

# **Twin C Allotment Goat Camp Well Environmental Assessment**

**EA Number: DOI-BLM-AZ-G010-2013-0004**

**UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
SAFFORD FIELD OFFICE  
GRAHAM COUNTY, ARIZONA**

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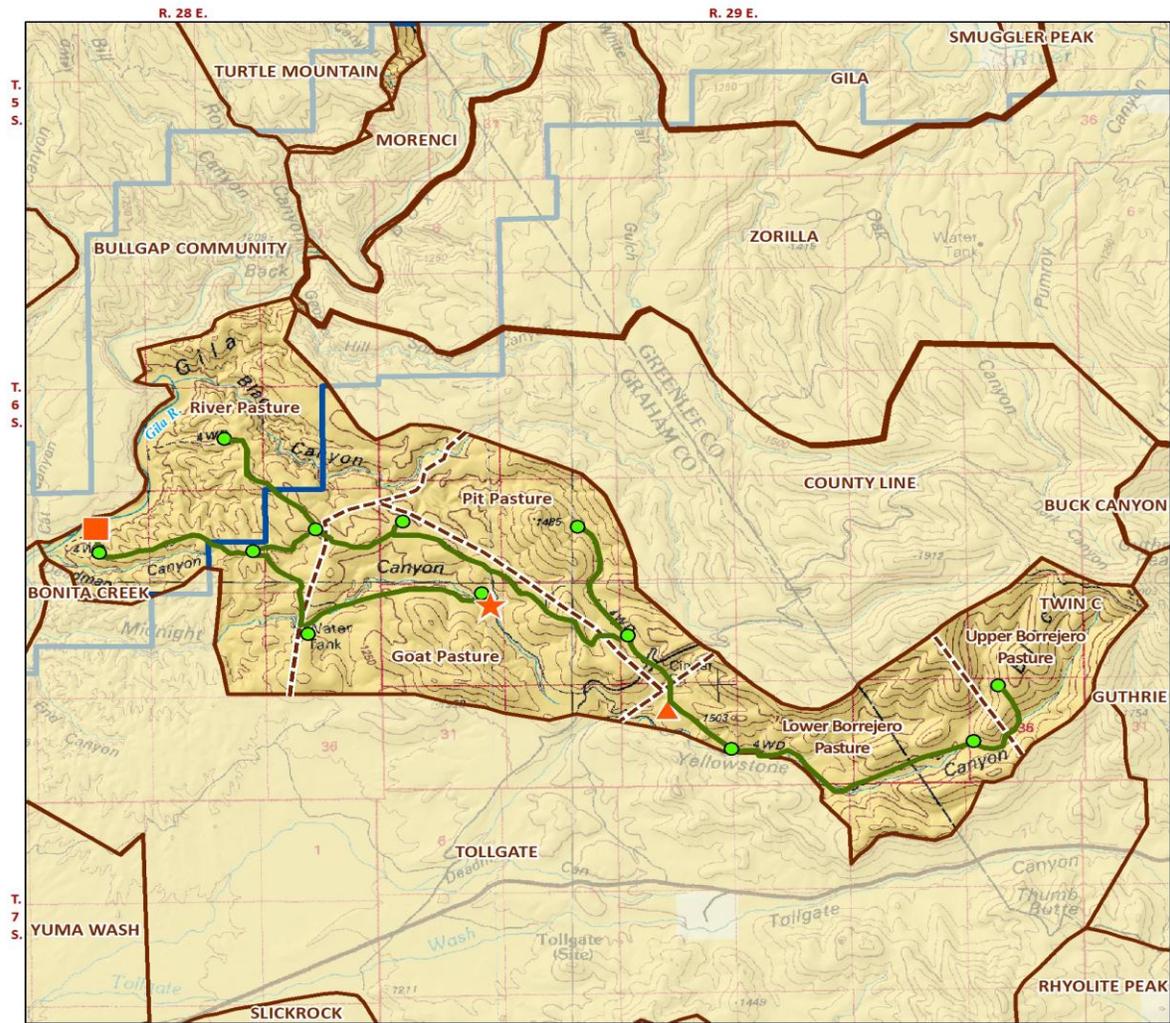
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# **1 INTRODUCTION**

