



**Quail & Upland Wildlife Federation  
Santa Clarita Valley Chapter – FC14**

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EIN 27-1674044 - IRS 501(c)(3) Non-Profit Corp. 509337006***

May 15, 2014

CDFW Wildlife Branch  
Upland Game Bird Account Grant Program  
1812 9<sup>th</sup> Street  
Sacramento, CA 95811

Chief, Wildlife Branch,

It has recently come to SCVQUWF's attention that our Habitat Committee's ongoing work with DFW and USFS in locating and rehabilitating old "lost" DFW wildlife guzzlers meets the criteria for the Upland Game Bird Account Grant Program. In particular, our guzzler rehabilitation program addresses the stress placed on quail populations due to drought and global climate change. Most climate researchers concur that our climate is warming and will California will continue to have less rainfall in coming seasons.

Working with an environmental geologist and groundwater professional, we have identified multiple locations for our initial guzzler rehabilitation program. We have selected 10 units out of the 20+ we have located so far. All 10 of these units will require some degree of maintenance ranging from patching cracks to complete replacement. Eight of the 10 sites are located along dry ridgelines and will provide "watering hole bridges" between major drainages and mapped springs, effectively permitting communication between quail coveys as they one did many years ago. Our request for grant funding includes components for monitoring the success of the program via manual bird counts and game cameras. The project also includes components for hunter education and increased hunter opportunities on public lands. All of the sites selected in this first phase of guzzler rehabilitation are located in the Angeles National Forest in northern Los Angeles County.

The opportunity to protect California's upland game bird populations in the face of global climate change will vanish completely if not acted upon swiftly and with full commitment and adequate financial resources. Therefore, we respectfully request DFW's consideration in partially funding this project with UGBADP resources. Please review our attached grant proposal. We believe that you will agree that this endeavor is a crucial step forward in offsetting the effects of climate change on our upland game resources in our area. Many years ago DFG built these guzzlers with much technical and biological consideration for where they should be strategically located. Our research shows the conservationists of the day did an excellent job and we now need to re-establish their functionality before it's too late. We urge you to select our proposal for consideration for Administrative and Technical Review Committee consideration.

If you have any questions about our proposal or our organization and resources, please do not hesitate to contact me.

Best regards,

Derek Fong  
QUWF National Board of Director  
California State Co-Chairman - Santa Clarita Valley Chapter

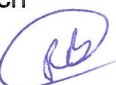

Encl. Letter of Support from DFW South Coast Regional Manager

**Quail & Upland Wildlife Federation - Santa Clarita Valley Chapter - FC14**  
***“Making a Difference for Wildlife, One Acre At A Time™”***

## Memorandum

**Date:** May 15, 2014

**To:** Eric Loft  
Chief  
Wildlife Branch

**From:** Edmund Pert   
 Regional Manager  
South Coast Region

**Subject:** Upland Account Grant Proposal

The Department of Fish and Game South Coast Region (R5) supports the Wildlife Guzzler Rehabilitation proposal submitted by the Santa Clarita Valley Quail & Upland Wildlife Federation (SCVQUWF). Projects of this nature are critical to the health and productivity of quail and wildlife populations in R5. The need for this type of guzzler rehabilitation project has become of even greater need due to current drought conditions in Southern California. This project, by repairing and improving guzzlers in R5, will support and improve habitat for numerous upland game species which will enhance public hunting opportunities. The Department will further coordinate with (SCVQUWF) through the help and advice of R5's Upland Game Program Coordinator.

If you have any questions regarding the project, please contact Rick Mayfield, Supervisor for the Lands Program within the South Coast Region at [rick.mayfield@wildlife.ca.gov](mailto:rick.mayfield@wildlife.ca.gov) or (805) 388-0153.

ec: Terri Stewart, CDFW, San Diego  
Rick Mayfield, CDFW, Santa Barbara

**Upland Account Grant Proposal**  
Proposal for Wildlife Guzzler Rehabilitation  
Prepared by SCVQUWF on May 15, 2014

**Title of Project:** Maintenance for DFW Guzzler Nos. 3,15,24,25,27,29,31,30,36 & 37  
Angeles National Forrest, Los Angeles County, CA  
DFW - Region 5 South Coast Region

**Organization:** Santa Clarita Valley Quail & Upland Wildlife Federation (SCVQUWF)  
PO Box 802738, Santa Clarita, CA 91380-2738  
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Email: [jnelson@scvquwf.com](mailto:jnelson@scvquwf.com)

**Issue Statement/ Justification for Project:**

The project is located along the major drainage divides of Bouquet Creek and Texas Canyon in the Angeles National Forest within Los Angeles County, CA. This is a semi-arid region receiving an average of 9 inches seasonal precipitation (LA County Department of Public Works Water Resources Division, 2014 <http://www.ladpw.org/wrd/precip/> ).

