

**ARIZONA GAME AND FISH DEPARTMENT
HABITAT PARTNERSHIP COMMITTEE
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL**
Electronic version available here: <https://goo.gl/forms/NZ8uNdSYpqq0AoUL2>

HPC Project Number:

18-521

PROJECT INFORMATION

Project Title:	South Legunita Grassland Habitat Enhancement – Phase III		
Game Management Unit:	36C	Region:	5
Local Habitat Partnership Committee (LHPC):	Was the project presented to the LHPC?		
Tucson	Yes		
Project Location: (Please provide lat/long 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). Please include enough maps to clearly demonstrate what the project will accomplish and where in Arizona the project is located (e.g. site specific map, and a larger overview map that shows where in the state the project is located).			
LATITUDE/NORTHING: 31.6220			
LONGITUDE/EASTING: -111.5563			
MULTIPLE LOCATION COORDINATES:			
Project Type:	Habitat Restoration		
Water Project Action (if applicable):			
Habitat Restoration Action (if applicable):	Mesquite density reduction/grassland restoration		
Other Project Type and Action (if applicable):			
Has this project been submitted in previous years?	No		
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: Mesquite will be mechanically removed from approximately 389 acres of former grassland in an area adjacent to recent grassland restoration activities. Trees will be reduced in density on ridgetops and swales, but left standing in drainages to provide cover for wildlife. The intent is to expand currently occupied pronghorn habitat in the southern reaches of the Altar Valley, complimenting 3,408 acres of grassland restoration work completed since 2010.			
Primary Big Game Wildlife Species to Benefit:	Pronghorn, Mule Deer, Javelina, Mountain lion		
Implementation Schedule (Month/Day/Year)	START DATE: 03/15/19	COMPLETION DATE: 10/15/19	

PROJECT FUNDING

Project Funding	Itemized Use of Funds
<p>*Qualifying Cost Share should be restricted to support (materials, compliance, and or labor) of the proposed action ONLY (same time and place). Please do not include previously purchased supplies or past completed work.</p> <p>HPC Funds Requested</p> <p>Amount: \$50,000</p> <p>Cost Share or Matching Funds</p> <p>Amount: \$57,467</p> <p>Landowner has completed an archaeology survey, and submitted the application to place an improvement, with a value of <u>\$8,842</u> (389 acres of the 1,300 surveyed x \$22.73/acre)</p> <p>Arizona Department of Environmental Quality has also pledged to match 50% of the total project cost which is <u>\$48,625.</u></p> <p>Percent Match 59%</p> <p>Total Project Cost</p> <p>Amount: \$97,250</p> <p>* This project is scalable, and will accept partial funding.</p>	<p>Please email separate quotes if HPC funds are to be used to purchase materials or contracted labor: HPC@azgfd.gov.</p> <p>Funds will be used to hire the same contractor from Phase I, who will bring equipment, provide fuel, and do the labor. The HPC funds will be used for work to be done on ASLD leased property (389 acres). An approximate cost of <u>\$250/acre</u> was used for this estimate and is higher than Phase I due to contractor better understanding the nature and costs involved with the work.</p> <p style="text-align: center;">$\\$250 \times 389 \text{ acres} = \\$97,250$</p>

ENVIRONMENTAL COMPLIANCE

Please indicate the status of the Project's compliance. if you are unsure, please reference:
HPC Compliance Checklist (<https://www.azgfd.com/wildlife/hpc/forms/>).
If you have questions regarding the requirement of an EAC, contact AGFD's Project Evaluation Program:
(<https://www.azgfd.com/wildlife/planning/projevalprogram/>).
***Please email supporting compliance documents to HPC@azgfd.gov ***

AGFD EA Checklist Completed:	n/a	Completion Date:	Falls under statewide programmatic, since HPC money will be used on ASLD portion
NEPA Completed:	n/a	Completion Date:	
State Historic Preservation Office/ Archaeological Clearance:	(survey complete, SHPO believed cleared)	Completion Date:	

CONTACT INFORMATION

Applicant

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

APPLICANT NAME: Walter Lane
ORGANIZATION: Santa Margarita Ranch
ADDRESS: PO Box 37018, Tucson AZ 85704

PHONE: (on file w/LRP)
EMAIL: (on file w/LRP)

