

Final Report Agreement P1580064,01

PROJECTS

K-80 - Rehabilitation of Guzzler

Work Completed: Guzzler K-80 is located at 35.187825N, 119.6656W within the Carrizo Plain National Monument. Work on the project was performed on two work days, starting on May 3 and the project was completed on May 6, 2017 by a crew of 8 volunteers assisted by 3 employees of the California Department of Fish & Wildlife.

During the renovation process, the existing fiberglass tanks were removed, the concrete apron connection ramps cut with a diamond saw to accommodate the new tanks, the excavated pits enlarged to accommodate the new tanks and the new tanks installed. Once the tanks were installed, the tank covers were installed and new concrete apron connections poured in place.

Additionally, the existing deteriorated barbed wire fence surrounding the guzzler was removed. New heavy duty corner posts were installed along with new line posts and a new 4-wire barbed wire fence strung and tightened. This fence should protect the new guzzler from livestock for many years to come.

Prior to removing the old tanks, approximately 80 gallons of water was recovered and stored for placement in the new south tank once it was installed. After installation, an additional 120 gallons of water that had been transported to the site was also pumped into the south tank. Approximately 8 hours after the renovation work was completed, a storm system moved through the area dumping over one half inch of rain on the guzzler. This rainfall should have generated approximately 130 gallons of water for each of the tanks. If additional storms over the next two months add water to the guzzler it will be sufficient to carry the site through the summer. If no more storms materialize, we will need to add 250 more gallons to each tank to carry them through this first summer. After that, annual rainfall of 75% of normal or better will generate sufficient runoff to fill the tanks.

Prior to this renovation project, the site would need supplemental water deliveries twice monthly during the summer to ensure that water would be available for wildlife. After this project, the site should be self-sufficient even in years of less than normal rainfall.

A total of \$3,879.91 for materials was used on this project. In the original budget funds were requested to cover the fees for disposal of the old tanks at the local county landfill. When the old tanks arrived at the landfill, the disposal fee was waived so this project came in slightly under budget. The breakdown of expenditures is as follows:

Guzzler Tanks including delivery and sales tax	\$3,687.25	
Concrete Mix		67.12
Fence Wire, 12.5 ga. galvanized wire		85.99
Fence hardware		<u>39.55</u>
Total		\$3,879.91

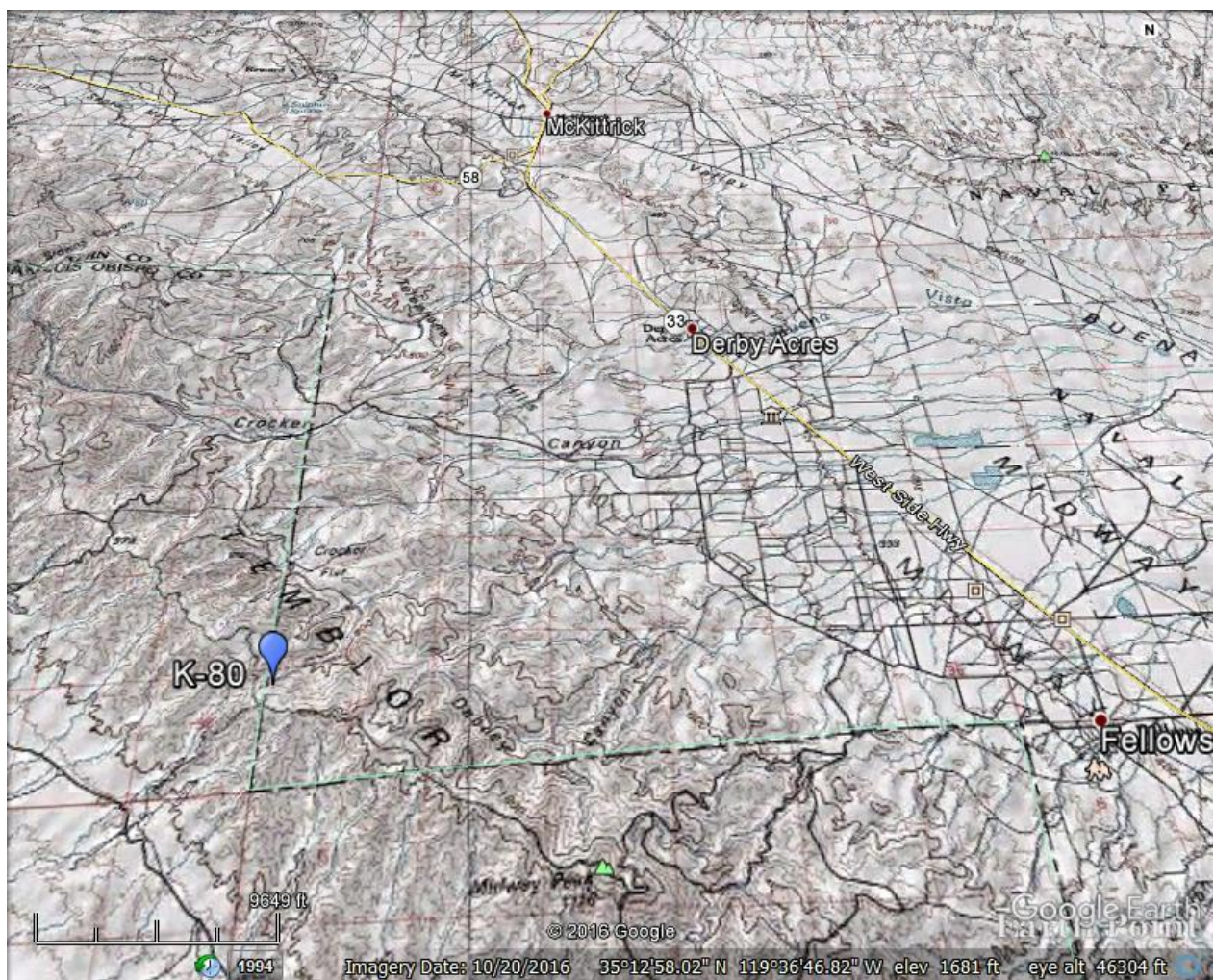


Installation of the north tank cover at Guzzler K-80, May 6, 2107



Completed south tank installation and brush pile Photos by Bob Morris

K-80 Guzzler Location



B-232 - Rehabilitation of Guzzler

Guzzler/drinker #B123, B124, B232, & B233

Thirty two volunteers made the drive and put in their labor to do what needed to be done to maintain four drinker/guzzlers. Two drinkers needed the concrete tanks Blue Maxed #B123 & B124, one drinker needed the apron coated with Ames #B233 and the fourth drinker #B232 needed the most maintenance, grind and mortar the cracks in the concrete apron, maintain the existing curb with concrete, clean out the tank and install tortoise ramp then seal the apron with two coats of the Ames product. Two hundred and twenty hours (220), including hauling water to the drinkers, of volunteer labor went into this April project. The materials used included 28 bags of concrete, three bags Rapid Set grout/mortar, three gals of concrete glue, over 20 gallons of Ames primer and coating, two bags of Merlex coating on the curbs, chain and wire for the tortoise ramp, ten gallons of Blue Max to seal the tanks and untold amounts of fuel paid for by each volunteer. Close to \$1800.00 in materials was needed to maintain these drinkers.