Southern California has experienced a severe drought over the past three years that has resulted in a recent declaration by the Governor of an emergency state-wide water shortage. Automated rain station data for Bouquet and Mint Canyon stations, respectively, indicate that the season total for the 2013-2014 Water Year is 4.02 inches and 4.45 inches, or less than half of the normal seasonal precipitation. The preceding three years were also severe drought years.

A. Starker Leopold's definitive work on quail habitat, *The California Quail*, (1977, UC Berkeley Press) scientifically promulgates the essential requirements for food, cover, and water to maintain a healthy quail population. Artificial wildlife watering devices (wildlife "guzzlers", Glading, 1943, Dept. of Fish & Game) are essential to maintaining quail reproduction in this semiarid environment, particularly during periods of extended drought.

DFW (previously DFG) recognized the need for supplemental upland wildlife guzzler construction in California to promote sustainable quail and wildlife reproduction. DFW initiated a wildlife guzzler construction program, completing many projects throughout California during the 1950's through the 1970's. By 1974, DFW had completed 34 guzzler projects in the Los Angeles District alone (Leopold, 1977, Table 15, P.193). These were primarily concrete devices that collect water on sloping 12 ft. X 12 ft. aprons that divert rain water falling directly onto the aprons into subsurface holding tanks. The tanks have sloped ramps to the ground surface allowing quail and other small animals to enter and use the water. Metal bars, and in certain cases fences having selected opening sizes, allow access to upland game animals and keep larger predators and other unwanted animals out. Fences are used primarily to protect the units from domestic livestock and trespass.

Other organizations besides DFW, including the Izaak Walton League, US Forrest Service, Quail Unlimited, and other private groups are known to have completed similar guzzler projects in the Los Angeles District which were constructed of various materials such as fiberglass, steel, and wood. Of those we have located, the concrete units seem to survive wildfires the best and are less obtrusive to the environment than are the above-ground metal units. Fiberglass units are more prone to materials deterioration over time.

Quail populations within the project area have been in steady decline over the past 30 years and have reached record lows during the recent period of extended drought. During the past 40 years or more, DFW, USFS and others have failed to maintain the guzzlers installed in the Los Angeles District for various reasons, including lack of funding and lost records.

SCVQUWF has recently undertaken a volunteer project to locate all of the existing DFW guzzlers, assess their conditions and document them with photographs, record precise locations with GPS coordinates, evaluate the type of maintenance needed to repair each of the units, and to prepare this proposal outlining the costs to rehabilitate each unit to full working order.

To date SCVQUWF has located over 20 of the DFW guzzler units in the Los Angeles District. Essentially all of those located will require maintenance to some degree, including cleanout of sediment and debris, repair of apron and tank cracks, replacement of opening restriction bars and/or fencing, brush clearance about the aprons, and in some cases complete replacement of the unit. Some of the units we have located have apparently been vandalized, while others have survived intact for decades, still hold water, and remain quite functional but require maintenance.

It is believed that virtually all of the guzzler sites had been selected by DFW based upon careful assessment of the need for these devices at specific locations. SCVQUWF has prepared this proposal to repair 10 of the old guzzlers and to evaluate the successfulness of the program as a starting point with the goal to eventually repair and/or replace all of the units in the future. We have prioritized the following 10 guzzler units in need of repair based upon the following:

- Proximity to native food sources such as filigree, lupine, acorn, buckwheat, etc.
- Distance from active springs and other water sources (i.e. further distance from known natural and/or artificial but reliable water sources have highest priority)
- Proximity to roosting cover
- Accessibility for repair and continued maintenance

The projects are described on the following pages. Several of these units may be observed in Google Earth by inputting the longitude/latitude information and zooming in to maximum extent.

