## HABITAT PARTNERSHIP COMMITTEE HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL

HPC Project Number: 18-507

PROJECT INFORMATION						
Project Title:	e: Winkelman NRCD Dirt Tank Cleaning and Sealing for Wildlife					
Game Management Unit: 37B			Region:	Region 5		
Local Habitat Partnership Committee (LHPC):			Was the project presented to the LHPC?			
Tucson HPC		Yes				

**Project Location:** (Please provide <u>lat/long</u> in decimal degrees or meters of project area using datum WGS84 or NAD83. If project is larger than one point, please include them all. Provide an accompanying shapefile as an attachment for the project area).

#### LATITUDE/NORTHING:

#### LONGITUDE/EASTING:

#### **MULTIPLE LOCATION COORDINATES:**

Please separate coordinate pairs with names & commas. (ex. Bob's Tank 34.365, -110.663. Clear Spring 34.55, -110.107, etc.):

 Indian Camp Tank
 32.967912, -110.867373
 Lower Tank
 32.8545698, -110.564135
 Basin Tank
 32.863885, 

 110.554938 Trick Tank 1
 32.864777, -110.566753
 Cholla Tank
 32.788133, -110.744533
 Cronley Tank
 32.747993, 

 110.724313 Pearl Tank
 32.748945, -110.722898
 Cement Tank
 32.752754, -110.529498
 Black Tank
 32.766068, 

110.514730 Zapata 1 32.797228, -110.627677 Zapata 2 32.784809, -110.609307

Project Type: Water project Number of acres that will be enhanced:

Water Project Action (if applicable): Dirt tank- clean out & maintenance

**Habitat Restoration Action** 

(if applicable):

Other Project Type and Action

(if applicable):

Has this project been submitted in previous years?

## **PROJECT SUMMARY**

Describe the proposed action only. Please use plain English, what action are you proposing? (If applicable, please reference any completed compliance including EAC#).

**Brief Project Summary:** The Winkelman Natural Resource Conservation District (WNRCD) is largely void of wildlife water developments in the bottom of the Lower San Pedro River watershed in Game Management Units 32 and 37B (see map). The WNRCD stock tank cleaning and sealing program will fill this void by providing cleaning, maintenance, and sealing of dirt stock tanks which are a primary source of water for wildlife in this area. Twelve dirt tanks will be cleaned and improved and four of these dirt tanks will then be sealed with Seepage Control's ESS-13 to reduce the loss of water.

Primary Big Game Wildlife Speci	ies to Benefit:	Mule Deer, Whitetail Deer, Javelina, Bighorn Sheep, Mountain Lion, Black Bear		
Implementation Schedule	START DATE	: 4/1/2019	COMPLETION DATE:	

**Archaeological Clearance:** 

(Month/Day/Year)		3/31/2020				
PROJECT FUNDING						
*Qualifying Cost Share should be restricted to sompliance, and or labor) of the proposed action and place). Please do not include previously purpast completed work.	on ONLY (same time	Itemized Use of Funds  Please email separate quotes if HPC funds are to be used to purchase materials or contracted labor: <a href="https://example.com/hPC@azgfd.gov.">hPC@azgfd.gov.</a>				
HPC Funds Requested  Amount: \$ 29730		HPC Funds Requested: ESS-13 at \$16,500/acre 1.5 acres + taxes and shipping = \$28,130 (-\$4,000 Landowners Program)				
Cost Share or Matching Funds \$4,000 Landowner's Relations Program WNRCD and participating ranchers Amount: \$20105	ı <u>, \$16,105</u>	WNRCD staff time 80 hours at \$25/hour = \$2,000  Cleaning and maintaining 3 tanks on Triangle Bar Ranch,  24 hours at \$150/hour = \$3,600				
Percent Match (of the total project cost	)	Cost Share or Matching Funds: Stock Tank Cleaning and ESS-13 Application, 70 hours at \$150/hour = \$10,500				
Total Project Cost		Oversight and coordination (Triangle Bar Ranch), 24 hours at \$75/hour = \$1,800				
Amount: \$ 49835		Purchase of ESS-13 (Aravaipa Canyon Ranch), 0.17 acres at \$16,500/acre = \$2,805				
		WNRCD Staff Coordination 40 hours at \$25/hour = \$1,000				
		AZGFD Landowner Relations Program Grant \$1,000/tank * 4 tanks = \$4,000				
ENVIRONMENTAL COMPLIANCE  Please indicate the status of the Project's compliance. if you are unsure, please reference:  HPC Compliance Checklist ( <a href="https://www.azgfd.com/wildlife/hpc/forms/">https://www.azgfd.com/wildlife/hpc/forms/</a> ).  If you have questions regarding the requirement of an EAC, contact AGFD's Project Evaluation Program:  ( <a href="https://www.azgfd.com/wildlife/planning/projevalprogram/">https://www.azgfd.com/wildlife/planning/projevalprogram/</a> ).  ***Please email supporting compliance documents to HPC@azgfd.gov ***						
AGFD EA Checklist Completed:	No	Completion Date:				
NEPA Completed:	NA	<b>Completion Date:</b>				
State Historic Preservation Office/ Archaeological Clearance:		<b>Completion Date:</b>	8/14/2018			

## **CONTACT INFORMATION**

## **Applicant**

The project applicant is the responsible party for seeing the work through to completion.