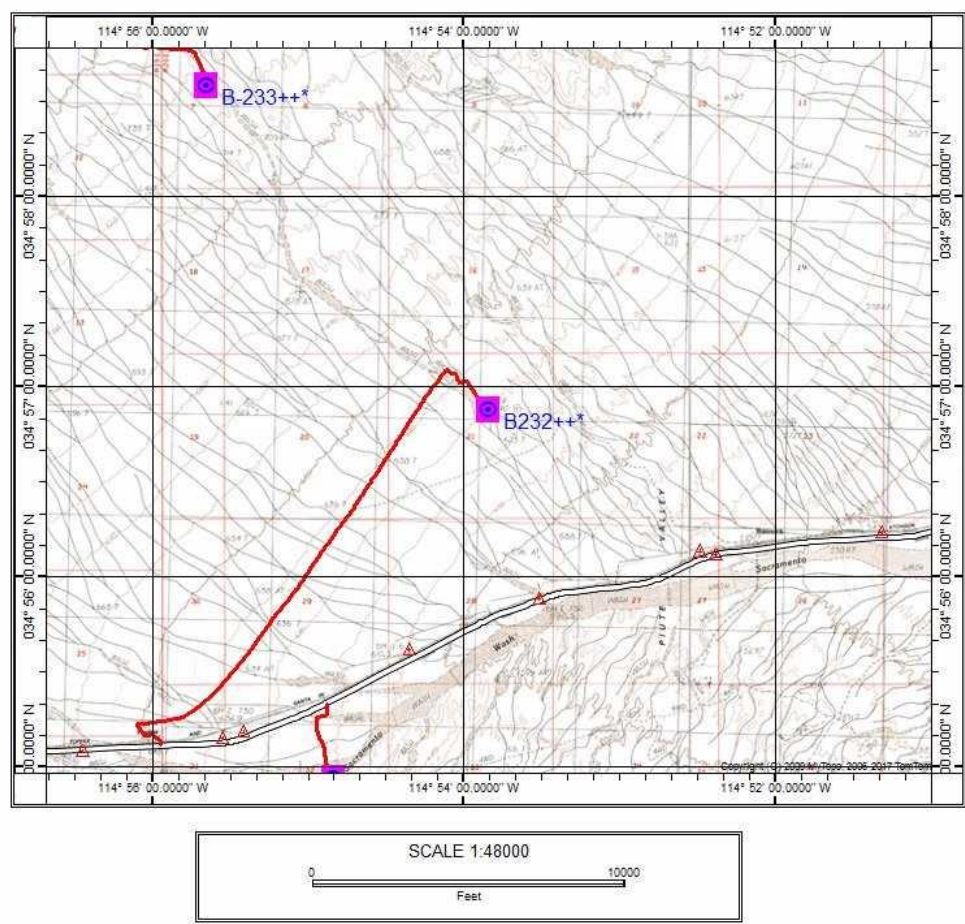
Materials and Cost

- Materials for Tortoise Ramp = \$25.00
 - 23 Bags of Concrete = \$80.50
 - 2 Gallons of Cement Glue = \$36.00
 - 3 Bags of Cement All = \$60.00
- 1 Bag of Merlex Super Blockade plus one bag of color = \$30.00
 - 5 Gallons of Ames Super Primer = \$200.00
 - 7.5 Gallons of Ames Safe-T-Deck = \$300.00
 - Misc Items = \$75.00
 - Total Cost = \$806.00





Map of B-232 Location



A-67 – Rehabilitation of Guzzler

Tank replacement, apron pave over, tank cover pave over, fencing, signage and Ames Safe-T-Deck sealer

Map Datum NADS 83, N34 41.9674, W117 32.7250

Completed 06/01/2017

Scope of work: **A-67** Tank replacement, apron pave over, tank cover pave over, fencing, signage and Ames Safe-T-Deck sealer. This site is adjacent to the El Mirage Off Highway Vehicle area and was heavily damaged by off highway vehicles and lack of maintenance. This area has historically supported a viable population of Gambels Quail, Chuckar Partridge and migratory dove as well as many song birds, small mammals and desert tortoise. BLM Barstow Field Office places this as a high priority for rebuild and is fully supportive of this project.

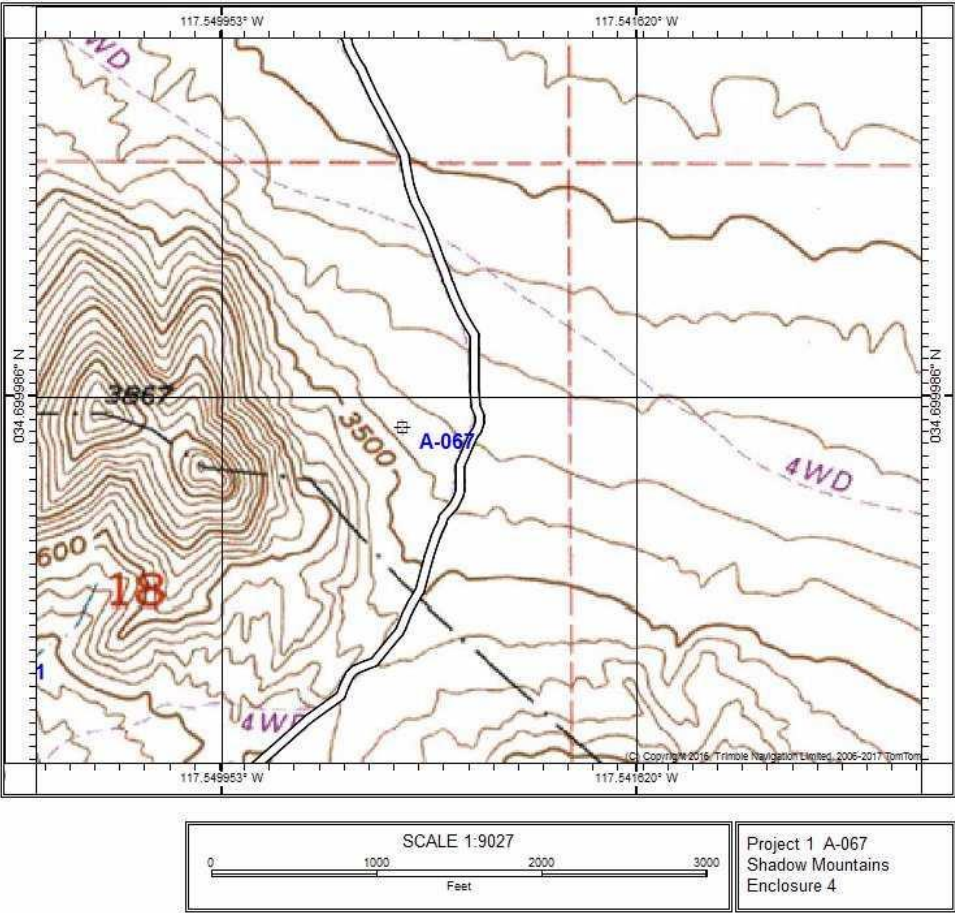
Budget:

800 gallon guzzler tank (delivered) 7 @ \$1400.00 ea.	\$ 1400.00
Backhoe rental w operator	\$ 350.00
Ames Safe-T-Deck Concrete Sealer Primer 2 gals @ 33 per gal	\$ 66.00
Ames Safe-T-Deck Concrete Sealer Finish 2 gals @ 33.00 per gal	\$ 66.00
20 ga Sheet steel 4' x 8'(for lids and signs) (1 @ \$60.00)	\$ 60.00
5.5 Ft Steel Fence posts 18 @ \$5.50	\$ 99.00
1350 ' spool slick stock wire 400 lf @ 26.00	\$ 26.00
misc concrete and finish materials	\$ 465.00
Total	\$ 2466.00





Map of Location



A-69– Rehabilitation of Guzzler

Project 2, El Mirage Off Highway Vehicle Area (BLM)

Map Datum NADS 83, N34 41.9032, W117 33.2385

Completed 06/01/2017

Scope of work: A-69 Tank replacement, apron pave over, tank cover pave over, fencing, signage and Ames Safe-T-Deck sealer. This site is adjacent to the El Mirage Off Highway Vehicle area and was heavily damaged by off highway vehicles and lack of maintenance. This area has historically supported a viable population of Gambels Quail, Chuckar Partridge and migratory dove as well as many song birds, small mammals and desert tortoise. BLM Barstow Field Office places this as a high priority for rebuild and is fully supportive of this project.

