonto nest this year. The Tonto Nest watchers observed many boaters violate the closure. Violations often occurred as anglers allowed their boats to drift beyond the buoys into the closure area. The Gila County Sheriff's Department also assisted with enforcing the closure area.

AGFD personnel placed closure buoys around the Pinto nest this year. The pair nested in Cottonwood Acres; signs were replaced around the closure area and the closure was enforced. Nest watchers monitored the Pinto breeding area only sporadically and recorded only a few violations of the closure. The FPO made verbal contact with one violator who had boated inside the buoy line and appeared ready to set up camp for the night well within the 1000 ft. closure area.

Outreach activities

The Tonto FPO conducted two interactive nature programs at the Grapevine Group campsite area for 20-30 Boy Scouts and their parents, many of whom had never been camping before. For the third year in a row, she gave an interactive program with a conservation theme for approximately 120 14- and 15- year-olds as part of the annual "Fishing with an Attitude," an event for disadvantaged teens from Gila County hosted by the Gila County Sheriff's Office.

Her activities also included hundreds of campsite visits on the Salt River arm of Roosevelt Lake throughout the year. Many people she contacted once frequented areas now closed to vehicle traffic. They are often anxious to know if those areas will ever be opened again. Some think the

closures were an improvement and were not surprised due to the abuses the area received. Others remain upset about the restrictions, but have seemingly accepted them. These contacts also allow the FPO an opportunity to educate people about local wildlife, and to enlighten them to the value of resources around them.

F. Rockhouse Riparian Demonstration Project

Obligation: The Rockhouse mitigation site will be determined successful if woody riparian vegetation within the project area becomes established within 5 years with the potential to meet the criteria for desirable habitat as the vegetation grows. As the trees age, they also could provide roosting and nesting habitat for bald eagles.

Actions: On September 18, 2008, SRP met with FWS, USBR and TNF biologists at the Rockhouse project site to evaluate the effectiveness of the pilot project. Attendees included Greg Beatty (FWS), Henry Messing (USBR), Amyann Madara-Yagla and Shannon Torrence (TNF), Tim Wheeler (site maintenance), Patty Cascio (Native Resources International), Lesly Swanson and Ruth Valencia (SRP).

Results of 5-Year Review

SRP has been able to establish woody riparian vegetation on approximately 20 acres at the Rockhouse project site. Riparian species planted include Goodding's willow (*Salix gooddingii*), Fremont cottonwood (*Populus fremontii*), coyote willow (*S. exigua*), seep willow (*Baccharis salicifolia*), and velvet mesquite (*Prosopis velutina*). Some tamarisk (*Tamarix* sp.) trees have also colonized portions of the site. The largest cottonwood and Goodding's willow trees are over 20 feet tall. Height and density of trees vary across the site due to staggered planting dates and heterogeneity of soils (from cobble and coarse sand to clay lenses). Fields 1, 2, 4A and 5 were planted in 2004; fields 3 and 4B were planted in 2005; coyote willow and seep willow were planted to fill in gaps in 2006; and, wetland basins were planted with trees in 2007. Some areas of the site have the potential to be dense enough to provide habitat for flycatchers. Other areas have the potential to provide habitat for cuckoos and roost sites for bald eagles.

Tree survival is expected to remain high as long as irrigation continues. Depth to groundwater is too great for the trees to access, so supplemental watering will be necessary for the life of the project. Although the irrigation ditch and project site have experienced damage from flood events, SRP has been able to keep the irrigation intake and ditch operational. Spring floods in 2008 filled the irrigation ditch with sediment and damaged the maintenance road to the site.

Maintenance Activities

- SRP contracts with Tim Wheeler to conduct irrigation and site maintenance.
- SRP's Northside Water Construction and Maintenance crews conducted the following maintenance activities:
 - Cleared sediment and re-contoured irrigation ditch
 - Regraded entrance road
 - Repaired/replaced irrigation gate at head of ditch
- SRP's Groundwater Division conducted the following maintenance activities:
 - Biochemical Applicators applied pre-emergent herbicide along banks of irrigation ditches.

IV. STATUS OF MITIGATION COMPLIANCE

Obligations: SRP must acquire and manage at least 1500 acres of riparian habitat by fee title or conservation easements. “Other” habitat conservation measures in an amount equivalent to 750 acres must also be implemented. The “Other” category includes (1) acquisition and management of upland buffers, (2) stream flow augmentation through purchase of water rights, (3) funding a Forest Protection Officer at Roosevelt Lake, and (4) other measures as approved by FWS.

Actions: Riparian lands managed in support of SRP’s ITP include:

- 1,083 acres on the lower San Pedro River
- 124 acres on the Verde River
- 1,054 acres on the upper Gila River in Arizona
- 5 acres at the Arlington Wildlife Management Area
- 15-20 acres at Rockhouse site

Table 3. Roosevelt HCP obligations (acre-credits)

	Habitat	Other	Total
Phase 1 (by 2/26/05)	500	250	750
Phase 2 (by 8/26/05)	500	250	750
Phase 3 (by 2/26/06)	500	250	750
Required Totals	1,500	750	2,250
Actual Totals (as of 10/31/07)	1,862	719	2,581

V. MITIGATION PROPERTIES – Monitoring and Management

A. Monitoring Obligations

SRP monitors both the bird species of interest as well as habitat condition on each of the mitigation properties. Monitoring obligations for each property are detailed in the HCP document and are summarized briefly below.

1. Obligation: Flycatcher and cuckoo populations will be surveyed in the first two years following acquisition of a property for purposes of establishing a baseline. After that, surveys will be conducted every other year on average, but not less than every third year. The specific frequency of survey for each site is to be determined during the annual meeting.

Action: Flycatcher and cuckoo surveys were conducted on the following San Pedro River Preserves in 2008: Adobe, Stillinger, Spirit Hollow and Spirit

Hollow Annex. The 2008 surveys on the Spirit Hollow Annex serve to establish the second year of baseline data.

Flycatcher and cuckoo surveys were also conducted on USBR's Bellman property (part of the Fort Thomas Preserve). This survey is the second year baseline survey for the parcel. The other parcels that comprise the Fort Thomas Preserve have all been surveyed at least twice previously.

Flycatcher and cuckoo surveys will be conducted on all Fort Thomas Preserve parcels in 2009 to coincide with surveys on parcels acquired for Horseshoe-Bartlett HCP mitigation. After that, we plan to skip two years and recommence full surveys in 2012.

2. *Obligation:* Yuma clapper rail populations will be surveyed in the first two years following creation of the mitigation site for purposes of establishing a baseline. After that, surveys will be conducted every other year on average, but not less than every third year. The specific frequency of survey for each site is to be determined during the annual meeting.

Action: The 5-acre wetland basin, which was established at the Arlington Wildlife Management Area in 2006, was planted with cattails and bulrushes shortly after completion. The plants have become well established and have spread fairly rapidly across the wetland basin. Clapper rail surveys were conducted in the spring of 2008 by AGFD and SRP biologists.

Table 4. Flycatcher survey schedule

	Close of Escrow. Date	2004	2005	2006	2007	2008	2009
SAN PEDRO							
Adobe	Sep-02	BR/GF*	BR/GF			SRP	
Stillinger	Jun-04	BR/GF	BR/GF*	SRP*		SRP	
Spirit Hollow	Jul-04	BR/GF	BR/GF*	SRP*		SRP	
Annex	Dec-06				BR/SRP*	SRP*	
VERDE							
Camp Verde	Jan-04	SRP*	SRP*		SRP		SRP
GILA							
McEuen	Aug-04		SRP*	SRP*	SRP		SRP
PD CE	Feb-05		SRP*	SRP*	SRP		SRP
BR/Hancock	Oct-05			SRP*	SRP*		SRP
BR/Bellman	Dec-06				SRP*	SRP*	SRP
ROCKHOUSE	n/a					Evaluation	SRP
ROOSEVELT	n/a	BR/GF	BR/GF	BR/GF	TNF	TNF	Limited TNF

* Denotes baseline survey. BR = USBR; GF = AGFD.

Table 5. Yuma clapper rail survey schedule

	Creation Date	2007	2008	2009
Arlington WMA	Feb-06	SRP/Audubon/ AGFD	SRP/AGFD*	SRP/AGFD*
Roosevelt	n/a			SRP**

*Denotes baseline survey. ** if cattail habitat exceeds threshold amount.

Table 6. Yellow-billed cuckoo survey schedule

	Close of Escrow Date	2004	2005	2006	2007	2008	2009
SAN PEDRO							
Adobe	Sep-02	X*	X			X	
Stillinger	Jun-04		X*	X*		X	
Spirit Hollow	Jul-04	X*	X*	X		X	
Smith-Doherty	Dec-06				X*	X*	
VERDE							
Camp Verde	Jan-04	X*	X*		X		X
GILA							
McEuen	Aug-04		X*	X*	X		X
PD CE	Feb-05		X*	X*	X		X
BR/Hancock	Oct-05			X*	X*		X
BR/Bellman	Dec-06				X*	X*	X
ROCKHOUSE	n/a					Evaluation	X
ROOSEVELT	n/a	SRP*	SRP				

* Denotes baseline survey.

Note: All cuckoo surveys are conducted by SRP or their contractors.

3. *Obligation:* Habitat conditions on mitigation properties will be monitored using the following means:

- A baseline inventory will be completed for each property within one year of acquisition. This inventory will be used to compare habitat changes over the life of the permit.
- Aerial photography will be acquired to establish a vegetation/habitat baseline and will be retaken every 5 years or when vegetation is altered by a catastrophic event.
- Permanent photo points will be established and retaken annually to monitor habitat condition.
- Biologists document habitat conditions in occupied flycatcher habitat on mitigation properties.

Actions: Table 12 summarizes habitat monitoring activities on SRP’s mitigation properties from 2005 through 2008. Also included are activities projected for 2009.

Table 7. Habitat monitoring schedule

	2005	2006	2007	2008	2009
SAN PEDRO					
<i>Adobe</i>					
Photopoints	X	X	X	X	X
Aerial photos				X	
<i>Stillinger</i>					
Photopoints	X	X	X	X	X
Aerial photos				X	
<i>Spirit Hollow</i>					
Photopoints	X	X	X	X	X
Aerial photos				X	
VERDE					
<i>Camp Verde</i>					
Photopoints	X	X	X	X	X
Aerial photos		X			
GILA					
<i>Fort Thomas</i>					
Photopoints				X	X
Aerial photos		X			
ROCKHOUSE					
Photopoints	X	X	X	X	X
Vegetation monitoring	X	X	X	Evaluation	
ARLINGTON					
Photopoints			X	X	X

B. Monitoring Results

Table 8 provides an overview of flycatcher and cuckoo survey results from 2005 through 2008 for the properties managed by SRP. Results of surveys conducted in 2008 are highlighted in yellow. A discussion of survey and monitoring results for each mitigation property are presented in the following section C. Flycatcher and cuckoo surveys were conducted by EcoPlan Associates, Inc. under contract to SRP. EcoPlan surveyed all 5 mitigation properties managed by SRP on the San Pedro River and the Bellman parcel on the Gila River at Fort Thomas. Their full report can be found in Appendix K. In addition to these surveys, Nature Conservancy staff conducted protocol surveys for flycatchers on the San Pedro Riparian Preserve.

Table 8. Summary of flycatcher and cuckoo survey results, 2005 through 2008.

Wildlife Preserves	Year	Flycatcher				Cuckoo	
		Territories	Adults	Nests Found	Pairs	Detections and/or Estimated Pairs	Evidence of Breeding
Adobe	2005	7	12	6	ND	7	Yes
	2008	6	10	3	4	17 3 pairs	Unconfirmed
Spirit Hollow	2006	3	5	1	2	1 – 3 pairs	Possible
	2007 ¹	0 (annex)	0	0	ND	2	ND
	2008 ²	10	18	5	8	65 6 pairs	Unconfirmed
Stillinger	2005	4	7	3	ND	0	No
	2006	10	19	8	9	1	No
	2008	2	2	0	0	4 1 pair	Unconfirmed
San Pedro River Preserve	2008	14	28	n/a	14	ND	ND
Camp Verde	2005	0	0	0	0	6	Likely
	2007	0	0	0	0	4 2 pairs	Possible
McEuen/PD /Hancock	2006	59	108	38	49	1	Possible
Fort Thomas (entire)	2007	56	103	52	47	76	Yes
Bellman	2008	11	22	8	11	36 5-7 pairs	Unconfirmed

¹ USBR and SRP conducted protocol surveys ONLY at the new 50-acre Smith-Doherty parcel (annex) acquired by USBR.

² Surveys were conducted on the entire Spirit Hollow Preserve including the 50-acre annex property. ND = No data.

Flycatcher Nest Searching

Nest searching was conducted at the San Pedro River study area to determine the impact of brown-headed cowbird (BHCO) parasitism on flycatchers in the study area. Nest searching involved locating and monitoring a minimum of 10 active nests during each survey period (SRP Unpublished). Nests of surrogate species (i.e., non-flycatcher riparian open-cup nesting bird species of similar size) were also monitored if researchers were unable to locate an adequate number of flycatcher nests. Nest searching and monitoring activities were conducted using a modified form of the protocol outlined by Rourke et al. (1999). This nest monitoring protocol was designed to assess detailed Mayfield (1961, 1975) nest success and productivity; therefore,

the frequency of visits called for was beyond the scope required to determine parasitism rates. This study reduced the frequency of nest checks from every 2 to 4 days as recommended in Rourke et al. (1999) to a total of three or four nest checks spaced throughout the nesting cycle. Because the flycatcher nesting cycle from egg laying to fledging only requires 27 to 28 days (Rourke et al. 1999), there is a high probability that several nest checks during this period will capture incidence of parasitism.