**Products:** The primary products of the project are:

- Re-establishment of 10 DFW wildlife guzzlers, which once served to promote quail reproduction, will be restored and will once again provide necessary water sources for quail and other upland game animals. Lack of maintenance of these guzzlers coincides with the decline in quail population in these areas over the past 30 to 40 years. Continued global climate warming trends predicted by most climate researchers makes rehabilitation of these guzzlers extremely important for the promulgation of quail and upland game in the region.
- Game cameras will be installed on selected guzzlers during nesting season to monitor effectiveness of the project. Manual bird counts by volunteer observation is also planned.
- The project will provide a long-term study basis for documenting the positive effect of artificial water sources and usage of free-standing water sources by wildlife as recommended by Simpson, et. al. of DFW Wildlife Investigations Laboratory (2011, *California Fish and Game* 97(4):190-209)
- Rehabilitation of these selected 10 guzzlers will provide important “leaping points” on remote divides between known natural watering holes. They will improve the effective quail range and habitat during dry spells and expand migration pathways between coveys. Restoration of the DFW guzzlers will help to ensure bio-diversification in the face of climate change.

- Selected Guzzler Nos. 25, 27, 30, and 31 will provide a unique opportunity to study the effectiveness of providing artificial water sources for upland game animals within areas of public lands designated for off-highway vehicular recreational use. These areas were once prolific quail and rabbit hunting grounds. Possible factors in the sharp decline of quail populations in these areas over the past 30 years may include climate change, drought, designation by USFS as off-highway vehicular use areas, and elimination of the guzzlers (last recorded site inspections were in 1972, DFW Guzzler maintenance notes).

### **Enhancing Public Hunting Opportunity**

- The project will increase upland game hunter opportunities on public land. All proposed projects are on public lands open to upland game hunting.

### **Hunting and Wildlife Conservation Outreach & Education**

- Educational materials will be developed by SCVQUWF in cooperation with DFW to promote public awareness of how wildlife guzzlers can offset pressure on upland game species due to drought and global climate change. Educational materials will emphasize the responsibility for sportsmen and hikers to respect the guzzler rehabilitation projects and protect them against vandalism.

### **Organizational Capacity to satisfactorily complete the grant**

The Santa Clarita Valley Quail & Upland Wildlife Federation (SCVQUWF) was established to maximize the recovery and restoration of the wild quail and other upland species through critical habitat management using sound science, with technology, and old fashioned sweat equity. Applying exceptional care and professional oversight to manage every penny raised for habitat and wildlife population recovery, at both the national and chapter level, with full transparency. This chapters primary focus is habitat on in our National Forests, California Department Of Fish & Game Properties, and Bureau of Land Management land and located in Southern California.

SCVQUWF is currently working on Habitat improvement within the Los Padres & Angeles National forests. Habitat projects, such as Wildlife Water Drinkers "guzzlers" are being installed, Tree Seedlings and native vegetation are being planted in fire ravaged areas and other projects such as road & fence repair in around designated habitat projects.

SCVQUWF serves the areas of Northern Los Angeles, Ventura and Kern counties. Having a MOU with USFS and the NRCS, SCVQUWF conducts habitat restoration work and improvements on both public and private properties. SCVQUWF is presently working in the Santa Clara District of the Angeles National Forest and the Mt. Pinos District of the Los Padres National Forest. Since 1993, our volunteers have built, repaired and restored over 60 wildlife water drinkers throughout Southern California.

For the present and last fiscal years, the primary sources of funding that has been available to SCVQUWF for habitat projects have come through chapter fund raising efforts and members donations.

Our volunteer workforce is ready to get to work to improve habitat for wildlife. Our volunteers have been working together, lead by John Nelson (Habitat Projects Coordinator) for over twenty years and we look forward to getting our hands dirty. We have the manpower, the tools, and the guidance of the DFW & USFS. We only need money to accomplish our objectives.

**Project No. 1, DFW #24**

**Guzzler:** DFW #24

**Located by:** Robert Davis on January 26, 2014

**Location:** Drinkwater Flats Area  
GPS N 34 deg 32.507', W 118 deg 29.65'

**Condition as of 1/26/2014:** Guzzler is located approx 100 yards east of a power line base marked 18/2. Fiberglass tank is completely destroyed by fire. Concrete apron is broken and has scrub oak growing through pad.

**Recommended maintenance:** Remove & Replace: Propose to remove old tank, excavate old material and frame and pour new 5 x 4 x 12 concrete tank, 5 x 12 concrete lid and 4" x 14' x 14' apron. Concrete should be reinforced with 6 X 6/10-10 welded wire mesh. Lid should have access manhole cover. Clear brush around new apron, Install stainless steel Big Game Drinker approximately 20 yards from site.

