PHASE I ENVIRONMENTAL SITE ASSESSMENT APPLETON RANCH, SANTA CRUZ COUNTY, ARIZONA Resolution Copper

Prepared for:
RESOLUTION

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TABLE OF CONTENTS

EX	ECUI	IVE SUMMARYES	-1		
1.	INTI	RODUCTION	. 1		
		Purpose			
	1.2.	Scope of Services	.2		
	1.3.	Limitations and Exceptions	.2		
	1.4.	Special Terms and Conditions	.3		
	1.5.	Üser Reliance	.3		
	1.6.	Continued Viability	.3		
2.	SITE	DESCRIPTION	.4		
	2.1.	Location and Legal Description	.4		
		Site and Vicinity General Characteristics			
	2.3.	Current Use of the Property	.4		
	2.4.	Description of Structures, Roads, and Other Improvements on the Site	.5		
	2.5.	Current Uses of Adjoining Properties	.5		
3.		R PROVIDED INFORMATION			
	3.1.	Title Records	.5		
		Environmental Liens or Activity and Use Limitations			
		Specialized Knowledge			
	3.4.	Commonly Known or Reasonably Ascertainable Information	.6		
		Valuation Reduction for Environmental Issues			
	3.6.	Reason for Performing Phase I	.6		
		Other			
4.	RECORDS REVIEW				
		Environmental Record Sources			
		Prior Environmental Reports			
		Physical Setting			
		4.3.1. Topography			
		4.3.2. Soils			
		4.3.3. Geology	.9		
		4.3.4. Hydrology	10		
		4.3.5. Hydrogeology			
	4.4.	Historical Use Information on the Property and Adjoining Properties	12		
		4.4.1. Historical Topographic Maps			
		4.4.2. Historical Aerial Photographs			
		4.4.3. Property Tax Files			
		4.4.4. Local Street Directories			
		4.4.5. Sanborn Fire Insurance Maps	15		
		4.4.6. Other Historical Sources			
5.	SITE RECONNAISSANCE				
J.	5.1. Methodology and Limiting Conditions				
		Indications of Past Uses of the Property			
		Exterior Observations			
		5.3.1. Hazardous Substances and Petroleum Product Containers in Connection with			
		Identified Uses	18		

	5.3.2.	Hazardous Substance and Petroleum Product Containers not in Connection with			
		Identified Uses			
	5.3.3.	Storage Tanks (Aboveground and Underground)	18		
	5.3.4.	Unidentified Substance Containers			
	5.3.5.	Drums	18		
	5.3.6.	Odors	18		
	5.3.7.	Pools of Liquid, Pits, Ponds, or Lagoons	18		
	5.3.8.	Wastewater			
	5.3.9.	Septic Systems			
		. Wells			
		Stained Soil or Pavement			
		Stressed Vegetation			
		Solid Waste Disposal			
		. PCB Equipment			
		or Observations			
6.		EWS			
		iews with Owner			
		iews with Manager			
		iews with Occupants			
		iews with Local Government Officials			
	6.5. Interv	iews with Others	23		
7.	FINDING	S AND OPINIONS	24		
8.	CONCLUS	SION	26		
9.	DEVIATIO	ONS	27		
10.	ADDITIONAL SERVICES2				
11.	QUALIFICATIONS AND SIGNATURE OF ENVIRONMENTAL PROFESSIONALS 29				
12.	REFEREN	ICES	30		

FIGURES

(follow text)

- Figure 1. Vicinity Map
- Figure 2. Aerial Overview with ADWR Registered Wells
- Figure 3. Surface Management
- Figure 4. Site Reconnaissance Map with Select Features

APPENDICES

Appendix A. Site Photographs

Appendix B. User and Owner Questionnaires

• Sterling Hundley, Resolution Copper

Appendix C. Pinal County Assessor's Record Maps

Appendix D. Title Records

Appendix E. EDR Environmental Lien and AUL Search

Appendix F. EDR Area Study

Appendix G. Historical Topographic Maps

- 1904 Topographic Map
- 1905 Topographic Map
- 1947, 1948 Topographic Map
- 1948 Topographic Map
- 1958 Topographic Map
- 1983 Topographic Map
- 1996 Topographic Map

Appendix H. Historical Aerial Photographs

- 1956 Aerial Photograph
- 1971 Aerial Photograph
- 1983 Aerial Photograph
- 1992 Aerial Photograph
- 2003 Aerial Photograph
- 2015 Aerial Photograph

Appendix I. A History of the Lands in the National Audubon Society's Research Ranch Near Elgin, in Santa

Cruz County, Arizona by Glendon E. Collins

Appendix J. Resumes

EXECUTIVE SUMMARY

WestLand Resources, Inc. (WestLand) was contracted by Resolution Copper Mining, LLC (Resolution; the "User") to perform a Phase I Environmental Site Assessment (ESA) for approximately 956 acres referred to as the Appleton Ranch parcel ("the Property"). The Property comprises a set of three private land tracts consisting of eight County Assessor parcels within the larger (8,000 acre) Appleton-Whittell Research Ranch (Research Ranch), which is itself a set of properties used in cooperative partnership between the Bureau of Land Management (BLM), U.S. Forest Service (USFS), The Nature Conservancy, National Audubon Society (Audubon), and Resolution. The Santa Cruz County Assessor Parcel numbers (APNs) for the Property are 108-18-012B, 108-18-012H, 108-18-019, 108-18-020, 108-18-012A, 108-18-017C, 108-36-003A, and 108-25-001. An assessor record map is provided as **Appendix C**.

The Property is presently under non-federal ownership (Resolution) but proposed as part of a land exchange with the BLM under the Southeast Arizona Land Exchange and Conservation Act of 2013. The Property is located within portions of Sections 14, 15, 17, and 28 of Township 21 South, Range 18 East, Gila and Salt River Meridian, in Santa Cruz County, Arizona (**Figure 1**).

An aerial photo showing the Property boundaries and the registered wells on the Property is included as **Figure 2**. **Figure 3** depicts the surface management (land ownership) of the Property and its vicinity. **Figure 4** shows the location of ground photographs shown in **Appendix A**.

This Phase I ESA has been completed in accordance with the guidelines provided in the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property (ASTM E 2247-16). The purpose of this work was to identify the presence or potential presence of recognized environmental conditions (RECs) resulting from past or present activities. According to ASTM guidelines, a REC is defined as "...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property."

Findings

Environmental Liens/Activity and Use Limitations

Environmental Data Resources, Inc. (EDR) was commissioned to conduct a title review for environmental liens and activity and use limitations (AULs) for the Property. This search was conducted for each of the eight parcels comprising the Property; no records of environmental liens or AULs were identified for any of the parcels comprising the Property.

Records Review

Environmental Records—Federal, tribal, state, local, and supplemental database searches for environmental records of concern were conducted by EDR on June 9, 2020. The Property was not identified in any of the environmental databases searched by EDR. No environmental record sites were located within the ASTM-recommended minimum search distance from the Property.

The EDR Orphan Summary list included in the EDR environmental records report identifies no records associated with unmappable sites ("orphan" sites) in the vicinity of the Property.

Prior Environmental Report—Prior Phase I ESAs for the Property were conducted by WestLand in 2004 (WestLand 2004b) and 2016 (WestLand 2016). The 2004 and 2016 assessments revealed no evidence of RECs in connection with the Property on adjoining land.