A total of 90 flycatcher and surrogate nests were monitored for BHCO parasitism. Of the 90 nests located, 8 were flycatcher nests and 82 were surrogates. One of the flycatcher nests was inferred from the presence of flycatcher fledges in the territory, though the actual nest was never found. Surrogate nests were included from territories of 6 Abert's towhees (*Pipilo aberti*), 14 Bell's vireos (*Vireo bellii*), 2 northern cardinals (*Cardinalis cardinalis*), 17 song sparrows (*Melospiza melodia*), 1 summer tanager (*Piranga rubra*), 1 vermilion flycatcher (*Pyrocephalus rubinus*), 39 yellow-breasted chats (*Icteria virens*), and 2 yellow warblers (*Dendroica petechia*).

BHCO Parasitism Rates

Of the 90 nests monitored, parasitism was documented in 19 nests: one flycatcher and 18 surrogate (1 Abert's towhee, 7 Bell's vireos, 1 northern cardinal, 3 song sparrows, and 6 yellow-breasted chats). Parasitized nests were present on all parcels: 9 on Adobe Preserve, 3 on Stillinger Preserve, 2 on Spirit Hollow Preserve, and 5 on Spirit Hollow Annex (this property includes the one parasitized flycatcher nest). The parasitism rate (i.e., number of monitored nests parasitized divided by the total number of nests monitored) for flycatcher and surrogate nests combined was 21.1 percent, and the parasitism rate for monitored flycatcher nests was 12.5 percent. Table 9 is excerpted from the EcoPlan report and summarizes the parasitism rates by property.

Table 9. Brown-headed cowbird parasitism rates for monitored nests by flycatcher and surrogate, per property, San Pedro River study area, Arizona, 2008.

Property	WIFL Nests¹	Surrogate Nests¹	Total Nests Monitored¹
Adobe Preserve	0% (0/3)	34.6% (9/26)	31.0% (9/29)
Stillinger Preserve	-	30.0% (3/10)	30.0% (3/10)
Northern Areas Combined	0% (0/3)	33.3% (12/36)	30.8% (12/39)
Spirit Hollow Preserve	0% (0/4)	5.9% (2/34)	5.3% (2/38)
Spirit Hollow Annex	100% (1/1)	33.3% (4/12)	33.3% (5/13)
Southern Areas Combined	20% (1/5)	13.0% (6/46)	13.7% (7/51)
All Sites	12.5% (1/8)	22.0% (18/82)	21.1% (19/90)

¹Data correspond to percent parasitism followed by (number of parasitized nests/number of nests); “-“ is equivalent to no nests were found.

Source: EcoPlan Associates Inc. (2008)

C. Management Obligations

The primary goal for management of these properties is to provide ecological and conservation benefits to the flycatcher, cuckoo, clapper rail and bald eagle. Management activities are focused primarily on minimizing or eliminating identified threats to riparian habitat, such as wildfire, groundwater pumping, surface water depletion, trespass livestock grazing, cowbird parasitism and vandalism. Actions to enhance the quality of habitat on a property or reverse past damage are also conducted.

General management activities required for each property are listed below:

- SRP will identify a manager for all acquired properties.
- A management plan will be developed for each property within one year of acquisition in coordination with FWS and will be updated annually.
- Management activities identified in the management plan will be implemented.
- Cowbird management will occur on properties that are agreed to by SRP and FWS during the annual Roosevelt HCP meeting.
- Conservation easements shall be placed on all appropriate mitigation lands and will be held by an agency or organization acceptable to FWS.

Table 10. Status of management obligations for mitigation properties

Mitigation Area	Site Manager	Baseline and Mgmt Plan	Fire Plan Status	Fencing	Water Rights	Conservation Easement
Adobe	SRP - contractor	C	C	C	In process	
Black Farm	SRP - contractor	C	C	C	In process	
Spirit Hollow	SRP - contractor	C	C	C	NR	Completed, USBR
Stillinger	SRP - contractor	C	C	Partial	NR	
Camp Verde Riparian	SRP - contractor	C	C	C	NR	
Fort Thomas	SRP - contractor	Drafts completed		Partial	NR	
Rockhouse	SRP - contractor			C	C	n/a
Arlington Wetland	AGFD			C	n/a	n/a
San Pedro Preserve	TNC	C	C	C	In Process	Completed

C = Completed; NR = Not required; n/a = Not applicable to the HCP; TNC = The Nature Conservancy

1. Summary of Major Management Activities in 2008

- a. *Site Management:* All mitigation properties were managed by SRP using contract labor, except for the Arlington wetland site, which was managed and operated by AGFD, and the San Pedro River Preserve, which is owned by USBR and managed/operated by The Nature Conservancy.
- b. *Non-Wasting Fund:* SRP established and funded an irrevocable grantor trust in May 2008. Roosevelt HCP implementation activities will be funded from the interest earned on the trust investments.
- c. *Water Rights:* The Arizona Department of Water Resources has yet to act on SRP's application to sever and transfer water rights from agricultural fields on the Black Farm and Adobe preserves. By law, ADWR should act on the filing within 420 days of submittal to issue a decision and order. The application was submitted on November 24, 2006. To date, ADWR has not issued a public notice regarding the filings. Once the notice has been posted, the public has 4 weeks to file any objections.
- d. *Coordination with Neighbors and Community:* SRP maintains relationships with neighboring property owners and land managers. SRP has been active in conservation issues related to the Lower San Pedro River (such as the proposed BHP development at San Manuel) and the Verde River. See individual property listings below for activities.
- e. *Management Agreement with USBR:* SRP and USBR have completed a management agreement for the Bellman and Hancock parcels on the Gila River and the Spirit Hollow Annex on the San Pedro River. This agreement transfers management of these properties from USBR to SRP into perpetuity. The agreement is in process of being signed by both parties.

The following section addresses actions taken to meet monitoring and management objectives as described in the management plan for each Preserve. A brief description of each property is presented, followed by results of monitoring activities, a summary of management activities accomplished in 2008 and a discussion of proposed activities for 2009.

2. San Pedro River

a. ADOBE PRESERVE

<i>Table 11. Summary – Adobe Preserve</i>	
Close of escrow	9/27/03
Total acreage	153 acres
Estimated riparian acreage	54 acres in San Pedro River
Estimated water rights credits	77 acre-credits (annual avg 863.2 af)

MONITORING ACTIVITIES IN 2008

Flycatcher Surveys: Flycatcher surveys were conducted by EcoPlan Associates under contract to SRP. Flycatcher surveys were conducted in all suitable habitats for migrating and breeding flycatchers and were conducted following the three survey protocol as described by Sogge et al. (1997). See Appendix K for full report.

Flycatcher surveys resulted in detections of 10 resident adult flycatchers, 6 territories, 4 pairs and 3 nests.

Cuckoo Surveys: Cuckoo surveys were also conducted by EcoPlan Associates under the SRP contract. Four surveys were conducted according to the Halterman et al. (2006) protocol. Researchers spent more time in the field than would normally be spent under the protocol because they were conducting flycatcher nest searching. During these times, incidental detections of cuckoos were recorded and were used to assist with estimates of breeding status and overall numbers.

Cuckoo surveys resulted in 17 detections, 7 of which were incidental, for an overall estimate of 3 pairs. Detections were generally made in patches of native-dominated vegetation with an approximate canopy height of 65 feet (20 m). The full report can be found in Appendix K.

Cowbird Parasitism: The nest searching protocol developed to estimate cowbird parasitism rates was conducted by EcoPlan researchers during and after standard protocol surveys. Results are discussed above in section V. B. Monitoring Results and in the full report in Appendix K.

Photo points: Photographs were taken at each permanent photo point in 2008. Results are presented in Appendix D.

Aerial Photography: An aerial photograph of the property was retaken in 2008. A comparison of the 2003 and 2008 photos is presented in Appendix A.

Habitat: The Adobe Preserve contains a diverse Fremont cottonwood-Goodding's willow riparian forest community exhibiting an array of habitat types from open patches of sandy/cobbly alluvium to well developed gallery forests. The margins of the floodplain contain relatively narrow mesquite groves which are adjacent to Sonoran upland communities to the west and abandoned pastures to the east. The gallery forest on this property is dominated by an even-aged stand of Goodding's willows, representing a few major recruitment events that occurred in the early to mid-1990s. These trees have formed a completely closed canopy in some areas that prevents little else in the way of shrubs and herbaceous growth or even younger cottonwood or willow trees from establishing. Shading also reduces or eliminates leaf formation on all but the top-most portions of these trees.

Recent flood events have not been large enough to completely scour the vegetated floodplain. However, many trees were knocked down by flood waters, resulting in some opening of the canopy. These gaps in the canopy and along the perimeter support abundant tamarisk and seep willow, and may allow for recruitment of new cottonwoods and willows when conditions allow. In the past, the primary channel ran along the west side of the active floodplain but has recently moved to mid-channel. Surface water was present in this reach during the entire breeding

season. The seep area, located along the east side of the river floodplain, remained moist all summer.

On the terrace (old pastures), tumbleweed and pigweed were even more prolific than last year due to heavy monsoon rains. Early in the season, Diane Laush (USBR) and Ruth Valencia (SRP) observed flycatchers on the terrace in the mesquite trees that are directly adjacent to the Cook's Lake property.

MONITORING ACTIVITIES PLANNED FOR 2008

Flycatcher and Cuckoo Surveys: No surveys will be conducted on this property in 2009.

Photo points: Photographs will be repeated in 2009.

MANAGEMENT ACTIONS COMPLETED IN 2008

Human and vehicular trespass, vandalism: Minimal disturbance occurred this past year from human or vehicular trespass. No acts of vandalism were reported.

Trespass livestock grazing and fencing: In the winter of 2008, USBR completed construction of a pipe rail fence between the northern boundary of the Adobe Preserve and the southern boundary of the Cook's Lake property. In addition, a cattle trap was constructed straddling between the two properties. The trap can be accessed from either property and cattle can be removed using the entrance road to the Adobe Preserve. The trap quickly got the attention of local livestock ranchers and they have been very helpful in removing their cattle from the property. However, we still experience a lot of trespass livestock occurrences on this property.

Water rights and use: Last winter, SRP Groundwater crews pulled the pump and capped the old irrigation well. No groundwater pumping is occurring on the property. Sever and transfer of water rights is in process.

Cowbird Management: No cowbird trapping was conducted on or in the vicinity of the property in 2008. Nest searching protocols were conducted during 2008 flycatcher surveys.

Site Management: SRP's property manager conducted weekly, on average, patrol of the property and fence lines, checking for and repairing any breaches in the fences, arranging for removal of trespass livestock and conducting any other general maintenance activities that were needed.

Invasive plant inventory: Abandoned pastures on the terrace are prolific with tumbleweed and pigweed. With the help of TNC, SRP is investigating ways of reducing the proliferation of weeds on the property and returning portions of abandoned pastures to native grasses and forbs.

Research Activities: Debbie Buecher, graduate student at the University of Arizona's School of Natural Resources, completed a pilot acoustic monitoring study on riparian bats. Buecher was contracted by USBR to conduct the study. She provided a copy of her results to SRP.

Infrastructure: Last winter, the old adobe building was demolished and removed from the property. Also, ASARCO removed all the scrap metal, appliances and vehicles from their adjacent property to the east of the Preserve, leaving only the old tires.

MANAGEMENT ACTIONS PLANNED FOR 2009

Trespass livestock: SRP will continue to work cooperatively with USBR, TNC and other conservation landowners along the river to reduce occurrences of trespass livestock grazing along the river. SRP will also continue to notify and work with neighboring ranchers to promptly remove their livestock. Fortification of fences will be an on-going activity.

Water Rights and Use: SRP is waiting for action by ADWR on the sever and transfer application.

Wildfire Abatement: Site will be patrolled regularly to identify and eliminate any fire hazards. All SRP employees and contractors working on the Preserve will be trained in the proper fire abatement and response protocols.

Fencing and Gates: SRP field technician will continue to repair and maintain fences and gates, as necessary.

Site Management: Regular patrols of the property and fence lines will be conducted; trespass livestock will be removed. General maintenance activities will be accomplished, as needed.

Invasive Plant Inventory and Issues: SRP will continue to investigate options to reduce tumbleweeds and promote native grasses on terraces. A combination of mowing and seeding will be explored in the coming year.

b. BLACK FARM PRESERVE

<i>Table 12. Summary – Black Farm Preserve</i>	
Close of escrow	1/10/03
Total acreage	137 acres
Estimated water rights credits	65+ acre-credits (annual avg 1,692.5 AF)

MONITORING ACTIVITIES IN 2008

Flycatcher and Cuckoo Surveys: No suitable habitat exists on the property, therefore, no surveys were conducted.

Photo points: Repeat photographs were taken in August 2008. Results are presented in Appendix E.

Aerial Photography: An aerial photograph of the property was retaken in 2008. A comparison of 2003 and 2008 photos is presented in Appendix A.