**APPLICANT NAME**: Kyle Thompson

**ORGANIZATION**: Winkelman Natural Resource

**Conservation District** 

ADDRESS: PO Box 486, Kearny, AZ 85137

EMAIL: kylewthomp@gmail.com

PHONE: 9283687067

**AGFD Project Proponent** 

The Project Proponent is responsible for compliance, implementation, and annual/final reporting requirements.

**AGFD CONTACT NAME**: Allison Haywood **PHONE**: 520-401-4749

## **Cooperators**

#### COOPERATOR NAME(S), ORGANIZATION, ROLE IN PROJECT:

Winkelman Natural Resource Conservation District – Coordination Arizona State Land Department – Approval of Maintenance Arizona Game and Fish Department – HPC and LRP funding

## PROJECT NEED AND DESCRIPTION

Please use direct language: why is this project important? What problem will be solved? How will you implement it, and how will the habitat be enhanced? Please include # of acres, methods, roles, and any phases. Please be specific and thorough.

NEED STATEMENT – PROBLEM ANALYSIS: Perennial water within the Winkelman Natural Resource Conservation District (WNRCD), located within the Lower San Pedro River and Gila River Watersheds (see map), is largely limited to water developed for cattle ranching and a few springs found throughout the district—many of which are becoming unreliable as perennial water sources. Currently wildlife water catchments or developments are limited within this area with only six AGFD water developments within 20 miles of any of our proposed sites and none within four miles. There is ephemeral water found in the San Pedro River, Gila River, and Aravaipa Creek, but it is unreliable and limited to these river corridors. Additionally, there are cattle drinkers within 4 miles of the sites, but they may not be available at each location year round.

Water longevity in dirt stock tanks in the WNRCD is currently limited by the efficiency of the dirt tank depending on its maintenance and the tank's ability to hold water. Many of these dirt tanks have high wildlife value to mule deer, Coues deer, javelina, black bears, mountain lions, and bighorn sheep. By cleaning these silted in tanks and using an effective sealant, these tanks could hold water for wildlife longer and more efficiently. Additionally, many of the ranches within the Winkelman Natural Resource Conservation District rely on water to move and manage cattle herds throughout their ranches because many are not separated into pastures by fences. By improving the effectiveness of these dirt tanks, cattle will be able to graze more evenly throughout the ranches, minimizing concentrated grazing and benefitting wildlife habitat.

**PROJECT DESCRIPTION AND STRATEGIES:** The Winkelman NRCD has begun a district-wide stock pond cleaning and sealing program to keep water available on the landscape longer and more

effectively. We propose the cleaning and maintenance of 11 dirt stock tanks in the Winkelman NRCD and the sealing of four of them with Seepage Control's ESS-13. HPC funds would be used to purchase ESS-13, contract the cleaning of 3 dirt tanks on the AGFD's Triangle Bar Ranch, and 80 hours of coordination time by WNRCD staff. Each rancher involved in the program has committed to cleaning the dirt tanks and applying ESS-13 with their own equipment and time or paying a contractor to carry out the work. Additionally, Aravaipa Canyon Ranch has committed to cleaning and sealing at least two additional dirt tanks at their cost. The AGFD Landowner Relations Program in Region 5 has also committed \$4,000 to supplement the purchase of ESS-13 between 4 dirt tanks.

This project is being coordinated by a dedicated staff member of the WNRCD and is shovel ready. As soon as funds are available, purchase of ESS-13 and contractor procurement can be implemented. All sites have been visited, mapped, and photographed. Arizona State Land Department has been contacted and the sites approved (see attachment). Planning would be finalized in April 2019 and on-the-ground work could be completed by July 2019 prior to monsoon rains. Tanks will then be monitored during and after they catch water to confirm effectiveness of cleaning and sealing.