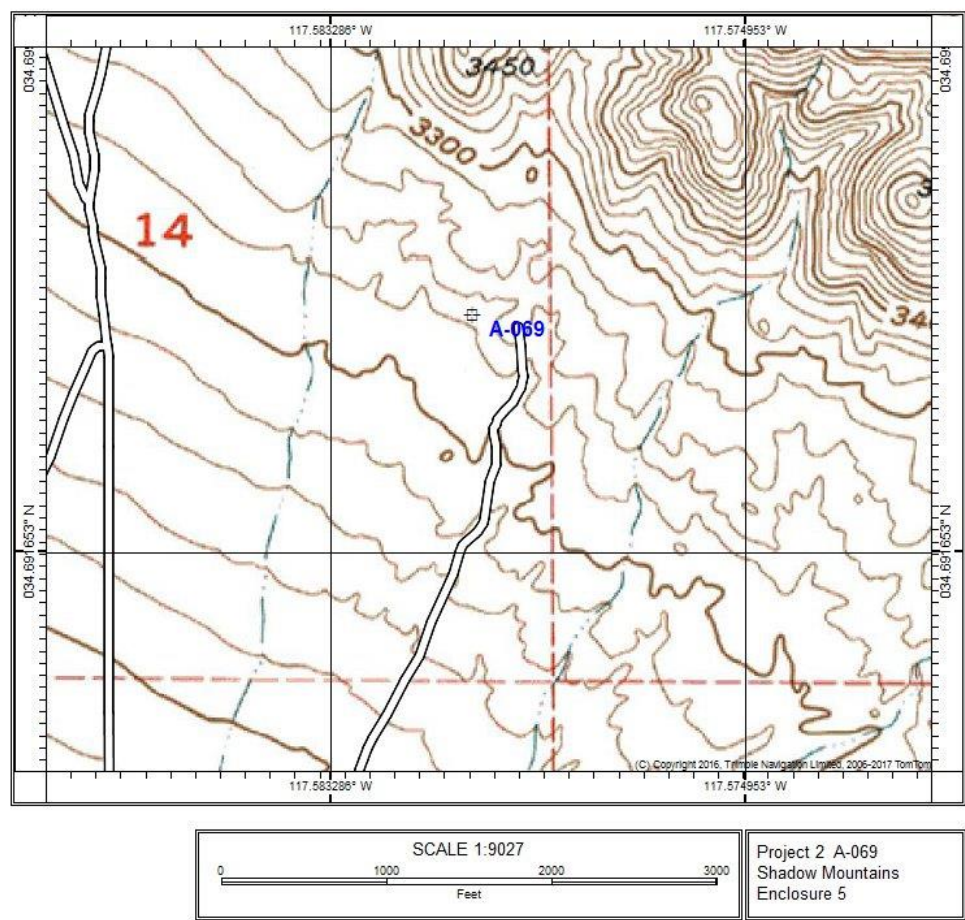
Budget

800 gallon guzzler tank (delivered) 7 @ \$1400.00 ea.	\$ 1400.00
Backhoe rental w operator	\$ 350.00
Ames Safe-T-Deck Concrete Sealer Primer 2 gals @ 33 per gal	\$ 66.00
Ames Safe-T-Deck Concrete Sealer Finish 2 gals @ 33.00 per gal	\$ 66.00
Galvanized mesh steel 4' x 8' (for Tortoise Ramp) (1 @ \$60.00)	\$ 60.00
5.5 Ft Steel Fence posts 18 @ \$5.50	\$ 99.00
1350 ' spool slick stock wire 400 lf @ 26.00	\$ 26.00
misc concrete and finish materials	\$ 565.00
Total \$ 2632.00	





Map of Location



Santa Barbara Canyon #4 Gallinaceous Guzzler

GPS = N 34 46 964 W 119 33 307

- Replace domed tank top on cement guzzler.
- Cement lid has collapsed for unknown reasons and no longer stores water or keeps elements out.
- Cement top shall be removed and a new top with hatch installed.

May 20, 2017: 11 members cleared the apron, removed the collapsed tank top & removed all debris from the tank.

Volunteer Hours: 11 volunteers; 7 am 'til 1 pm = 66 hours

Volunteer Mileage: 1,240 miles

June 10, 2017: 2 members cleaned the interior of the tank & applied the 1st coat of sealer.

Volunteer Hours: 2 volunteers; 7 am 'til 4 pm = 18 hours

Volunteer Mileage: 210 miles

June 11, 2017: 1 member applied a 2nd coat of sealer to the interior of the tank.

Volunteer Hours: 2 volunteers; 7 am 'til 1 pm = 6 hours

Volunteer Mileage: 95 miles

June 21, 2017: 6 members applied a final coat of sealer & patched the cracks in the apron with *DuoPatch*.

Volunteer Hours: 6 volunteers; 5:30 am 'til noon = 39 hours

Volunteer Mileage: 325 miles

June 24, 2017: 9 members prepared to pour the top of the tank & also resurfaced the patched apron with *ScratchKote*. The sealed tank was readied for the replacement of the top by clearing material from the sides, placing anchors along the sides & building supporting forms for concrete to be poured on our next work day.

Volunteer Hours: 9 volunteers; 7 am 'til 4 pm = 81 hours

Volunteer Mileage: 840 miles

July 1, 2017: 12 members started by carrying 37 90# bags of concrete, a small electric concrete mixer & sufficient water to the site. They then mixed the concrete, some with the mixer & some by hand in a wheelbarrow, & poured it onto the form for the top of the guzzler tank.

Volunteer Hours: 12 volunteers; 6 am 'til 1 pm = 84 hours

Volunteer Mileage: 1,150 miles

Summary of expenses, volunteer hours & mileage:

Materials:

5 gallons Ames *Blue Max* \$199.98 + tax + fees

3 bags *DuoPatch* \$38.59 each + tax

4 bags *ScratchKote* \$77.99 each + tax **Total Volunteer Hours = 294 hours**

6 sheets 4' x 8' plywood \$12.98 each + tax

8 pieces of 2" x 4" x 8' lumber \$3.16 each + tax **Total Volunteer Mileage = 3,760 mile**

4 sheets of heavy wire mesh \$8.40 each + tax

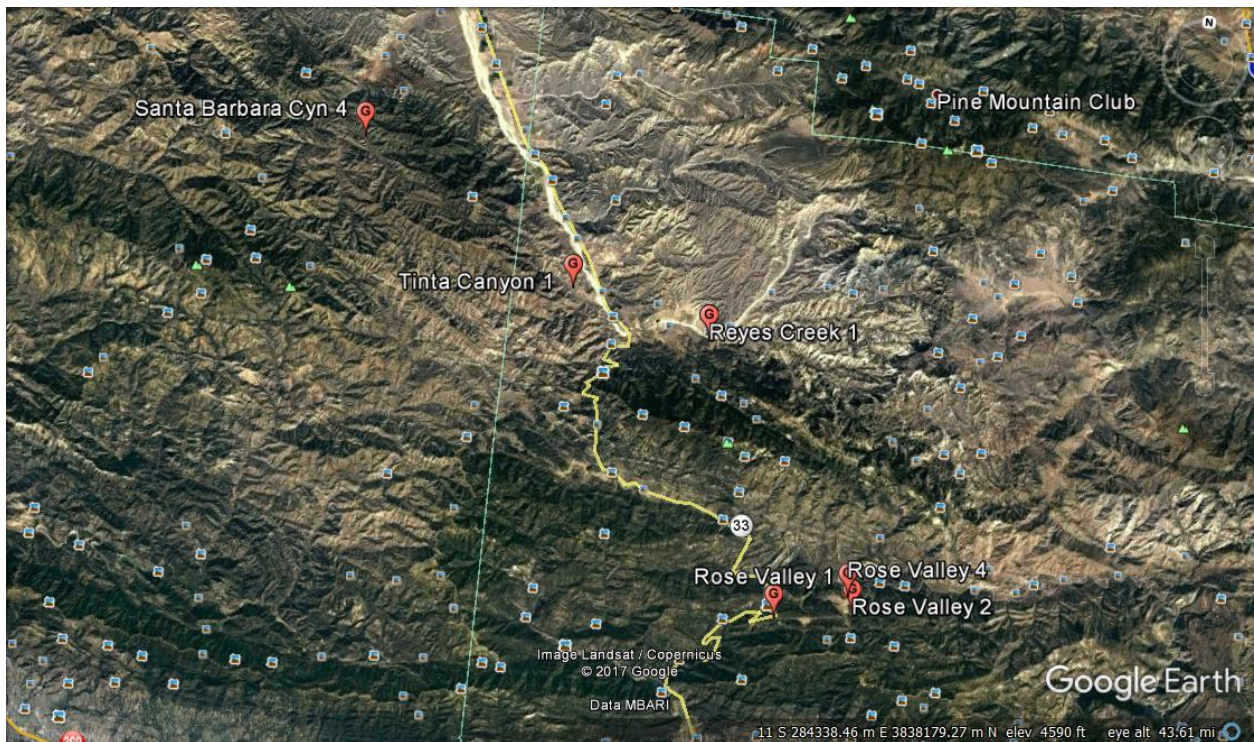
20 pieces $\frac{3}{8}$ " x 1' rebar 78¢ each + tax

