ENVIRONMENTAL ASSESSMENT FOR THE REFURBISHMENT OF TANQUE WILDLIFE WATER CATCHMENTS

EA Number: AZ-410-2005-0027
Lease/Serial/Case File No.: N/A
Applicant: Bureau of Land Management (BLM)
BLM Office: Safford Field Office

Location of Proposed Action:

214-Tanque #1:
T 9S, R 27E, Sec. 30; GPS N 32° 37.185'; W 109° 37.147'
UTM: 12S 0629326 3609871

217-Tanque #4:
T 9S, R 27E, Sec. 19; GPS N 32° 38.105'; W 109° 37.147'
UTM: 12S 0628721 3611640

218-Tanque #5:
T 9S, R 26E, Sec. 26 NE NE SE SE; GPS N 32° 37.185'; W 109° 39.177'
UTM: 12S 0626846 3609511

219-Tanque #6:
T 10S, R 26E, Sec. 1 NW SE SE SW; GPS N 32° 35.345'; W 109° 38.162'
UTM: 12S 0627567 3606168

220-Tanque #7:
T 9S, R 26E, Sec. 26 SE NW NW NW; GPS N 32° 37.185'; W 109° 39.177'
UTM: 12S 0625395 3610574

890-Timber Draw:
T 11S, R 28E, Sec 19 SE SE.
UTM: 12S 0639304 3592151

908- Little Coyote:
T 9S, R 27E, Sec. 32 NW SE

CONFORMANCE WITH APPLICABLE LAND USE PLANS

The Proposed Action is subject to the following land use plan:

Name of Plan: Safford Resource Management Plan (RMP).

Date Approved: Record of Decision Part I, September 1992; Record of Decision Part II, July 1994.

The proposed Action is in conformance with the applicable land use plan:

CHECK ONE
(x) YES ( ) NO

Decisions specific to wildlife habitat and the Proposed Action that are found in the RMP:

Wildlife Habitat Management Objective #1: Maintain and enhance priority species and their habitats. RMP pg. 33

Wildlife Habitat Management Objective #5: Manage priority wildlife species habitat (vegetation communities) or special features of that habitat (water, riparian vegetation, cliffs, etc.) to maintain or enhance population levels. RMP pg. 33
Wildlife Habitat Management Action #6: Continue to maintain and improve wildlife habitat, emphasizing priority habitat. RMP pg. 34

Wildlife Habitat Management Action #10: Develop Sikes Act Habitat Management Plans with Arizona Game & Fish Department for the following areas: Geronimo, Gila Box, Aravaipa Muleshoe, Peloncillo, Dos Cabezas, San Simon, Cochise and San Pedro. Priorities for revisions will be determined in coordination with Arizona Game & Fish Department.

PURPOSE/NEED FOR PROPOSED ACTION

The proposed action is to redevelop seven existing wildlife water developments in the San Simon Valley near Safford, AZ. The primary objective is to increase storage during dry periods and provide a more reliable source of water for wildlife. Game species (e.g. deer, quail) and other native species (e.g. rodents, doves, toads, and invertebrates) will benefit from the redevelopment.

The Arizona Game & Fish Department (AGFD) has identified the catchments as requiring repairs, as well as requiring water supplementations by truck during the summer months.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Proposed Action:

This site is located on land managed by the BLM-Safford Field Office, in Graham County. Vegetation at these sites is typical of semi-desert grasslands (Brown and Lowe, 1980).

The proposal includes redevelopment of seven dilapidated wildlife water developments built in the late 1950's or early 1960's. An evaluation of these catchments was

conducted to compare its original components and historical performance to current AGFD construction standards. This evaluation determined the catchments continue to be used by a variety of big game and other wildlife, most frequently by mule deer. These catchments could be made significantly more reliable and less visible by replacing the aging components with more modern materials. Specifically, the appearance of the large, fiberglass apron and metal tank roof could be greatly reduced by replacing their functions with a small collection point to gather run-off water, and a set of new water storage tanks buried out of sight and holding a greater volume of water than the original tank.

A standard, four-strand wire fence is in place to exclude livestock from the catchments. The proposed action includes replacement of the wire fence with a standard, three-rail metal pipe fence which would increase overall accessibility and safety for wildlife, while essentially eliminating the need for routine fence maintenance.

If authorized, redevelopment activities last approximately one week, and would most likely occur between March and May 2005. Arizona Game & Fish Department personnel, volunteers from Quail Unlimited and other groups are anticipated to perform all construction activities.