Physical Setting

The Property spans the Vaughn Canyon and Turkey Creek surface water basins within the San Pedro River watershed. None of the named drainages within the Property have been identified by the Arizona Department of Environmental Quality (ADEQ) as impaired for any designated uses by that agency's surface water monitoring program (ADEQ 2012, 2015, 2018). The Property is located in the Upper San Pedro groundwater basin. Groundwater appears to be on or near the Property at relatively shallow depths (i.e., generally less than 100 feet (WestLand 2004a). The Arizona Department of Water Resources (ADWR) well registry indicates that two wells at the Property reach water levels at approximately 70 feet bgs. The wells are dug to depths ranging from 100 to 260 feet bgs (WestLand 2004a). Additionally, depth-to-groundwater data from 10 wells monitored near the Research Ranch indicate that groundwater is present generally between 25 and 175 feet bgs (WestLand 2004a). No water quality data is available from the wells on these parcels.

Historical Use

The Property is located east of Arizona State Highway 83 and south of State Highway 82 within a private landholding largely surrounded by public land. Based on historical information reviewed, the Property has historically been used for ranching, including a residence and cattle grazing, which reportedly ceased in 1969 to establish an ecological preserve. The Property was not part of the land exchanges in which the adjacent Research Ranch was originally formed; it remains privately owned but is managed similarly to the Research Ranch ecological study area. Adjoining land is owned by USFS (as the Coronado National Forest), BLM, Arizona State Land Department (ASLD), Audubon, and other private owners.

The Research Ranch has been used for ecosystem conservation, research, and education/outreach. Land use activities include grassland rehabilitation efforts such as erosion control, removal of non-native invasive species, replanting native grasses, and re-establishing a natural fire regime via planned fires. Exotic removal is accomplished by spraying each plant individually with 2-percent

Roundup[®] to minimize disturbance to the ecosystem. Based on prior and recent interviews with Linda Kennedy, the representative for Audubon and past ranch manager, and the description of land use at the Research Ranch provided by published documents, conservation and research activities at the Research Ranch do not involve the application or use of hazardous materials or petroleum products (with the exception of discrete application of Roundup[®] in small [de minimis] quantities). It is possible that the storage and use of minor quantities of hazardous material and petroleum products (lubricants, cleaners, etc.) are present at structures on adjoining land (at the larger ranch) such as the laboratory, housing units and offices; however, these products would likely be found in household quantities and any releases would also be of a de minimis nature.

Site Reconnaissance

On July 13, 2020, WestLand engineer, Patrick Mette, and environmental specialist, Samantha Blonder, performed field reconnaissance to assess existing environmental conditions for the Property. Developed features and improvements at the Property are limited to windmills, solar power wells, small earthen-bermed stock ponds, electric power lines, and telegraph/telephone lines/poles. Several dirt roads access these features from the Research Ranch road network. Field observations were consistent with the findings of WestLand's historical review of the Property and vicinity.

Remnants of a ranch house (i.e. only a foundation), yard landscaping and a driveway are present on the southern tract of the Property. This residence, reportedly constructed in the 1980s, was burned down in 2002 due to a large fire that originated in the San Rafael Valley (Linda Kennedy, Audubon pers. comm. in 2015 to D. Sandoval). The Santa Cruz County Health Department has no records of a septic system at the Property; however, septic tanks may be present adjacent to the former house foundation. In 2004, two vent tubes for a septic system were observed immediately east of the house foundation; rocks dropped into the tubes contacted liquids approximately 10 feet below ground surface (bgs), indicating that liquids in the tank(s) had not been pumped out. While the vents were no longer visible in 2015 or 2020, vestiges of the septic system may still be onsite. Considering use or storage of any hazardous materials and petroleum products at this location is limited to typical household quantities, the septic system for the residence, if still present, is not considered a REC.

Interviews

Interviews were conducted with several individuals as part of this assessment:

- The report User and Property owner (Sterling Hundley representative for Resolution),
- The Sonoita-Elgin Fire District (Katie Goodwin, Admin. Assistant to the Chief), and the Property Manager (Cristina Francois, Director of the Research Ranch).

Additional interviews were conducted for prior assessments but not re-interviewed considering the historic information obtained from those interviews would not have changed since the last inquiry was completed. These include:

- Linda Kennedy, Audubon and prior Property Manager for the Research Ranch;
- Posey Piper, a past occupant at the Research Ranch who lived on adjoining land at the ranch's headquarters managing cattle for the Appleton family with her husband; and
- The Santa Cruz County Health Department (regarding old septic records).

No information provided through these interviews indicate the potential for a REC in connection to the Property.

Recognized Environmental Conditions

WestLand has performed this Phase I ESA in conformance with the scope and limitation of ASTM E 2247-16 for the Property. This assessment has revealed no evidence of RECs in connection with the Property.

I. INTRODUCTION

WestLand Resources, Inc. (WestLand) was contracted by Resolution Copper Mining, LLC (Resolution; the "User") to perform a Phase I Environmental Site Assessment (ESA) for approximately 956 acres referred to as the Appleton Ranch parcel ("the Property"). The Property comprises of a set of three private land tracts consisting of eight County Assessor parcels within the larger (8,000 acre) Appleton-Whittell Research Ranch (Research Ranch), which is itself a set of properties used in cooperative partnership between the Bureau of Land Management (BLM), U.S. Forest Service (USFS), The Nature Conservancy, Audubon, and Resolution. The Santa Cruz County Assessor Parcel Numbers (APNs) for the Property are 108-18-012B, 108-18-012H, 108-18-019, 108-18-020, 108-18-012A, 108-18-017C, 108-36-003A, and 108-25-001. An assessor record map is provided as **Appendix C**. The Property is presently under non-federal ownership (Resolution) but proposed as part of a land exchange with the BLM under the Southeast Arizona Land Exchange and Conservation Act of 2013. The Property is located within portions of Sections 14, 15, 17, and 28 of Township 21 South, Range 18 East, Gila and Salt River Meridian, in Santa Cruz County, Arizona (Figure 1).

I.I. PURPOSE

The purpose of this investigation was to conduct an assessment of the Property and surrounding areas to identify the presence or potential presence of recognized environmental conditions (RECs) potentially resulting in environmental impacts to the Property. According to the American Society for Testing and Materials (ASTM) E 2247-16 guidelines, a REC is defined as: ...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. This term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies. Conditions determined to be de minimis are not RECs.

The results of an investigation may be used as part of the due diligence investigation for prospective property owners promulgated pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, a.k.a. Superfund), the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the Small Business Liability Relief and Brownfield's Revitalization Act of 2002 (the Brownfield Amendments). This Phase I ESA is intended to assist the User in satisfying the requirements to qualify for the innocent landowner, contiguous property owner, or bonafide prospective purchaser limitations of CERCLA. In order to qualify for one of the Landowner Liability Protections, the report User must provide certain information to the environmental professional conducting the Phase I ESA. This information can be provided by completing the User Questionnaire. Failure to provide this information could result in a determination

that the All Appropriate Inquiry is not complete. Additionally, the Property owner has continuing obligations, if applicable, to receive liability protections in addition to the All Appropriate Inquiry. The continuing obligations include: 1) compliance with land use restrictions; 2) not impeding the effectiveness or integrity of institutional controls; 3) taking reasonable steps to prevent releases; 4) providing assistance and access to the U.S. Environmental Protection Agency (EPA), state, or other parties conducting response or restoration actions; 5) complying with CERCLA information requests and subpoenas; and 6) providing legally required notices.

1.2. SCOPE OF SERVICES

This Phase I ESA has been completed in accordance with the guidelines provided in the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property (ASTM E 2247-16). This standard satisfies the requirements of the EPA All Appropriate Inquiry provisions, which became effective November 1, 2006 (40 CFR Part 312). This protocol requires the review of readily available environmental records, historical and current land use, interviews with persons knowledgeable about the Property, and a field reconnaissance to observe on-site conditions and adjoining properties.

