ARIZONA GAME AND FISH DEPARTMENT
HABITAT PARTNERSHIP COMMITTEE
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL

Game Branch / HPC Project Number:	14-217

PROJECT INFORMATION

Project Title: **Kane Ridge Trick Tank**

Region and Game Management Unit: Region II, GMU 12AE

Local Habitat Partnership Committee (LHPC):
- Arizona Strip Habitat Working Group

Was the project presented to the LHPC?
YES[X] **NO**[]

Has this project been submitted in previous years? **YES**[] **NO**[X]
If Yes, was it funded? **YES**[] **NO**[X]→ **Funded HPC Project #(s)**:

Project Type: Construction of New Water Catchment

Brief Project Summary: As part of a new master water development plan for GMU 12AE, the Kane Ridge Trick Tank is one of 6 new water developments to be proposed. A water catchment will be constructed for wintering mule deer in order to improve the distribution of wintering deer in an effort to increase deer population levels for the 12AE wintering deer herd. The construction of this facility will initiate the Eastside Water Development Plan that includes 6 new water sources and the redevelopment of 4 existing water sources.

Big Game Wildlife Species to Benefit: Mule Deer 100%

Implementation Schedule (Month/Day/Year):

Project Start Date: 2015

Project End Date: 2015

Environmental Compliance:
NEPA Completed: Yes[] No[X] N/A[]
Projected Completion Date: December 2014

State Historic Preservation Office - Archaeological Clearance:
Yes[] No[X] N/A[]
Projected Completion Date: December 2014

Arizona Game and Fish Department EA Checklist: N/A[]
To be Completed by: Joe Curry
Projected Completion Date:

PROJECT FUNDING

Special Big Game License Tag Funds Requested:	**$** 29950.44
Cost Share or Matching Funds:	**$** 24200.00
Total Project Costs:	**$ 54150.44**

PARTICIPANT INFORMATION

Applicant (please print): Todd M. Buck	**Address**: 3500 S. Lake Mary Rd. Flagstaff, AZ 86001	**E-mail**: TBuck@azgfd.gov
Telephone: 928-856-0740		**Date**: 9/1/14

AGFD Contact and Phone No. (If applicant is not AGFD personnel):

Project has been coordinated with:
USFS, Arizona Strip Habitat Working Group, AZGFD Development Branch

NEED STATEMENT – PROBLEM ANALYSIS:

In 2014 large tracts of the GMU 12AW winter range are without perennial water sources as a result of prolonged drought, reduced flow from the South Canyon Spring, and the unreliable nature of existing dirt tanks (Fig. 1).