37 90# bags concrete mix \$2.56 each + tax

Total Materials Cost \$946.33

As seen in the total materials cost, the cost of renovating this guzzler was far greater than anticipated. The chapter chose to carry out a thorough renovation that went far beyond the proposed budget to insure that its efforts would have lasting effect.





Tinta Gallinaceous Guzzler

GPS = N 34 15 707 W 119 10 468

Apron is falling apart and needs to be repaired.

Patch, caulk and reseal apron.

Materials

4 – caulking	@\$6.29	= \$25.16
55 lbs - grout	@\$21.24	= \$21.24
5 – ScratchKote	@\$69.95	= \$349.75

June 20, 2017: 4 members removed flaking material from the surface of the apron & resurfaced the apron with ScratchKote.

Volunteer Hours: 4 volunteers; 7 am 'til noon = 20 hours

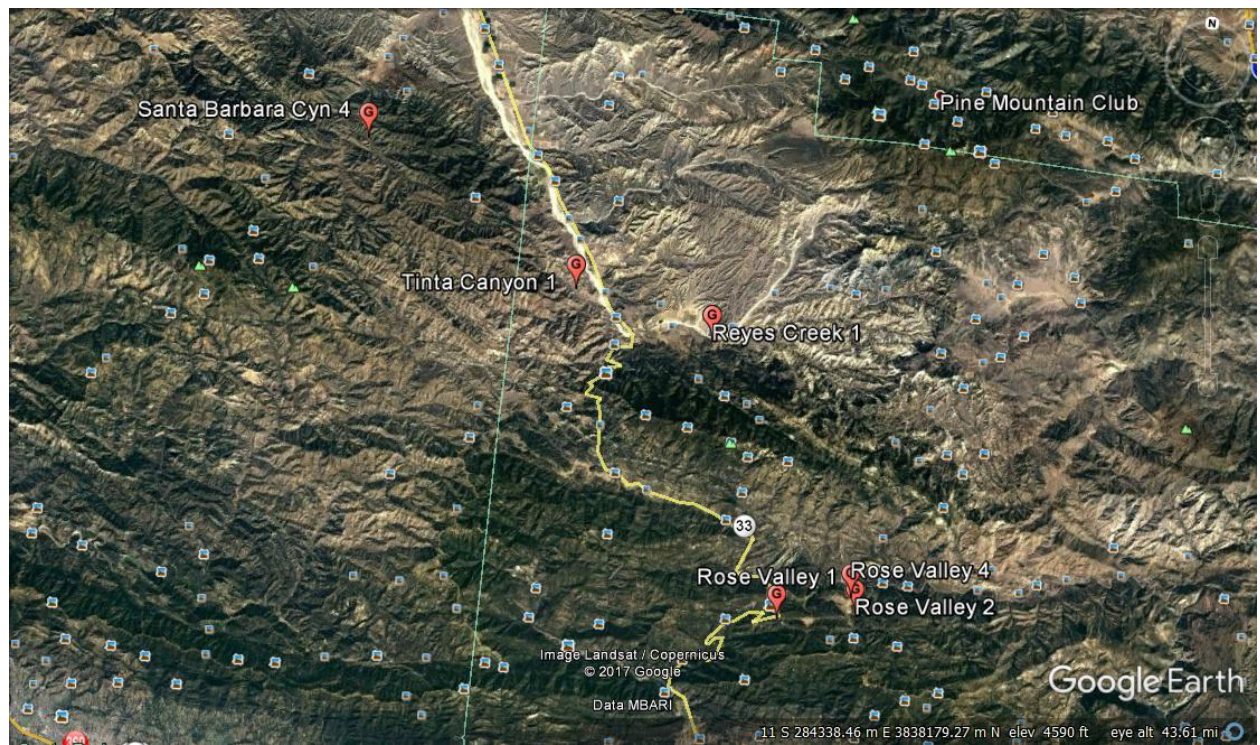
Volunteer Mileage: 480 miles

Summary of expenses, volunteer hours & mileage:

Materials:

5 bags ScratchKote	\$77.99 each + tax	Total Volunteer Hours = 20 hours
Total Materials Cost	\$420.17	Total Volunteer Mileage = 480 miles





Reyes Creek Gallinaceous Guzzler

GPS = N 34 41 356 W 119 18 040

Apron is falling apart and needs to be repaired.

Patch, caulk and reseal apron.

Materials

4 – caulking	@\$6.29	= \$25.16
55 lbs - grout	@\$21.24	= \$21.24
5 – ScratchKote	@\$69.95	= \$349.75

May 20, 2017: 11 members cleared the exfoliating material from the apron & applied a layer of ScratchKote brand sealant.