**Justification:** This site is located on what's known as Drinkwater Flats. This area was ravaged by fire in 2013 in the Powerhouse fire and (5) five wildlife guzzlers in this area have been affected. This area has long been known for its Quail and Deer populations. Good quail habitat and food sources in both adjoining canyons, but generally lacking water. Excellent roosting oak woodland habitat in Drinkwater Canyon to north. The site is relatively secure from off-road vehicular traffic and vandalism.

**Cost: Estimated cost for materials**

1)	Concrete Tank & Lid (11 yards @ \$ 130.00 a yard)	\$ 1430.00
2)	Pumper	\$ 500.00
3)	Excavation (backhoe)	\$ 650.00
4)	Framing Materials, Plastic Sheeting, Rebar and Misc supplies	\$ 1200.00
5)	Galvanized Steel Big Game Drinker Boxes	\$ 450.00
6)	CUDDEBACK TRAIL CAMERA MODEL 1194	\$ 300.00
7)	Informative Signage	\$ 75.00
<b>Total</b>		<b>\$ 4605.00</b>

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**Project No. 2, DFW #27**

**Guzzler:** DFW #27

**Located by:** Joe Cota & other SCVQWF Members on January 26, 2014

**Location:** Lower Texas Canyon Road, approx 0.9 miles up from 2<sup>nd</sup> locked gate  
Lon. -118.43016; lat 35.50535  
SW ¼ of the NW ¼ Section 23, T.5N, R 14 W (SBB&M)

**Condition as of 1/26/2014:** Top collapsed, apron missing and/or removed. Tall brush has encroached onto site. Open tank is partly filled with sediment and debris

**Recommended maintenance:** Remove & Replace: Propose to remove old tank, excavate old material and frame and pour new 5 x 4 x 12 concrete tank, 5 x 12 concrete lid and 4" x 14' x 14' apron. Concrete should be reinforced with 6 X 6/10-10 welded wire mesh. Lid should have access manhole cover. Clear brush around new apron, Install stainless steel Big Game Drinker approximately 20 yards from site.

**Justification:** This site is located near a very sandy river bottom in excellent quail habitat. Texas Canyon Creek at this location flows for only short periods following intense rainfall and is otherwise dry throughout normal precipitation years. The closest mapped spring is 1.3 miles NW of the site. The site is relatively secure from off-road vehicular traffic and vandalism.



**Cost: Estimated cost for materials**

1)	Concrete Tank & Lid (11 yards @ \$ 130.00 a yard)	\$ 1430.00
2)	Pumper	\$ 500.00
3)	Excavation (backhoe)	\$ 650.00
4)	Framing Materials, Plastic Sheeting, Rebar and Misc supplies	\$ 1200.00
5)	Galvanized Steel Big Game Drinker Boxes	\$ 450.00
6)	CUDDEBACK TRAIL CAMERA MODEL 1194	\$ 300.00
7)	Informative Signage	\$ 75.00
<b>Total</b>		<b>\$ 4605.00</b>

**Photo DFW No. 27.** Taken on 1-26-2014 by J. Cota, Tank missing tank lid, filled with debris, no apron, overgrown with brush



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**Project No. 3, DFW #25**

**Guzzler:** DFW #25

**Located by:** Joe Cota on December 23, 2013

**Location:** Rowher Flats above Whiskey Springs Canyon  
NE ¼ of the NW ¼ Section 17, T.5N, R 14 W (SBB&M)  
Lon. -118.371258°; lat 34.524143°

**Condition as of 1/23/2014:** 40 ft south of loop in motorcycle trail, double fenced, outer fence is driven steel post, 4 ft high 4X6 inch twisted wire mesh inner fence 4 strands 8 gauge wire ties to driven steel posts unit has a 10ft X 15 ft concrete splash pad above a partially buried 6 ft X 8 ft fiberglass storage tank. Fiberglass exposed & cracked at north and south end. Apron is concrete and has cracks in need of repair. Collapsed tank top appears to have completely closed off game bird access to the tank.

**Recommended maintenance:** Remove old material and frame and pour new 6 x 8 x 4 concrete tank, 6 x 8 concrete lid and 4" x 10' x 15' apron. Concrete should be reinforced with 6 X 6/10-10 welded wire mesh. Lid should have access manhole cover. Clear brush around new apron, Install stainless steel Big Game Drinker approximately 20 yards from site.