AGFD Project Proponent

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

AGFD CONTACT NAME: Sarah Gandaria

PHONE: 520-388-4471

Cooperators

COOPERATOR NAME(S), ORGANIZATION, ROLE IN PROJECT:
 Walter Lane, Santa Margarita Ranch, Ranch Manager. Hire contractors and oversee work.
 Sarah Gandaria, Arizona Game and Fish Dept, Landowner Relations Program. Map project area, ensure paperwork/compliance is complete, and coordinate funding.
 Rana Tucker, AZGFD Game Specialist, Guidance on HPC Application, guidance on game species, and coordinator for Phase I
 Jered Ellingson, AZGFD, WM for unit 36 C. Coordination and recommendations for treatment area.
 Mike McIntire, AZ State Lands Dept, Range Resource Area Manager. Approval of land treatment for ASLD lease.

PROJECT NEED AND DESCRIPTION

NEED STATEMENT – PROBLEM ANALYSIS:

The Altar Valley, south of Hwy 86, directly east of the Boboquivari Mountains encompasses approximately 457,000 acres of Arizona rangeland in Game Management Units 36 A, B, and C. In this valley, 347,000 acres were categorized by percent shrub canopy cover in a 2012 grassland quantity and composition study conducted by The Nature Conservancy. At the time it was surveyed, only 5% of this once open grassland had less than 15% shrub cover. The survey found 54% of the total area, to have between 10-35% shrub cover, and suitable for restoration activities. The remaining acreage was either greater than 35% shrub invaded or not classified at all, likely due to urban encroachment.

This once open area, where shrub cover has not exceeded 35%, still supports a small population of pronghorn antelope, mostly in areas where grassland restoration has been completed, or shrub density was low to begin with. It is the desire of the Department that shrub density be reduced to less than 10% on at least 20 square miles, or 12,900 acres, in the southern portions of the Valley in the interest of promoting pronghorn population growth and improving grassland species diversity (Altar Valley Pronghorn Status Update and Restoration Plan Draft--2/14/2017). In the MFA Plan for these units, the need for grassland restoration for the benefit of pronghorn antelope is listed as a Priority 1 Issue. Reducing the number of mesquites will also increase the groundwater recharge rate, and increase the availability of water to grasses and forbs. With more land cover, the grass will then act as a filter to clean water as it goes into the aquifer.

Since 2010, the Buenos Aires National Wildlife Refuge (BANWR), which encompasses 117,464 acres in the valley, has reduced mesquite density on a total of 3,408 acres. In addition to the already cleared acres, 8,229 acres have been surveyed for cultural resources. On the culturally cleared acres, they have been awarded funding to cover 50% of the total cost to masticate and apply herbicide to 322 acres. This area is across Highway 286 from the South Legunita pasture and they are also applying to HPC to cover the remaining 50%.

In 2017, the Santa Margarita Ranch, which borders the Refuge to the west, expressed interest in expanding upon grassland restoration work completed, where over half of the 3k+ acres cleared are located. To show his sincerity, Walter Lane, the ranch manager, contracted a cultural resources survey on 1,300 acres directly west of the 1,134 acres cleared in 2016-17, so that as resources were made available, mesquite might be mechanically reduced on the uplands in that pasture. Last year, with the help of the Landowner Relations Program Staff Specialist, Santa Margarita applied for and was awarded HPC and Partners for Fish and Wildlife funds for Phase I of the project to grub over 300 acres and is currently gearing up for phase II of the project to grub 60 acres which is being funded through AZGFD Landowner Relations Program.

PROJECT DESCRIPTION AND STRATEGIES:

The South Legunita pasture contains approximately 1,300 acres of loamy upland soil characterized by perennial grasses on the uplands being encroached upon by mesquite from the drainages that run northwest to southeast through the pasture. With tree density being much less dense on the ridges than in drainages, it is desirable to remove mesquite from the uplands, but leave most of the trees in the major drainages, and a few scattered trees in the uplands for shade and mule deer cover. There are a small number (6) of heavy patches of trees, ranging in size from 1 acre to 35, scattered across the project area; those have been left out of the project area as well, to retain cover for wildlife. Total treatable acres in the entire pasture is 1,155 acres.