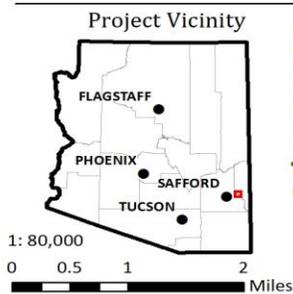
## **1.1 Background**

Drilling of the proposed Goat Camp Well started in 2011 under a Final Decision dated March 25, 2011. Initial work was stopped due to an Appeal of this Final Decision. Prior to being stopped, the well was drilled to a depth of 150 feet. The well was capped with a collared pipe and welded plate pending final outcome. Further analysis was conducted through the development of an environmental analysis (EA) in 2012 (DOI-BLM-AZ-G010-2012-0021), from which another finding of no significant impact (FONSI) and proposed decision was issued August 24, 2012. The proposed decision was protested in a letter received August 29, 2012. In response to the protests, the Bureau of Land Management (BLM) re-initiated the environmental review process to re-analyze the proposed project and afford all interested publics an opportunity to participate in the decision-making process. This Environmental Assessment (EA) (DOI-BLM-AZ-G010-2013-0004) will replace the previous versions, and those documents are no longer valid.

Figure 1. Location of proposed Goat Camp Well, River Well, Headquarters Well, existing water system and pastures on the Twin C Allotment.



**Twin C Allotment - Proposed Goat Camp Well**



- ★ Proposed Goat Camp Well
- River Well
- ▲ Headquarters Well
- Existing Water Tanks
- Existing Pipeline
- - - Pasture Boundary
- ▭ Grazing Allotments
- ▭ Gila Box NCA
- ▭ BLM
- ▭ Private


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## **1.2 Purpose and Need**

The BLM purpose of the action is to provide a reliable upland source of water to supplement the existing water infrastructure in the uplands of the Twin C Allotment, thus reducing resource impacts to the Gila River within the Gila Box Riparian National Conservation Area.

The need for action is that the primary source of water known as the “River Well” (ADWR Well Registration No. 55-631497) draws water from the Gila River floodplain that provides resource habitat. Further, the other source of existing water known as the “Headquarters Well” (ADWR Well Registration No. 55-631495) does not produce a sufficient supply of water to provide for the whole system. Therefore, existing infrastructure does not allow for existing grazing management activities authorized under current land management plan decisions, while also providing greater protection of riparian resource habitat within the Gila Box Riparian National Conservation Area.

Decision to be made: The BLM will decide whether or not to authorize development of a new water source to tie into and supplement the existing water system.

## **1.3 Conformance with Land Use Plan**

The proposed action described in Chapter 2 is in conformance with the *Safford District Resource Management Plan* (RMP), approved August 1991. The proposed action is consistent with the following decisions contained within this plan. It has also been determined that the proposed action would not conflict with other decisions throughout the plan.

“Construction of range improvements would be necessary to implement and operate the various types of grazing management included in the proposal. Construction of adequate water facilities, for example, would be necessary in areas designated for livestock grazing.” Upper Gila – San Simon Final EIS, Page 1-25. Well specifications are presented on pages 1-34 to 1-35 of the Final EIS and states in part BLM will work with ranchers to keep electric pumps or windmills operating to provide water for wildlife while cattle are not in the pasture.

## **1.4 Relationship to Statutes, Regulations, or Other and Policies**

This EA has been prepared in accordance with the requirements of NEPA and any additional Federal, State, and local statutes that may be relevant to the proposed action, such as those cited below.

Executive Order 13186 requires the BLM and other Federal agencies to work with the U.S. Fish and Wildlife Service to provide protection for migratory birds.

The project area is located in Graham County, Arizona. The proposed action is consistent with the *Graham County Comprehensive Plan*, as amended (July 1996). Section 2.12.2 of this plan states that “Graham County supports and encourages the continued efforts to protect existing water rights and future uses on the Gila River and its tributaries.” In addition, this action does not conflict with decisions contained within the plan.

The proposed action would also comply with the following laws and/or agency regulations, other plans and are consistent with applicable Federal, State, and local laws, regulations, and plans to the maximum extent possible.

- Federal Land Policy and Management Act of 1976 (43 United States Code [USC] 1707 et seq.)
- Endangered Species Act of 1973, as amended
- Section 106 of the National Historic Preservation Act of 1966, as amended
- Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001–3013; 104 Stat. 3048-3058)
- National Environmental Policy Act of 1969
- Taylor Grazing Act of 1934 as amended
- Public Rangelands Improvement Act of 1978

These laws, along with the grazing regulations under 43 CFR 4100, govern administration of livestock grazing and range improvements on public lands.