Seepage Control has been sealing ponds, lakes, and dirt tanks for over 60 years and its product ESS-13 is environmentally safe. Because the primary component is vegetable oil, the product can be poured directly into water containing fish and is not harmful if consumed by wildlife or cattle. They have recently developed a method specifically for dirt tank sealing for wildlife waters (see attachments). This method involves mixing ESS-13 with the bottom layer of a dirt tank and compacting a 6-12 inch sub-grade layer. Then spraying ESS-13 over the top of this compacted layer and covering with another 6-12 inch cap of dirt for additional protection from the tank drying and from cattle. ESS-13 is the only lining system that improves over time. The first new construction project completed with the ESS-13 Treated and Compacted method was completed in 1970. This was a 50-acre development lake in Tempe known as The Lakes. According to the current Community Manager, it is holding perfectly with no seepage. ESS-13 has been used in a number of projects in southern Arizona including on Pima County's Canoa Ranch.

ECC 12

Name (	Coordinates	Ranch	E	SS-13	Cleaning
Indian Camp	32.967912,	-110.867373	Duboise		X
Lower Tank	32.854569,	-110.564135	Aravaipa Canyon Ranch	. X	X
Basin Tank	32.863885,	-110.554938	Aravaipa Canyon Ranch	. X	X
Trick Tank 1	32.864777,	-110.566753	Aravaipa Canyon Ranch	. X	X
Cholla Tank	32.788133,	-110.744533	Triangle Bar Ranch		X
Cronley Tank	32.747993,	-110.724313	Triangle Bar Ranch		X
Pearl Tank	32.748945,	-110.722898	Triangle Bar Ranch		X
Cement Tank	32.752754, -	110.529498	Table Mountain Ranch	X	
Black Tank	32.766068,	-110.514730	Table Mountain Ranch	X	X
Zapata 1	32.797228,	-110.627677	Mann Ranch		X
Zapata 2	32.784809,	-110.609307	Mann Ranch	X	X
Indian Camp	Tank Mu	le Deer, Javelina,	Coues Deer, Mountain Li	on	
Lower Tank	C	Coues Deer, Javel	ina, Bighorn Sheep, Moun	tain Lion	
Basin Tank	C	Coues Deer, Javel	ina, Bighorn Sheep, Moun	tain Lion	
Trick Tank 1	C	Coues Deer, Javel	ina, Bighorn Sheep, Moun	tain Lion	
Cholla Tank	Mule Deer,	Javelina, Coues	Deer, Mountain Lion, Black	ck Bear	
Cronley Tank Mule Deer, Javelina, Coues Deer, Mountain Lion, Black Bear					
Pearl Tank	Mule Deer,	Javelina, Coues	Deer, Mountain Lion, Black	ck Bear	
Cement Tank	Mule	Deer, Javelina, C	oues Deer, Mountain Lion		
Black Tank	N	Mule Deer, Javeli	na, Coues Deer, Mountain	Lion	
Zapata 1	N	Mule Deer, Javeli	na, Coues Deer, Mountain	Lion	
Zapata 2	N	Mule Deer, Javelin	na, Coues Deer, Mountain	Lion	
Name	Ranch	Lando	ownership		

Indian Camp Duboise State Trust

Lower Tank Aravaipa Canyon Ranch Private Aravaipa Canyon Ranch Basin Tank State Trust Trick Tank 1 Aravaipa Canyon Ranch State Trust Cholla Tank Triangle Bar Ranch State Trust Cronley Tank Triangle Bar Ranch State Trust Triangle Bar Ranch Pearl Tank State Trust Cement TankTable Mountain Ranch State Trust Table Mountain Ranch Black Tank Private Zapata 1 Mann Ranch State Trust Zapata 2 State Trust Mann Ranch

## SPECIFICALLY HOW WILL YOU PROMOTE THIS PROJECT AND ACKNOWLEDGE THE AZ GAME & FISH DEPARTMENT HPC PROGRAM? NA

**LAND OWNERSHIP AT THE PROJECT SITE(S):** Arizona State land, Private; No, there is not a landowner-Department Access Agreement in place

**PROJECT MONITORING PLAN:** This current program will be administered and monitored by the Winkelman NRCD's District Coordinator. Photos have been recorded of the current condition of the tanks. Additionally, photos will be taken before and after work is completed and when full of water at the same locations allowing for standardized repeat photographs.

**PROJECT MAINTENANCE:** Maintenance will continue by the rancher or a continuation of this program by Winkelman NRCD.

**PROJECT COMPLETION REPORT TO BE FILED BY:** Winkelman NRCD district coordinator, the dedicated staff member for this program, will complete the project completion report.