Habitat: This is the second year that native grasses have received no supplemental water. Once again, grasses responded to generous summer monsoon rains and plant density has remained high. Grasses appeared to be healthy and set seed but

were not mowed during the growing season. SRP continues to treat tumbleweed with RazorPro, a generic brand of glyphosate.

MONITORING ACTIVITIES PLANNED FOR 2009

Photo points: Repeat photographs will be taken in 2009.

MANAGEMENT ACTIONS COMPLETED IN 2008

Water Rights and Use: SRP uses the domestic well as a water source for the field office. SRP is waiting for ADWR to take action on the application to sever and transfer water rights from the agricultural fields.

Wildfire Abatement: Fire prevention activities conducted in 2008 included regularly patrolling the property to identify and eliminate potential fire hazards, mowing and treating vegetation around buildings and wells to maintain at least a 10-foot clearance, trimming tree limbs near buildings and maintaining roads.

On-Site Management: SRP maintains a field office on this site and has a regular presence here. Regular maintenance activities are conducted as necessary.

Field Office: SRP removed carpet and painted the floor in the building, upgraded the electrical system and installed an on-demand water heater. The building was used as a bunkhouse by field biologists during flycatcher and cuckoo surveys this past year.

MANAGEMENT ACTIONS PLANNED FOR 2009

Native grass stands: Fields will be mowed in November 2008 to minimize movement of tumbleweeds into adjacent farm fields. SRP will work with TNC to explore natural ways of reducing tumbleweeds, such as over-seeding areas with narrow-leaf plantain.

Invasive Plant Control: SRP will continue to monitor fields for presence of tamarisk and other invasive plants. Control measures will be applied judiciously, only to the worst areas. All tamarisk will be treated in the agricultural fields. Treatment of mesquites will also be considered.

Wildfire Abatement: Continue, as necessary, regularly patrolling the property to identify and eliminate potential fire hazards, mowing of vegetation around buildings and wells to maintain at least a 10-foot clearance, trimming tree limbs near buildings and maintaining roads. Familiarize all SRP employees and contractors working on the property with fire abatement and response protocols.

Site Management: Maintain a regular presence at the site and field office. Conduct general maintenance activities, as needed.

c. *STILLINGER PRESERVE*

<i>Table 13. Summary – Stilling Preserve</i>	
Close of escrow	6/5/04
Total acreage	40 acres
Estimated riparian acreage	26 acres
Estimated buffer acreage	14 acres
Property management entity	SRP

MONITORING ACTIVITIES IN 2008

Flycatcher Surveys: Flycatcher surveys were conducted by EcoPlan Associates under contract to SRP. Flycatcher surveys were conducted in all suitable habitats for migrating and breeding flycatchers and were conducted following the three survey protocol as described by Sogge et al. (1997). See Appendix K for full report.

Flycatcher surveys resulted in detections of 2 resident adult flycatchers and 2 territories. No nests were found.

Cuckoo Surveys: Cuckoo surveys were also conducted by EcoPlan Associates under the SRP contract. Four surveys were conducted according to the Halterman et al. (2006) protocol. Researchers spent more time in the field than would normally be spent under the protocol because they were conducting flycatcher nest searching. During these times, incidental detections of cuckoos were recorded and were used to assist with estimates of breeding status and overall numbers.

Cuckoo surveys resulted in 2 detections during the third survey period and 2 incidental detections. Detections were generally in mixed native/non-native habitat with an approximate canopy height of 45 feet (14 m). See Appendix K for the full report.

Cowbird Parasitism: The nest searching protocol developed to estimate cowbird parasitism rates was conducted by EcoPlan researchers during and after standard protocol surveys. Results are discussed above in section V. B. Monitoring Results and in the full report in Appendix K.

Photo points: Photographs were taken at each permanent photo point in 2008. Results are presented in Appendix F.

Aerial Photography: An aerial photograph of the property was retaken in 2008. A comparison of the 2003 and 2008 photos is presented in Appendix A.

Habitat: The number of flycatchers detected on this property during 2008 was a substantial reduction from the 10 territories detected during the 2006 survey. Given that this is a small property (40 acres), it is possible that flycatchers moved to upstream or downstream locations that were not surveyed.

Habitat conditions have changed on the property. In the past, the property has periodically supported an extensive beaver dam that created a long, narrow and deep pond along the main San Pedro River channel. This beaver dam was lost

during a flood event prior to the 2008 flycatcher breeding season and was not reconstructed. As a result, the occupied patch, which was routinely inundated for years, is currently 6 to 10 feet (2 to 3 meters) above the flowing channel. Wetted perimeter of the river is also greatly reduced. The dense tamarisk stand on the west bank (river left), which was occupied by breeding flycatchers in years when the beaver pond existed, is dry and decadent.

MONITORING ACTIVITIES PLANNED FOR 2009

Flycatcher and Cuckoo Surveys: No surveys will be conducted on the property in 2009.

Photo points: Repeat photographs will be taken in 2009.

MANAGEMENT ACTIONS COMPLETED IN 2008

Wildfire Abatement: Continue, as necessary, regularly patrolling the property to identify and eliminate potential fire hazards.

Fencing: River channel substrate on this property is comprised of a deep layer of clays and silts. SRP is unable to construct cross-channel fences in this material. We are exploring other ways to deter trespass livestock from this site.

On-Site Management: Regular patrols of the property and fence lines were conducted. General maintenance activities were accomplished, as needed. However, access to this property is limited during high flow events, primarily during summer monsoon season.

Invasive Plant Inventory and Issues: Tamarisk are present and recruiting but will not be treated because flycatchers are breeding in this area. No other issues have been identified.

Coordination with Neighbors and Community: Since the Aravaipa Road river crossing was destroyed, SRP has coordinated with neighboring property owners to gain access to this property.

Research: Arizona Department of Environmental Quality (ADEQ) has been taking samples of river water at this site for their TMDL study.

MANAGEMENT ACTIONS PLANNED FOR 2009

Trespass livestock grazing: Periodic livestock grazing occurs on the property when the river bed dries out enough to allow them access. SRP will continue to work with neighbors to minimize impacts from livestock.

Wildfire Abatement: Continue, as necessary, regularly patrolling the property to identify and eliminate potential fire hazards. Familiarize all SRP employees and contractors working on the Preserve with fire abatement and response protocols.

Access: SRP will explore alternative access to the property, preferably from the east (right bank).

On-Site Management: Regular patrols of the property and fence lines will be conducted. General maintenance activities will be accomplished, as needed.

Coordination with Neighbors and Community: Continue to work with neighbors to secure access and to eliminate livestock grazing on the property.

d. SPIRIT HOLLOW PRESERVE and USBR ANNEX

Close of escrow– Lots 2, 3, 4	7/28/03
Close of escrow – Lot 5	8/31/03
Close of escrow – Sonberg (Lot 1)	7/25/04
Close of escrow - Doherty-Smith-Hatfield	12/30/06
Total acreage	194 acres
Estimated riparian acreage	155 acres in San Pedro River
Estimated buffer acreage	39 acres
Property management entity	SRP

MONITORING ACTIVITIES IN 2008

Flycatcher Surveys: Flycatcher surveys were conducted by EcoPlan Associates under contract to SRP. Flycatcher surveys were conducted in all suitable habitats for migrating and breeding flycatchers and were conducted following the three survey protocol as described by Sogge et al. (1997). See Appendix K for full report.

Flycatcher surveys resulted in detections of 18 resident adult flycatchers, 8 territories, 10 pairs and 5 nests.

Cuckoo Surveys: Cuckoo surveys were also conducted by EcoPlan Associates under the SRP contract. Four surveys were conducted according to the Halterman et al. (2006) protocol. Researchers spent more time in the field than would normally be spent under the protocol because they were conducting flycatcher nest searching. During these times, incidental detections of cuckoos were recorded and were used to assist with estimates of breeding status and overall numbers.

Cuckoo surveys resulted in 65 detections, 38 of which were incidental detections. Detections were generally in mixed native/non-native habitat with an approximate canopy height of 45 feet (14 m). See Appendix K for the full report.

Cowbird Parasitism: The nest searching protocol developed to estimate cowbird parasitism rates was conducted by EcoPlan researchers during and after standard protocol surveys. Results are discussed above in section V. B. Monitoring Results and in the full report in Appendix K.

Photo points: Photographs were taken at each permanent photo point in 2008. Results are presented in Appendix G.

Aerial Photography: An aerial photograph of the property was retaken in 2008. A comparison of the 2003 and 2008 photos is presented in Appendix A.

Habitat: Significant changes in the riparian habitat were observed on this property in 2008. High flow events resulting from monsoon rain events over the past 3 years have reshaped the floodplain, with a new active channel forming in the middle of

the floodplain. This new channel, together with the channel on the east side of the floodplain provide more wetted surface within existing stands of trees. Dense stands of seep willow intermixed with tamarisk have developed on the west side of the active floodplain on deep, recently deposited sediment. A variety of grasses (both perennial and annual), forbs and shrubs are prolific in areas of the active floodplain that were once barren.

MONITORING ACTIVITIES PLANNED FOR 2009

Flycatcher and Cuckoo Surveys: No surveys will be conducted in 2009.

Photo points: Repeat photographs will be taken in 2009.

Baseline Inventory: Baseline inventory will be updated to include acreage acquired by USBR.

MANAGEMENT ACTIONS COMPLETED IN 2008:

Trespass livestock, ATVs and fencing: The property remained mostly free of livestock from June through mid-September, except for short term trespass situations. In September, a late monsoon-related flood event damaged some of the fences in the channel bottom. One of the neighbor's children rode his ATV on the property shortly after the fences were breached. Fences were repaired in October and livestock were removed from the property. Trespass cattle will continue to be a problem on this property, however, we have the assistance of cattle owners in removal activities and patrolling.

Wildfire abatement: Fire prevention activities conducted in 2008 included regularly patrolling the property to identify and eliminate potential fire hazards.

Cowbird Management: No cowbird trapping was conducted on or in the vicinity of the property in 2008.

Research Activities: Meg White, PhD student at Arizona State University studying under Dr. Julie Stromberg, continued data collection for long-term riparian monitoring on the Lower San Pedro River.

Management Plan: The management plan was updated to include the new USBR parcel.

Management Agreement: The management agreement between USBR and SRP has been completed.

MANAGEMENT ACTIONS PLANNED FOR 2009:

Wildfire Abatement: Continue, as necessary, regularly patrolling the property to identify and eliminate potential fire hazard. Familiarize all SRP employees and contractors working on the Preserve with fire abatement and response protocols.

Fencing: Patrol and maintain fences.

Site Management: Regular patrols of the property and fence lines will be conducted; livestock owners will be contacted to remove trespass livestock, when necessary. General maintenance activities will be accomplished, as needed.

Invasive Plant Inventory and Issues: No activities planned.

Coordination with Neighbors and Community: Continue to coordinate activities with neighbors and to work with universities to allow access to the Preserve for riparian research, as long as it does not interfere with flycatcher and cuckoo breeding and habitat.

Baseline Inventory: The baseline inventory will be updated to include the new USBR parcel.

3. Verde River

a. CAMP VERDE RIPARIAN PRESERVE

<i>Table 15. Summary – Camp Verde Riparian Preserve</i>	
Close of escrow	1/19/04
Total acreage	124 acres in Verde River
Estimated riparian acreage	124 acres
Property management entity	SRP

MONITORING ACTIVITIES IN 2008

Flycatcher and Cuckoo Surveys: No surveys were conducted on this property in 2008.

Photo points: Photographs were taken at each permanent photo point in 2008. Results are presented in Appendix H.

Habitat: A mature Fremont cottonwood gallery forest continues to thrive over large portions of the property. Saplings of coyote willow (*Salix exigua*), seep willow (*Baccharis salicifolia*), Gooddings willow, and Fremont cottonwood growing along the active river channel are increasing in height and girth. The beaver dam, located on the south end of the property is still in place, supporting a large marshy area replete with cattails, bulrush, spike rush, sedges and grasses. Terraces are overgrown with dense stands of weedy annuals this year as a result of monsoon rains.

MONITORING ACTIVITIES PLANNED FOR 2009

Flycatcher and Cuckoo Surveys: Surveys will be conducted in 2009.

Photo points: Photographs will be repeated in 2009.

MANAGEMENT ACTIONS COMPLETED IN 2008

Human and Vehicular Trespass; Vandalism: Fence cutting and trespass by neighbor on north boundary eventually stopped. The north boundary will need to be patrolled regularly because of the potential for destructive trespass from the Verde Meadows development. However, SRP has good relations with most of these landowners and the majority of them are respectful of the river lands. ATV and vehicular trespass from upstream (I-17 bridge and Town of Camp Verde lands)

seems to have lessened this past summer. Dick Hauser thinks it might be related to the high cost of gasoline.

Trespass incidences from Clear Channel Communications' contractors has been resolved. Clear Channel owns the billboard just outside the southwest corner of the property. They are now using their legal access to the sign instead of crossing through the Preserve.

Hunting: I am including this as a separate category because it became an issue this year at the Camp Verde Preserve. AGFD opened the area to bow-hunting of elk from August 1st through March 31st. SRP's concern was that hunters would be on the Preserve during the end of breeding season for both flycatchers and cuckoos. After discussing this at length with the AGFD Wildlife Manager, SRP decided to post signs closing the area to hunting from May 1st through October 31st. Bow-hunting of elk will be permitted during the winter months.