The User of this report has responsibilities for addressing some of the mandatory provisions of the standard. ASTM E 2247-16 Section 6 (User Responsibilities) describes tasks that will help identify the possibility of RECs in connection with the Property that do not require the expertise of an environmental professional, including checking title records for environmental liens and activity and use limitations (AULs). WestLand commissioned a title search for environmental liens and AULs on the User's behalf.

This Phase I ESA does not assess ASTM non-scope considerations, including asbestos-containing building materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality (including vapor intrusion), biological agents, mold, or other nuisances.

1.3. LIMITATIONS AND EXCEPTIONS

This Phase I ESA evaluates potential sources of hazardous substances or petroleum products that could be considered a REC and a liability due to their presence in significant concentrations, or the potential for contamination migration through exposure pathways. Unless otherwise noted, this assessment did not include any testing or sampling of materials. This report is intended to provide further recommendations regarding potential RECs related to the Property; conclusive identification of hazardous substances and petroleum products can be accomplished only through sampling and laboratory analysis.

Field reconnaissance does not provide information regarding potential sources of contamination below the ground surface. However, in cases of subsurface contamination, aboveground indicators such as obvious stress to plant life or staining are noted. All findings are based on observations and information collected at one point in time and is based on conditions during the site visit. A change of those conditions may alter the findings and conclusions of this report.

A Phase I ESA cannot, within its scope of assessment, wholly eliminate uncertainty regarding the potential presence of RECs. WestLand believes that the information in this report is reliable; however, WestLand cannot guarantee that the information provided by all the sources contained in this report is complete and accurate. This report is intended to decrease, but not eliminate, uncertainty regarding the potential for RECs in connection with a property given reasonable limits of cost and time, and in a manner consistent with the customary practices of the environmental consulting industry, under similar circumstances at the time services were performed and in similar localities. It should be noted that the conditions at the Property could change as a result of natural processes or be altered by human activities at the Property and/or nearby sites.

1.4. SPECIAL TERMS AND CONDITIONS

No special terms or conditions are associated with this report.

1.5. USER RELIANCE

This Phase I ESA has been prepared for use by Resolution and the BLM in support of the Southeastern Land Exchange and Conservation Act of 2013. This Phase I ESA may not be relied upon by any other person or entity without the written consent of WestLand.

I.6. CONTINUED VIABILITY

ASTM E 2247-16 guidelines require that certain components of a Phase I ESA be completed less than 180 days prior to the date of acquisition or the intended transaction if no acquisition is involved; therefore, its useful life is limited. The following components of the Phase I ESA are presumed valid only within 180 days prior to the date of acquisition or other intended transaction:

- Interviews
- Searches for environmental liens
- Government records review
- Site reconnaissance
- Declaration by the environmental professional

Other components of the Phase I ESA are valid for 1 year. The above-listed components can be updated separately in order to eliminate redundant environmental due diligence efforts within 1 year. After 1 year has passed, all Phase I ESA components should be redone. The prior Phase I ESA report may be used as a reference during completion of the new investigation and analysis.

2. SITE DESCRIPTION

This section describes the location, general characteristics, and current uses of the Property. The current uses of adjoining properties are also described. Photographs depicting the Property and vicinity are provided in **Appendix A**. The approximate locations of the ground photographs are provided on **Figure 4**, which includes an aerial view of the Property.

2.1. LOCATION AND LEGAL DESCRIPTION

The Property is situated south of Elgin in Santa Cruz County, Arizona. The nearest major metropolitan center is Tucson, located approximately 50 miles northwest of the Property. Access to the Property and the larger Research Ranch is from the north via Arizona State Highway 83 from Elgin and then Research Ranch Road. Access within the Property is via Research Ranch Road and other informal dirt roads.

The Property is located within portions of Sections 14, 15, 17, and 28 of Township 21 South, Range 18 East, Gila and Salt River Meridian, in Santa Cruz County, Arizona (**Figure 1**). The Santa Cruz County assessor parcel numbers (APNs) for the Property are 108-18-012B, 108-18-012H, 108-18-019, 108-18-020, 108-18-012A, 108-18-017C, 108-36-003A, and 108-25-001. A Santa Cruz County Assessor's Record Map is provided as **Appendix C**.

The Property is made up of three discrete areas, described as follows and depicted in Figure 3:

- Tract 1 is the northwestern tract and a rectangular shape that occupies the eastern half of Section 17. Vaughn Canyon drains the northwest portion of this tract.
- Tract 2 is the northeastern tract, irregularly shaped and occupying a portion of Section 14 and 15. O'Donnell Canyon is located on the east portion of this tract.
- Tract 3 is the southernmost tract. It is an irregularly shaped tract in the northeastern quarter of Section 28. Post Canyon runs east to west along the central and southern portion of this tract.

2.2. SITE AND VICINITY GENERAL CHARACTERISTICS

The Property is located in the Canelo Hills, on the western flanks of the Huachuca Mountains in southeastern Arizona. The Property is situated along the streambeds and adjacent upland areas of Vaughn, O'Donnell, and Post canyons. Topography, soils, geology, hydrology, and hydrogeology of the Property are described in **Section 4.3**.

2.3. CURRENT USE OF THE PROPERTY

The Property is currently unoccupied. The larger Appleton Ranch was originally used for cattle grazing, which reportedly ceased in 1969 as a result of the decision by the Appleton family to establish an ecological preserve, the Research Ranch. The Property was not part of the original land exchanges

in which the Research Ranch was formed; it remains privately owned but is managed similarly to the adjacent Research Ranch ecological study area.

2.4. DESCRIPTION OF STRUCTURES, ROADS, AND OTHER IMPROVEMENTS ON THE SITE

Developed features and improvements at the Property are minimal. A few windmills, solar power wells (**Appendix A, Photographs 4 and 19** respectively), and numerous small earthen-bermed stock ponds are present in or adjacent to the drainages onsite. Remnants of a former residence is present in the southern tract; the majority of the structure was consumed by fire in 2002, and only the foundation was observed during site reconnaissance in 2015 and 2020. Several dirt roads (**Appendix A, Photo 7**) access these features from the Research Ranch's primitive road network.

2.5. CURRENT USES OF ADJOINING PROPERTIES

Adjoining land is owned by USFS (as the Coronado National Forest), BLM, Arizona State Land Department (ASLD), Audubon, and other private owners. As previously mentioned, the Property is largely surrounded by the Research Ranch (described further in Section 4.4.6) which includes lands managed by USFS and BLM as well as those owned by Audubon.

3. USER PROVIDED INFORMATION

The report User is Resolution who provided relevant information about the Property. The User representative is Sterling Hundley. The report User provided contact information for Research Ranch. A copy of the User Questionnaire is provided as **Appendix B**.

On August 6, 2020, WestLand contacted representatives for the BLM and requested that the User Questionnaire be completed for the Property in support of the Southeastern Land Exchange and Conservation Act. As of the date of this report, a returned questionnaire had not yet been received. If the User Questionnaire is received after this report is finalized, it may be incorporated into the Phase I ESA report as an addendum to assist in qualifying for landowner liability protections.

3.1. TITLE RECORDS

As part of a prior Phase I ESA assessment, the previous report User provided copies of title information in connection to the Property including an ALTA Standard Owners 1992 policy of insurance, dated February 2, 2004 (**Appendix D**). This policy appears to have been issued when Swift Current Land & Cattle, LLC was considering purchase of the Property from the Lee Appleton Trust. The title documents include a list of Schedule B requirements and Exceptions which typically list known land encumbrances (i.e., taxes, deed restrictions, easements, liens) and may provide an indication of the potential for contamination at the Property. Based on WestLand's review of the listed standard and specific encumbrances, none readily indicate the release, or threat of a release, of a hazardous material or petroleum product at the Property.