SUPPORTING DOCUMENTS LIST: 1 Winkelman Conservation District Map, 2 Project Overview Map, 3 Duboise Ranch Tanks, 4 Aravaipa Canyon Ranch Tanks, 5 Table Mountain Ranch Tanks, 6 Mann Ranch Tanks, 7 Triangle Bar Ranch Tanks, 8 Seepage Control ESS-13 Flyer, 9 Seepage Control Wildlife Waters, 10 Archaeology Clearance Email – ASLD, 11 Tank Photos

Have supporting documents been submitted? YES

ARIZONA GAME AND FISH DEPARTMENT

## WATER DEVELOPMENT WORKSHEET

PROJECT TITLE: Winkelman NRCD Dirt Tank Cleaning and Sealing for Wildlife

- Was a site visit completed (Date and with whom)? Yes, all tanks in application were visited and mapped by the WNRCD Coordinator July August 2018. Wildlife Manager Allison Haywood accompanied site visits on the Aravaipa Canyon Ranch on August 8, 2018.
- 3) If this is a dirt tank project, has the site historically held reliable water? Yes

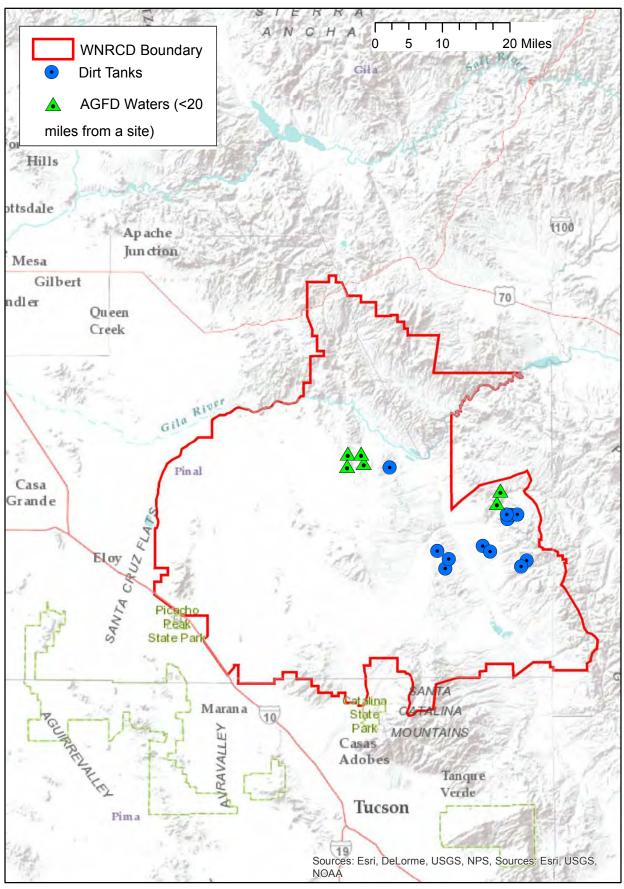
# Winkelman NRCD Dirt Tank Cleaning and Sealing for Wildlife

## **Attachments**

- 1 Winkelman Conservation District Map
- 2 Project Overview Map
- 3 Duboise Ranch Tanks
- 4 Aravaipa Canyon Ranch Tanks
- 5 Table Mountain Ranch Tanks
- 6 Mann Ranch Tanks
- 7 Triangle Bar Ranch Tanks
- 8 Seepage Control ESS-13 Flier
- 9 Seepage Control Wildlife Waters
- 10 Archaeology Clearance Email ASLD
- 11 Tank Photos