## **1.5 Identification of Issues**

Identification of issues for this assessment was accomplished by considering the resources that could be affected by implementation of one of the alternatives. Issues were identified by Safford Field Office Interdisciplinary Team, the grazing permittee, and interested publics. This scoping process was conducted through processes prior to the 2011 Final Decision, as well as throughout the successive EA processes through which comments and protests have been received and addressed (see Section 1.1 Background).

Issues identified through the process described above are:

- Could disturbance to wildlife, including migratory birds and sensitive species, occur during drilling activities of the new well?
- Could the proposed well, i.e., Goat Camp, affect the aquifer and flow of the Gila River?

## **2 PROPOSED ACTION AND ALTERNATIVES**

This EA focuses on the proposed action and no action alternatives. The no action alternative is considered and analyzed to provide a baseline for comparing the impacts of the proposed action. The BLM interdisciplinary team explored and evaluated one other alternative to determine whether the underlying purpose and need for the proposed action would be met. The alternative considered but eliminated from further analysis is described in Section 2.3, along with the rationale for not further considering this alternative.

### **2.1 Proposed Action**

The proposed action would be to authorize the livestock permittee to develop an upland water source for livestock to tie into the existing water system and supplement the water in the current system on the Twin C Allotment at: T6S, R29E, NE ¼ of Section 30 (Figure 1). Under this alternative, drilling of the proposed Goat Camp Well (ADWR Well Registration No. 55-220387) would resume and would be completed within two to four weeks.

The proposed Goat Camp Well drill pad (less than 0.25 acres) would occupy an area within an existing range improvement site and would connect to an existing (and adjacent) storage tank, trough and pipeline. Ground and vegetation disturbance has already occurred at the site; no additional ground or vegetation disturbance would be necessary. Well construction requirements would comply with Arizona Department of Water Resources (ADWR) specifications found in Arizona Administrative Code (A.A.C.) R12-15-801 et seq. and Arizona Revised Statute (A.R.S.) § 45-594 and 45-595. All construction activities would use existing roads (one drill mounted two-ton truck) to complete the project. The BLM would be the registered well owner (Arizona Department of Water Resources form, DWR 55-40, 2012). It is estimated that water would be reached between 850 to 1000 feet, and that the well completion would occur within four weeks after drilling is reinitiated. In accordance with the regulations at 43 CFR 4120.3-2, the BLM would enter into a cooperative range improvement agreement with the permittee for use and maintenance of this well.

The pump at the new well would be submersible and solar powered. Maximum pumping rate would be 20 gallons per minute during daylight hours, year round. Solar panels would be ground mounted to reduce potential vandalism from target shooting and ease of maintenance (cleaning and tilting), and provide a low profile to reduce visual observance. It is estimated 8-12 panels (modules) 2 X 4 feet per module (less than 200 square feet total) would supply sufficient power to pump water the estimated 850 to 1,000 feet of the well. A small fence would protect the panels.

#### **2.1.1 Best Management Practices**

The following BMPs are included in the proposed action to minimize the impacts of the proposed action:

- Construction activities would be limited to daylight hours to minimize impacts to wildlife.

- Construction activities would be limited to periods when the soil and ground surface are not wet in order to avoid road damage, e.g. ruts.
- Well construction requirements would comply with Arizona Department of Water Resources (ADWR) specifications found in Arizona Administrative Code (A.A.C.) R12-15-801 et seq. and Arizona Revised Statute (A.R.S.) § 45-594 and 45-595.
- All construction vehicles would use existing roads.
- In order to reduce the potential for the spread of noxious and invasive weeds from construction equipment used for implementation of the proposed action, either from contamination with weed seed and/or biomass, all vehicles would be thoroughly power washed off-site to remove all vegetative material and soil before transporting equipment to the construction site. This includes trucks, trailers and all other machinery.
- Leftover materials pose a hazard to public safety and also to wildlife. Thus, construction debris would be removed to an appropriate landfill location. This includes any unused, replaced, or discarded materials such as pipes float valves, wire, and other miscellaneous supplies. BLM staff would conduct site visits to the area to ensure adequate clean-up measures are taken.
- Any cultural (historic/prehistoric site or object) or paleontological resource (fossil remains of plants or animals) discovered during operations would immediately be reported to the authorized officer or his/her designee. All operations in the immediate area of the discovery shall be suspended until written authorization to proceed is issued. An evaluation of the discovery shall be made by a qualified archaeologist or paleontologist to determine appropriate actions to prevent the loss of significant cultural or scientifically important paleontological values;
- If in connection with this work any human remains, funerary objects, sacred objects or objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (P.L. 101-601; 104 Stat. 3048; 25 U.S.C. 3001) are discovered, operations in the immediate area of the discovery would stop, the remains and objects would be protected, and the BLM would be immediately notified. The immediate area of the discovery would be protected until notified by the Safford Field Office Manager that operations may resume;
- At no time would vehicle or equipment fluids (including motor oil and lubricants) be dumped on public lands. The BLM accepts the spill management plan complying with Arizona Department of Water Resources well drilling requirements as sufficient best management practice. In addition, in the case of a hydrocarbon spill (*i.e.*, fuel) the BLM would be notified and spilled fluids would be excavated to a depth of 12 inches beyond contaminated material, removed from the work location and disposed of properly. If no water is developed after drilling to the maximum depth. The drill hole would be capped and abandoned according to ADWR requirements, and the drill pad scarified; and
- Drilling waste such as drilling fluid and drill cuttings would be removed so that wastes do not pollute surface waters or cause contamination of the well.