**Justification:** Located along divide between Whiskey Springs to southwest and Rowher canyon to the east. Whiskey Springs is located 0.5 miles southwest of DFW #25 and was observed to have flowing water on 1/26/2014. There is excellent oak woodland habitat and roosting cover in the canyon just north of the springs. The upper end of Rowher Canyon to the east also has good oak woodland habitat; however, the closest mapped spring is about 2.5 miles up the canyon to the north. DFW #25 site has good ground cover of chamise & buckwheat but no roosting cover. Restoration of the guzzler, along with restoration of DFW #31, located about 0.6 miles to the north, and DFW #30, 0.7 miles to the west, will provide a source of water on the divide between the Texas canyon, Whiskey Springs Canyon, and Rowher Canyon and effectively bring water to a large area of Rowher Flats which is otherwise dry. These fenced watering areas will provide sanctuary for all upland game animals within the heart of a heavily used off-highway recreational vehicle area.

**Cost: Estimated cost for materials**

1)	Concrete Tank & Lid (11 yards @ \$ 130.00 a yard)	\$ 1430.00
2)	Pumper	\$ 500.00
3)	Excavation (backhoe)	\$ 650.00
4)	Framing Materials, Plastic Sheeting, Rebar and Misc supplies	\$ 1200.00
5)	Galvanized Steel Big Game Drinker Boxes	\$ 450.00
6)	CUDDEBACK TRAIL CAMERA MODEL 1194	\$ 300.00
7)	Informative Signage	\$ 75.00
<b>Total</b>		<b>\$ 4605.00</b>



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**Project No. 4, DFW #31**

**Guzzler:** DFW #31

**Located by:** CJ & Justin Gross on January 26, 2014

**Location:** Upper Texas Canyon Road, approx 1.1 miles NE of Rowher Flats off-road staging area  
 Lon. -118.36627; lat 34.53292  
 SW ¼ of the NE ¼ Section 8, T.5N, R 14 W (SBB&M)

**Condition as of 1/26/2014:** Top collapsed, apron entirely broken up. Open tank is partly filled with sediment and debris. All construction appears to have been concrete

**Recommended maintenance:** Complete replacement, Remove old material and frame and pour new 5 x 4 x 12 concrete tank, 5 x 12 concrete lid and 4" x 14' x 14' apron. Concrete should be reinforced with 6 X 6/10-10 welded



wire mesh. Lid should have access manhole cover. Clear brush around new apron, Install stainless steel Big Game Drinker approximately 20 yards from site.

**Justification:** This site is located on a very dry topographically high divide between Texas Canyon Creek to the west and Spade Canyon to the east. Coveys of quail observed in area by J Cota on Dec 22, 2013 and Jan 12, 2014, cottontail also noted on January 12. Good quail habitat and food sources in both adjoining canyons, but generally lacking water. The site is fenced and relatively secure from off-road vehicular traffic and vandalism.

**Cost: Estimated cost for materials**

1)	Concrete Tank & Lid (11 yards @ \$ 130.00 a yard)	\$ 1430.00
2)	Pumper	\$ 500.00
3)	Excavation (backhoe)	\$ 650.00
4)	Framing Materials, Plastic Sheeting, Rebar and Misc supplies	\$ 1200.00
5)	Galvanized Steel Big Game Drinker Boxes	\$ 450.00
6)	CUDDEBACK TRAIL CAMERA MODEL 1194	\$ 300.00
7)	Informative Signage	\$ 75.00
<b>Total</b>		<b>\$ 4605.00</b>

**Photo DFW No. 31.** Taken on 1-26-2014 by J. Cota, Tank lid and apron completely broken up. CJ & Justin Gross, SCVQUWF volunteers and locators of the guzzler standing for scale.



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**Project No. 5, DFW #37**

**Guzzler:** DFW #37

**Located by:** SCVQWF Members on January 26, 2014

**Location:** USFS Forest Service Road 6N18 (Haskell Canyon Rd.)  
Lon. -118.41042; lat 35.58063  
SW ¼ of the NW ¼ Section 30, T.6 N, R 14 W (SBB&M)

**Condition as of 1/26/2014:** 6' X 10', 500 gal tank, large 18' X 22' X 15' apron (including tank), top not reinforced with steel, roof cracked and partially collapsed. Apron has many cracks with weed infestation and is not sealed. Siphon hole of unknown origin in bottom/feeding PVC pipe broken/no other visible cracks in tank

**Recommended maintenance:** Clean debris from tank and inspect bottom for additional cracks. Repair cracks and plug up siphon hole and repair as necessary with epoxy or concrete. Reconstruct new lid and place new 12 ft. X 12 ft. reinforced concrete. Concrete should be reinforced with 6 X 6/10-10 welded wire mesh. Lid should have access manhole cover. Repair Apron, repair broken concrete, fill, patch cracks and seal surface with epoxy sealant. Clear brush around new apron and install mesh wire fence around the perimeter. Install a new Big Game Drinker 25 yards from main tank.