Volunteer Hours: 11 volunteers; 1 pm 'til 4 pm = 33 hours

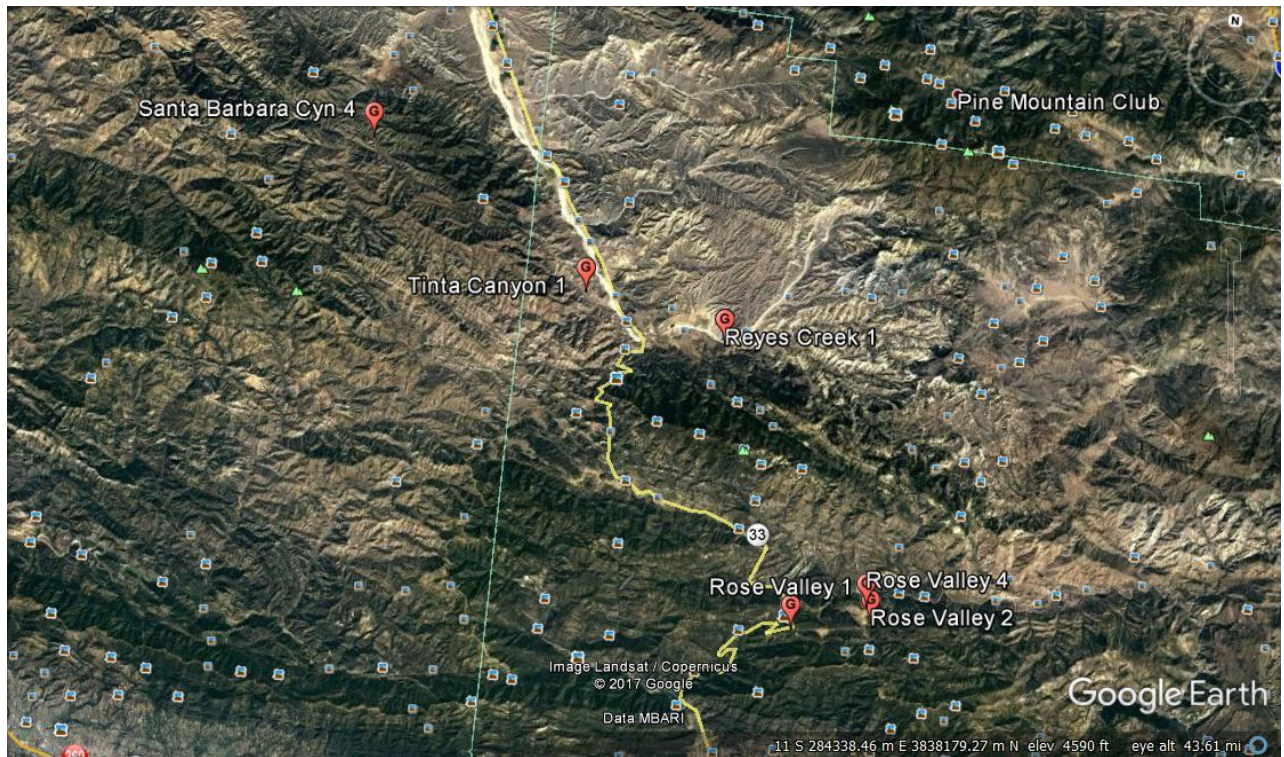
Volunteer Mileage: 890 miles

Summary of expenses, volunteer hours & mileage:

Materials:

5 bags ScratchKote	\$77.99 each + tax	Total Volunteer Hours = 33 hours
Total Materials Cost	\$420.17	Total Volunteer Mileage = 890 miles





Rose Valley #1 & #4 Gallinaceous Guzzlers

GPS = N 34 32 032 W 119 14 133; GPS = N 34 32 465 W 119 10 838

Fiberglass top needs sealing and cover graffiti.

Prime and paint cover.

Materials

1 quart – primer	@\$10.48	= \$10.48
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2 gallons - paint	@\$36.98	= \$73.96
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Note: The proposal originally submitted described these sites as “Gallinaceous Guzzlers.” They are, in fact, parabolic guzzlers.

July 7, 2017: 1 member cleaned, primed & painted over graffiti that had been put on the surface of Rose Valley #1 guzzler.

July 14, 2017: 1 member cleaned, primed & painted over graffiti that had been put on the surface of Rose Valley #4 guzzler.

Summary of expenses, volunteer hours & mileage:

Materials:

White Primer	\$39.99 + tax & fees
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2 Evershield Exterior Flat Paint	\$40.63 each + tax & fees
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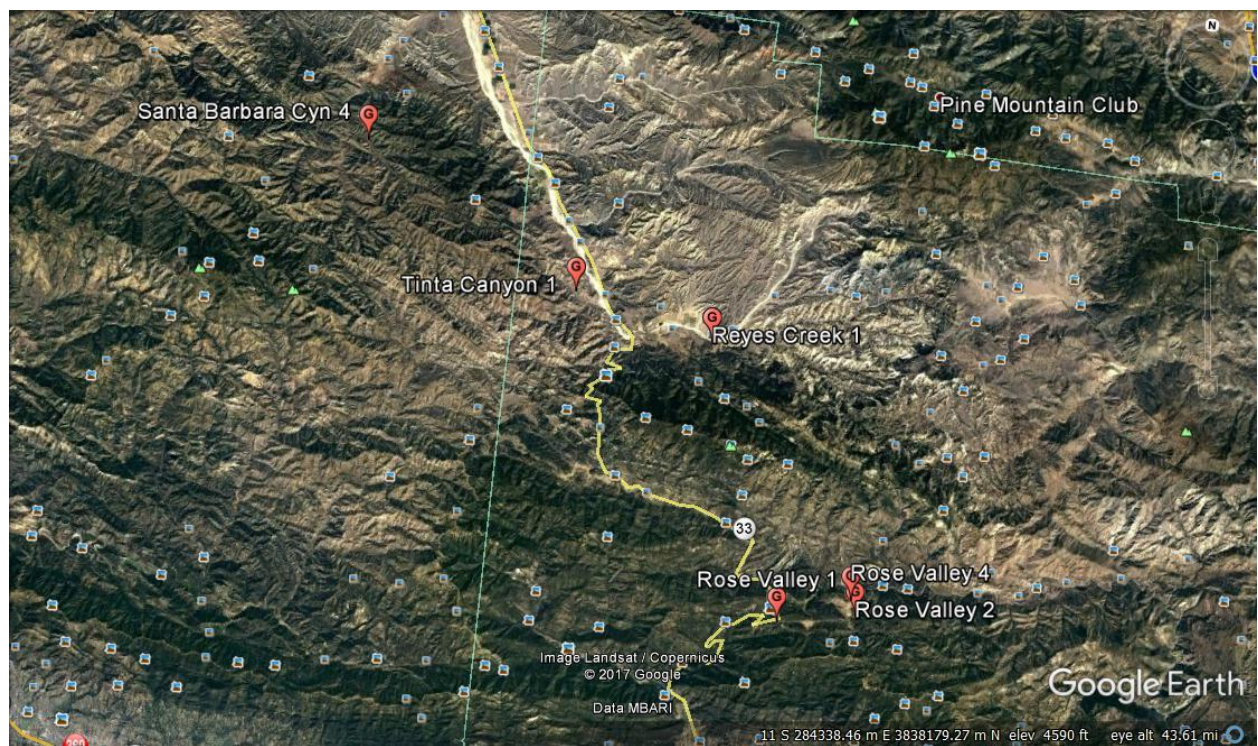
Spartashield Exterior Flat Paint	\$8.00 + tax
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2½” Brush	\$2.49 + tax
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6” x ½” Roller	\$6.99 + tax
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Plastic bucket	\$1.99 + tax
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Total Materials Cost	\$154.42
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Rose Valley #3 Parabolic Guzzler

GPS = N 34 32 560 W 119 11 266

Apron in need of repair.

Cracks caulked and sealed.

Materials

4 - caulking @ \$6.29 = \$25.16

1 - grout @ \$21.24 = \$21.24

5 - scratch kote @ \$69.95 = \$349.75

July 10, 2017: 3 members cleaned the apron of vegetation & other debris. Once the apron was cleared, it was patched with DuoPatch in preparation for resurfacing. After allowing the DuoPatch to dry, the apron was resurfaced with a layer of ScratchKote.

Note: The proposal originally submitted described this site as a "Parabolic Guzzler." It is, in fact, a gallinaceous guzzler with a concrete apron & underground concrete tank.