- No water pumped to the surface at Goat Camp Well would be allowed back into the subsurface flow. Likewise, no water pumped to the surface would be allowed to flow into surface water.

### **2.1.2 Monitoring**

The BLM would conduct inspections of the well site during drilling to ensure compliance with the best management practices listed in Section 2.1.1. Periodic inspections would subsequently be conducted by BLM specialists to insure appropriate operation and maintenance. The project area would be routinely monitored by the BLM for noxious weeds after construction during regular RHA assessments, U. of A. Monitoring and compliance inspections.

### **2.2 No Action Alternative**

Under this alternative, drilling at the Goat Camp Well site would not be completed, and the partially drilled well would be capped and abandoned, as required by ADWR. In addition, the drill pad location soil would be broken up and loosened. Operation of the water system would continue as it is currently, with water draw from the River Well located on the Gila River floodplain. Thus, the objectives of a new, reliable water source with better accessibility and maintenance opportunities would not be achieved.

## **2.2 Alternatives Considered But Eliminated From Detailed Analysis**

Hauling water and dam construction within the allotment were considered as alternatives, but deemed not feasible alternatives through further analysis. There were other locations (Ranch HQ and west of Goat Camp) within the uplands of the Twin C Allotment that were evaluated for the proposed well. These sites were considered but eliminated. Analysis by the well driller (who is familiar with the Twin C Allotment and has many years of experience drilling wells in the Black Hills as well as other locations throughout southeastern Arizona) indicated that the other locations did not possess as good a potential to contact water as the proposed action location. Both locations were ineffective and the one west of Goat Camp was also technically and economically infeasible due to remoteness. The Goat Camp location possesses water bearing formations of volcanic rock, cinder, and sandstone. In addition, the proposed location has existing road access and shares the locus with existing range improvements (e.g., pipelines, storage tanks/trough) reducing the amount of ground disturbance within the project area. No other sites with all these attributes were identified. Thus, no other reasonable alternative well locations were proposed.

## **3 AFFECTED ENVIRONMENT**

The purpose of this chapter is to describe the existing environment potentially affected by the alternatives. This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources), as identified in Table 1 and as presented in Section 1.5 of this assessment. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4.

### **3.1 Elements/Resources of the Human Environment**

The proposed Goat Camp Well site is located in the Twin C Allotment. The allotment is located 15 miles east of Safford, Arizona, and 12 miles southwest of Clifton, Arizona. The proposed well site is located between the Black Hills Back Country Byway and the Gila River. The well site is three miles from the Gila River, two miles from the Gila Box National Riparian Conservation Area boundary and two and half miles from the Black Hills Back Country Byway. The site is 700 feet in elevation above the Gila River. It is accessed by an unmaintained public road off of the Black Hills Back Country Byway that provides remote access to public lands for the permittee and the general public. A short two-track spur leads to an existing storage tank at the drill site.

The drill site is located in the uplands below a ridge line on the slopes leading down to the Gila River. These slopes consist of large, long rocky ridge lines. Classified as limey uplands, the soils are shallow with large cobble on top and a limey hard pan (caliche) underneath. Vegetation is dominated by creosote bush with some perennial grasses including tobosa and threeawn. Along the drainages, mesquite and catclaw trees 8-10 feet in height are common. This environment dominates the immediate slopes on both sides of the upper Gila River.