Further information regarding current title information was provided through the search of available land title records for environmental liens and activity and use limitations (AULs) on the Property conducted on behalf of the User; see **Section 3.2**, below.

3.2. Environmental Liens or Activity and Use Limitations

The User is not aware of any environmental liens or AULs for the Property.

WestLand engaged Environmental Data Resources, Inc. (EDR) to conduct a search of available land title records for environmental liens and AULs on the Property on behalf of the User. A search for environmental liens and AULs was completed for each of the eight parcels comprising the Property. No records of environmental liens or AULs were identified in the search conducted by a title professional. Copies of the environmental lien and AUL search with copies of relevant deeds for the Property are provided as **Appendix E**. The current deed for the Property was executed and recorded on April 8, 2020, conveying ownership from Swift Current Land & Cattle, LLC to Resolution.

3.3. SPECIALIZED KNOWLEDGE

The User indicates that small, aboveground storage tanks for petroleum products were reported to be located on the adjoining Audubon property and used for maintenance at the Research Ranch. No spill or releases were known to have occurred. The Appleton family purchased the Property in the 1950s and owned it until 2005.

3.4. COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

The Property and vicinity are rolling grasslands formerly used for cattle grazing (until 1968) and are largely devoid of development such as buildings or major earthwork. Currently, the Property is managed similarly to adjacent ecological research lands where cattle grazing is restricted.

3.5. VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

The User reports that there is no information indicating the value of the Property has been reduced as a result of environmental issues.

3.6. REASON FOR PERFORMING PHASE I

The User states that the Phase I ESA was being performed to identify RECs requiring additional investigation relating to a land exchange property transaction with the BLM under the Southeast Arizona Land Exchange and Conservation Act of 2013.

3.7. OTHER

Based on the User's knowledge of, and experience related to the Property, no obvious indicators point to the presence or likely presence of contamination on the Property of which the User is aware. No other information relevant to potential RECs was provided by the User.

4. RECORDS REVIEW

WestLand reviewed a variety of regulatory records to determine if any past uses of the Property or uses within adjoining areas may have led to RECs on the Property.

4.1. Environmental Record Sources

WestLand contracted with EDR to conduct an electronic search of regulatory agency databases for references to the Property and surrounding lands. The database search was conducted on June 8, 2020 and included standard and additional federal, tribal, state, local, and supplemental database records, as well as EDR proprietary database records. The regulatory agency databases were queried by conducting a search from the boundaries of the Property to the minimum search distance recommended by the ASTM standard. A copy of the EDR report that describes the databases searched, search distances, record details for the search results, and the dates the databases were last updated is provided in **Appendix F**.

The Property was not identified in any of the environmental databases searched by EDR and there were no environmental records mapped within the ASTM prescribed search distances from the Property.

The EDR Orphan Summary list included in the EDR report identifies no records associated with unmappable sites ("orphan" sites) in the vicinity of the Property.

4.2. Prior Environmental Reports

Prior Phase I ESAs for the Property were conducted by WestLand in 2004 (WestLand 2004b) and in 2016 (WestLand 2016). Those reports were relied upon and referenced, as appropriate, throughout the course of this inquiry. The 2004 and 2016 assessments revealed no evidence of RECs in connection with the Property.

4.3. PHYSICAL SETTING

The Property's physical setting was reviewed by WestLand to gain an understanding of the Property's geophysical characteristics. These geophysical characteristics, including surface topography, soils, geology, hydrology, and hydrogeology may relate to the potential migration of hazardous substances and petroleum products.

4.3.1. Topography

The Appleton Ranch parcels are located in the southern Basin and Range physiographic province. The province is characterized by elongated mountain ranges trending northwest-southeast, separated by broad alluvial valleys. The Property is located within the southeastern portion of the Sonoita basin. There are several ranges surrounding the basin including Canelo Hills (on the western flank of the

Huachuca Mountains) to the south, Empire Mountains to the north, Mustang Mountains to the east, and Santa Rita Mountains to the west.

The Property, and immediate vicinity, is located in the Canelo Hills (WestLand 2004a); low and rolling hills range in elevation from about 4,635 to 5,051 feet above mean sea level (amsl). Bald Hill, centrally located on the Research Ranch and near the midpoint of the three Property tracts), represents the high point of this elevational range. The Canelo Hills reach their peak elevation at Lookout Knob, 6,175 feet amsl, about 7 miles south-southeast of the Property. The Property is along the ephemeral drainages and adjacent upland areas of Post, Vaughn, and O'Donnell Canyons—all of which flow north-to northeast towards the Babocomari River, approximately 1.5 miles north of the closest Property boundary.

4.3.2. **Soils**

Soil data provided by the National Cooperative Soil Survey through Web Soil Survey (Soil Survey Staff 2020)¹ indicate that the Property encompasses five soil complexes. These include the Bernardino-Hathaway association, the White House gravelly loam 0 to 10 percent, Hathaway gravelly sandy loam series 20 to 50 percent, White House gravelly loam 10 to 35 percent, and Pima soils. The soil complexes in the parcels are generally well-drained and occur on fan terraces.

The Bernardino-Hathaway association is composed of 55-percent Bernardino soils and approximately 25-percent Hathaway soils. The Bernardino series consists of very deep, well-drained soils that formed in fan alluvium from igneous and sedimentary rock. Bernardino soils are on fan terraces and have slopes of 0 to 30 percent. Permeability of the soil series is moderately low to moderately high. The Hathaway series consists of very deep, well-drained soils that formed in fan alluvium from mixed sources. Hathaway soils are on fan remnants and have dominant slopes of 10 to 40 percent. Permeability is moderately high to high. White House gravelly loam consists of very deep, well-drained soils formed in stream alluvium. Pima soils are on alluvial fans and flood plains and have slopes of 0 to 3 percent. Permeability is moderately high. The Hathaway gravelly sandy loam series consist of very deep, well-drained soils that formed in fan alluvium from mixed sources. This soils series has slopes of 20 to 50 percent and has moderately high to high permeability. White House gravelly loam is mapped as a separate soil unit where it occurs on slopes of 10 to 35 percent (Soil Survey Staff 2020). It is a well-drained soil that formed in fan alluvium with moderately high permeability. The Pima soils association consists of recent mixed alluvium that formed in floodplains. It is considered well-drained and has high water storage capacity. This soil series has slopes of 0 to 3 percent.

4.3.3. Geology

The Canelo Hills are cut by northwest-striking steep faults that are splays of the Sawmill Canyon-Kino Springs fault system (Bultman 1999). A thin to moderately thick veneer of soil overlies the bedrock of the upland areas; eroded material has accumulated in canyon bottoms as alluvium. Farther north,

¹ Accessed online July 29, 2020.

approaching the Babocomari River, basin-fill sediment has accumulated to a degree identifiable as a geologic unit. Regionally, the "lower basin fill unit is probably lower- and middle-Miocene in age and is poorly to moderately well consolidated. In the Santa Cruz basin [in which the Property lies] this unit is the Nogales Formation. The upper basin fill unit is upper-Miocene to lower-Pleistocene and is unconsolidated to poorly consolidated. These basin fill units are overlain by Holocene surficial deposits, including alluvium of stream channels, flood plains, and terraces which are unconsolidated overall but locally indurated" (Bultman 1999, Houser 1999).