Site Management: SRP continues to contract with Dick Hauser to patrol the property on a weekly basis, maintain fencing and deter human and vehicular trespass, as necessary.

Wildfire Abatement: The area adjacent to I-17 is mowed twice a year to reduce fire potential. Mowing occurs after annual plants become dry. Vegetation management (mowing; crushing) was conducted on a narrow strip along the top of the left terrace because of a proliferation of salt bush and other weedy plant species.

Coordination with Neighbors and Community: SRP activities include:

- Exhibitor at Verde River Days in September 2008;
- Tour leader and sponsor at Verde Valley Birding and Nature Festival;
- Presentation at Prescott Sierra Club meeting –Chuck Paradzick presented information about HCP activities and reservoir operations.
- Participation in a Verde River conservation planning workshop sponsored by TNC in October 2008.
- Christmas Bird Count and Audubon Field Trip.

MANAGEMENT ACTIONS PLANNED FOR 2009

Wildfire Abatement: We will continue to maintain a mowed corridor adjacent to Interstate 17 and to patrol the area to identify and minimize fire hazards.

Site Management: SRP contractor will patrol the site on a weekly basis and conduct general maintenance and fence repair, remove trespass livestock, deter human and vehicular trespass and identify any fire hazards.

Coordination with Neighbors and Community: SRP will continue to coordinate with local community leaders and citizens' groups, Arizona State Parks Board, TNC and neighbors to ensure that the ecological goals for the property are met. We plan to participate again in the Verde Valley Birding and Nature Festival in April 2009 and at Verde River Days in September 2009.

4. Gila River

a. FORT THOMAS PRESERVE

<i>Table 16. Summary – Fort Thomas Preserve</i>	
<i>SRP Fee Land</i>	
Property owner	SRP
Close of escrow	8/5/04
Total acreage	308 acres
Estimated riparian acreage	304 acres
Estimated buffer acreage:	4 acres
<i>Freeport McMoran (Phelps Dodge) Conservation Easement</i>	
Property owner	Freeport McMoran Inc.
Close of escrow	2/4/05
Total acreage	250 acres
Estimated riparian acreage	250 acres
<i>BR/Hancock Property</i>	
Property owner	USBR
Close of escrow	10/3/05
Total acreage	280 acres
Estimated riparian acreage	280 acres
<i>BR/Bellman Property</i>	
Property owner	USBR
Close of escrow	12/31/06
Total acreage	216 acres
Estimated riparian acreage	216 acres
<i>All Parcels</i>	
Property management entity	SRP- contractor
Status of Baseline Inventory	Draft completed
Status of Management Plan	Draft completed

MONITORING ACTIVITIES IN 2008

Flycatcher Surveys: In previous years, two years of baseline surveys had been completed for all parcels, except for the 216-acre Bellman parcel. In 2008, SRP contracted with EcoPlan Associates to conduct the second year of baseline flycatcher and cuckoo surveys on that parcel. Because nest searching had been conducted over the past two years and brown-headed cowbird parasitism rates were below threshold, we did not collect that information this year.

A total of 22 resident adult flycatchers, 11 territories, 11 pairs and 8 nests were detected on the Bellman parcel in 2008. An additional 5 non-resident flycatchers were detected. Flycatcher territories were found in monotypic tamarisk as well as native and exotic dominated mixed stands with an average canopy height of 25

feet (8 m). All 8 flycatcher nests were found in tamarisk and the average nest height was 12 feet (3.6 m). See Appendix K for the full report.

Cuckoo Surveys: Ecoplan Associates also conducted cuckoo surveys on the Bellman parcel according to methods described by Halterman et al. (2006). Between June 10 and September 2, 36 cuckoo detections were recorded – 33 during protocol surveys and 3 incidental detections. Based on a summation of the survey data and incidental detections, researchers estimated 5 to 7 pairs in the study area. Detections occurred in monotypic tamarisk as well as native and exotic dominated mixed habitat with an average canopy height of 25 feet (8 m). See Appendix K for the detailed report.

Photo points: Photo points were established and baseline photos were taken. General habitat photos were also taken during flycatcher and cuckoo surveys. Some of these photos are included in Appendices I and K.

Baseline Inventory: SRP contracted with Matthew Turner to draft the baseline inventory for the properties. The baseline survey has been drafted and is being reviewed.

Habitat: Vegetation on this parcel is comprised of a patchwork of dense tamarisk stands and mixed native and exotic riparian vegetation (Fremont cottonwood, Goodding's willow, coyote willow, tamarisk, seep willow). Several large stands of Fremont cottonwood-Goodding's willow gallery forest occur on this parcel. Large patches of coyote willow occur along edges between dense vegetation and open riparian strand. The river flows continuously in this reach except for short periods during the growing season when water is diverted to agricultural fields. When that occurs, channel pools still contain water but riffles are dry. Flycatcher territories tend to be found near water, either along the river channel or along irrigation return ditches.

MONITORING ACTIVITIES PLANNED FOR 2009

Flycatcher and Cuckoo Surveys: SRP will conduct flycatcher and cuckoo surveys and the flycatcher nest searching protocol in 2009.

Photo points: SRP will re-take photos at permanent photo points in 2009.

MANAGEMENT ACTIONS COMPLETED IN 2008

Management Plan: The draft Management Plan was completed and is in review.

Management Agreement: The management agreement between USBR and SRP has been completed.

Fencing: Fences were constructed at the Fort Thomas Preserve along the alignment agreed to in the Fence License Agreement with Phelps Dodge (now Freeport McMoran). Signs were posted along the boundary between the Bellman parcel and adjacent agricultural lands. No signs have been posted along the Hancock parcel boundary because SRP Survey is still working on minor corrections to that line.

Site Management: SRP's property manager conducts regular patrols of the property and coordinates with neighboring landowners and farmers.

Coordination with Neighbors and Community: SRP met with Jerry Sako, Property Manager for FMI, several times over the past year to discuss management issues related to the conservation easements. The FMI lands are being farmed by Scott Bryce this year. The McEuen lands have been sold except for their pasture. SRP does not know who the new owner is yet.

Wildfire Abatement: SRP regularly patrolled the property to identify and eliminate potential fire hazards. All SRP employees and contractors working on the Preserve were briefed on fire abatement and response protocols.

MANAGEMENT ACTIONS PLANNED FOR 2009

Management Plan: The draft management plan will be finalized in 2009.

Cowbird Management: No cowbird trapping will be conducted in 2009.

Wildfire Abatement: SRP will work with USBR, FMI, BLM, ASLD and the Fort Thomas Fire Department to develop a wildfire abatement plan for the Preserve in 2009. In the meantime, we will continue to regularly patrol the property to identify and eliminate potential fire hazards. All SRP employees and contractors working on the Preserve will be briefed on fire abatement and response protocols.

Site Management: SRP will conduct regular patrols of the property, general maintenance activities, as needed, and will coordinate with neighboring landowners.

Fencing: SRP will continue to install, repair or replace fencing and signs as necessary.

Coordination with Neighbors: SRP will continue to meet with adjacent landowners and lessees to work out access issues and to develop working relationships. SRP will continue to communicate with community leaders, agencies and watershed groups in the area.

5. Created Wetland, Arlington Wildlife Management Area (WMA)

Obligation: SRP is required to develop 5 acres of cattail wetlands suitable for Yuma clapper rail habitat.

Action: SRP maintains 5 acres of cattail wetlands at AGFD's Arlington Wildlife Management Area and contracts with AGFD to maintain the site. The following activities were accomplished in this past year.

MONITORING ACTIVITIES IN 2008

Yuma Clapper Rail Surveys: A multi-species marsh bird survey protocol was conducted at the Arlington Wildlife Area wetlands in 2008 on March 28, May 7 and May 28. Surveys were conducted by Lesly Swanson, SRP, and Mark Steward, AGFD. Sites were surveyed for black rail, least bittern, sora, Virginia rail, and Yuma clapper rail. Surveyors also recorded all pied-bill grebes, common

moorhens and American bittern detected. Although the multi-species approach was used, SRP's interest is solely in detections of Yuma clapper rails.

The 2008 survey recorded the first official occurrence of a pair of Yuma clapper rails using the new wetland basin (paired clatter vocalization response to tape playback). A total of 7 clapper rails were reported for the site overall, along with Virginia rails, common moorhens, and a sora.

MONITORING ACTIVITIES PLANNED FOR 2009

Yuma Clapper Rail Surveys: Surveys will be conducted in 2009 to establish baseline.

Photo points: Photographs of site will be taken in 2009.

MANAGEMENT ACTIONS COMPLETED IN 2008

The following management activities were conducted at the site:

1. Continued water management, weed control and infrastructure maintenance associated with the wetland.
2. Installation of pipeline and valve system to deliver water to SRP cell from well independently from other cells.

The combination of the unavailability of Arizona Department of Corrections (ADOC) labor workforce and the state hiring freeze have served to severely reduce AGFD's ability to provide a labor and security presence beyond that of the Wildlife Area Manager. Wildlife Area Manager, Phil Smith, is on-site at Arlington at least once per week for security checks, but some weed management and similar light maintenance has proved difficult to accomplish. SRP is trying to supplement AGFD staff to accomplish the necessary maintenance at the wetland.

The following photos were taken from water control structure 07 at the south end of the SRP wetland looking North.



Figure 7. Arlington Wetland, October 3, 2007



Figure 8. Arlington Wetland, October 1, 2008

VI. PERMANENT NON-WASTING FUND

Obligation: No later than 5 years after the ITP is issued, SRP will ensure that permanent funding is available to meet its continued obligations under the Roosevelt HCP. Unless other methods of assuring permanent funding are selected by SRP, principal will be placed in non-wasting accounts designated solely for that purpose. The accounts will be in the form of segregated fund(s) at SRP or separate trust account(s). Principal in the account will be of an amount to generate annual cash-flow sufficient to satisfy SRP's continuing obligations under the Roosevelt HCP, as agreed to by FWS and SRP.

Actions: An irrevocable grantor trust fund was established and funded in May 2008. Roosevelt HCP obligations will be funded into perpetuity by the interest drawn from trust investments.

VII. PUBLIC RELATIONS: Building Community Support

SRP staff members have been actively involved with the Lower San Pedro Partnership, a group comprised of representatives from Resolution Copper, BHP Billiton, Arizona Audubon, The Nature Conservancy, USBR and others to discuss development plans and conservation efforts within the Lower San Pedro River corridor.

SRP is also actively involved in watershed issues on the Verde River in support of our mitigation property there. Regular participation and support of community groups, such as Verde Watershed Alliance, Arizona State Parks Foundation, Verde Citizen's Alliance, are on-going.

In the Safford Valley, SRP's involvement has primarily been with landowners and agencies immediately adjacent to our mitigation lands. However, we are working to expand our participation in local watershed groups and community efforts in the future.

VIII. CONSERVATION EASEMENTS

No activity.

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APPENDIX A

AERIAL PHOTOGRAPHS
OF
MITIGATION PROPERTIES

APPENDIX B

MANAGEMENT ACTIVITY IMPLEMENTATION MATRICES

ADOBE PRESERVE – Management Activity Implementation Matrix

MANAGEMENT ACTIONS	STATUS	TARGET DATE	DEPARTMENT
Baseline Inventory and Management Plan			
Baseline Inventory	Completed		SRP Env. Svc.
Management Plan	Completed		SRP Env. Svc.
Water Rights and Use:			
Submit water rights claim form to ADWR	Completed		SRP Water Rights
Complete the transfer of water rights on property, except for domestic use	In process	Pending ADWR action	SRP Water Rights
Cowbird Management:			
Apply nest searching protocol	Completed	Applied to surveys in 2008	SRP
Livestock grazing and recreational disturbance:			
Remove all trespass livestock	On-going	Patrol conducted regularly	SRP contractor Livestock owner(s)
Fire Management:			
Develop a fire management plan in coordination with fire management agencies	Completed	October 2004	SRP Env. Svc. Contractors
Send fire plan to response agencies; maintain close coordination with wildfire response agencies	Completed	March 2005	SRP Env. Svc. SRP contractor
Patrol site regularly to identify and eliminate potential fire hazards; clearing, mowing, etc.	On-going	Conducted weekly, on average	SRP contractor
Fencing and Gates:			
Re-install barbed wire fencing around the perimeter of the property.	Completed	October 2008	SRP contractor

ADOBE PRESERVE (cont'd.)