The BLM is required to consider many authorities when evaluating a Federal action. Those elements of the human environment that are subject to the requirements specified in statutes, regulations, or executive orders, and must be considered in all EAs, have been considered by BLM resource specialists to determine whether they would be potentially affected by the proposed action. These elements are identified in Table 1, along with the rationale for the determination on potential effects. If any element was determined to be potentially impacted, it was carried forward for detailed analysis in this EA; if an element is not present or would not be affected, it was not carried forward for analysis. Table 1 also contains other resources/concerns that have been considered in this EA. As with the elements of the human environment, if these resources were determined to be potentially affected, they were carried forward for detailed analysis in this document.

**Table 1. Summary evaluation of elements/resources of the human environment.**

| Resource  | Determination* | Affected Environment (Rationale for Determination)  |
|---|----------------|---|
| <p>* NP = Not present in the area that will be impacted by the proposed action.<br/>           NI = Present, but not affected to a degree that would mean detailed analysis is required.<br/>           PI = Present with potential for impact; analyzed in detail in the EA.</p> |                |   |
| Air Quality   | NI             | Air quality in the general area is good, although windblown dust can be a minor source of pollution. The project location is within an attainment area for all National Ambient Air Quality Standards. The proposed action would result in temporary, localized deterioration of air quality because of the operation of equipment and the dust generated from well drilling. Because the amount generated would very small in relation to the natural windblown dust, would be temporary (no more than four weeks) and would cease once well drilling is complete, the BLM has determined that the impact is negligible. |
| Areas of Critical Environmental Concern   | NP             | The project area is not located within or near an Area of Critical Environmental Concern.   |
| Cultural Resources  | NP             | A Class III cultural inventory of the project area was completed. No cultural resources were identified within the project area.  |
| Environmental Justice   | NP             | The closest community is Clifton, Arizona, 15 miles from the proposed action. Therefore, the action would have no disproportionately high or adverse human health or other environmental effects on minority or low-income segments of the population. The proposed action would also have no effect on low-income or minority populations.   |
| Farmlands (Prime or Unique)   | NP             | There are no prime or unique farmlands within or near the project area.   |
| Floodplains   | NP             | The proposed Goat Camp well site is located in the uplands two miles from the Gila River and is outside of any designated floodplain. There is no known flooding hazard at the site nor is there any expectation that the proposed action would create or alter downstream flooding hazard.   |
| Invasive, Non-native Species  | NI             | There are currently no known invasive species or noxious weeds within the project area. Measures to prevent the spread of invasive and noxious weeds have been built into the proposed action. No impacts from the proposed action are therefore anticipated.   |
| Native American Religious Concerns  | NP             | During consultations with American Indian Tribes who claim cultural affiliation to southern Arizona, no Native American religious concerns have been identified in relation to actions proposed in this EA.   |
| Threatened, Endangered, or Candidate Plant Species  | NP             | No Threatened, Endangered, or Candidate plant species occur in the project area.  |
| Threatened, Endangered Animal Species   | NI             | Listed species and designated critical habitat exist within three miles of the project site. The BLM considered the FWS county list and determined the potential effect of the proposed project on each of the species (this analysis by species is found in the project record). The BLM determined the action would have no effect on federally-listed species or their critical habitat.   |
| Wastes (hazardous or solid)   | NI             | No known hazardous or solid waste issues occur in the project areas. In addition, measures to prevent contamination from fluid spills, should they occur, have been built into the proposed action. No impacts from the proposed action are therefore anticipated.  |

| <b>Resource</b>  | <b>Determination*</b> | <b>Affected Environment (Rationale for Determination)</b>  |
|--|-----------------------|--|
| Water Quality and Quantity (drinking/ground)               | PI                    | There is no expectation that the construction and operation of the proposed well would alter either surface or subsurface water quality. The BLM has assessed the potential impact of the Goat Camp well on underground hydrology and connectivity to the Gila River. See detailed analysis below.   |
| Wetlands/Riparian Zones                                    | NP                    | The closest riparian area is the Gila River, three miles away. There are no Wetlands/Riparian Zones within the project area.   |
| Wild and Scenic Rivers                                     | NP                    | The closest segment proposed for designation is the Gila River, three miles away. There are no Wild and Scenic River segments classified as designated, eligible, or suitable within the project area.   |
| Wilderness   | NP                    | The project area is not located within designated wilderness.  |
| Livestock Grazing  | NI                    | Maintenance and operation of the water system would be simplified. The current grazing system and existing range improvements would remain. However, over time the permittee would benefit from reduced operational costs.   |
| Vegetation   | NI                    | All construction activities would occur in previously disturbed areas; therefore, the proposed action would not affect vegetation.   |
| BLM Sensitive Plants                                       | NP                    | No BLM Sensitive Plants resources are known to occur in the project area.  |
| Wildlife (including sensitive species and migratory birds) | PI                    | Disturbance to wildlife could occur during well drilling activities. The impacts would be short-term and negligible in magnitude, as construction activities would displace wildlife within the immediate area.  |
| Soils  | NI                    | Surface disturbance has already taken place at the site and no new disturbance is anticipated. Travel would occur on existing roads.   |
| Recreation   | NI                    | The Goat Camp Well site is two miles from the Black Hills Back County Byway and three miles from the Gila River, but there is no feature at the proposed site to attract recreation activity. Recreation is dispersed and sporadic, primarily in the form of hunting; it is unlikely that recreationists would be in the area during drilling operations. The operation of the solar powered pump at the well would make no noise, or in any other way detract from recreational activities. |