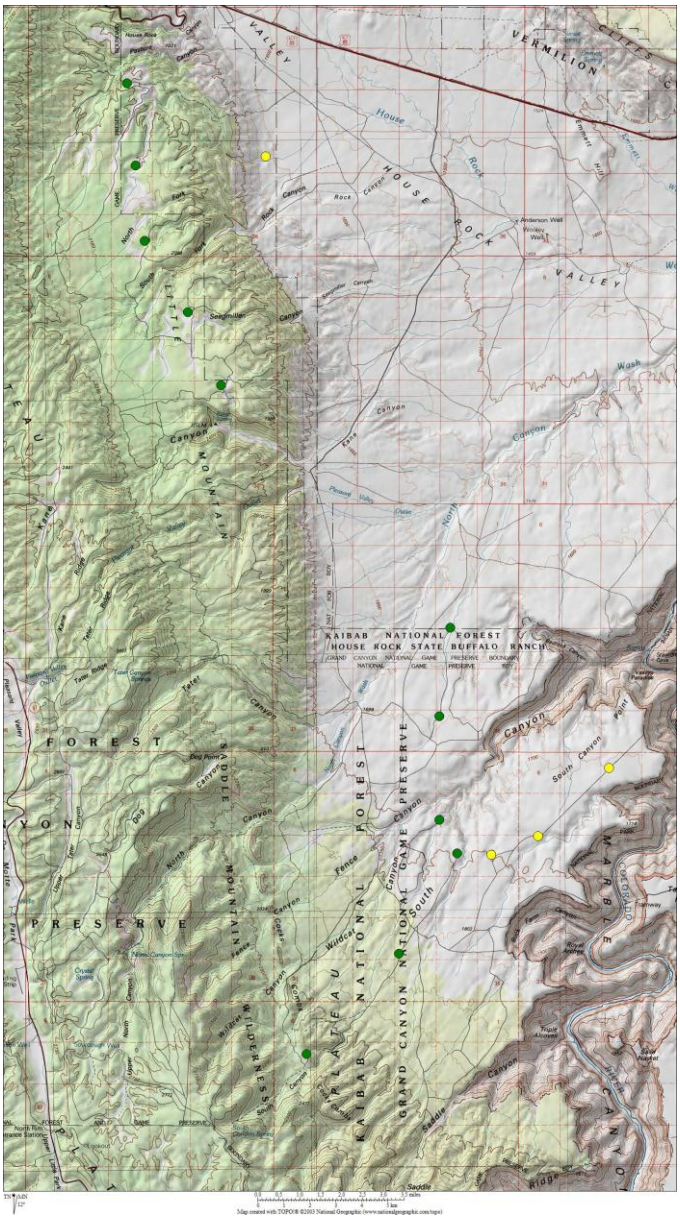


Figure 1. 2014 12AE winter-range water distribution. Green indicates functioning water development, yellow indicates development in need of repair or reconstruction.

As of 2014 there were only 15 winter range water developments in GMU 12AE of these 11 were currently functioning in a reliable manner. Only 12 of the 15 waters are at elevations which make them useful to the wintering deer herd (Fig. 1). Essentially all dirt tanks within the 12AE winter range have been dry during the winter months for the past 10 years. As a result of this substantial decrease in reliable water sources the deer distribution had become very concentrated around the few water developments which are providing water. In an

effort to mitigate these concerns a comprehensive water development plan for GMU 12AE was developed and 6 locations for new water developments were identified. Also, 4 existing waters sources were identified to expand capacity or increase reliability (Fig. 2).