Volunteer Hours: 3 volunteers; 7 am 'til 1 pm = 18 hours

Volunteer Mileage: 80 miles

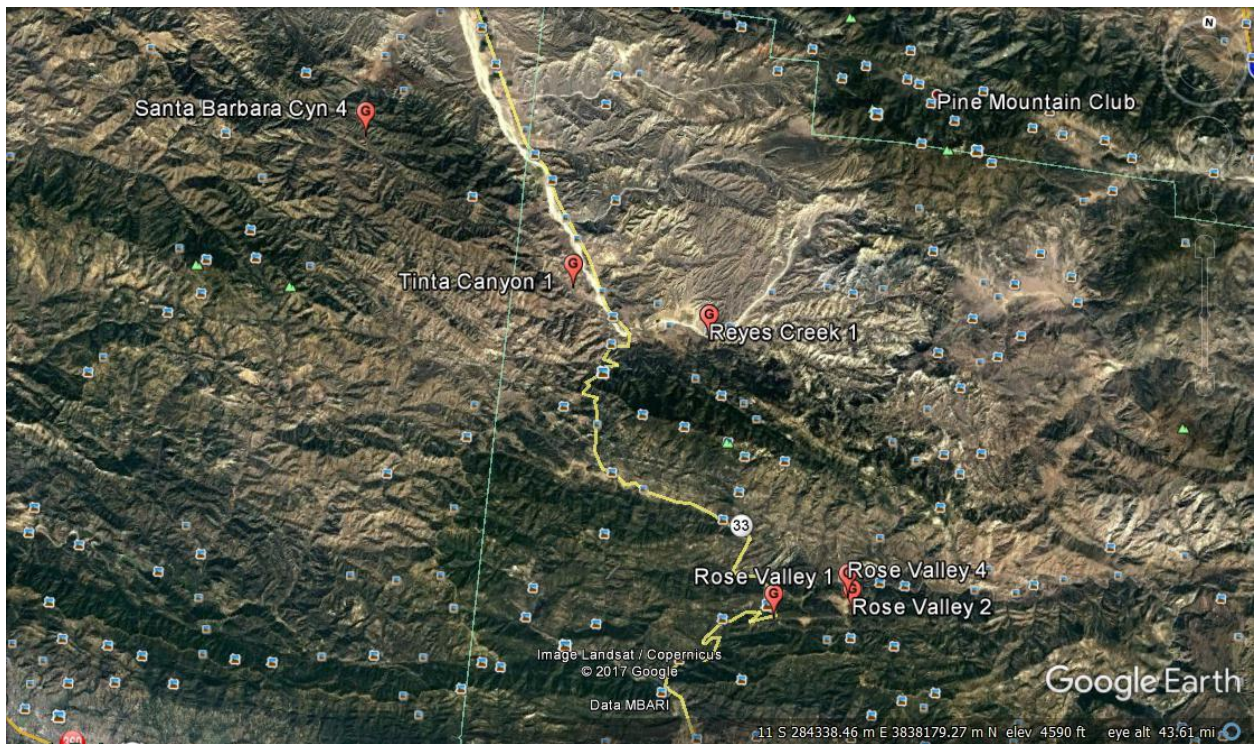
Summary of expenses, volunteer hours & mileage:

Materials:

5 bags ScratchKote \$77.99 each + tax **Total Volunteer Hours = 18 hours**

1 bag *DuoPatch* grout \$38.59 + tax **Total Volunteer Mileage = 80 miles**

Total Materials Cost \$461.75



Ocotillo, CA

32° 40.269' N, 115° 53.647' W

This Guzzler (45) is in Imperial County, near Ocotillo, CA. It has always held water until 2015. It is now dry and the tank is full of sand and debris. The apron is cracked. We will remove the tar and repair the cracks with mortar and non-shrink grout. A finish coat of Masterseal waterproof coating will be applied to the apron. The tank will be entered, mucked out and cleaned and filled with clean water.



Before Photo

Budget

1. 2 bags of Rapid Set Mortar @ \$14.45 x 2 = \$28.90
2. 2 bags of Rapid Set Non-Shrink Grout @ \$19.97 x 3 = \$39.94
3. 1 gallon of Quikrete concrete glue @ \$11.93
4. 2 bags of FastSet concrete @ \$5.20 x 2 = \$10.40
5. 2 bags of Masterseal waterproof coating @ \$38.00 x 2 = \$76.00
6. 1 gallon of Acryl-60 adhesive @ \$30.00
7. 2 each 4 ½" masonry cutting blades (consumables) @ \$22.97

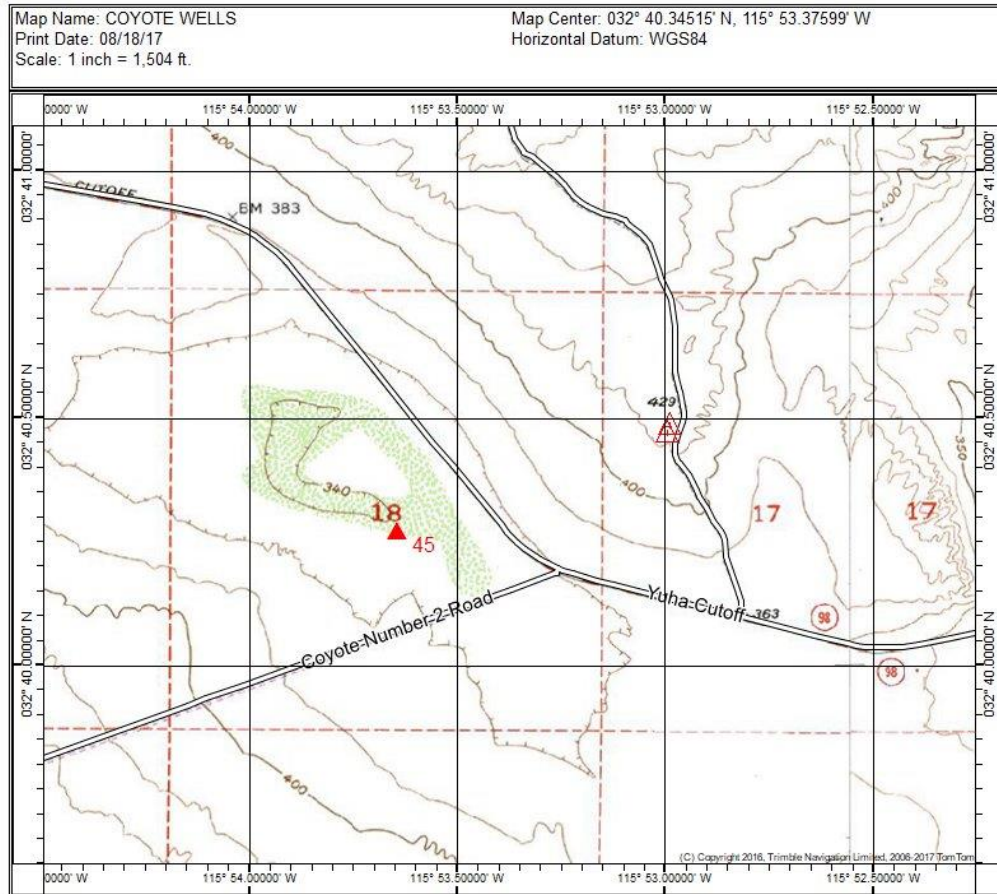
Total cost: \$220.14

Finished Project on 2/4/2017



After Photo

Map of Coyote Wells – Ocotillo, CA



Thing Valley Road

32° 47.897' N, 116° 24.158' W

This Guzzler (D-8), is badly overgrown with vegetation and has not been worked on in several years. The apron has extensive cracking that was repaired with tar in the early 1980's. We will remove overhanging vegetation, remove the tar and repair the cracks with mortar and non-shrink grout. A finish coat of Masterseal waterproof coating will be applied.



Before Photo

Budget

1. 2 bags of Rapid Set Mortar @ \$14.45 x 2 = \$28.90
2. 3 bags of Rapid Set Non-Shrink Grout @ \$19.97 x 3 = \$59.91
3. 1 gallon of Quikrete concrete glue @ \$11.93
4. 2 bags of FastSet concrete @ \$5.20 x 2 = \$10.40
5. 3 bags of Masterseal waterproof coating @ \$38.00 x 3 = \$114.00
6. 1 gallon of Acryl-60 adhesive @ \$30.00
7. 2 each 4 ½" masonry cutting blades (consumables) @ \$22.97