| Resource                   | Determination* | Affected Environment (Rationale for Determination)   |
|----------------------------|----------------|--|
| Visual Resources           | NI             | <p>The location of the proposed well is in a Class III Visual Resource Management Area. The objective of this class is to partially retain the existing landscape character. The level of change to the characteristic landscape should be moderate. Management activities may attract attention, but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominate natural features of the characteristic landscape.</p> <p>The Goat Camp Well site is below a ridge line and is only visible from a very small view shed. A large water storage tank currently exists at the site; the addition of a well head and ground mounted solar panels (less than 200 square feet) would not attract attention, change the character of the landscape or dominate the view.</p> |
| Socioeconomic Values       | NI             | The proposed action would have no effect on the economy or social aspect of the region.  |
| Wilderness Characteristics | NP             | The proposed project area is not located within an area containing the 3 wilderness characteristics of naturalness, solitude, or outstanding opportunities for primitive and unconfined recreation.  |

## 3.2 Resources Brought Forward for Analysis

### 3.2.1 Wildlife, Including Migratory Birds and Sensitive Species

The vegetative community is upland desert scrub, dominated by creosote with some grass and small trees along the drainages. This vegetation provides for a very common and widely dispersed habitat type. Wildlife populations at the project area are typical of the Upland Desert Scrub vegetation community. Mammals that use the area include jackrabbits (*Lepus* sp.), coyote (*Canus latrans*), mule deer (*Odocoileus hemionus*), javelina (*Pecari tajacu*), and various small and non-game species. While the project area has relatively low biotic diversity, it does provide habitat for some small and nongame species of mammals, birds and reptiles (as described above); larger species use the drainages and ridge lines to transit between the higher elevations and the Gila River. The well site does provide a source of water for wildlife (i.e., an existing trough), but has no other unique habitat features to set it apart.

### 3.2.2 Water Quality and Quantity

The Twin C Allotment lies within the Upper Gila River watershed and drains northwest into the Gila River. Immediately downstream of the allotment, the Gila River from Bonita Creek to Yuma Wash does not meet water quality standards for *Escherichia coli* (*E. coli*) and suspended sediment concentration (SSC). The 2010 draft list of impaired waters has added lead as an additional parameter for not meeting water quality standards within that reach of the Gila River. There are no public drinking water systems within the allotment and the purpose(s) of the proposed well are stock watering and wildlife.

The Twin C Allotment lies within the Gila Valley sub basin of the Safford ground water basin and encompasses approximately 1,642 square miles and is bounded by mountains to the northeast (Gila), east (Peloncillo), and southwest (Pinaleno and Santa Teresa). The basin is divided into two units or layers known as the younger and older alluvial fill. Ground water occurs in both units and is generally thought to function as a single aquifer system based upon the limited amount of available information, e.g., water-level data, driller's logs and associated construction date, etc. Ground water flows from the basin boundaries toward the axis of the valley and then northwest paralleling the Gila River.

The Gila River, which enters the valley from the east and exits to the northwest, is the primary drainage and source of recharge for the basin. Mountain-front recharge particularly along the Pinaleno Mountains can also provide a considerable amount of ground water to the sub basin as can seepage from irrigation canals and underflow from the adjacent San Simon sub basin. Annual precipitation is approximately 9 inches per year with most occurring over the months of July, August, and September. Annual precipitation is not a substantial source of recharge.

## **4 ENVIRONMENTAL CONSEQUENCES**

This section includes a discussion of the environmental consequences (including a description of direct and indirect impacts, and cumulative effects, if any). Impacts are defined as modifications to the existing condition of the environment and/or probable future condition that would be brought about by implementation of one of the alternatives.