**Justification:** Located on dry ridge along a prominent drainage divide between Bouquet Cyn and Bee Canyon with excellent quail habitat flanking both sides. Good access to site for rehabilitation and future maintenance. Guzzler #37 is located more than ¼ mile from any other water source. Size of apron and tank should sustain water during years having below normal rainfall. The benefits expected for rehabilitation of this guzzler include the promotion of quail reproduction during drought years due to three large collection area and location in prime quail habitat.

**Cost: Estimated cost for materials**

1)	Ames Research Super Primer (5 gallons) x 2 @ \$ 179.99 each	\$ 359.98
2)	Ames Research Blue Max Liquid Rubber (5 gaL) x 2 @ \$ 179.99	\$ 359.98
3)	Trowels, Rollers and Misc supplies	\$ 250.00
4)	6x6 Steel Remesh (4x7 sheets) x4 @ \$ 10.00 ea	\$ 40.00
5)	Cement 100 sq ft (18 bags) \$ 12.30 per bag (Sand Building Materials Inc.)	\$ 221.50
6)	50/50 Mix 100 sq ft (6 scoops) \$ 20.00 per scoop (Sand Building Materials Inc.)	\$ 120.00
7)	Cement & 50/50 delivery \$ 50.00 to \$ 75.00) (Sand Building Materials Inc.)	\$ 75.00
8)	Trailer Rental (6 scoop capacity) \$ 60.00 per day (2" ball) (A-V Rentals)	\$ 60.00
9)	Galvanized Steel Big Game Drinker Boxes	\$ 450.00
10)	CUDDEBACK TRAIL CAMERA MODEL 1194	\$ 300.00
11)	Informative Signage	\$ 75.00

**Total** **\$ 2311.46**

**Photo DFW No. 37.** Taken on 1-26-2014 by D. Fong, Volunteers and DFW Staff inspecting apron



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### Project No. 6, DFW #3

**Guzzler:** DFW #3

**Located by:** Robert Davis on January 26, 2014

**Location:** Drinkwater Flats Area

GPS N 34 deg 30.092', W 118 deg 31.047

**Condition as of 1/26/2014:** Constructed of fiberglass tank and top with concrete apron. Approx 4'x8'x2' deep. Fiberglass top is distorted from fire damage but is still intact. Tank looks good but has 4-5 inches of sediment inside. Concrete apron has some cracks with brush starting to grow in cracks. It could use epoxy and the overlay concrete drink box needs to be replaced. The 1" PVC feeder line is still intact, but no big game drinker at the end of the line.

**Recommended maintenance:** Clean debris from tank and inspect bottom for additional cracks. Repair cracks and plug up siphon hole and repair as necessary with epoxy or concrete. Reconstruct new lid and place new 12 ft. X 12 ft. reinforced concrete. Concrete should be reinforced with 6 X 6/10-10 welded wire mesh. Lid should have access manhole cover. Repair Apron, repair broken concrete, fill, patch cracks and seal surface with epoxy sealant. Clear brush around new apron and install mesh wire fence around the perimeter. Install a new Big Game Drinker 25 yards from main tank.

**Justification:** This site is located on what's known as Drinkwater Flats. This area was ravaged by fire in 2013 in the Powerhouse fire and (5) five wildlife guzzlers in this area have been affected. This area has long been known for its Quail and Deer populations.

**Cost: Estimated cost for materials**

1)	Ames Research Super Primer (5 gallons) x 2 @ \$ 179.99 each	\$ 359.98
2)	Ames Research Blue Max Liquid Rubber (5 gal) x 2 @ \$ 179.99	\$ 359.98
3)	Trowels, Rollers and Misc supplies	\$ 250.00
4)	6x6 Steel Remesh (4x7 sheets) x4 @ \$ 10.00 ea	\$ 40.00
5)	Cement 100 sq ft (18 bags) \$ 12.30 per bag (Sand Building Materials Inc.)	\$ 221.50
6)	50/50 Mix 100 sq ft (6 scoops) \$ 20.00 per scoop (Sand Building Materials Inc.)	\$ 120.00
7)	Cement & 50/50 delivery \$ 50.00 to \$ 75.00 (Sand Building Materials Inc.)	\$ 75.00
8)	Trailer Rental (6 scoop capacity) \$ 60.00 per day (2" ball) (A-V Rentals)	\$ 60.00
9)	Galvanized Steel Big Game Drinker Boxes	\$ 450.00
10)	CUDEBACK TRAIL CAMERA MODEL 1194	\$ 300.00
11)	Informative Signage	\$ 75.00