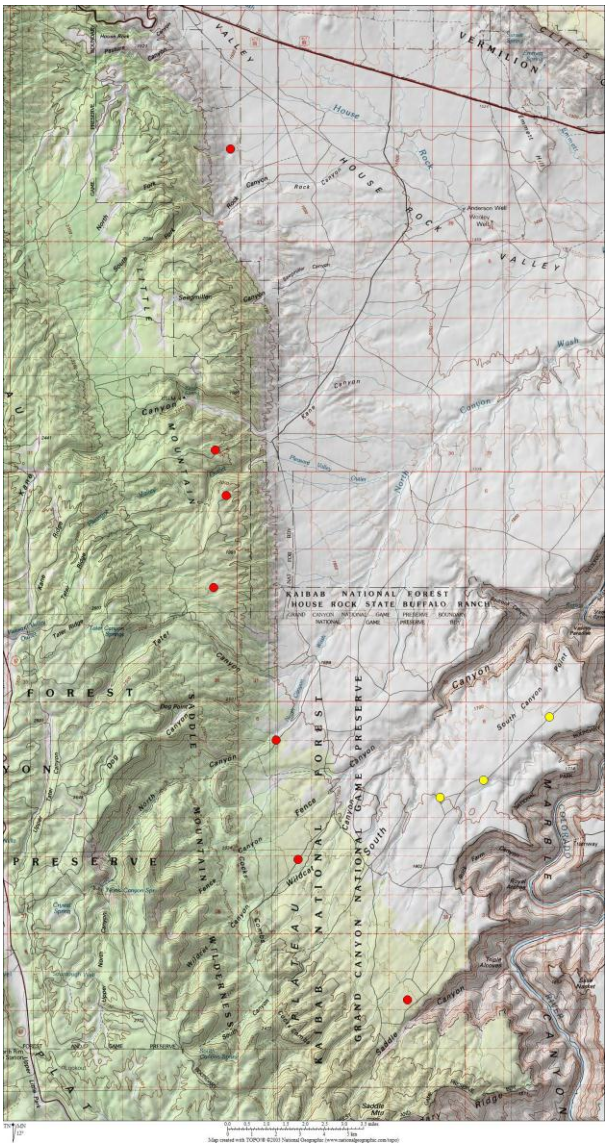
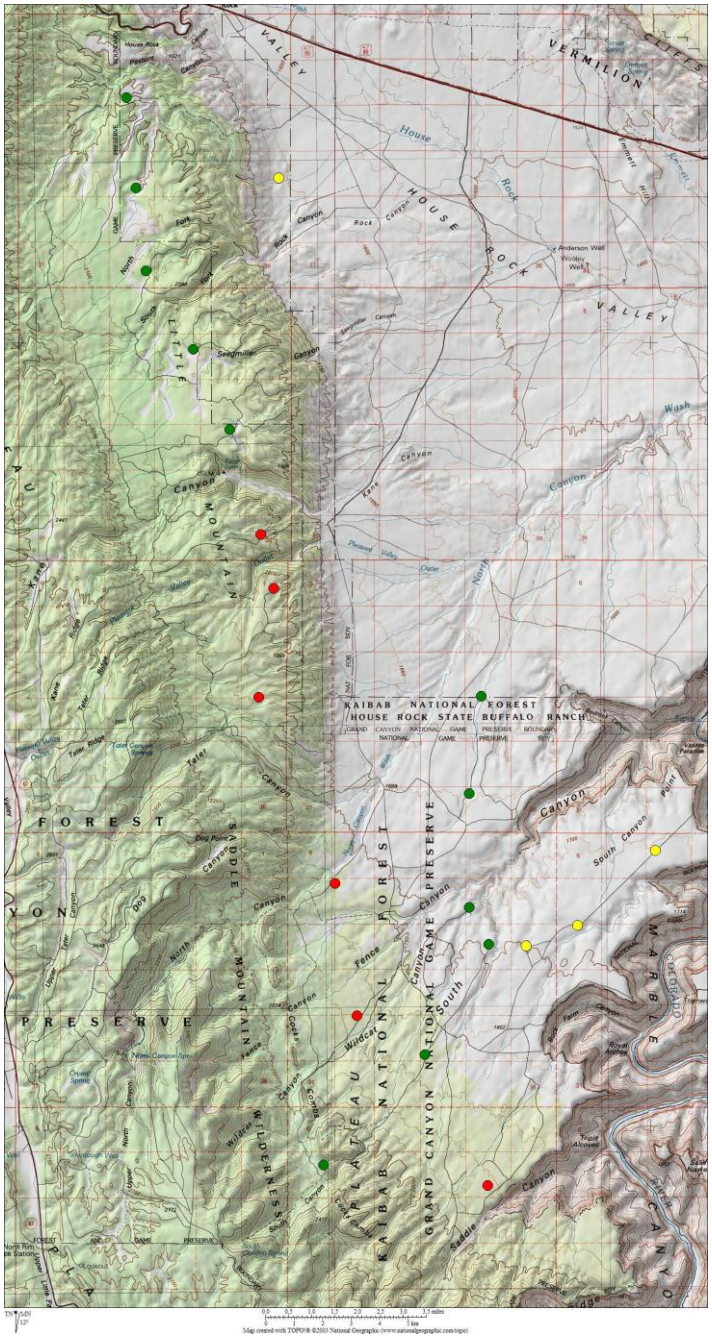


Figure 2. New 12AE water developments. Red denotes new water development. Yellow indicates a redevelopment.

One of the redevelopments is a combination antelope/deer water, 3 of the redevelopments are combination antelope/bison/deer waters, 3 of the new developments are bison/deer waters, and the remaining 3 new catchments are solely for deer. The end result of this effort will be a more uniform water distribution on the winter range of GMU 12AE (Fig. 3).