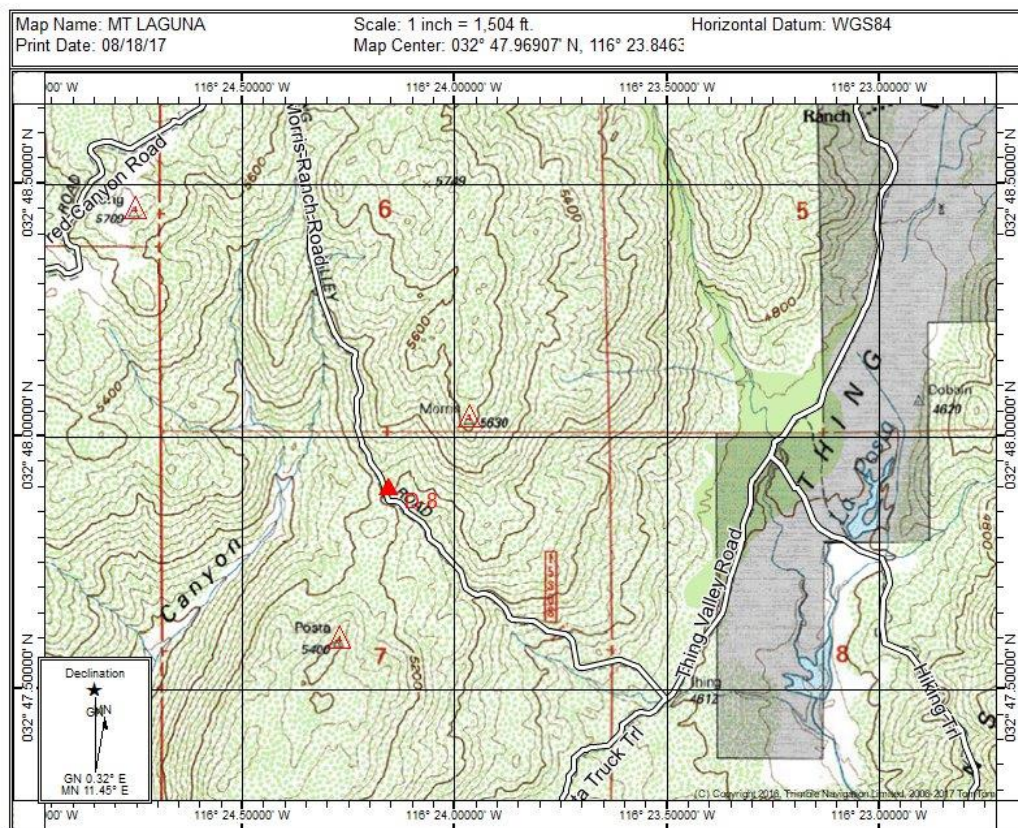
Total cost: \$278.11

Project finished on 6/17/2017



After Photo

Map of Thing Valley – Mt Laguna





Guzzler Projects Ridgecrest Chapter 3176

Guzzler No. No. K 126

Location Rand Mts 5-39-133-45-4-387-56

BLM Road Rd. R-30

Maintenance Needed

Tank needs clean
New Pad
Fence replace 75%
Tortoise Screen
Shade Replaced

Material Costs

R. Polypropylene Linen	575
Cement 7 Bags	85
Fence Wire roll	80
Tortoise screen	50
Shade replaced	200
	<u>Total</u>
<u>Labor</u>	1090.00

7 People for 12 hours each = 84 hours
5 Vehicles 42 mi each = 210 mi
2 Days



Guzzler Projects Ridgecrest Chapter 3176

Guzzler No. K-92

Location Rand Mts

S-39-120-02 - 4358-68

BLM Road R71

Maintenance Needed

New Pad Enlarge Tank Opening
 Tank meals clean 2 yards sand
 Replace fence 630'
 Shade 10' x 12' + brush pile

Material Costs

R. Polypropylene liner	\$700
Cement Bags 7	105
Fence	80
Shade 10' x 12'	200
Total	1085.00

Labor

8 People for 10 hours each = 80 hours
 5 Vehicles 47 mi each = 235 mi



Guzzler Projects Ridgecrest Chapter 3176

Guzzler No. No. k-153
Location Ridgecrest South 5-39-320-66/4-361-42
 BLM 237-EP244

BLM Road

Maintenance Needed

Tank needed cleaning
 New pad
 Fence replaced 75%
 Tortoise screen
 Shade replaced
 Enter gate

Material Costs

	R. Polypropylene	550	
	Cement 5 Bags		80
	Fence wire 1 roll	80	
	Tortoise Screen	50	
	Shade replaced	200	
	gate 4' x 3'	35	
	Total	995.00	

Labor

6 People for 12 hours each = 72 hours
 5 Vehicles 20 mi each = 100 mi
 2 Days



Guzzler Projects Ridgecrest Chapter 3176

Guzzler No. No. K-90

Location Klinber Mt

S-39-209-34 - 4-475-77

BLM Road RM7A

Maintenance Needed

New Pad
Large Shade - 2-8x10
Tortoise Screen
Fence Replace 50%
Clean Tank

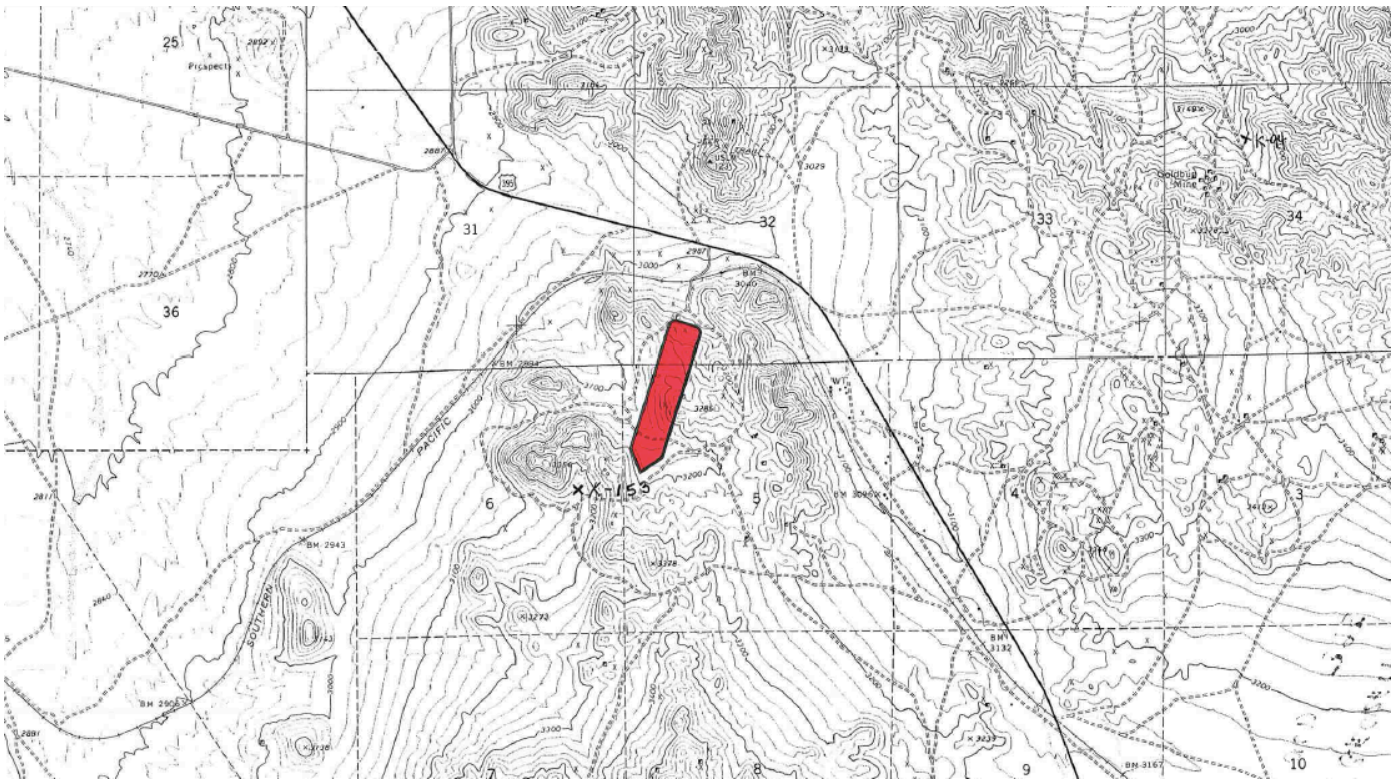
Material Costs

New Pad R. Polypropylene	900
Shade	300
Fence Wire	80
Tortoise Screen	50
	1330.00
Cement 5 bags	60