The surface geology on the northeastern tract is mapped as predominately Early Pleistocene to Late Pliocene Surficial Deposits, with the western portion of that tract mapped as Pliocene to Middle Miocene Deposits, and the southeastern corner mapped as Middle Miocene to Oligocene Sedimentary Rocks (Richard et al. 2000). The other two tracts are mapped entirely as Pliocene to Middle Miocene Deposits (Richard et al. 2000).

4.3.4. Hydrology

The Property spans the Vaughn Canyon and Turkey Creek surface water basins within the San Pedro River watershed. Named drainages associated with the Property include Vaughn Canyon, Post Canyon, and O'Donnell Canyon. All three of these drainages were observed to be dry during site visits completed in 2004 (February and March), December 2015, and July 2020 and are presumed to be ephemeral (WestLand 2004c). O'Donnell Canyon flows generally northeast into the Babocomari River, which then flows east and discharges into the San Pedro River approximately 24 river miles downstream of the Property. The closest stream gauge (U.S. Geological Survey [USGS] Gauge No. 009471380) is on the Babocomari River, near Huachuca City approximately 7 miles downstream of the Property at the O'Donnell Canyon Tract. The short record for this gauge (August 2000 to September 2002) indicates annual, to a limited extent, and seasonal variability in stream flow for the area (WestLand 2004a). Changes in stream flows are delayed by approximately 2 to 3 months from precipitation events, which usually peak in July (WestLand 2004a). The extreme variability in monthly mean flows exhibited in Babocomari River at this gauge are likely reflected in the three smaller on-site watersheds (WestLand 2004a).

Surface water is present on the Property in the form of three earthen stock ponds (Finley, Telles, and Vaughn tanks) that are supported by groundwater from nearby wells (WestLand 2004a). Each of these tanks is relatively small (less than 1 acre) and shallow (less than 10 feet deep). These tanks are filled with on-site wells fitted with wind-powered pumps and contain some water year-round (WestLand 2004a), these tanks were mostly dry during the July 2020 visit.

The map of perennial streams in Arizona compiled by Brown et al. (1978) indicates an approximately 1.2-mile stretch of perennial flow (less than 10 cfs base flow) in O'Donnell Canyon within the Research Ranch area (WestLand 2004a). It should be noted that the scale of this map, 1 inch = 25 km (Brown 1978), does not permit precise location of small segments, and it is not possible to determine if the perennial flow segment depicted in this 1978 map includes a portion of the Property. However,

a segment of base flow (10 to 50 cfs) is indicated in Turkey Creek, a tributary to O'Donnell Canyon, farther upstream, near the Canelo Hills. Segments of this stream, upstream and downstream of the mapped perennial flow section of O'Donnell Canyon, are depicted on the map as ephemeral or intermittent. Additionally, a short segment of an unnamed stream immediately west of the Turkey Creek segment near the Canelo Hills is depicted with 10 to 50 cfs perennial baseflow. Although depicted as isolated (i.e., not connected to any other waterway via even ephemeral flow), this unnamed stream is likely the upper reach of O'Donnell Canyon.

Comparing WestLand's observations from prior site visits to the 1978 map, it is likely that the segment of O'Donnell Canyon on the Research Ranch varies from ephemeral to intermittent to perennial flow based on long-term precipitation patterns (WestLand 2004a). Although the stream may have been perennial in 1978, and in preceding years, the lack of flow during site reconnaissance indicates that the on-site segment of the streams are currently ephemeral, flowing only in response to storm events. Protracted wet seasons or years may temporarily elevate the stream to intermittent status, while droughts and/or excessive nearby or regional groundwater pumping may change perennial streams to intermittent or ephemeral flow.

None of the named drainages within the Property have been identified by ADEQ as impaired for any designated uses by that agency's surface water monitoring program (ADEQ 2012, 2015, 2018).

The majority of Research Ranch is identified by Federal Emergency Management Agency (FEMA) as Zone A, areas with 1-percent annual chance flood hazard, with a small area denoted Zone X (minimal flood hazard). The National Wetland Inventory map for the Property identified no wetlands within the Property.

4.3.5. Hydrogeology

The Property is in the Sierra Vista sub-basin within the larger Upper San Pedro groundwater basin (Hydrologic Unit Code [HUC] 15050202). The Property covers 940 acres near the Huachuca Mountains (to the south). In general, groundwater flow direction is from the mountain fronts toward the central valley and to the north (ADWR 2015). A zone of depression that has formed in the Sierra Vista area as a result of groundwater pumping has altered flow direction (ADWR 2015).

The major aquifers in the basin consist of younger basin fill, older basin fill, basal conglomerate, and recent alluvium. The primary recharge in the area is mountain-front recharge and streambed infiltration (ADWR 2015).

Groundwater appears to be on or near the Property at relatively shallow depths (i.e., generally less than 100 feet; WestLand 2004a). Four groundwater wells are present on the Research Ranch (i.e., on or in the vicinity of Appleton Ranch), originally used to provide water for livestock, using shallow impoundments for storage (stock tanks). The pumps in these wells are powered by windmills. The ADWR well registry indicate that these wells reach water levels at approximately 70 feet bgs. The wells

range in depth from 100 to 260 feet bgs (WestLand 2004a). Additionally, depth-to-groundwater data obtained from Audubon for 10 wells monitored near the Research Ranch indicate groundwater present generally between 25 and 175 feet bgs (WestLand 2004a).

The ADWR well registry database contained data for 25 wells within a 1-mile radius of the parcels (ADWR 2020)². The groundwater level trends in these wells showed that the groundwater depth ranges from 100 to 400 feet bgs. The median well yield for the basin is 600 gallons per minute.

No water quality data is available for these parcels. However, groundwater in the Upper San Pedro Basin is generally suitable for most uses, with arsenic and fluoride being the parameters that most frequently exceed drinking water standards in sampled wells (ADWR 2015).

4.4. HISTORICAL USE INFORMATION ON THE PROPERTY AND ADJOINING PROPERTIES

The purpose of reviewing historical sources is to develop a history of the previous uses of a property and surrounding area in order to help identify past uses that may have led to RECs in connection with the Property. According to the ASTM standard, obvious uses of a property shall be identified from the present back to the property's first developed use, or back to 1940, whichever is earlier. This requires reviewing only as many standard historical sources as are reasonably ascertainable and likely to be useful.

Use of the Property appears to have been limited to rural ranch use, open space and as part of the Research Ranch. A residence was once located on the southern parcel. Other improvements appear to have been limited to roads, fences, and utilities including well sites (wells, windmills/power source, and water tanks).

4.4.1. Historical Topographic Maps

WestLand reviewed USGS topographic maps of the Property and its vicinity dated 1904, 1905, 1947, 1948, 1958, 1983, and 1996. WestLand added to these topographic maps provided by EDR by outlining the boundaries of the Property (**Appendix G**). USGS topographic map coverage for the Property is provided on the Pyeatt Ranch 7.5-minute quadrangles, O'Donnell Canyon 7.5-minute quadrangles, Fort Huachuca SW 7.5- and 15-minute quadrangles, Elgin 15-minute quadrangles, and Patagonia 30-minute quadrangles. The 7.5-minute quadrangles are provided at a 1:24,000 scale, the 15-minute quadrangles at a 1:62,500 scale, and the 30-minute quadrangles at a 1:125,000 scale. Topographic maps depict both natural and developed features, including wells, structures, and other indications of historical use. The following summary presents WestLand's review of the identified mapped features on or near the Property in chronological sequence.