MANAGEMENT ACTIONS	STATUS	TARGET DATE	DEPARTMENT
(Fencing and gates cont'd.)			
Conduct regular fence patrol to check for breaches. Inspect fence line after every flood event.	On-going	Conducted weekly, on average	SRP contractor
Restoration of Upland Fields:			
Evaluate the need for upland vegetation mgmt or restoration	Initiated	October 2009	Env. Svc.
On-Site Management			
Maintain and repair existing fences and roads	On-going	As needed	SRP contractor
Conduct general maintenance	On-going	As needed	SRP contractor
Invasive Plant and Animal Control:			
Survey the property to determine presence and extent of invasive elements	Completed	October 2008	Env. Svc. Contractor
Develop plan to minimize or eliminate problem species	Initiated	May 2009	Env. Svc. SRP contractor
Facilities Management:			
Implement actions for domestic well	On hold	TBD	SRP Env. Svc. Contractor
Conservation Easement:			
Locate an entity to hold the conservation easement	Pending	TBD	Env. Svc. Land
Community Support:			
Contact neighbors, maintain working relationships	On-going	On-going	SRP SRP contractor

BLACK FARM PRESERVE – Management Activity Implementation Matrix

MANAGEMENT ACTIONS	STATUS	TARGET DATE	DEPARTMENT
Baseline Inventory and Management Plan:			
Finalize baseline inventory	Completed		Env. Svc.
Finalize management plan and distribute to cooperators	Completed	January 2007	Env. Svc.
Water Rights and Use:			
Submit water rights claim form to ADWR	Completed		SRP Water Rights
Complete the transfer of water rights on property, except for domestic use	Pending	TBD by ADWR	SRP Water Rights
Cease irrigation of fields	Completed	March 2007	SRP
Fire Management:			
Develop a fire management plan in coordination with fire management agencies	Completed	October 2004	Env. Svc. Contractor
Patrol site regularly to identify and eliminate potential fire hazards	On-going	Conducted weekly, on average	SRP contractor
Make initial contact with local fire-fighting org. and wildfire response agencies; send copies of plan	Completed	March 2005	Env. Svc. SRP contractor
Familiarize SRP employees with protocols	On-going	As necessary	Env. Svc.
Restoration of Upland Fields:			
Plant native grasses and forbs on 101 acres of agricultural fields	Completed	September 2005	Agric. contractor SRP contractor
Disc and re-plant 20 acres at southeast corner of property	Pending	April 2009	SRP contractor
On-Site Management:			
Hire a property maintenance technician	Completed	March 2004	Env. Svc.
Patrol property and fence lines	On-going	Weekly, on average	SRP contractor
Conduct general maintenance activities	On-going	As necessary	SRP contractor

BLACK FARM (cont'd.)

MANAGEMENT ACTIONS	STATUS	TARGET DATE	DEPARTMENT
Invasive Plant Control:			
Determine need for herbicide spraying or mowing of agricultural fields during irrigation of areas seeded with native grasses	On-going	Weekly coordination to determine need during growing season	SRP SRP Groundwater
Coordination with Neighbors and Community:			
Coordinate activities with adjacent landowners	On-going		Env. Svc.

SPIRIT HOLLOW PRESERVE – Management Activity Implementation Matrix

MANAGEMENT ACTIONS	STATUS	TARGET DATE	DEPARTMENT
Baseline Inventory and Management Plan			
Baseline Inventory – add new properties	Pending	January 2009	SRP Env. Svc.
Management Plan – add new properties	Completed	August 2008	SRP Env. Svc.
Cowbird Management:			
Apply nest searching protocol	Completed	Apply to surveys in 2008	SRP Env. Svc. Cooperators
Livestock grazing and recreational disturbance:			
Remove all trespass livestock	On-going	As necessary	SRP contractor Livestock owner(s)
Wildfire Abatement:			
Develop a fire management plan in coordination with fire management agencies	Completed	October 2004	SRP Env. Svc. Contractors
Patrol site regularly to identify and eliminate potential fire hazards; clearing, mowing, etc.	On-going	Conducted weekly, on average	SRP contractor
Make initial contact and maintain close coordination with wildfire response agencies, send plan	Completed	March 2005, on-going	SRP Env. Svc. SRP contractor
Fencing:			
Re-install barbed wire fencing around the perimeter of the main property.	Completed	October 2008	Contractor
Install fencing around south and east perimeters of USBR property	Completed	June 2007	Contractor
Conduct regular fence patrol to check for breaches. Inspect fence line after every flood event.	On-going	Conducted weekly, on average	SRP contractor

SPIRIT HOLLOW (cont'd.)

MANAGEMENT ACTIONS	STATUS	TARGET DATE	DEPARTMENT
On-Site Management			
Hire a property maintenance technician	Completed	March 2004	SRP Env. Svc.
Maintain and repair existing fences and roads	On-going	As needed	SRP contractor
Conduct general maintenance	On-going	As needed	SRP contractor
Invasive Plant and Animal Control:			
Survey the property to determine presence and extent of invasive elements	Completed	September 2008	Env. Svc. Contractor
Develop plan to minimize or eliminate problem species	Pending	No action required at this time	Env. Svc. Contractor
Conservation Easement:			
Complete conservation easement	Completed	October 2006	Env. Svc.
Community Support:			
Contact neighbors, maintain working relationships	On-going	On-going	SRP Env. Svc.

STILLINGER PRESERVE – Management Activity Implementation Matrix

MANAGEMENT ACTIONS	STATUS	TARGET DATE	DEPARTMENT
Baseline Inventory and Management Plan			
Baseline Inventory	Completed	September 2005	SRP Env. Svc.
Management Plan	Completed	September 2005	SRP Env. Svc.
Cowbird Management:			
Apply nest searching protocol	Completed	Apply during 2008 surveys	SRP Env. Svc. Cooperators
Livestock grazing and recreational disturbance:			
Remove trespass livestock	On-going	On-going	SRP contractor Livestock owner(s)
Wildfire Abatement:			
Develop a fire management plan in coordination with fire management agencies	Completed	October 2004	SRP Env. Svc. Contractors
Patrol site regularly to identify and eliminate potential fire hazards; clearing, mowing, etc.	On-going	Conducted weekly, on average	SRP contractor
Make initial contact and maintain close coordination with wildfire response agencies, send plan	Completed	March 2005, on-going	SRP Env. Svc. SRP contractor
Fencing:			
Conduct regular fence patrol to check for breaches	On-going	Conducted weekly, on average	SRP contractor
On-Site Management			
Hire a property maintenance technician	Completed	March 2004	SRP Env. Svc.
Maintain and repair existing fences and roads	On-going	As needed	SRP contractor
Conduct general maintenance	On-going	As needed	SRP contractor
Address long-term access issues	Pending	June 2009	SRP Env. Svc. SRP Land Dept.

STILLINGER PRESERVE (cont'd.)

MANAGEMENT ACTIONS	STATUS	TARGET DATE	DEPARTMENT
Invasive Plant and Animal Control:			
Survey the property to determine presence and extent of invasive elements	Pending	September 2009	Env. Svc. Contractor
Develop plan to minimize or eliminate problem species	Pending	Depends on results of survey	Env. Svc. Contractor
Conservation Easement:			
Locate an entity to hold the conservation easement	Pending	TBD	Env. Svc. Land
Community Support:			
Contact neighbors, maintain working relationships	On-going	On-going	SRP contractor SRP Env. Svc.

CAMP VERDE RIPARIAN PRESERVE – Management Activity Implementation Matrix

MANAGEMENT ACTIONS	STATUS	TARGET DATE	DEPARTMENT
Baseline Inventory and Management Plan			
Baseline Inventory	Completed	September 2005	SRP Env. Svc./Contractor
Management Plan	Completed	September 2005	SRP Env. Svc./Contractor
Cowbird Management:			
Apply nest searching protocol	Pending	No wifls in 2007. Application will depend on 2009 results.	SRP Env. Svc. Cooperators
Livestock grazing and recreational disturbance:			
Minimize human, vehicular and livestock trespass	On-going	On-going	SRP contractor Livestock owner(s)
Wildfire Abatement:			
Develop a fire management plan in coordination with fire management agencies	Completed	December 2004	SRP Env. Svc. Contractors
Patrol site regularly to identify and eliminate potential fire hazards; clearing, mowing, etc.	On-going	Conducted weekly, on average	SRP contractor
Make initial contact and maintain close coordination with wildfire response agencies, send plan	Completed	On-going	SRP Env. Svc. SRP contractor
Mow vegetation to create fire break along I-17 boundary	On-going as necessary	After each winter and monsoon rainy seasons	SRP
Boundary Issues / Fencing:			
Install wildlife friendly barbed wire fencing along the southern boundary of property.	Completed	December 2004	Contractor
Conduct regular fence patrol to check for breaches. Inspect fence line after every flood event.	On-going	Conducted weekly, on average	SRP contractor
Complete fencing along the north and east boundaries	Completed	July 2007	Contractor

CAMP VERDE RIPARIAN PRESERVE (cont'd.)

MANAGEMENT ACTIONS	STATUS	TARGET DATE	DEPARTMENT
Boundary Issues/Fencing (cont'd.)			
Install signage at I-17 bridge and along fence lines	Completed	July 2005	Env. Svc., Contractor
Work w/ adjacent landowners to minimize impacts from I-17 bridge access point.	On-going	On-going	Env. Svc. Contract employee
On-Site Management			
Hire a property maintenance technician	Completed	March 2005	SRP Env. Svc.
Maintain and repair existing fences and roads	On-going	As needed	SRP Env. Svc.
Conduct general maintenance	On-going	As needed	SRP Env. Svc. Contractors
Conservation Easement:			
Locate an entity to hold the conservation easement	Pending	TBD	Env. Svc. Land
Community Support:			
Contact neighbors, maintain working relationships	On-going	On-going	SRP Env. Svc.
Information display and trip at Verde Birding Festival	Annually	April 2009	SRP Env. Svc.
Information display at Verde River Days	Annually	September 2009	SRP Env. Svc.
Verde River Planning w/ TNC and ASPB	On-going	Thru 2009	SRP Env. Svc.

FORT THOMAS PRESERVE - Management Activity Implementation Matrix

MANAGEMENT ACTIONS	STATUS	TARGET DATE	DEPARTMENT
Baseline Inventory and Management Plan			
Baseline Inventory	Draft in review	February 2009	SRP Env. Svc./Contractor
Management Plan	Draft completed	November 2008	SRP Env. Svc./Contractor
Cowbird Management:			
Test nest searching protocol	Completed	2006 and 2007 breeding season	SRP Env. Svc. Contractor
Conduct nest searching protocol	Not started	2009 breeding season	SRP Contractor
Livestock grazing and recreational disturbance:			
Install signage to deter human and vehicular trespass	Completed	September 2008	SRP Env. Svc.
Wildfire Abatement:			
Develop a fire management plan in coordination with fire management agencies and USBR	Initiated	December 2009	SRP Env. Svc. Contractors
Patrol site regularly to identify and eliminate potential fire hazards; clearing, mowing, etc.	On-going	Conducted weekly, on average	SRP contractor
Make initial contact and maintain close coordination with wildfire response agencies	Initiated	After completion of plan	SRP Env. Svc. SRP contractor
Send copies of fire management plan to fire management agencies	Not started	After completion of plan	SRP Env. Svc.
Boundary Issues / Fencing:			
Evaluate the property to determine fencing, signage and access needs	Completed	June 2007	SRP
Based on evaluation, install fencing, signage and secure access	Completed	September 2008	SRP/BR
On-Site Management			
Hire a property maintenance technician	Completed	March 2004	SRP Env. Svc.

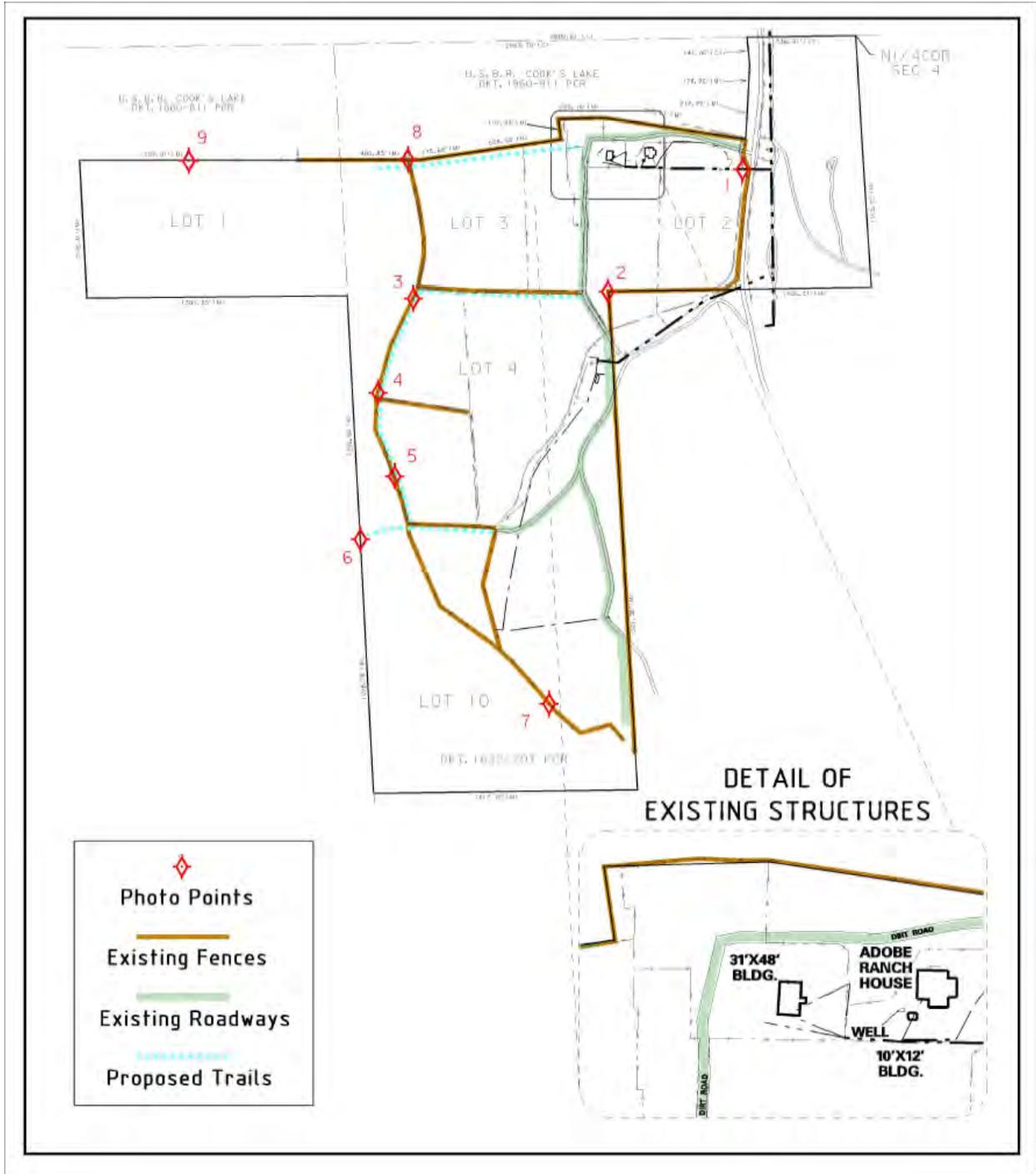
FORT THOMAS PRESERVE (contt'd.)