**Total \$ 2311.46**

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### Project No. 7, DFW #15

**Guzzler:** DFW #15

**Located by:** Robert Davis on January 26, 2014

**Location:** Drinkwater Flats Area

GPS N 34 deg 31.217', W 118 deg 30.476

**Condition as of 1/26/2014:** Existing fiberglass tank (approx 4'x8' ) has been destroyed by fire. The concrete apron is intact and in good condition.

**Recommended maintenance:** Remove & Replace old tank with similar Fiberglass Tank & Lid with access manhole cover. Repair Apron, repair broken concrete, fill, patch cracks and seal surface with epoxy sealant. Clear brush around new apron and install mesh wire fence around the perimeter. Install stainless steel Big Game Drinker approximately 20 yards from site.

**Justification:** This site is located on what's known as Drinkwater Flats. This area was ravaged by fire in 2013 in the Powerhouse fire and (5) five wildlife guzzlers in this area have been affected. This area has long been known for its Quail and Deer populations.

**Cost: Estimated cost for materials**

1)	Coffin Style Fiberglass Wildlife Water Drinker 800 gallons incs. Lid	\$ 1700.00
2)	Ames Research Super Primer (5 gallons) x 2 @ \$ 179.99 each	\$ 359.98
3)	Ames Research Blue Max Liquid Rubber (5 gaL) x 2 @ \$ 179.99	\$ 359.98
4)	Trowels, Rollers and Misc supplies	\$ 250.00
5)	6x6 Steel Remesh (4x7 sheets) x4 @ \$ 10.00 ea	\$ 40.00
6)	Cement 100 sq ft (18 bags) \$ 12.30 per bag (Sand Building Materials Inc.)	\$ 221.50
7)	50/50 Mix 100 sq ft (6 scoops) \$ 20.00 per scoop (Sand Building Materials Inc.)	\$ 120.00
8)	Cement & 50/50 delivery \$ 50.00 to \$ 75.00 (Sand Building Materials Inc.)	\$ 75.00
9)	Trailer Rental (6 scoop capacity) \$ 60.00 per day (2" ball) (A-V Rentals)	\$ 60.00
10)	Galvanized Steel Big Game Drinker Boxes	\$ 450.00
11)	CUDDEBACK TRAIL CAMERA MODEL 1194	\$ 300.00
12)	Informative Signage	\$ 75.00

**Total \$ 4011.46**

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**Project No. 8, DFW #30**

**Guzzler:** DFW #30

**Located by:** Joe Cota on January 12, 2014

**Location:** NW of Rowher Flats Off-Road staging area

Lon. -118.38261; lat 35.52782

SE ¼ of the SW ¼ Section 8, T.5N, R 14 W (SBB&M)

**Condition as of 1/12/2014:** Tank dry, partially filled with sediment, top and clean-out lid intact with some small cracks, apron cracked and filled with sediment and weeds, some broken restriction bars, behind fence keeping site secure from off-road vehicles

**Recommended maintenance:** Clean debris from tank and inspect bottom for cracks. Repair cracks as necessary with epoxy or concrete. Clean apron of debris, inspect and patch cracks as necessary. Install stainless steel Big Game Drinker approximately 20 yards from site.

**Cost: Estimated cost for materials**

1)	Ames Research Super Primer (5 gallons) x 2 @ \$ 179.99 each	\$ 359.98
2)	Ames Research Blue Max Liquid Rubber (5 gaL) x 2 @ \$ 179.99	\$ 359.98
3)	Trowels, Rollers and Misc supplies	\$ 250.00
4)	6x6 Steel Remesh (4x7 sheets) x4 @ \$ 10.00 ea	\$ 40.00
5)	Cement 100 sq ft (18 bags) \$ 12.30 per bag (Sand Building Materials Inc.)	\$ 221.50
6)	50/50 Mix 100 sq ft (6 scoops) \$ 20.00 per scoop (Sand Building Materials Inc.)	\$ 120.00
7)	Cement & 50/50 delivery \$ 50.00 to \$ 75.00 (Sand Building Materials Inc.)	\$ 75.00
8)	Trailer Rental (6 scoop capacity) \$ 60.00 per day (2" ball) (A-V Rentals)	\$ 60.00
9)	Galvanized Steel Big Game Drinker Boxes	\$ 450.00
10)	CUDDEBACK TRAIL CAMERA MODEL 1194	\$ 300.00
11)	Informative Signage	\$ 75.00