The 1904 Patagonia 30-minute quadrangle (1:125,000 scale) provides coverage for the entire northwestern tract, the southern tract, and the western portion of the northeastern tract. This map

² Accessed online July 29, 2020.

depicts much of the Property as undeveloped land. Natural topography and drainages appear to be similar to current conditions. There are no developed features depicted on the Property with the exception of an unimproved road crossing through the northeast tract. A road is also depicted just south of the southern tract on adjoining land.

The 1905 Patagonia 30-minute quadrangle (1:125,000 scale) provides the same area of coverage as the 1904 map. This map depicts the Property in the same undeveloped condition as 1904 with the exception of the removal of the road in the western portion of the northeastern tract.

The 1947 Elgin 15-minute (1:62,500 scale) and 1948 Fort Huachuca 15-minute (1:62,500 scale) quadrangles were combined and provide coverage of all of the Property with the exception of the very eastern portion of the northeast tract. This map provides additional coverage of the Property and the surrounding area. The only improvement depicted on the Property is an improved road at the northeastern parcel, located on an alignment east of the unimproved road that was shown the 1904 map. The road splits to travel southwest and southeast, and continues off the Property toward Brophy Ranch and Clark Ranch, respectively. Several structures are depicted at these ranches on adjoining land. The Coronado National Forest boundary is depicted along the north boundary of the southern tract.

The 1948 Fort Huachuca SW 7.5-minute (1:24,000 scale) and O'Donnell Canyon 7.5-minute (1:24,000 scale) quadrangles are combined and cover all of the Property with the exception of the very eastern portion of the northeast tract. These maps depict the Property and surrounding area in similar conditions to the previous quadrangles and show a larger expanse of informal roadways on land around the Property.

The 1958 O'Donnell Canyon 7.5-minute (1:24,000 scale) and Pyeatt Ranch 7.5-minute (1:24,000 scale) quadrangles are combined and cover the Property with the exception of the very eastern portion of the northeast tract. This map is the same as the prior map with the exception of two additional road spurs, one toward land north of the Property and the other to Finely Tank, a stock pond located on the northeastern tract. Two windmills are depicted at the Property: one at the northwest tract and the other on the southern tract. An informal road is depicted to the windmill on the northwestern parcel. Other changes on the 1958 maps compared to prior maps occur on land surrounding the Property. A trail has been improved to a dirt roadway west of Clark Ranch (previously owned by the Clark family), and Brophy Ranch has been renamed Swinging H Ranch. A water tanks is depicted on the hillside east of Swinging H Ranch. A new roadway provides access to a new windmill on land between the two northern tracts.

The 1983 O'Donnell Canyon 7.5-minute (1:24,000 scale) and Pyeatt Ranch 7.5-minute (1:24,000 scale) quadrangles are combined and cover all of the Property with the exception of the very eastern portion of the northeast tract. These maps portray the Property in the same condition as the prior map, with the exception of the absence of one of the informal roads on the northeastern tract. Other changes appear to have occurred on land surrounding the Property, new roadways are present and additional

buildings are depicted at Clark Ranch (previously owned by the Clark family). The windmill between the two northern parcels is no longer depicted.

The 1996 O'Donnell Canyon 7.5-minute (1:24,000 scale) and Pyeatt Ranch 7.5-minute (1:24,000 scale) quadrangles are combined and cover all of the Property with the exception of the very eastern portion of the northeast tract. These maps show the additional development at the southern tract including a new road and structures. For land surrounding the Property, new roadways and water tanks are present.

4.4.2. Historical Aerial Photographs

WestLand obtained five historical aerial photographs depicting the Property and vicinity dating from 1956, 1971, 1983, 1992, 2003, and 2015 (**Appendix H**). These were reviewed at a scale of 1inch =1,600 feet. WestLand reviewed the photographs for evidence of anthropomorphic disturbance and to identify any historical land uses that might have involved the use, treatment, storage, disposal, or generation of hazardous substances, or petroleum products.

The 1956 aerial photograph does not show any developed features at the Property with the exception of a linear feature on the northeastern tract suspected to be a fence line. Other surface disturbance appears to be limited roadways and small, cleared areas west of the northwestern tract and between the northeastern and southern tracts on adjoining land.

The 1971 aerial photograph shows the Property in similar conditions to the prior photograph with the exception of impoundments on the east portion of the northeastern tract. A ranch appears on adjoin Property between the northeastern and southern tracts.

The 1971 aerial photograph clearly shows roads on the northeastern tract. The eastern-most road appears to provide access to a structure, likely a ranch house or water tank. Additional development of roadways is apparent on land surrounding the Property.

The 1992 aerial photograph is a higher quality resolution than the prior photographs. Dirt roads are apparent on all of the tracts. A ranch house and possibly guest house, outbuilding or other structure and landscaped grounds are present on the southern tract. The ranches on surrounding lands include several small structures.

The 2003 aerial photograph shows a roadway from the south on the northwestern tract and remnants of the ranch area on the southern tract; surrounding land use appears to be similar to that observed for prior years.

The 2015 aerial photograph is provided in high quality resolution and in color. At the northwestern tract, roadways provide access to an earthen stock pond and an area or land has been disturbed adjacent to a wash near the roadway. Roadways and stock ponds are present on the northeastern tract. The central portion of the tract appears to have been graded/contoured. The southern parcel has

remnants of the ranch house (i.e., a foundation). Surrounding land use appears to be similar to that observed for prior years.

4.4.3. Property Tax Files

WestLand obtained the property tax maps for the Property and adjoining areas from the Santa Cruz County Assessor. The Property assessor map is provided as **Appendix C**. The approximate boundary of the Property and associated land designation was also overlaid on the assessor's map.

This map shows certain roadways at and in the vicinity of the Property. The majority of the land in the vicinity appears to be undeveloped open space. The Property is considered vacant land with no assessed buildings.

4.4.4. Local Street Directories

Based on the lack of development in the immediate vicinity of the Property, WestLand did not conduct a city directory search.

4.4.5. Sanborn Fire Insurance Maps

Sanborn Fire Insurance Maps typically cover development in the first half of the 20th century. Considering the lack of development at the Property, WestLand did not commission a search for these maps.

4.4.6. Other Historical Sources

WestLand reviewed general Research Ranch information including a fact sheet and frequently asked question publications (**Appendix I**). WestLand was also provided with a copy of A History of the Lands in National Audubon Society's Research Ranch near Elgin, in Santa Cruz County, Arizona by Glendon E. Collins (**Appendix I**). This information states that the ranch was originally part of the San Ignacio del Babocomari land grant. In the early 1900s, the grasslands of the area were used to graze cattle and homesteads were patented. The Appleton family purchased a part of the original land grant, retired the lands from cattle grazing in 1968 and in 1969 established the Research Ranch on the lands they own. Between 1960 and 1990, there was a series of land transactions which occurred between federal, state, and private owners. Audubon assumed management of the Research Ranch in 1980. Public access of the ranch has been limited and the ranch is used for conservation, land management, research, and education.

The known history of the Property and surrounding lands suggests that land use has been limited to ranching, then conservation and research. The Research Ranch website (National Audubon Society 2020) reports that since cattle were removed more than 30 years ago, rehabilitation efforts have included erosion control, removal of non-native invasive species, replanting native grasses and reestablishing a natural fire regime via planned fires. Exotic species removal is accomplished by spraying each plant individually with 2-percent Roundup[®] (Glyphosate) to minimize disturbance to the

ecosystem. Facilities for the Research Ranch, on adjoining land, include offices, housing, classrooms, and a laboratory (National Audubon Society 2020, Conservation and Research webpages)³. Research at the Research Ranch includes ecological and biological surveys, groundwater measurements, mapping exercises, vegetation monitoring, precipitation measurements, trail cameras, and more (National Audubon Society 2017). Based on the past interview with Linda Kennedy the representative for Audubon and past ranch manager, and description of land use at the Research Ranch, conservation and research activities at the Research Ranch do not involve the application or use of hazardous materials or petroleum products (with the exception of discrete application of Roundup[®] in small [de minimis] quantities).