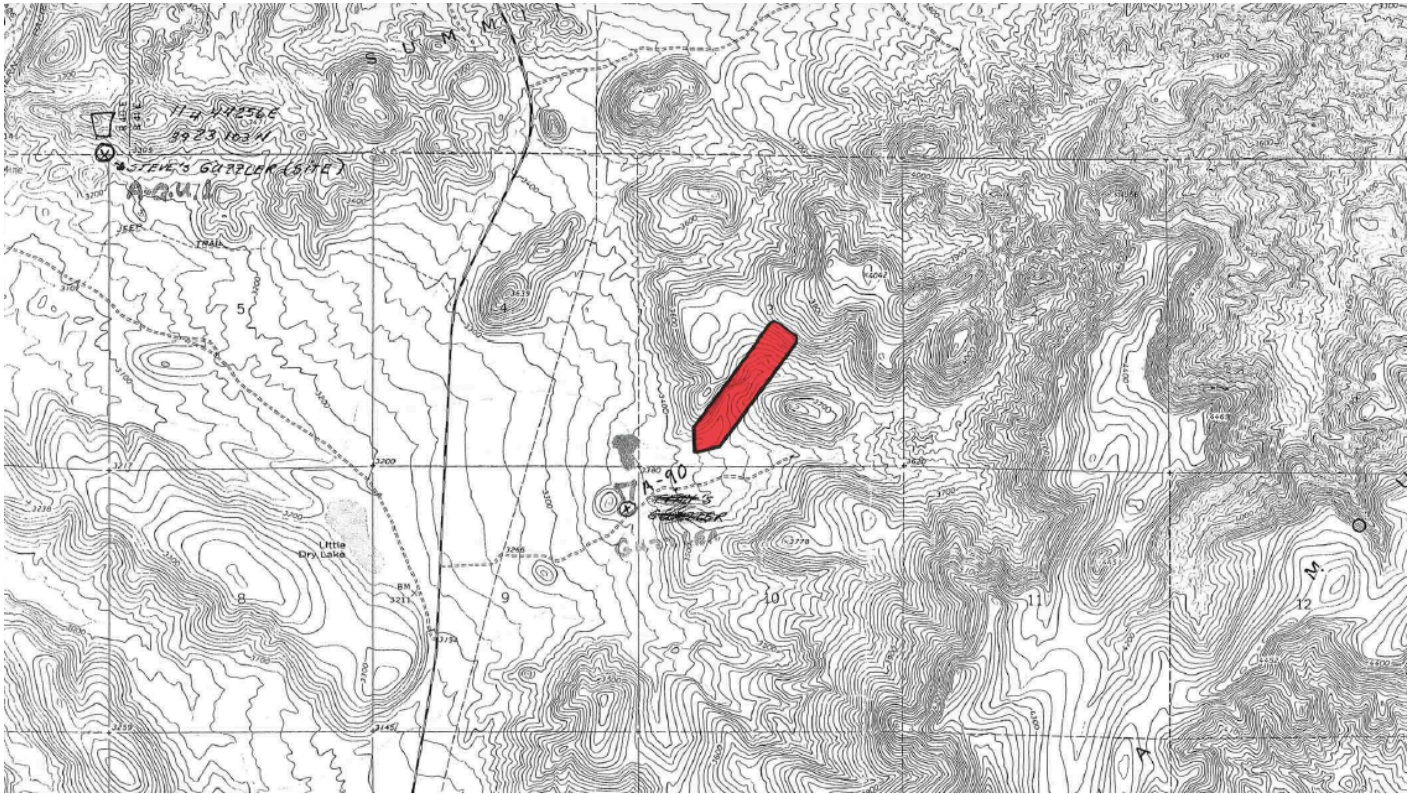
Labor

Total 1390.00

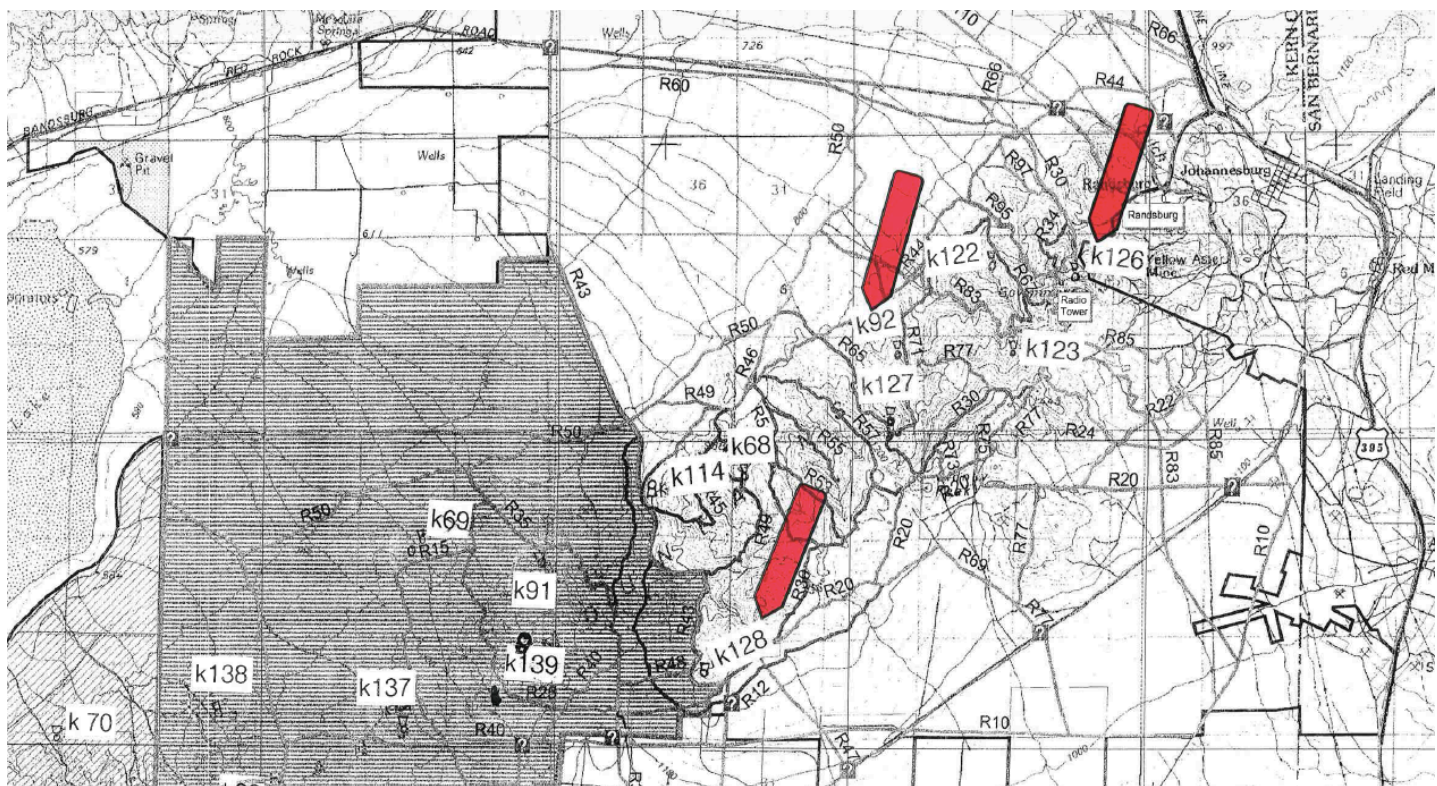
7 People for 12 hours each = 84 hours
5 Vehicles 30 mi each = 150 mi
2 Days



Map of Guzzler K-153



Map of Guzzler A-90



Map of Guzzlers: K92, K126, K128