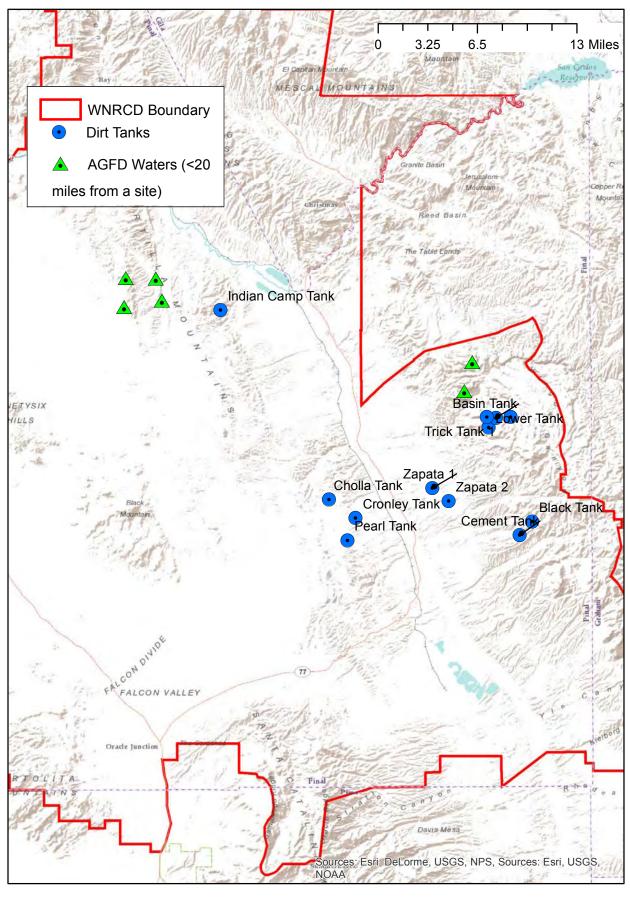
## Winkelman NRCD





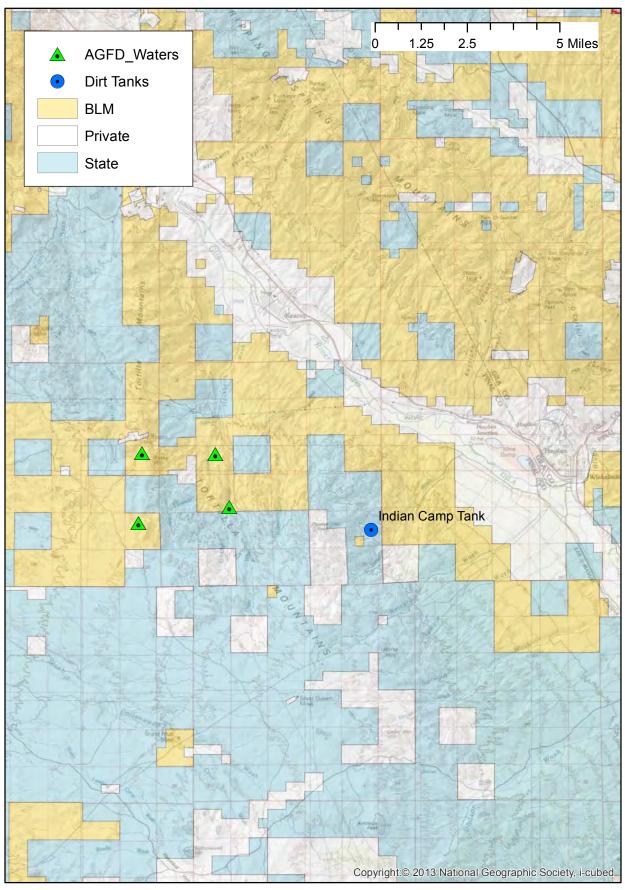
## **Project Overview**





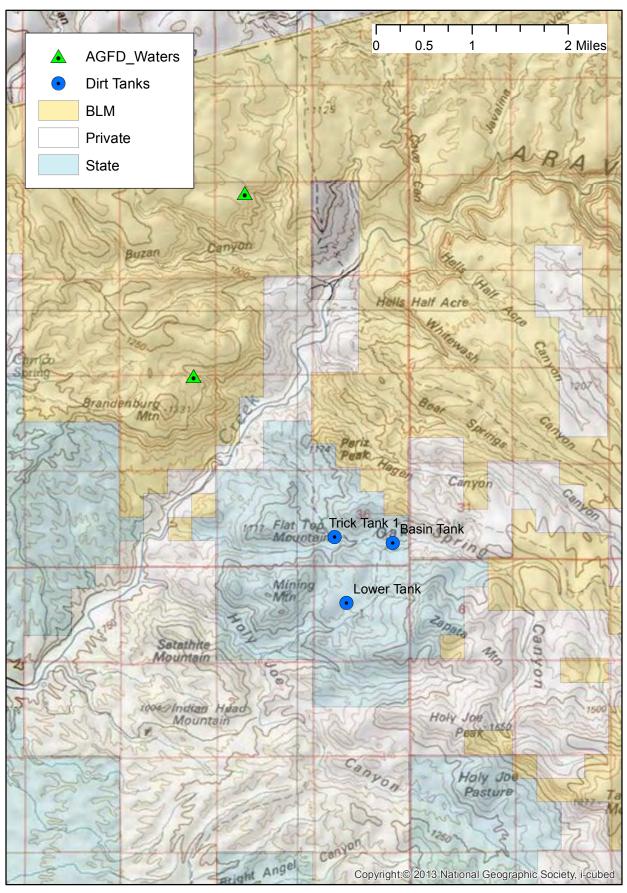
## **Duboise Ranch Tanks**





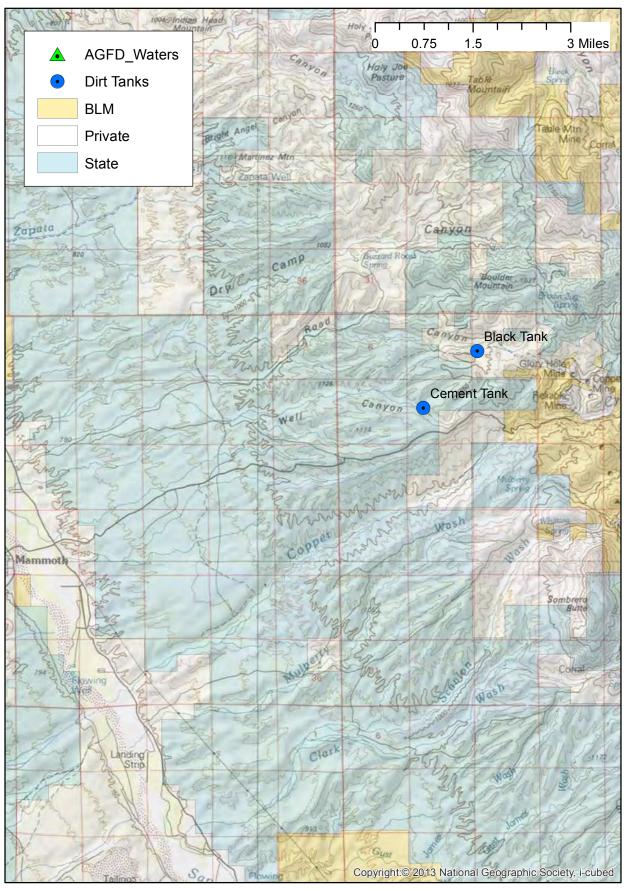
## Aravaipa Canyon Ranch Tanks





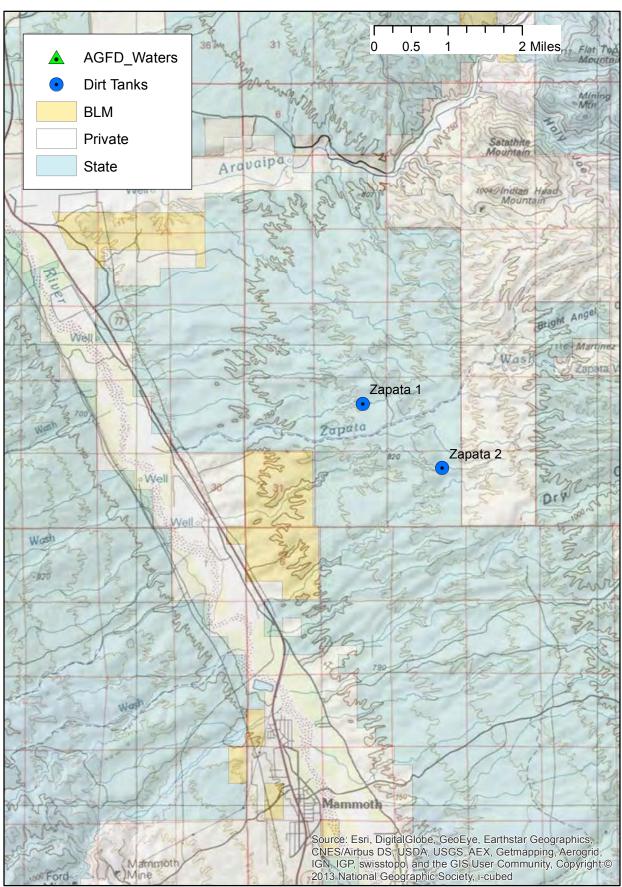
## **Table Mountain Ranch Tanks**





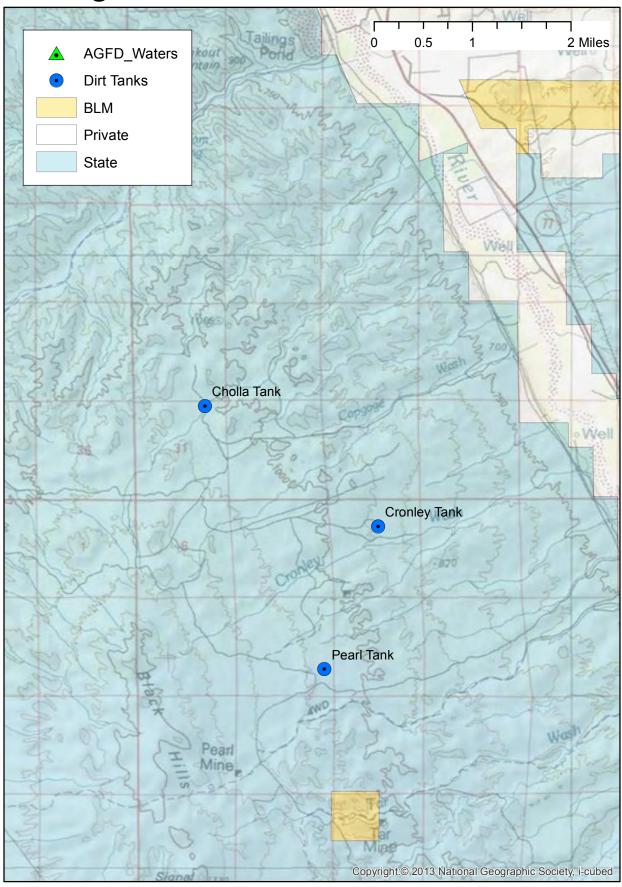
## Mann Ranch Tanks





## Triangle Bar Ranch Tanks





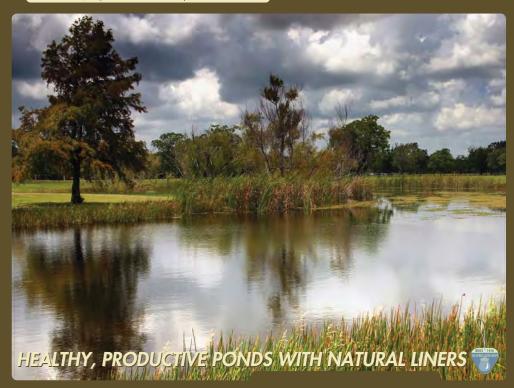


## Seepage Control, Inc.

**Building Ranch Lakes and Ponds with ESS-13** 

Environmental Soil Sealant

www.seepagecontrol.com | 1.800.214.9640



## **Case Study**



Bill Dance Signature Lakes, Twin Oaks Farms, Holly Springs, MS 30 acre fishing pond

Twin Oaks Farms has a 30+ acre lake that was originally constructed by a local contractor. After all of the planning and the expenses associated with constructing the lake, it soon became apparent that it was not holding water.





At that point, the owners contacted Bill Dance Signature Lakes for a solution for this unfortunate dilemma. The Bill Dance Company, along with Hall, Blake & Associates Engineering, consulted with Seepage Control and it was determined that the ESS-13 Treated and Compacted Lining System was the perfect solution.

During the re-building process, ESS-13 was incorporated into on-site soil creating an amended soil lining system that fit perfectly into the overall concept while maintaining the purity of the natural environment. The owners are now able to enjoy the lake they had long envisioned.







#### **Application Methods**

Full Lake - Waterborne Application

A Waterborne application of ESS-13 is highly effective in minimizing the amount of water loss due to seepage in ponds or lakes. Even ponds that were