No other historical sources were reviewed during this Phase I ESA.

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³ Accessed July 30, 2020.

5. SITE RECONNAISSANCE

On July 13, 2020, WestLand engineer, Patrick Mette, and environmental specialist, Samantha Blonder, performed a field reconnaissance to assess existing environmental conditions for the Property. Photographs documenting pertinent features are provided in **Appendix A**. The approximate photograph locations are shown in **Figure 3**.

5.I. METHODOLOGY AND LIMITING CONDITIONS

Prior to conducting the site reconnaissance, WestLand reviewed current and historical aerial photographs and topographic maps (described in **Section 4**) to identify the location of any suspect areas, including roadways, cleared areas, disturbed soils, and structures. Areas of known concentrated human activity were assessed in more detail because these areas presented the greatest potential for impacts by hazardous materials and petroleum products.

During the site reconnaissance, WestLand evaluated the suspect areas of site disturbance through pedestrian surveys. WestLand's reconnaissance included the Property, as well as observations of the adjoining properties from publicly accessible areas. Field observations were consistent with the findings of WestLand's historical records review of the Property and surrounding properties.

Field reconnaissance does not provide information regarding potential sources of contamination below the ground surface. However, in cases of subsurface contamination, aboveground indicators such as obvious stress to plant life or staining are noted. All findings are based on observations and information collected at one point in time and is based on conditions during the site visit. A change of those conditions may alter the findings and conclusions of this report.

Access to the Property was provided via public roadways and interior roads of Research Ranch, accessed from the north via Arizona State Highway 83 from Elgin. The Property is enclosed by locked gates and fencing to prevent illegal entrance to the Property. There was no evidence of recreational off-road vehicle use or camping observed during the site reconnaissance.

5.2. INDICATIONS OF PAST USES OF THE PROPERTY

The Appleton Ranch parcels have historically been used for cattle grazing (excluded since 1969). Onand off-site human impacts are limited to residences and buildings for former ranching activities and current conservation and research activities—windmills and wells for groundwater supply, small earthen bermed surface water impoundments originally for stock watering, and dirt roads for accessing these facilities.

A portion of the southern tract was used as a residence from the 1980s until the early 2000s; the structure was consumed by fire in 2002 and only the foundation remained in 2015 and 2020. Fire debris was removed from the house site for off-site disposal.

5.3. EXTERIOR OBSERVATIONS

5.3.1. Hazardous Substances and Petroleum Product Containers in Connection with Identified Uses

No hazardous substances and petroleum product containers in connection with identified uses were observed at the Property or on land immediately adjoining the Property.

5.3.2. Hazardous Substance and Petroleum Product Containers not in Connection with Identified Uses

No hazardous substances and petroleum product containers not in connection with identified uses were observed at the Property or on land immediately adjoining the Property.

5.3.3. Storage Tanks (Aboveground and Underground)

No indications of above- or underground storage tanks potentially used for hazardous substances or petroleum products were observed on the Property or on adjoining properties. Aboveground concrete storage tanks formerly used for water storage were observed on the Property.

The report User indicated that there are small aboveground storage tanks for petroleum products that are present on the adjoining Audubon property used for maintenance at the Research Ranch. Based on past interviews with the Audubon representative, no spills or releases are known to have occurred.

5.3.4. Unidentified Substance Containers

No unidentified substance containers were observed on the Property or on adjoining properties during the site reconnaissance.

5.3.5. Drums

No drums were observed at the Property.

5.3.6. Odors

No strong, pungent, or noxious odors were detected on the Property or on adjoining properties during the site reconnaissance.

5.3.7. Pools of Liquid, Pits, Ponds, or Lagoons

Stock ponds, both abandoned and in use, were observed on the Property. Typically near wells, they would have been previously used to store water for cattle ranching. One of the ponds still in use is likely designated for wildlife use, as a wildlife camera was observed nearby. No pools of liquid, pits, ponds, or lagoons in connection with waste disposal or treatment were observed on the Property or on adjoining properties.

5.3.8. Wastewater

No features associated with wastewater storage and disposal were observed during the site reconnaissance.

5.3.9. Septic Systems

Septic tanks may be present adjacent to the former house foundation. In 2004, two vent tubes for the septic system were observed immediately east of the house foundation; rocks dropped into the tubes contacted liquids approximately 10 feet bgs, indicating that liquids in the tank(s) had not been pumped out. While the vents were no longer visible in 2015 or 2020, underground portions of the septic system may still be onsite.

5.3.10. Wells

Three wells were observed at the Property. Two of the wells were served by solar power and one was served by windmills, as confirmed by Linda Kennedy, see **Section 6.1**). A well was located on each tract at the Property (**Appendix A, Photos 4 and 19**). An additional well is reportedly located on the Property (**Figure 2**) but was not observed during the Phase I ESA site reconnaissance.

Given the lack of government records identified in the EDR database search, there are no wells on the Property or adjoining properties that would likely be associated with known groundwater remediation concerns.

5.3.11. Stained Soil or Pavement

No stained soil or pavement was noted.

5.3.12. Stressed Vegetation

Vegetation across the Property appeared to be in good health. There was no indication of stressed vegetation on the Property or adjoining properties likely attributed to hazardous substances, or petroleum products.

5.3.13. Solid Waste Disposal

The Resource Conservation Recovery Act (RCRA) was enacted by Congress in 1976 and amended in 1984. RCRA's primary goal is to protect human health and the environment from the potential hazards of waste disposal. Unauthorized solid waste disposal provides the potential for hazardous and regulated substances to impact a property in the absence of waste-generating activities. The Property appears to be generally clean of solid waste.

5.3.14. PCB Equipment

Congress in 1976 to enact §6(e) of the Toxic Substances Control Act (TSCA), which included prohibitions on the manufacture, processing, and distribution in commerce of PCBs. Historically, electrical transformers contained a cooling liquid that had PCBs. If present, electrical transformers or hydraulic equipment could provide the potential for release of PCBs onto the Property. In 1984, manufacturers began producing non-PCB transformers that contain less than 50 parts per million of PCBs.

No PCB equipment was observed at the Property.

5.4. INTERIOR OBSERVATIONS

Not applicable. There are no structures at the Property.

6. INTERVIEWS

6.1. INTERVIEWS WITH OWNER

The Property is currently owned by Resolution. The report User is Resolution who provided relevant information about the Property. See interview with report User in **Section 3**.

6.2. INTERVIEWS WITH MANAGER

On August 13, 2020 Cristina Francois, the director of the Research Ranch with Audubon was interviewed by WestLand to obtain current information for the Property that may inform the potential for RECs at the Property. Cristina Francois has been the acting director since January 2018. Linda Kennedy was the former director and was previously interviewed by WestLand for prior Phase I ESA reports. Audubon manages the larger Research Ranch.

Linda Kennedy reviewed field maps with WestLand staff prior to the past site visit and provided responses to several questions intended to provide relevant data regarding use of the Property and potential for environmental liabilities. She also provided historic information on the Research Ranch (**Appendix I**). Linda Kennedy reported the current and past use of the Property as conservation and grazing land with limited residential (i.e., a ranch house at the southern parcel). That house burned down in the Ryan Fire of 2002; only the foundation remains. She reported that the Appleton family bought the Property in the 1950s. Grazing at the Property occurred until 1968. She reported that surrounding land use has similar to that used today.