**Total \$ 2311.46**



**Justification:** This site is located on a very dry topographically high divide between Texas Canyon Creek to the NW and Rush Canyon to the SW. Coveys of quail observed in area by J Cota on Dec 22, 2013, Jan 12, 2014, and Jan 26, 2014. Good quail habitat and food sources in both adjoining canyons, but generally lacking water. Excellent roosting oak woodland habitat exists in Texas Canyon to north. The site is relatively secure from off-road vehicular traffic and vandalism.

**Photo DFW No. 30.** Taken on 1-12-2014 by J. Cota, note sediment and weeds covering apron



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**Project No. 9, DFW #29**

**Guzzler:** DFW #29

**Located by:** Joe Cota on January 19, 2014

**Location:** Upper Texas Canyon, approx 0.8 mi southwest of Rowher Flats Off-Highway staging area  
Lon. -118.39397; lat 51.8957

**Condition as of 1/26/2014:** Tank dry, partially filled with sediment, top and clean-out lid intact with some small cracks, apron cracked and filled with sediment and weeds, some broken restriction bars, behind fence keeping site secure from off-road vehicles

**Recommended maintenance:** Clean debris from tank and inspect bottom for cracks. Repair cracks as necessary with epoxy or concrete. Clean apron of debris, inspect and patch cracks as necessary. Install stainless steel Big Game Drinker approximately 20 yards from site.

**Justification:** The site is located within an oak woodland canopy providing excellent roosting cover. It is fenced off from the main off-highway designated trails. It provides hidden protection in an area having excellent cover away from off-highway vehicles.

**Cost: Estimated cost for materials**

1)	Ames Research Super Primer (5 gallons) x 2 @ \$ 179.99 each	\$ 359.98
2)	Ames Research Blue Max Liquid Rubber (5 gaL) x 2 @ \$ 179.99	\$ 359.98
3)	Trowels, Rollers and Misc supplies	\$ 250.00
4)	QuickCrete 50 square ft (38 - 60lbs bags) @ \$ 3.00 per bag	\$ 114.00
5)	Galvanized Steel Big Game Drinker Boxes	\$ 450.00
6)	CUDDEBACK TRAIL CAMERA MODEL 1194	\$ 300.00
7)	Informative Signage	\$ 75.00

**Total** **\$ 1908.96**



**Photo DFW No. 29.** Taken on 1-19-2014 by J. Cota,



**Project No. 10, DFW #36**

**Guzzler:** DFW #36

**Located by:** Lt. Martin Wall, DFW on Jan17, 2014 with subsequent visit on May 9, 2014

**Location:** Leonis Divide Truck Train & Spunky Edison Road,  
Lon. -118.35536; lat 35.61505  
NW ¼ of the NW ¼ Section 15, T.6N, R 14 W (SBB&M)

**Condition as of 5/9/2014:** Contains water, top intact, vertical large animal/predator restriction bars intact, apron present but has cracks and buckwheat growing through, brush encroaching onto the apron, quail observed in vicinity on previous visits.

**Recommended maintenance:** Remove maintenance lid for inspection, clean interior as required, trim back weed growth, patch all apron cracks with epoxy, quickset concrete, or pitch (to be determined). Install stainless steel Big Game Drinker approximately 20 yards from site.

**Cost: Estimated cost for materials**

1)	Ames Research Super Primer (5 gallons) x 2 @ \$ 179.99 each	\$ 359.98
2)	Ames Research Blue Max Liquid Rubber (5 gaL) x 2 @ \$ 179.99	\$ 359.98
3)	Trowels, Rollers and Misc supplies	\$ 250.00
4)	QuickCrete 50 square ft (38 - 60lbs bags) @ \$ 3.00 per bag	\$ 114.00
5)	Galvanized Steel Big Game Drinker Boxes	\$ 450.00
6)	CUDDEBACK TRAIL CAMERA MODEL 1194	\$ 300.00
7)	Informative Signage	\$ 75.00

**Total** **\$ 1908.96**

**Photo DFW No. 36.** Taken on 5-9-2014 by M. Wall, note buckwheat growing up through apron



**Proposed Budget Total for 10 Wildlife Water "Guzzler" Restoration Project  
for FY2014-2015**

**Total           \$ 33,183.76**