Maintain and repair existing fences and roads	On-going	As needed	SRP Env. Svc.
MANAGEMENT ACTIONS	STATUS	TARGET DATE	DEPARTMENT
On-Site Management (cont'd.)			
Conduct general maintenance	On-going	As needed	SRP Env. Svc. SRP contractor
Conservation Easement:			
Locate an entity to hold the conservation easement	Pending	TBD	Env. Svc. Land
Community Support:			
Contact neighbors, maintain working relationships	On-going	On-going	SRP Env. Svc.

APPENDIX C
ROOSEVELT LAKE PHOTOGRAPHS

APPENDIX D
PHOTO POINT MONITORING RESULTS
ADOBE PRESERVE

Photo Point Locations Adobe Preserve



Adobe Preserve Photo Point Record
Photo Point 1- View 1



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 1- View 2



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 2- View 1



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 2- View 2



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 3- View 1



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 3- View 2



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 3- View 3



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 4- View 1



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 4- View 2



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 5- View 1



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 6- View 1



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 6- View 2



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 7- View 1



October 9, 2003



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 8- View 1



October 20, 2004



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 8- View 2



October 20, 2004

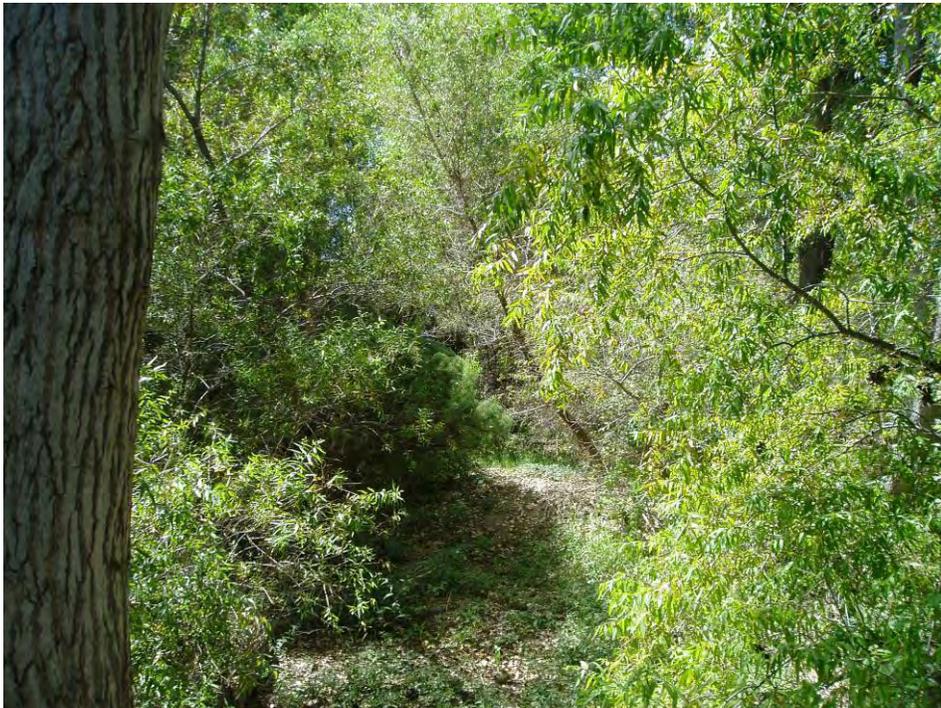


September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 8- View 3



October 6, 2005



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 9- View 1



October 20, 2004



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 9- View 2



October 20, 2004



September 22, 2008

Adobe Preserve Photo Point Record
Photo Point 9- View 3



October 20, 2004



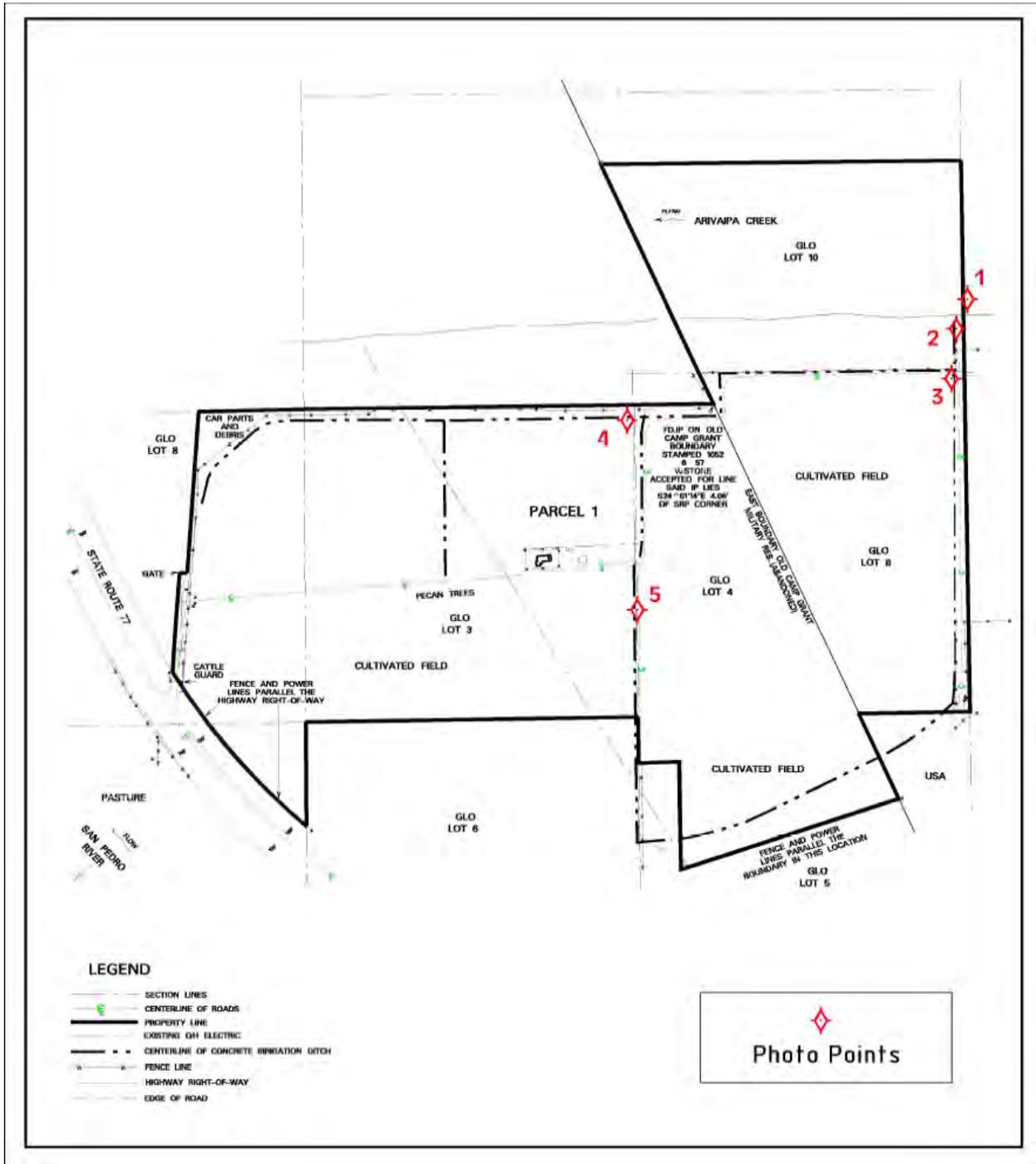
September 22, 2008

APPENDIX E

PHOTO POINT MONITORING RESULTS

BLACK FARM PRESERVE

Photo Point Locations Black Farm Preserve



Black Farm Preserve Photo Point Record
Photo Point 1- View 1



June 17, 2004



October 2, 2008

Black Farm Preserve Photo Point Record
Photo Point 1- View 2



June 17, 2004



October 2, 2008

Black Farm Preserve Photo Point Record
Photo Point 2- View 1



June 17, 2004



October 2, 2008

Black Farm Preserve Photo Point Record
Photo Point 2- View 2



June 17, 2004



October 2, 2008

Black Farm Preserve Photo Point Record
Photo Point 3- View 1



June 17, 2004



October 2, 2008

Black Farm Preserve Photo Point Record
Photo Point 3- View 2



June 17, 2004



October 2, 2008

Black Farm Preserve Photo Point Record
Photo Point 3- View 3



June 17, 2004



October 2, 2008

Black Farm Preserve Photo Point Record
Photo Point 4- View 1



June 17, 2004



October 2, 2008

Black Farm Preserve Photo Point Record
Photo Point 4- View 2



June 17, 2004



October 2, 2008

Black Farm Preserve Photo Point Record
Photo Point 5- View 1



June 17, 2004



October 2, 2008

Black Farm Preserve Photo Point Record
Photo Point 5- View 2



June 17, 2004



October 2, 2008

Black Farm Preserve Photo Point Record
Photo Point 5- View 3



June 17, 2004



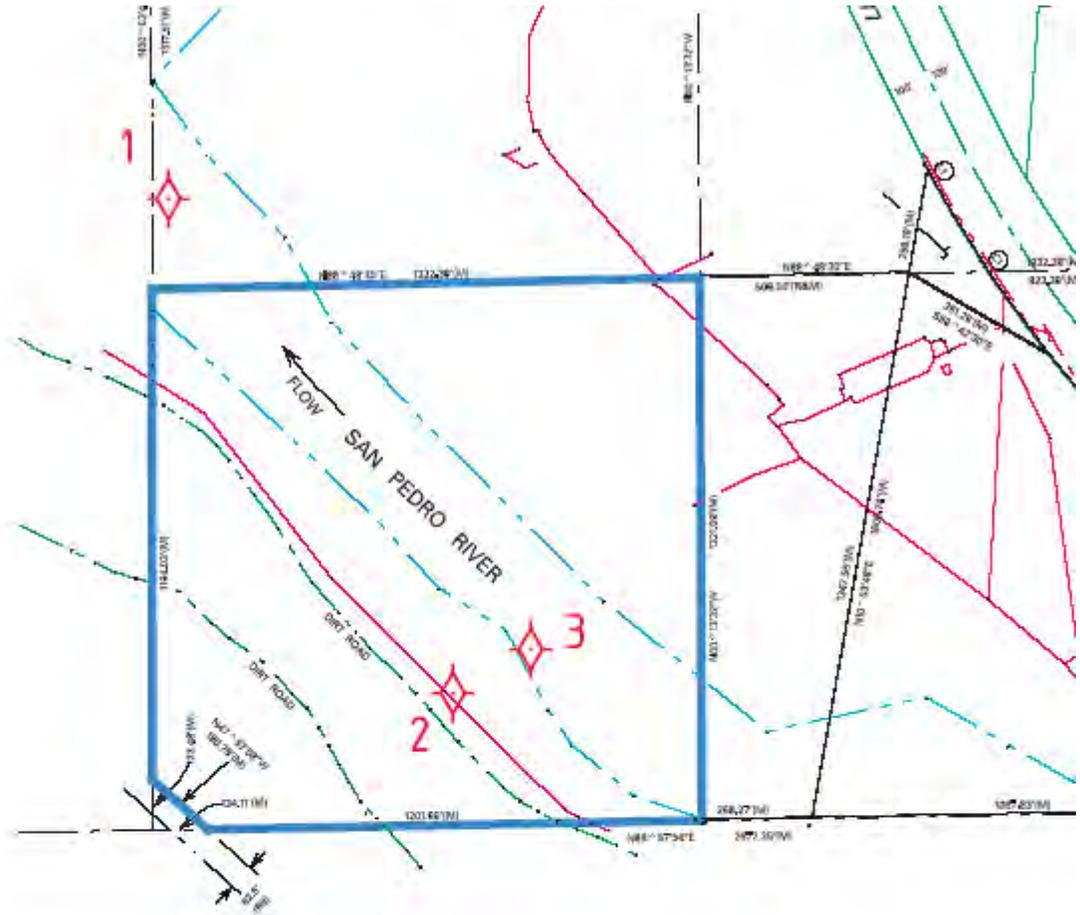
October 2, 2008

APPENDIX F

PHOTO POINT MONITORING RESULTS

STILLINGER PRESERVE

Photo Point Locations Stilling Preserve



Stilling Preserve



Photo Points

Stillinger Property Photo Point Record
Photo Point 1- View 1



June 21, 2005 *** Located off property; near edge of active channel***

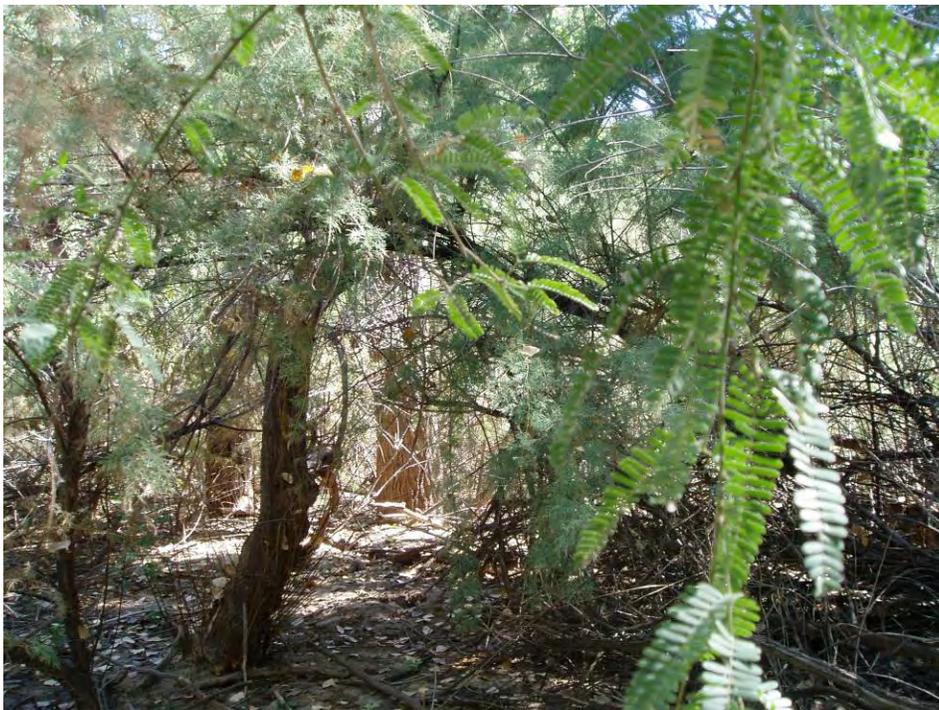


September 22, 2008

Stillinger Property Photo Point Record
Photo Point 1- View 2



June 21, 2005



September 22, 2008

Stillinger Property Photo Point Record
Photo Point 1- View 3



June 21, 2005



September 22, 2008

Stillinger Property Photo Point Record
Photo Point Established in 2006
Photo Point 1B-1



October 19, 2006 *** Located on property corner ***



September 22, 2008

Stillinger Property Photo Point Record
Photo Point Established in 2006
Photo Point 1B-2