Impacts can be direct or indirect; direct impacts are those effects that are caused by the action or alternative and occur at the same time and place, while indirect effects are those effects that are caused by or would result from an alternative and are later in time but that are still reasonably certain to occur. Cumulative effects are generally assessed using the environmental impacts of past, present, or reasonably foreseeable future actions within the project areas.

The impact analyses in the following sections were based on knowledge of the resources and the site, review of existing literature information provided by experts and other agencies, and professional judgment.

### **4.1 Environmental Consequences of Proposed Action**

#### **4.1.1 Wildlife, Including Migratory Birds and Sensitive Species**

The effect on habitat would be minimal and short term. The only ground disturbance would be at the small temporary drill pad (less than 0.25 acres), which has been previously disturbed. In addition, since the habitat is very common and widespread, the impact to wildlife and their habitat would be negligible. The drill pad would recover in the short term (less than 10 years).

There would be temporary direct impacts to wildlife from the noise and human activity associated with the drilling action. Wildlife would be displaced from and avoid the project site for up to four weeks. Wildlife dependent on free water would not have access to the water source at the project site during drilling operations. This impact is lessened due to the fact that there are other sources of water within a mile of the well site and all drilling activities would be limited to daylight hours.

Migratory birds of numerous species are common throughout the area. There are no habitat features at the site that would concentrate nesting or roosting. The proposed action would not directly impact individuals, habitat or nests. A few individual birds in close vicinity to the project site would be displaced and others would avoid the area during drilling activities. This impact is temporary, since it is expected to occur for a maximum of four weeks. Birds, as noted for wildlife in general, would not have access to water at the site during drilling operations. This

impact is lessened since other there are other sources of water within a mile of the site and operations would only occur during daylight hours.

Three BLM sensitive species are known to occur in the general vicinity of the proposed project, peregrine falcon (*Falco peregrinus*), golden eagle (*Aquila chrysaetos*), and bald eagle (*Haliaeetus leucocephalus*). All are associated with the Gila River and canyon walls three miles away. Historic golden eagle nests occur on ledges and rock faces along the ridge of the Black Hills four miles away. All three species are wide ranging and could fly over the project site during operations. There is no expectation that the proposed action would impact these three species.

#### **4.1.2 Water Quality and Quantity**

There is no expectation that the construction and operation of the proposed well would alter either surface or subsurface water quality.

The BLM has assessed the potential impact of the Goat Camp well on underground hydrology and connectivity to the Gila River and made the following determinations:

- The planned maximum pumping rate of the well (20 gallons per minute) won't create a cone of depression that would extend out three miles to intercept flow in the river.
- Due to geological conditions, it is likely that the well would be completed above the level of the river in the volcanic rocks, in which case there would not be a hydraulic connection to the river.
- The intermittent pumping schedule would allow the aquifer to recover, limiting the growth of the cone of depression in the aquifer, which means the cone of depression will not extend out to the river.
- Short pumping durations and low pumping rates do not produce a far reaching cone of depression.
- Even if the well is completed at or near the level of the river, the pumping rate is not sufficient to impact the river, because the cone of depression will not extend to the river.

## **4.2 Environmental Consequences of the No Action Alternative**

### **4.2.1 Wildlife, Including Migratory Birds and Sensitive Species**

Under the no action alternative drilling at the well site will not be reinitiated and the drill site will be abandoned. There would be no impacts to wildlife or their habitat. Since no drilling would occur, there would be no noise and human activity associated with the drilling action, so no temporary direct impacts to wildlife. Wildlife would not be displaced from and avoid the project site, and wildlife dependent on free water would continue to have uninterrupted access to the water source at the project site.

## **4.2.2 Water Quality and Quantity**

As no water would be pumped from groundwater sources under the no action alternative, there would be no impacts to either surface or subsurface water quality at the site.

Continued operation of the River Well would continue the reduction of water availability within the Gila River, with greater dependence of the system on this well. Continued operation of the well would likewise continue disturbance to water quality with increased dependence on the River Well.

## **4.3 Cumulative Impacts**

“Cumulative impacts” are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions. This EA attempts to qualify and quantify the impacts to the environment that result from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions. These impacts can result from individually minor but collectively important actions taking place over a period of time.

### **4.3.1 Cumulative Impacts of Proposed Action**

It is foreseeable that the water production from the Goat Camp Well would lessen the water systems’ dependence on the River Well. In this case, the water not pumped from the River Well would remain in the Gila River aquifer.