At each of the seven sites, the following new components would be installed:

1) One 3' deep fiberglass walk-in trough (~100 gallons),
2) One or two 3' tall by 20' diameter fiberglass ring tank (~7,000 gallons),
3) A 24' wide by 48' long metal (steel studs and R panel) precipitation collection apron,
4) 600' linear feet of steel pipe-rail exclosure fence; and
5) PVC plumbing from the tank to the trough.
6) Block curb or collection point, approximately 12-18" tall and 3-6' wide.

All components and pipelines will be buried, except for the apron which will overlap the top of the partially buried tank. A 4' deep by 22'x22' hole will be excavated by backhoe for each new tank, and a 4' deep by 4'x8' hole for the walk-in water trough. The trough has an integrated escape ramp that is easily accessible to terrestrial (eg. deer, rodents) and arboreal (eg. bats, birds) wildlife species.

Approximately 50 postholes, 8" diameter by 2' deep will be dug for the pipe-rail fence at each site. Overall less than 1,000 square feet of new surface soil disturbance will occur during construction. Burying the tank, trough, and pipeline will keep components as inconspicuous as possible in the landscape and protect the integrity of the materials. If soil conditions impede digging to the desired depth other camouflage techniques will be used to hide the components. Commonly used camouflage techniques include: painting exposed components with earth-tone colors or acid stains, breaking up linear shapes with sculptured concrete, or covering with soil, rock, or deadfall. Metal aprons are painted a neutral tan color by the manufacturer.

The existing concrete 1,000 gallon tank, integrated walk-in trough, and apron will be left in place if salvageable. Excess (overflow) water from the new system will be directed into the old concrete tank for additional storage. If the old systems are not salvageable they will be removed.

The minimum number of tools necessary to complete the project will be transported to the site via trucks and trailers. Mechanized/motorized equipment we anticipate using during construction includes: tractors, generator, welder, compressor, concrete mixer, chop saw, and drill. Construction activities will occur between sunrise and sunset. This project will take 8-16 days to complete, unless delayed by inclement weather.

No significant amount of annual maintenance is anticipated once the water development is completed, other than occasional cleaning of the trough and apron gutter. Exposed surfaces of the trough may be periodically repainted, recoated, or require minor repairs.

No Action Alternative:

The storage capacities of the seven water catchments would not be increased. Walk-in troughs, fiberglass tanks, metal aprons and PVC piping would not be installed. Post holes would not be dug to replace the existing wire fence with steel pipe-rail fence.

Scope of the Assessment:

The Safford Field Office NEPA team reviewed the project description and provided comments during a two-week review period. The Safford Field Office NEPA team is an interdisciplinary team of resource specialists that review all proposed actions prior to decision within the field office, initiated internally or externally.

Issues Identified: During the review period comments were raised regarding wildlife, soil erosion, and potential vegetation disturbance. These issues will be carried forward for analysis. Standard stipulations were prepared for cultural resources and non-native/invasive species.

1. Wildlife – mortality and temporary displacement of resident wildlife.
2. Soil – erosion and compaction.
3. Vegetation – temporary disturbance from project construction and/or long-term impacts.

Critical Elements: The table below lists the critical elements of the human environment that must be addressed in environmental assessments and environmental impact statements. The elements were reviewed during internal scoping and none were found to be potentially affected except for visual resource management.

CRITICAL ELEMENTS (required by federal law)	AFFECTED		CRITICAL ELEMENTS (required by federal law)	AFFECTED	
	YES	NO		YES	NO
ACECS		x	Solid Waste		x
Air Quality		x	T&E Animal		x
Cultural Res		x	T&E Plant		x
Environmental Justice Socioeconomics		x	VRM		x
Flood Plains		x	Water Quality		x
Hazardous Materials		x	Wetland/Riparian		x
Invasive/Noxious Plants		x	Wilderness		x
Native American Rel.			Wild & Scenic River		x
Prime/Unique Farmland		x	Water Rights		x

Proposed Action: Refurbishment of Tanque water catchments.

1. Wildlife

Temporary displacement of reptiles, amphibians and small mammals will occur during construction and likely mortality. Disturbance to wildlife habitat would be temporary. Within a few days/weeks after construction is completed resident wildlife would return to the area. Increased human activity and noise associated with redevelopment activities could have a short-term negative impact on wildlife in the area. This minor and temporary stress would be auditory and visual. Some wildlife may temporarily leave the project area during construction, possibly for the duration of the project. The long term effects associated with the maintenance of a perennial water source will be positive.