October 18, 2006



September 22, 2008

Stillinger Property Photo Point Record
Photo Point 1B-3



October 19, 2006



September 22, 2008

Stillinger Property Photo Point Record
Photo Point 2- View 1



June 21, 2005



September 22, 2008

Stillinger Property Photo Point Record
Photo Point 2- View 2



June 21, 2005

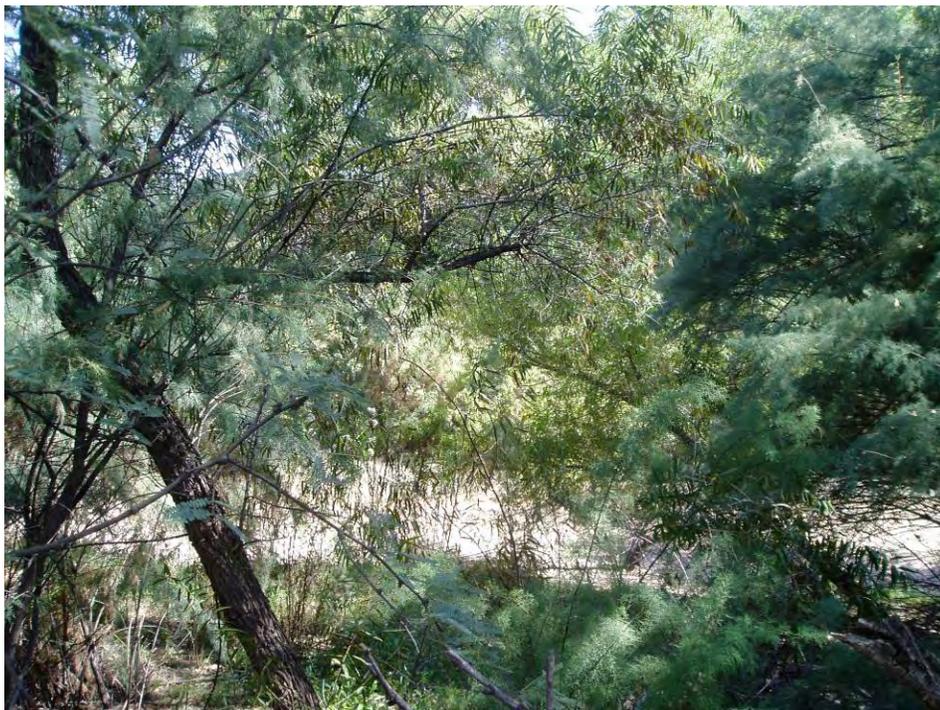


September 22, 2008

Stillinger Property Photo Point Record
Photo Point 3- View 1



June 21, 2005



September 22, 2008

Stillinger Property Photo Point Record
Photo Point 3- View 2



June 21, 2005



September 22, 2008

Stillinger Property Photo Point Record
Photo Point 3- View 3



June 21, 2005



September 22, 2008

**Additional Pictures
Stillinger Preserve
San Pedro River Corridor**



September 22, 2008



September 22, 2008

**Additional Pictures
Stilling Preserve
San Pedro River Corridor**



September 22, 2008



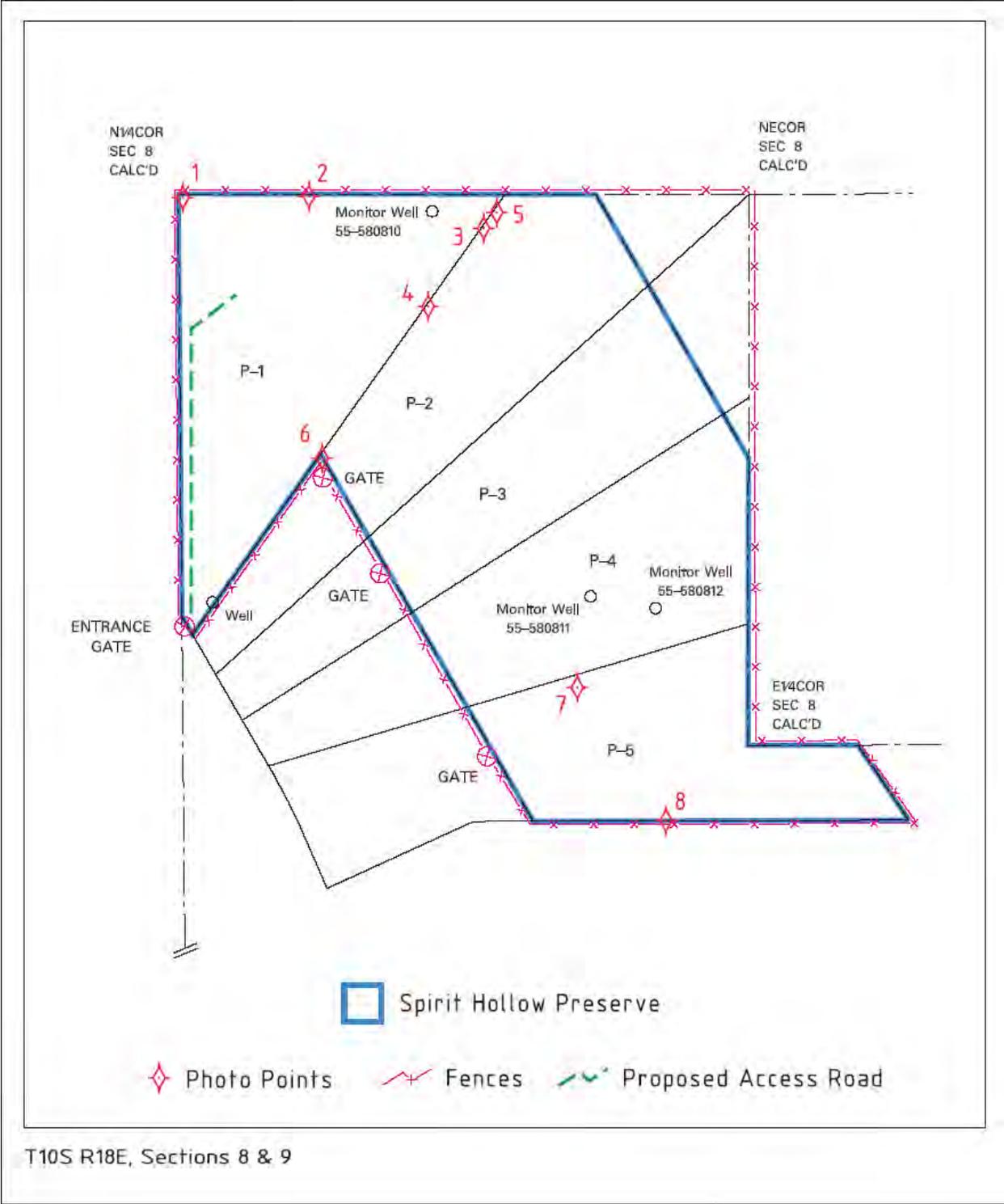
September 22, 2008

APPENDIX G

PHOTO POINT MONITORING RESULTS

SPIRIT HOLLOW PRESERVE

Photo Point Locations Spirit Hollow Preserve



Spirit Hollow Preserve Photo Point Record
Photo Point 1- View 1



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 1- View 2



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 2- View 1



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 2- View 2



September 21, 2005

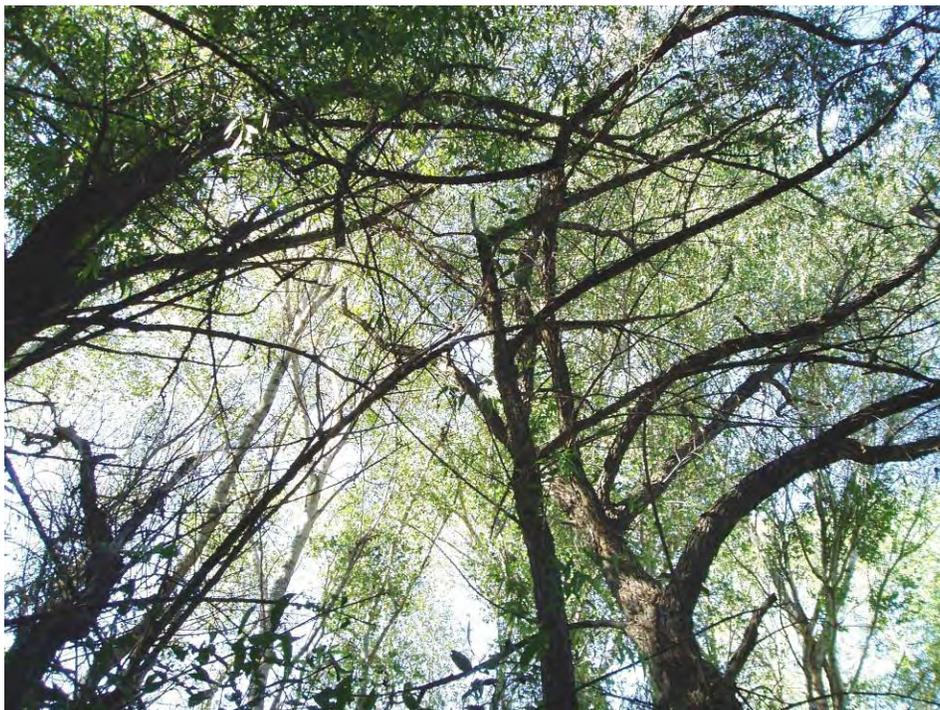


October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 2- View 3



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 2- View 4



September 21, 2005

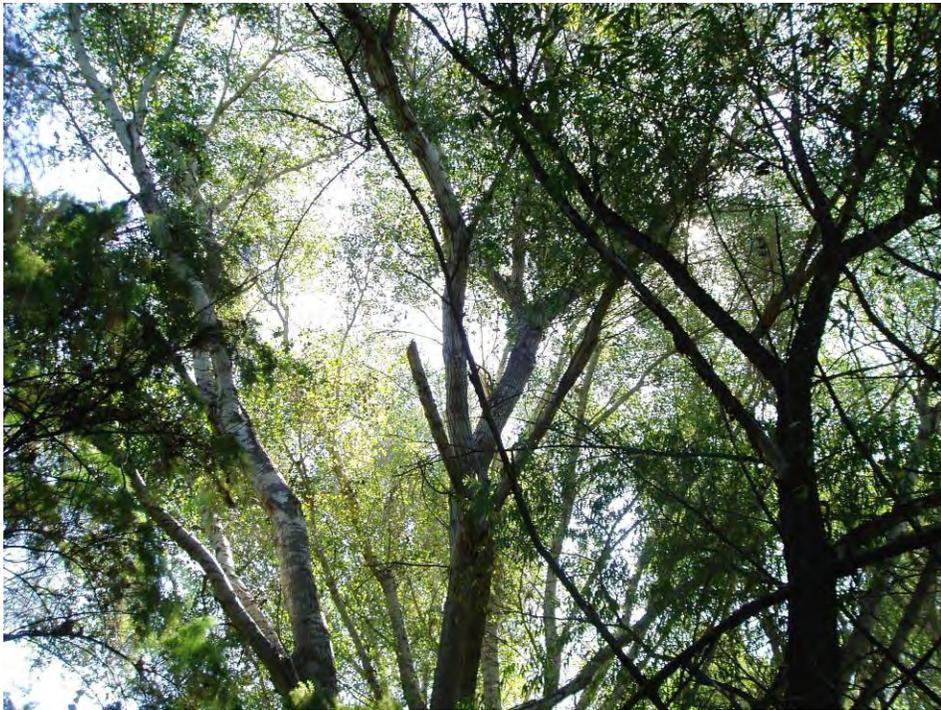


October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 2- View 5



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 3- View 1



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 3- View 2



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 3- View 3



September 21, 2005

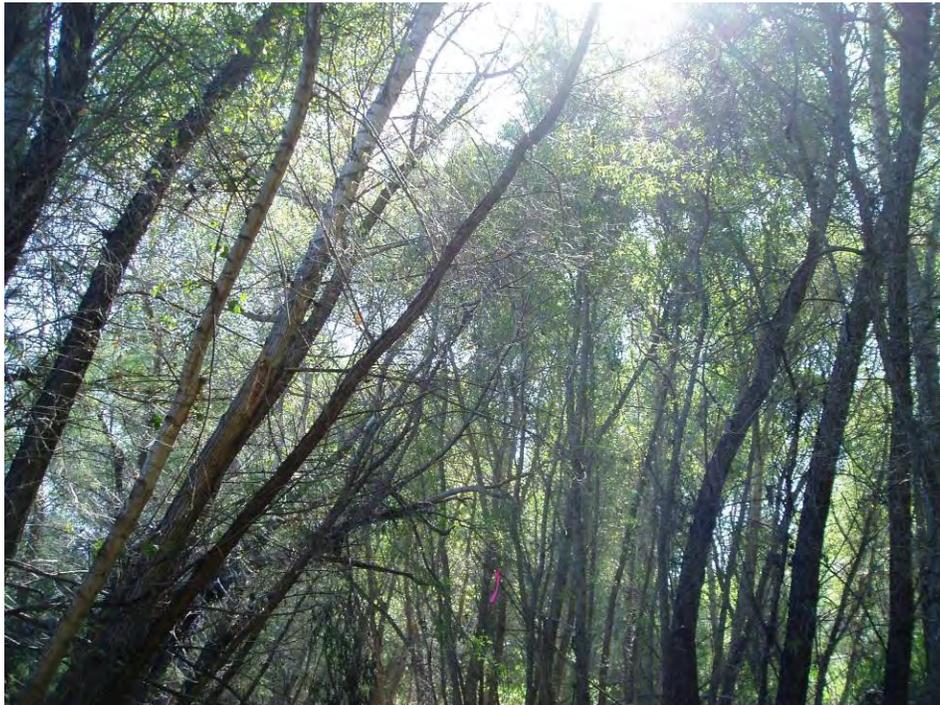


October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 3- View 4



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 3- View 5



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 3- View 6



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 4- View 1



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 4- View 2



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 4- View 3



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 4- View 4



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 5- View 1



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 5- View 2



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 5- View 3



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 5- View 4



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 6- View 1



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 6- View 2



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 6- View 3



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 7- View 1



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 7- View 2



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 8- View 1



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 8- View 2



September 21, 2005



October 14, 2008

Spirit Hollow Preserve Photo Point Record
Photo Point 8- View 3



September 21, 2005



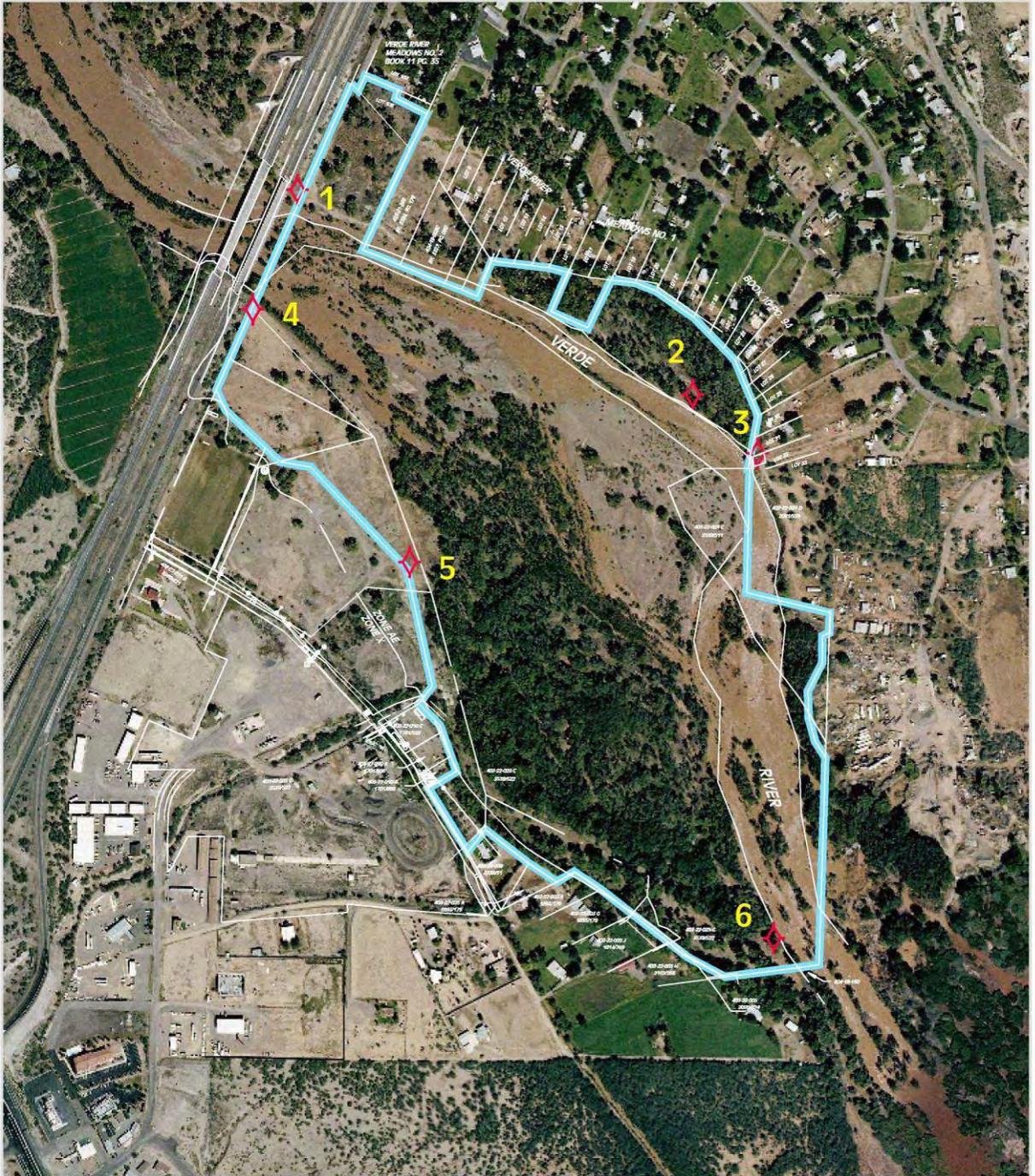
October 14, 2008

APPENDIX H

PHOTO POINT MONITORING RESULTS

CAMP VERDE RIPARIAN PRESERVE

Photo Point Locations Camp Verde Riparian Preserve



AirPhotoUSA 2004
T14N R4E, Sections 24 & 25

 Photo Points  Preserve Boundary

b

Camp Verde Riparian Preserve Photo Point Record
Photo Point 1- View 1



June 7, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 1- View 2



June 7, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 1- View 3



June 7, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 1- View 4



June 7, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 2- View 1



June 7, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 2- View 2