Wildlife may be affected by other activities occurring within and adjacent to the project area including various dispersed recreational activities. Population growth in nearby communities (such as Safford) could increase the level of off-highway vehicle use in the vicinity of the project area, resulting in increased disturbance to wildlife, particularly ground dwelling species with low mobility and disturbance-related displacement of migratory birds and other avian species. However, due to the small size of the project area, and the relative remoteness of the site, impacts from these activities would be moderated by the open and remote nature of the region. It is therefore anticipated that the proposed action would not result in significant cumulative impacts to wildlife resources when added to other past, present, and reasonably foreseeable activities in the project area.

### **4.3.2 Cumulative Impacts of the No Action Alternative**

It is foreseeable that continued dependence and increased use of the River Well would reduce the availability of water within the Gila River aquifer.

Wildlife may be affected by other activities occurring within and adjacent to the project area including various dispersed recreational activities. Off-highway vehicle use in the vicinity of the project area could increase with population growth in nearby communities, resulting in increased disturbance to wildlife, particularly ground dwelling species with low mobility and disturbance-related displacement of migratory birds and other avian species. However, impacts from these activities would be moderated by the open and remote nature of the region. It is therefore

anticipated that the no action alternative would not result in significant cumulative impacts to wildlife resources when added to other past, present, and reasonably foreseeable activities in the project area.

## **5 CONSULTATION AND COORDINATION**

### **5.1 Introduction**

The issue identification section of Chapter 1, as well as Table 1, identifies those issues analyzed in detail in Chapter 4. Table 1 also lists all resources/elements of the human environment that have been considered by BLM resource specialists to determine whether they would be potentially affected by the proposed action; this table provides the rationale for resources/elements that were considered but not analyzed further. The issues were identified through the public and agency involvement process described in section 5.2 below.

### **5.2 Summary of Public Participation**

This section summarizes the process used to involve individuals, organizations, and government agencies in the preparation of this EA.

This scoping process was conducted through processes prior to the 2011 Final Decision, as well as throughout the successive EA processes through which comments and protests have been received and addressed (see Section 1.1 Background). A previous EA, FONSI and proposed decision were provided to interested parties on August 24<sup>th</sup>, 2012. One protest letter was received which raised issues related to the quantity and quality of water in the Gila River, as well as associated wildlife. These are identified in the Identification of Issues section and analyzed in detail within the Affected Environment and Environmental Consequences sections of the EA.

### **5.3 Persons/Agencies Consulted**

The following persons/agencies were consulted during preparation of this EA:

Permittee: Carolyn and Manuel (Rocky) Manuz  
Well Driller: Ray Cueto (Cueto Drilling)  
Arizona Department of Water Resources, Deputy Counsel, David S. Johnson  
Western Watersheds Project

### **5.4 List of Preparers and Contributors**

The following tables list persons who contributed to preparation of this EA.

**Table 2. List of BLM preparers/reviewers.**

| <b>Name</b>             | <b>Title</b>                                   | <b>Responsible for the Following Program</b>   |
|-------------------------|--|--|
| Dan McGrew              | Archaeologist                                  | Cultural Resources Native American Religious Concerns,   |
| Tim Goodman             | Wildlife Biologist                             | Environmental Justice, Federally Listed Species, Socioeconomic Values, BLM Sensitive Plants,                               |
| Deb Morris, Tom Schnell | Outdoor Recreation Planner                     | Areas of Critical Environmental Concern, Wild and Scenic Rivers, Wilderness, Visual Resources, Wilderness Characteristics, |
| Heidi Blasius           | Fisheries Biologist                            | T&E, Sensitive Species Fish  |
| Sharisse Fisher         | GIS Specialist                                 | NEPA Maps  |
| Roberta Lopez           | Realty Specialist                              | ROWs   |
| Bill Wells              | Hydrologist                                    | Water Quality and Quantity, Areas of Critical Environmental Concern, Floodplains, Air Quality, Wetlands/Riparian Zones,    |
| R. J. Estes             | Range Management Specialist                    | Wastes (hazardous or solid)  |
| Paul L. Summers         | Ground Water Specialist and Senior Hydrologist | Hydrology  |
| Joe David               | Assistant Field Manager                        | NEPA   |
| Dave Arthun             | Range Management Specialist                    | EA Preparer, Farmlands (Prime or Unique), Invasive, Non-native Species, Invasive, Non-native Species, Livestock Grazing,   |