constructed with plastic liners, native clay, or bentonite can be successfully treated with this environmentally friendly product. Test data shows that ESS-13 is non-toxic to aquatic life and any effect would only be at concentrations significantly higher than our standard treatment.

#### Empty Lake - Treated and Compacted Application

The ESS-13 Treated and Compacted application has been used successfully since 1971 and is perfect for new construction or renovation projects. Similar to a clay liner, the product is incorporated into the soil using standard earth moving equipment and is compacted in six-inch lifts. The end result is a layer of soil that has the product mixed throughout and is densely compacted. The typical

thickness is 12 inches, but this may vary depending on the project specifications.

#### Empty Lake - Spray-On Application

Over the last ten years, the development of our most effective lining system, the ESS-13 Spray-On application, has opened up many doors of opportunity in the public sector. This method can usually



meet the most stringent wastewater standards utilizing on-site soil. With this method, the product is simply sprayed onto a properly prepared subgrade, and then allowed to dry. Once it is dry, a six-inch compacted soil cover is placed over the liner to protect it during the filling process.

#### Joey Rivers - Uvalde, TX

Joey Rivers is a contractor out of Uvalde that we have worked with on numerous lake projects over the last seven years. Joey has also represented Seepage Control as a "Field Supervisor" on projects where other contractors were doing the installations.