2. Soil

Moving and placement during construction. Impacts to soil and vegetation will occur within the exclosure. These impacts will consist of compaction of soils from heavy equipment in the areas of treatment and along the two-track road providing access to the sites. Disturbed soil surfaces will be graded to match surrounding land contours.

3. Vegetation

Current vegetation includes four-wing saltbush, annual grasses and forbs, mesquite, creosote, and cholla. As the project is constructed, vegetation will be trampled and possibly die. Disturbance to native vegetation will be kept to a minimum. No plant species protected by State statue will be removed or intentionally damaged. The project site will be allowed to re-vegetate naturally following construction activities.

No Action Alternative: Tanque water catchments will not be refurbished.

1. Wildlife - Resident wildlife would continue to use the site. Storage capacity at the catchments would remain the same and in drought conditions, the catchments could dry up, eliminating a water source for wildlife.
2. Soils – Soils will not be compacted or removed and replaced due to construction activities.
3. Vegetation – Existing vegetation will not be trampled or dug out for the construction of the project.

Cumulative Impacts

Proposed Action: Refurbishment of Tanque water catchments.

BLM has rebuilt six CCC detention structures in the San Simon Valley in the past three years. Approximately 20 acres of soil and vegetation disturbance occurred during construction and maintenance activities. BLM has completed maintenance on six major breaches on Ryan Dike to restore the functionality of the erosion control structure. BLM has no other erosion control structures planned for construction in the same area in the same time frame within the San Simon Valley and the BLM is not aware of any planned on other lands. BLM also has no other plans for water catchment refurbishment projects. However, BLM does plan to maintain approximately two dozen other structures over the next five years in the Arizona East Zone. The BLM anticipates temporary displacement of wildlife, improved soil conditions, and increased vegetation production in these areas in 5-20 years.

No Action Alternative: Tanque water catchments will not be refurbished.

Under this alternative, if the BLM does not refurbish the Tanque water catchments, the Arizona Game & Fish Department (AGFD) will need to continue to haul water to the catchments during times of intense heat and low precipitation. There is a negative economic impact to AGFD for the cost of hauling water. The catchments and exclosure fences were built to provide a perennial water source for wildlife species. Over time (5-10 years), the condition of the catchments could deteriorate from wind, vandalism and recreation to the point that they will no longer efficiently hold any water. The condition of the fence could also deteriorate and allow livestock to trample it and cause further damage to the catchments.

Mitigating Measures and Stipulations

The following stipulations are set for protection of cultural resources:

Any archaeological or historical artifacts or remains, or vertebrate fossils discovered during construction, maintenance and use shall be left intact and undisturbed; all work in the area shall stop immediately and the Program Manager for Planning and Monitoring shall be notified immediately. Commencement of operations shall be allowed upon clearance by Program Manager.

An additional cultural and paleontological resource survey may be required in the event that the project location is changed or additional surface disturbing operations are added to the project after the initial survey. Any such survey would have to be completed prior to commencement of operations.

If in connection with operations under this authorization, any human remains, funerary objects, sacred objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (P.L. 101-601; Stat. 3048; U.S.C. 3001) are discovered, the permittee shall stop operations in the immediate area of the discovery, protect the remains and objects, and immediately notify the Program Manager of the discovery. The permittee shall continue to protect the immediate area of the discovery until notified by the Program Manager that operations may resume.

The following stipulations are set to avoid the spread or introduction of non-native/invasive species:

1. All equipment and vehicles would be power washed before going to the site to lessen the chance of introducing noxious weeds.
2. All work must be performed with the intention to incur only the minimum amount of disturbance necessary to achieve the objectives in order to decrease the establishment of noxious weeds.
3. Rehabilitation work including seeding, mulching and vertical mulching, matting, water control devices, and other measures would have biologist input to reduce introduction of non-native species.
4. Hay brought to the project site must be certified weed-free.

Monitoring
BLM and AGFD will continue on a regular basis to check water levels at the Tanque water catchments, especially during times of intense heat and low precipitation.

Persons/Agencies Consulted:
Bureau of Land Management, Safford ID Team

List of Preparers:
Heidi Kuska, Natural Resource Specialist

Date:
March 31, 2005