The first phase of this project initially proposed reducing the density of mesquite on 282 acres, starting in the end of the pasture closest to the restoration efforts on BANWR. Of these 282 acres, 153 acres were on private land, and were funded by the US Fish and Wildlife Service's Partners for Fish and Wildlife Program. The remaining 129 acres were on an Arizona State Land Department (ASLD) grazing allotment and grubbing there was funded through the HPC in January of 2018. The AZGFD was able to procure extra funding to grub an additional 104 acres. The total number of acres to be grubbed in Phase 1 equaled 386 acres. The project is still currently under way but is slated to be done in fall 2018.

The second phase is a continuation of Phase 1 and will be working on the same ASLD allotment just west of where Phase 1 ended. It is to be funded through the AZGFD Landowner Relations Program as soon as Phase 1 is completed and will cover 60 acres.

The third phase of this project involves reducing density of mesquite on an additional 389 acres of ASLD rangeland within the same allotment. A permit to make this improvement has already been filed with ASLD, and an extension will be placed as soon as notification of funding is received.

Individual trees smaller than 6" diameter at 2ft height from the ground, and more than 100' from major drainages, which will be delineated on a map and on the ground, will be uprooted using either a track hoe, or bulldozer, ensuring the root crown is severed below the soil surface. Tree carcasses will be piled with a bulldozer or front end loader, and burned when weather permits, following regulations set by the AZ Dept of Environmental Quality and the local Fire Department. Care will be taken to avoid disturbing soil more than necessary, and equipment will be offloaded/loaded in previously disturbed areas.

As funding becomes available, the remaining 320 acres will be grubbed, in blocks proportionate to the amount of funding.

LAND OWNERSHIP AT THE PROJECT SITE(S):

Arizona State Trust Land

PROJECT MONITORING PLAN:

The Landowner Relations Specialist will monitor project progress and documenting completion of blocks

PROJECT MAINTENANCE:

After trees are removed, project maintenance, such as monitoring for resprouts and controlling via herbicide, removal, or herbivory, will be the responsibility of the ranch manager. It is the expectation of the Department that reasonable efforts be undertaken to control resprouting mesquite.

PROJECT COMPLETION REPORT TO BE FILED BY:

Sarah Gandaria, Landowner Relations Specialist, R5

SUPPORTING DOCUMENTS LIST:

If you are unsure, please reference the Recommended Supporting Documents for your Application:

(<https://www.azgfd.com/wildlife/hpc/forms/>).

Copy of Last Years Approved ASLD Application (2017)

Statewide Location map

Map of project area on satellite image

Map of project area on topographic map

Photos of Phase I Before/After

BANWR Mule Deer Herd Photo

USFWS Partners SHPO Response Letter

Have supporting documents been submitted?

Yes, emailed to Dan Sturla.

ARIZONA GAME AND FISH DEPARTMENT
WATER DEVELOPMENT WORKSHEET

PROJECT TITLE: _____

- 1) **Was a site visit completed (Date and with whom)?**

- 2) **If this is a dirt tank project, has the site historically held reliable water?**

- 3) **If this is a dirt tank project and soil data is available, what type of soil is at the site?**

- 4) **If this is a water catchment project, please list the Development Branch coordination date:**

- 5) **Is the water development listed as a priority in the most recent “Wildlife Water Development Annual Implementation Schedule?”**

- 6) **If this is a water catchment project, please list the Development Branch personnel coordinated with:**

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

NHPA

SHPO - 2018-0337 (141546)
ARIZONA STATE HISTORIC PRESERVATION OFFICE



U.S. Fish and Wildlife Service
Arizona Partners for Fish and Wildlife
Arizona Ecological Services Field Office
9828 North 31st Avenue #C3
Phoenix, Arizona 85051-2517
602-242-0210 602-242-2513 Fax



February 26, 2018

Ms. Kathryn Leonard
State Historic Preservation Office
Arizona State Parks
1100 West Washington Street
Phoenix, AZ 85007



Attn: Ms. Mary-Ellen Walsh, MA, RPA
Compliance Specialist/Archeologist

RE: Santa Margarita Ranch in Pima County, Arizona

Dear Ms. Leonard:

In compliance with Section 106 of the National Historic Preservation Act, I want to notify you of a proposed federal undertaking in Pima County, Arizona. The U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program proposes to fund a project for the removal of invasive mesquite on approximately 154 acres of private property on the Santa Margarita Ranch, located 9 miles north of the U.S.-Mexico border. The proposed project will be funded under the authority of the Partners for Fish and Wildlife Act (Public Law: 109-294).