In addition to his fairly vast experience in installing ESS-13 soil lining systems, Joey has used ESS-13 on one of his own ponds on his ranch in Uvalde. Adjacent to the ESS-13 treated pond is another pond that was previously constructed and lined with a synthetic liner. Joey's observation is that the ESS-13 lined pond has much better water quality than the synthetic lined pond. This same comparison has been made by other people in the industry.



## Partial List of Completed Jobs in Texas

City of Austin Nature and Science Center

**Traditions Golf Course** 

Concan Country Club at Mountain Valley

White Oak Lake Estate

Ambush Golf Course

Reese Golf Center

Falls Creek Golf Course

The Club @ Cimarron

Riverside Golf Course

Mill Creek Golf & Country Club

Brooks City Base

Fox Springs Park

**River Crossing Golf Course** 

Riverstone Development Lake

**Tomball Shopping Center** 

**Uvalde Ranch** 

Bear Ridge Golf Club

Wichita Falls

Austin

Bryan

Concan

Cypress

Lajitas

Lubbock

Midlothian

Mission

Riverside

Salado

San Antonio

Spring

**Spring Branch** 

Sugarland Tomball

Uvalde

Waco

Wichita



# Sealing Lakes & Ponds with ESS-13° Empty or Full.

1-800-214-9640 | phone 480-763-1182 | fax 115 S. Weber Dr. Suite #2 Chandler, AZ 85226 info@seepagecontrol.com | email

## Wildlife Conservation Pond Sealing Proposal

In an effort to provide a highly effective, permanent solution to the problem of water loss due to seepage, Seepage Control, Inc. has put together the following proposal. This proposal is designed exclusively for wildlife conservation ponds being served through grant funding and is not available for any other application. The price in this proposal reflects a 26% discount over our list pricing and will include a one year limited warranty.