KAIBAB NATIONAL FOREST
HOUSE ROCK STATE BUFFALO RANCH
GRAND CANYON NATIONAL GAME PRESERVE
KAIBAB NATIONAL FOREST
PLATEAU
WILDERNESS
MOUNTAIN
SADDLE
MOUNTAIN
FOREST
PRESERVE
HOUSE ROCK VALLEY
VERMILION CLIFFS
MARBLE CANYON
Anderson Well
Wildcat
Fence
Canyon
Wash
Saddle
Sawmill
Dog Point
South Canyon
North Canyon
Tater Canyon
Tater Ridge
Kane Ridge
Kane Canyon
Cooks Canyon
Cooks Canyon Spring
Crystal Spring
Pleasant Valley
Outlet
Estes Canyon
Rock Canyon
House Rock
Eminent Hill
Colorado
Point
Fault Alcoves
Wildcat Airstrip
Saddle Airstrip
Bunkhouse
Lookout
Ranch
Pasture
Sawmill
Fork
North
South
Upper
Lower
Tater
Dog
Kane
Estes
Pleasant
Valley
Outlet
Wilderness
Preserve
Game
Forest
Plateau
Kaibab
Grand Canyon National Game Preserve
Grand Canyon National Game Preserve Boundary
Grand Canyon National Game Preserve
Kaibab National Forest
Kaibab Plateau Wilderness
Kane Ridge Trick Tank
Tater Canyon Spring
Dog Point
Wildcat Canyon Spring

PROJECT OBJECTIVES:

The objective of this project is to construct a new Wildlife Water Development to provide wintering Mule Deer with a perennial water source in central 12AE. This water development will also mitigate a substantial loss of other water sources in 12AE and to allow for a more even distribution of wintering deer in an effort to increase population levels. This development is the first in a series of 6 new developments and 4 redevelopments being constructed to address the overall water distribution concerns on the winter range of GMU 12AE.

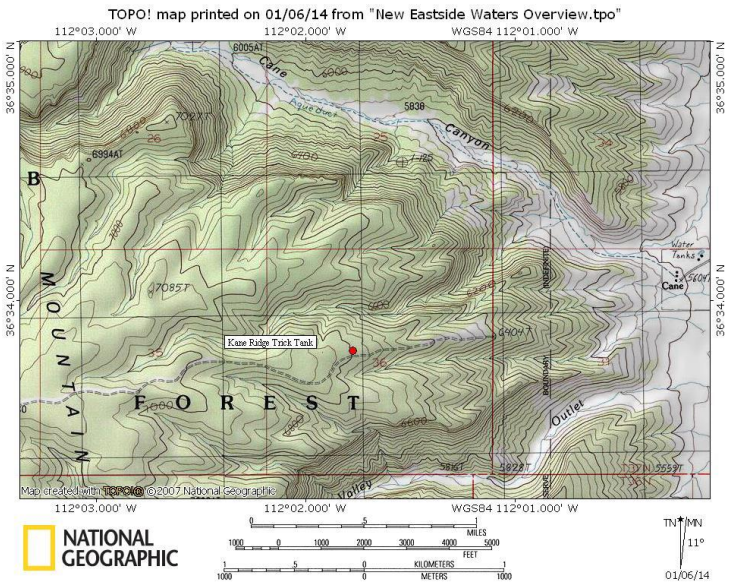
PROJECT DESCRIPTION AND STRATEGIES:

Utilize SBG Funds and an Arizona Game and Fish Department contractor to construct a new development consisting of a 24'X96' metal apron which will collect water into four 2500 gallon storage tanks which, in turn, supplies a 5' gravity fed walk in drinker box.