Harris Environmental completed a cultural resource survey, "*The Santa Margarita Ranch Survey: A Class III Cultural Resources Inventory of 1,318 Acres West of State Route 286, Pima County, Arizona*" in August 2017 and is enclosed for your convenience. The proposed 154 acres that would be treated using Partners funds are located within the defined Area of Potential Effects of the larger 1,318 acres surveyed. The Class III cultural survey identified 4 isolated occurrences. Arizona State Land Department submitted the report for review.

No archaeological sites were identified within the project area. Four isolated occurrences were recorded within the project area. None of these isolates is recommended eligible for the National Register of Historic Places or the Arizona Register of Historic Places. Harris Environmental recommends that no historic properties will be affected by proposed mesquite reduction activities within the project area.

A letter describing the project was sent to the following tribal contacts: Fort McDowell Yavapai Nation, Hopi Tribe, Pascua Yaqui Tribe, Tohono O'Odham Nation, and the Pueblo of Zuni. We have asked if they have any properties of cultural or religious significance within the project area as well as if they have any concerns with the project. We intend to notify the affected tribes should any cultural features or deposits be encountered during project activities.

Project Name: Santa Margarita Ranch

County: Pima

Geographic Location: Township 21 South, Range 8 East, Section 8

USGS 7.5 Minute Map Name: Presumido Peak, Arizona

Project Description:

The proposed project will involve reducing density of mesquite on the Santa Margarita Ranch. The first phase of the project will remove mesquite from 289 acres. Of the 289 acres, 154 acres occur on Deeded land owned by Santa Margarita Ranch and will be treated with funds Partners for Fish and Wildlife. The remaining 135 acres are land leased from the Arizona State Land Department (ASLD) and will be treated with other funding sources.

Individual trees smaller than 8" diameter at breast height, and more than 100' from major drainages, which will be delineated on a map and on the ground, will be uprooted using either a track hoe, or bulldozer, ensuring the root crown is severed below the soil surface. Tree carcasses will be piled with a bulldozer or front end loader. Care will be taken to avoid disturbing soil more than necessary, and equipment will be offloaded/loaded in previously disturbed areas.

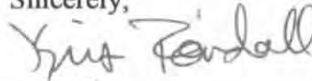
Mitigation Plan:

The cultural resource report identified four isolated occurrences (IO) within the 1,318 acre APE. IO 4 was located within the area that would be funded by Partners. The report states that the object may be modern in age. Harris Environmental recommends that no historic properties will be affected by proposed mesquite reduction activities within the project area.

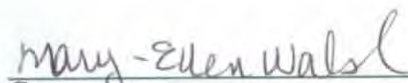
We believe **no historic properties or traditional cultural places eligible to the National Register of Historic Places will be affected by this project.** Should cultural deposits be discovered during ground-disturbing activities, all work in the vicinity will stop until cultural resource items can be evaluated by a professional archaeologist and consultation with the State Historic Preservation Office occurs.

Please concur with this determination. If you have questions, please contact me at (602) 889-5955.