June 7, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 2- View 3



June 7, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 2- View 4



June 7, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 3- View 1



June 7, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 3- View 2



June 7, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 3- View 3



June 7, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 3- View 4



June 7, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 4- View 1



August 25, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 4- View 2



August 25, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 4- View 3



August 25, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 5- View 1



August 25, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 5- View 2



August 25, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 5- View 3



August 25, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 6- View 1



August 25, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 6- View 2



August 25, 2005



August 13, 2008

Camp Verde Riparian Preserve Photo Point Record
Photo Point 6- View 3



August 25, 2005



August 13, 2008

APPENDIX I

SELECT BASELINE PHOTO IMAGES

FORT THOMAS PRESERVE



Upstream view of Gila River with Fremont cottonwood-Goodding willow-Tamarisk community on right and Tamarisk monoculture on left.



Downstream view of Gila River showing Tamarisk community.



Panorama showing riparian strand vegetation in foreground and cottonwood-willow in background.



Gila River looking downstream at mixed riparian vegetation.



Coyote willow in foreground and cottonwood-willow in background.



Tailwater ditch and Tamarisk patch.



Fremont cottonwood – Goodding's willow gallery forest.



Looking toward patch of Fremont cottonwoods and Goodding's willows.

APPENDIX J

PHOTO POINT MONITORING RESULTS

ROCKHOUSE PROJECT

Photo Point Locations
Rockhouse Project



Rockhouse Photo Point Record
Photo Point 1- View 1



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 1- View 2



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 1- View 3



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 1- View 4



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 2A- View 1



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 2A- View 2



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 2A- View 3



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 2A- View 4



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 2A- View 5



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 2A- View 6



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 2A- View 7



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 2B- View 1



October 13, 2005

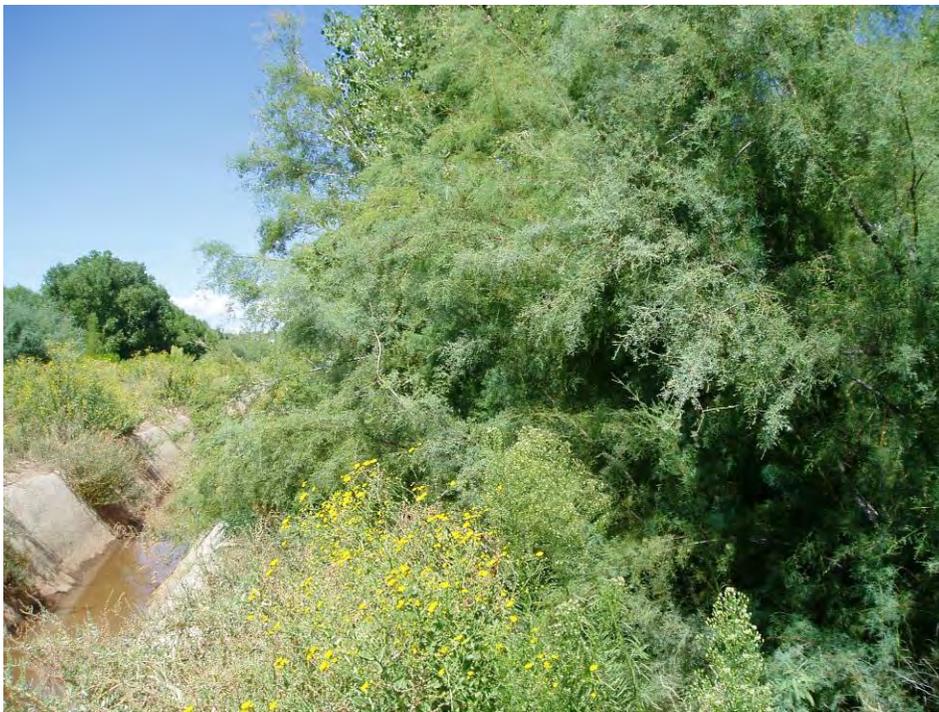


September 18, 2008

Rockhouse Photo Point Record
Photo Point 2B- View 2



October 13, 2005



September 18, 2008

Rockhouse Photo Point Record
Photo Point 3- View 1



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 3- View 2



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 3- View 3



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 4- View 1



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 4- View 2



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 4- View 3



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 4- View 4



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 4- View 5



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 4- View 6



October 13, 2005



September 18, 2008

Rockhouse Photo Point Record
Photo Point 5- View 1



May 3, 2004



September 18, 2008

Rockhouse Photo Point Record
Photo Point 5- View 2



May 3, 2004



September 18, 2008

APPENDIX K

**“Southwestern Willow Flycatcher and Yellow-billed Cuckoo Surveys
along the Gila River at Fort Thomas Preserve, Graham County, and the
SRP-managed Properties Along the San Pedro River, Pinal County,
Arizona: 2008 Summary Report”**