Seepage Control, Inc. will provide ten totes (2,750) gallons of ESS-13 Spray-On Formulation per acre to be sprayed directly onto a prepared subgrade. This application rate is heavier than the standard application rate to accommodate remote conditions, limited equipment available for installation, dry cycles and less than ideal soil conditions.

In addition, Seepage Control, Inc. will provide a sufficient quantity of our own proprietary Compaction Aid Formulation, E-13, for the preparation of the subgrade.

Each pond owner will have a dedicated Technical Field Representative available to them for consultation and for the purpose of developing specific installation procedures based on their conditions and available equipment.

The price below does not include delivery of the product to the job site, installation of the product or applicable sales taxes.

Price per acre.....\$16,500.00



#### Kyle Thompson <kylewthomp@gmail.com>

## Cleaning out dirt tanks

7 messages

Cody Hatfield <chatfield@azland.gov>

To: "kylewthomp@gmail.com" <kylewthomp@gmail.com>

Tue, Aug 14, 2018 at 8:13 AM

Kyle,

Our lessee's may clean-out/maintain dirt tanks without an Application to Place Improvements or archaeological clearance as long as the work does not go above and beyond the scope of the original project. In other words, they cant make the dirt tank bigger, deeper or wider (hold a larger amount of water) than what the original water right/project called for. However, if the project area has to break new ground for the equipment to access it (new roads or equipment with tracks walking across previously undisturbed land) then that portion has to be cleared by a permitted archaeologist and a report submitted to ASLD Cultural Resources Staff for review and approval before such work occurs. If you have any other questions don't hesitate to call me at 520-444-1142.

Cody Hatfield

Range Area Manager

Arizona State Land Department

Kyle Thompson <kylewthomp@gmail.com>

To: chatfield@azland.gov

Thanks for the information, Cody.

Kyle

[Quoted text hidden]

Kyle Thompson <kylewthomp@gmail.com>

To: chatfield@azland.gov

Hi Cody,

Tue, Aug 14, 2018 at 1:18 PM

Wed, Aug 22, 2018 at 10:40 AM

Are you familiar with Seepage Control's ESS-13? We would like to seal 3-4 tanks on state land through this project with this product. As far as I know there is no problem using ESS-13 on state land as it is environmentally safe. Is that correct?

Thanks, Kyle

[Quoted text hidden]

Cody Hatfield <chatfield@azland.gov> To: Kyle Thompson <kylewthomp@gmail.com> Thu, Aug 23, 2018 at 6:44 AM

Kyle,

Never heard of that stuff before. Is it similar to bentonite? I would have no problems with you using it as long as it isn't toxic or harmful in any way to the environment.

From: Kyle Thompson <kylewthomp@gmail.com> Sent: Wednesday, August 22, 2018 10:41 AM To: Cody Hatfield <chatfield@azland.gov> Subject: Re: Cleaning out dirt tanks

[Quoted text hidden]

### Kyle Thompson <kylewthomp@gmail.com>

Tue, Aug 28, 2018 at 9:27 AM

To: chatfield@azland.gov

Hi Cody,

It has been used on the Canoa Ranch and a Pima County City Park. It is environmentally friendly - it is vegetable oil based and can be poured directly into water. Here is their website http://www.seepagecontrol.com/. It has been used in Texas for stock ponds quite a bit, but largely not used in that application in Arizona until recently. If there is any problem with using it, please let me know.

[Quoted text hidden]

## Cody Hatfield <chatfield@azland.gov>

Tue, Aug 28, 2018 at 9:34 AM

To: Kyle Thompson <kylewthomp@gmail.com>

Kyle.

I don't see any problems with using it on ASLD lands for this purpose.

Sent from my iPhone

[Quoted text hidden]

**Kyle Thompson** <kylewthomp@gmail.com>

Tue, Aug 28, 2018 at 9:37 AM

To: chatfield@azland.gov

Ok, thank you.

Kyle

[Quoted text hidden]

Lower Tank, Aravaipa Canyon Ranch





Basin Tank, Aravaipa Canyon Ranch





**Black Tank, Table Mountain Ranch** 



Cement Tank, Table Mountain Ranch



Indian Camp Tank, Duboise Ranch





Cholla Tank, Triangle Bar Ranch



**Cronley Tank, Triangle Bar Ranch** 



## Pearl Tank, Triangle Bar Ranch