Sincerely,



Kris Randall
State Coordinator
Partners for Fish and Wildlife Program



Concurrence
Arizona State Historic Preservation Office

3/22/18
Date

Enclosures

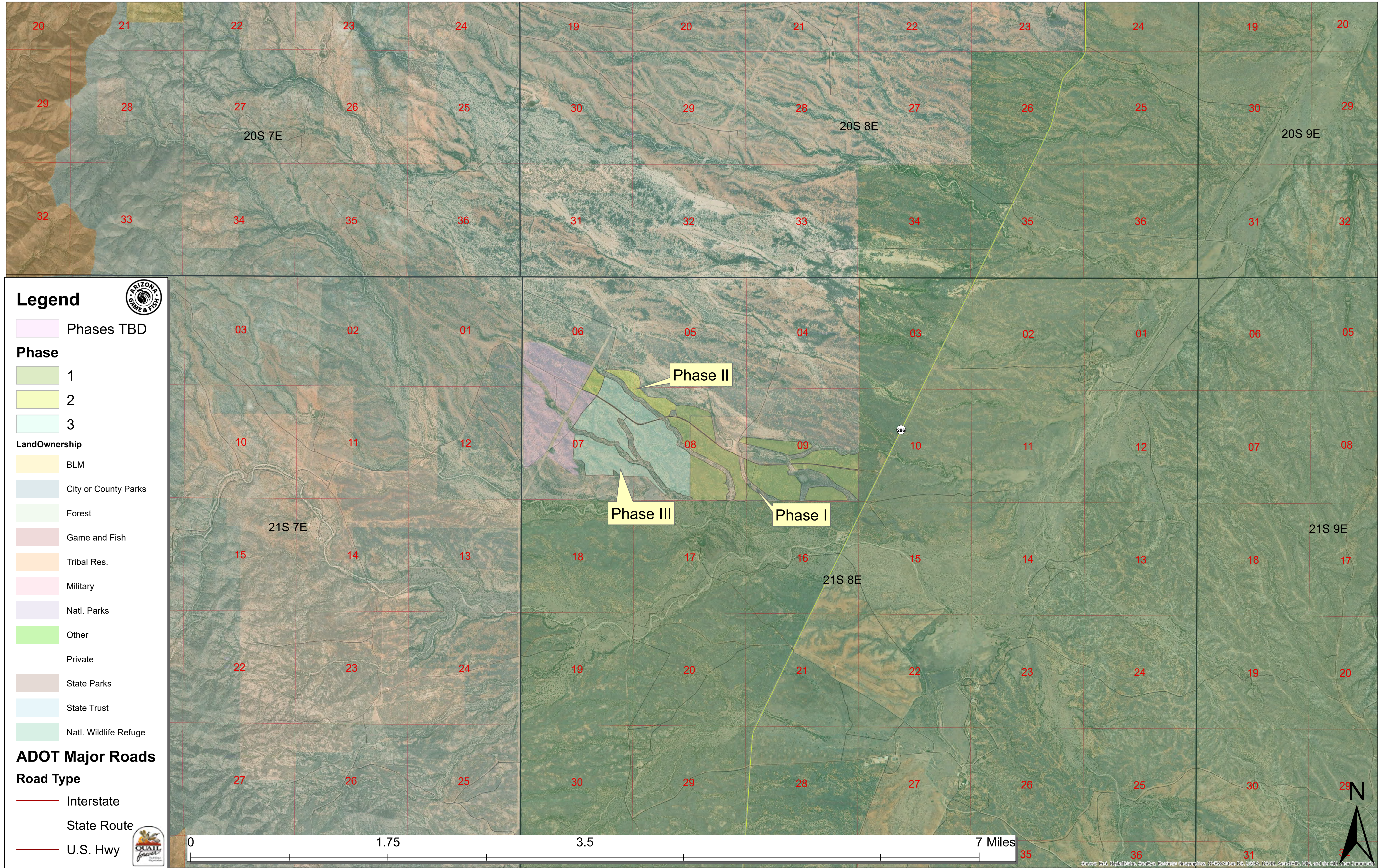
Legunitas Tank Photo Point

Before Brush Management 5/1/17



After Brush Management 8/30/18





Legend



Phases TBD

Phase

- 1
- 2
- 3

Land Ownership

- BLM
- City or County Parks
- Forest
- Game and Fish
- Tribal Res.
- Military
- Natl. Parks
- Other
- Private
- State Parks
- State Trust
- Natl. Wildlife Refuge