PROJECT LOCATION:

N36º33.792' W112º01.788' Elev. 6816

(NAD 83)



LAND OWNERSHIP AT THE PROJECT SITE(S)*:*

(if the project area is private property, please state specifically and provide the landowner's name)

- Entirely United States Forest Service ownership

IF PRIVATE PROPERTY, IS THERE A COOPERATIVE BIG GAME STEWARDSHIP or LANDOWNER AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?
YES[] NO[] N/A[]

HABITAT DESCRIPTION:

The habitat type is typically referred to as mule deer winter range. The Kane Ridge Trick Tank is at an elevation of approximately 6816' and the primary vegetation consists of various grasses and forbes, sagebrush (*Artemesia tridentata)*, and cliffrose (*Cowania mexicana*), pinion trees (*Pinus sp*.), and Utah juniper trees (*Juniperus utahensis).*

ITEMIZED USE OF FUNDS:

Special Big Game License Tag Funds

4 – 2500 gallon Polyethylene water storage Tanks =	$13,280.44 ($ 3,320.11 each)
1 – polyethylene Standard Walk-in Trough =	$ 3,200.00
1 – 24' Polyethylene Standard Gutter =	$ 750.00
1 – 24' X 96' Steel Frame and R-panel Apron =	$ 7,580.00
1 – 150' X 150' Livestock Exclosure Piperail Fence =	$ 3,390.00
1 – 3" Sch. 80 PVC Plumbing Package =	$ 750.00
1 – Miscellaneous Materials =	$ 1,000.00
TOTAL =	**$29950.44**

Cost Share or Matching Funds (*for volunteer labor rates please refer to the worksheet below*)

Labor (2 work periods, 5 man crew)	$17,600
Subsistence and miscellaneous	$ 2,400
Equipment Depreciation	$ 4,200
Total Matching Funds	$24,200

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

The USFS North Kaibab Ranger District is in the process of completing all NEPA documentation for the facility and NEPA will be finished by December 2014.

Arizona Game and Fish Department Development Branch.

Arizona Strip Habitat Working Group.

WOULD IMPLEMENTATION OF THIS PROJECT ASSIST IN PROVIDING, MAINTAINING, OR FACILITATING RECREATIONAL ACCESS?

YES[] NO[X] N/A[]

PROJECT MONITORING PLAN:

The district wildlife manager or USFS personnel will check the development annually. In addition, animal use at the site will be documented by the district wildlife manager during survey efforts and during all incidental visits to the site.

PROJECT MAINTENANCE:

The district wildlife manager or USFS personnel will perform minor maintenance.
The Arizona Game and Fish Department Development Crew (SSDV) will perform major maintenance.

PROJECT COMPLETION REPORT TO BE FILED BY:

Joseph Currie, AZGFD SSDV

WATER DEVELOPMENT PROJECTS (*please use the worksheet below***):**

TREE CLEARING/REMOVAL PROJECTS (*please use the worksheet below***):**

ARIZONA GAME AND FISH DEPARTMENT
WATER DEVELOPMENT WORKSHEET

PROJECT TITLE: Kane Ridge Trick Tank_ _____

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

2) Please list the Development Branch personnel and date coordinated with for this project.
Joe Curry and Ed Jahrke multiple dates over last several years

3) What is the estimated annual inches of precipitation for the area? (mark one)
[]2-4 []4-6 []6-8 [X]8-10 []10-12 []12-14 []14-16 []>16

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

YES[] (please complete #5 below) NO[X] (skip #5 below**)**

5) For the accessible, perennial water source nearest this project:
Name of water source:
Type of water source (catchment, spring, dirt tank):
Ownership of water source:
Distance in miles from project:

6) Is the target wildlife species a result of transplant efforts? YES[] NO[X]

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

8) Please provide the following information about access to the proposed site:
Type of access (mark one): [X]2x4 vehicles []4x4 only []foot only**

**If foot access only: Distance in miles:_____ Approximate hiking time: _____

-- Does access to this site require crossing private or tribal lands? YES[] NO[X]

-- Please describe any restrictions to public access:

9) Please list below (or on a separate sheet) the material type and dimensions of each component proposed to be added, modified, or repaired.

10) Was a site visit completed? Yes[] No[X]
If Yes, please list personnel that attended and date.
To be visited with Ed Jahrke Fall 2014.