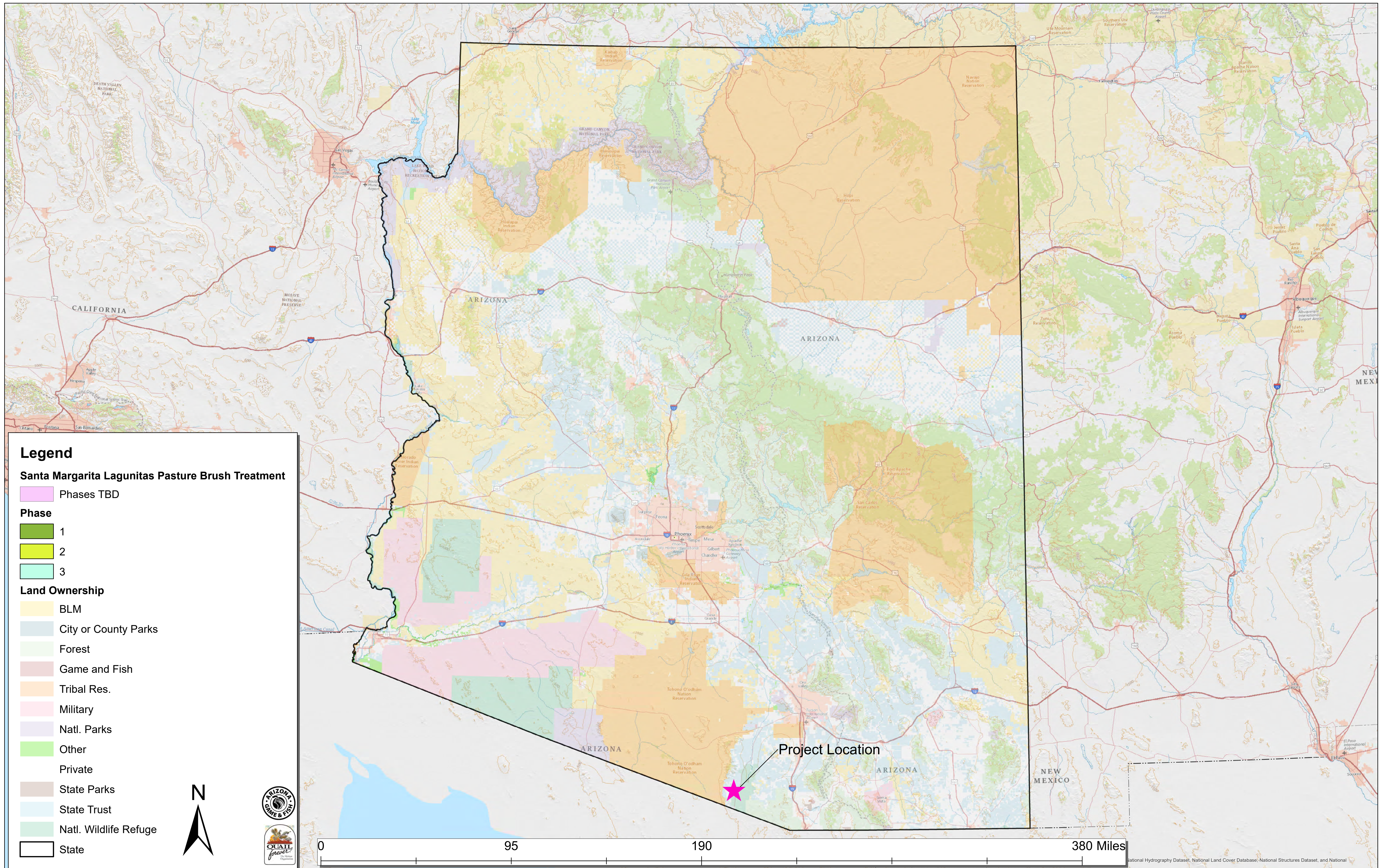
ADOT Major Roads

- Road Type**
- Interstate
 - State Route
 - U.S. Hwy



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Santa Margarita Legunitas Grassland Restoration Project Location



Legend

Santa Margarita Lagunitas Pasture Brush Treatment

Phases TBD

Phase

1

2

3

Land Ownership

BLM

City or County Parks

Forest

Game and Fish

Tribal Res.

Military

Natl. Parks

Other

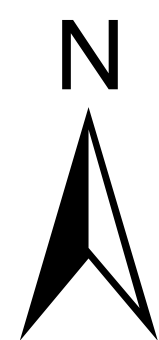
Private

State Parks

State Trust

Natl. Wildlife Refuge

State



0 95 190 380 Miles

Source: National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National

South Legunita Grassland Restoration Phase III Project Area
(Santa Margarita Ranch)

1:24,000



Legend

Santa Margarita Lagunitas Pasture Brush Treatment

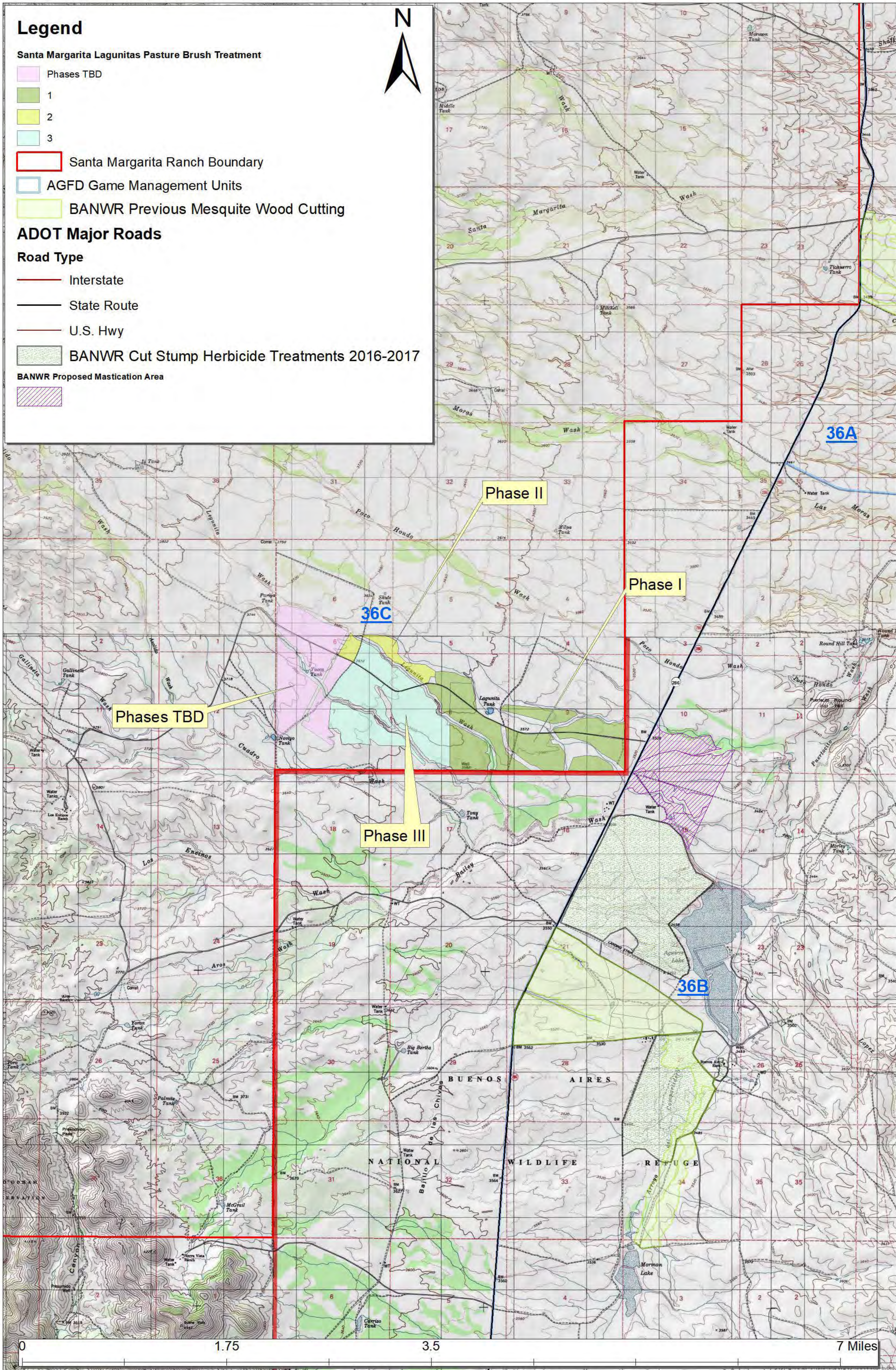
- Phases TBD
- 1
- 2
- 3
- Santa Margarita Ranch Boundary
- AGFD Game Management Units
- BANWR Previous Mesquite Wood Cutting

ADOT Major Roads

Road Type

- Interstate
- State Route
- U.S. Hwy
- BANWR Cut Stump Herbicide Treatments 2016-2017

BANWR Proposed Mastication Area



0 1.75 3.5 7 Miles

South Legunita Grassland Restoration Phase III Project Area (Santa Margarita Ranch)

1:200,000