Linda Kennedy indicated that she was not aware of any chemical/petroleum products being stored on the Property. The wells located on the Property are powered by wind and solar power. She also stated that she was not aware of any spills or other chemical releases that had taken place on the Property. She is not aware of any environmental liens, deed restrictions, restrictive covenants or other land controls related to contamination for the Property or surrounding land. It is not known if water or an underground septic was located at the ranch house at the Property, or if septic tanks were closed. There are no transformers at the Property, only on adjoining land. Linda Kennedy has not observed indications of petroleum or chemical spills, she had not observed wastewater treatment facilities. The Property was not used for landfill or dump and there is no fill material at the Property from an unknown origin. There are no drains that are stained or emit odors.

Cristina Francois indicated that to her knowledge, there has not been any use of hazardous substances or petroleum products on the Property in recent years. There have not been any known spills of hazardous materials or petroleum products. Even the use of herbicides has been curtailed in recent years as a management goal. Removal of non-native weed species is done by hand. There have been no new storage tanks installed on the Property but there was a new septic tank installed recently (since 2016) at the ranch headquarters on adjoining land. There is a proposal to use heavy equipment at the

Property as part of a wetland installation project, but this has not been scheduled and would not immediately indicate a likely release of hazardous materials or petroleum products to the Property.

6.3. INTERVIEWS WITH OCCUPANTS

There are currently no occupants on the Property; however, Audubon manages the larger Research Ranch. The Property is managed as part of the Research Ranch (see Manager interview, **Section 6.2**).

As part of the previous Phase I ESA inquiry (WestLand 2016), Diana Sandoval spoke with Posey Piper at (520) 394-2919. Posey Piper and her family lived at the ranch headquarters (on adjoining land) from_1959 until 1967, where they raised cattle and her husband served as cattle manager for the Appleton family. She reported that the Clark family owned much of the land in the vicinity before the Appletons.

Posey Piper reported that the only known use of the Property she was aware of is for ranch use. She does not recall there ever being a spill or large release of any chemicals, hazardous materials, or petroleum products at the ranch headquarters or on land in the larger ranch. She stated that her family and the owners managed the land with special attention given to conservation and protection of the natural environment. They preserved rainwater and worked to prevent erosion and sedimentation at the ranch.

She suggested the old ranch house that has since burned down on the Property belonged to the Appleton family. There would have had to be a septic system as there is no sewer in the vicinity. She stated that trash was typically burned and not buried.

When asked about parasitic prevention practices, Posey Piper reported cattle dipping practices were never conducted while they managed cattle. Sprays were used to apply pesticides to the cattle. She was not aware of what practices the Clarks or others in the area used.

6.4. INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS

Fire Department

WestLand inquired to the Sonoita-Elgin Fire District at (520) 455-5854) regarding confirmation of their service area, and whether or not they have responded to the Property or adjoining properties with regard to fuel/chemical spills or if they were aware of any chemical or petroleum product storage at the Property. On August 10, 2020, Katie Goodwin (Admin. Assistant to the Chief) reported that the District has no knowledge of any such spills or storage.

Santa Cruz County Health Department

For the previous Phase I ESA inquiry (WestLand 2016), the Santa Cruz County Health Department was interviewed by telephone at (520) 375-7900 regarding a septic records request. WestLand provided the legal description and parcel number (108-36-003A) for the southern tract of land that formerly included a ranch house. Their records are not entirely inclusive as many people have not provided records to the County or ADEQ; however, they have records as far back as 1968. The query for this tract of land indicated only vacant land and no septic records were identified.

6.5. INTERVIEWS WITH OTHERS

No other individuals were interviewed as part of this investigation.

7. FINDINGS AND OPINIONS

Based on the findings of the environmental records search, historical review, physical setting of the Property, field reconnaissance of the Property, prior reports, and interviews, WestLand provides the following findings and opinions pertaining to the Property:

- EDR was also commissioned to conduct a title review for environmental liens and activity and use limitations (AULs) for the Property. No records of environmental liens or AULs were identified for any of the assessor parcels comprising the Property.
- Federal, tribal, state, local, and supplemental database searches for environmental records of concern were conducted. The Property was not identified in any of the environmental databases searched by EDR; furthermore, no environmental record sites were located within the ASTM-recommended minimum search distance from the Property. Based on WestLand's research of this list, none of these sites would likely indicate an environmental concern for the Property due to the nature of the listings and/or their distance from the Property.
- None of the named drainages within the subject parcels have been identified by ADEQ as impaired for any designated uses by that agency's surface water monitoring program (ADEQ 2012, 2015, 2018).
- Remnants of a ranch house, yard landscaping and a driveway are present on the southern tract of the Property. Septic tanks may be present adjacent to the former house foundation. In 2004, two vent tubes for the septic system were observed immediately east of the house foundation; rocks dropped into the tubes contacted liquids approximately 10 feet bgs, indicating that liquids in the tank(s) had not been pumped out. While the vents were no longer visible in 2015 or 2020, vestiges of the septic system may still be onsite. The Santa Cruz County Health Department has no records of a septic system at the Property; however, their records only date from 1968 and many individuals do not report septic records to the local jurisdiction and/or state. Considering that use or storage of any hazardous materials and petroleum products at this location is limited to typical household quantities, the septic system for the residence is not considered a REC.
- Based on historical and modern information reviewed, the Property was previously used for ranching, including a residence and cattle grazing. In 1969, the ecological preserve was established, now the Research Ranch. The Research Ranch has been used for ecosystem conservation, research, and education/outreach. Grassland rehabilitation efforts include: erosion control, removal of non-native invasive species, replanting native grasses, and reestablishing a natural fire regime via planned fires. Non-natives invasive species removal is currently accomplished by manual removal but in past years, each plant may have been sprayed with 2-percent Roundup[®] to minimize disturbance to the ecosystem. Based on WestLand's interview with the representative for Audubon and the past ranch manager, and descriptions of land use at the Research Ranch provided by published documents, conservation and research activities do not involve the application or use of hazardous materials or petroleum

products, with the exception of discrete application of Roundup[®] in small [de minimis] quantities. It is possible that the storage and use of minor quantities of hazardous material and petroleum products (lubricants, cleaners, etc.) are present at structures on adjoining land (at the larger ranch) such as the laboratory, housing units and offices; however, these products would likely be found in household quantities and any releases would be of a de minimis nature.

- Prior Phase I ESAs for the Property were conducted by WestLand in 2004 (WestLand 2004b) and 2016 (WestLand 2016). The 2004 and 2016 assessments revealed no evidence of REC in connection with the Property. No RECs were identified on the Property or on adjoining land.
- Interviews were conducted with several individuals: the report User and Property Owner, Property Manager (Audubon), the local fire department, and in past years a past occupant of the larger ranch property, and the local health department as well. None of these interviews revealed information indicative of a release of a hazardous material or petroleum product at the Property or on land adjoining the Property.

8. CONCLUSION

WestLand has performed a Phase I ESA in conformance with the scope and limitations of ASTM E 2247-16 for the Property (**Figure 1**). Any exceptions to, or deletions from, this practice are described in **Section 9** of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the Property. WestLand also did not identify any historical or controlled RECs, or *de minimis* conditions for the Property.

9. DEVIATIONS

The purpose of reviewing historical sources is to develop a history of the previous uses of a property and surrounding area in order to help identify past uses that may have led to RECs in connection with the Property. According to the ASTM standard, obvious uses of a property shall be identified from the present back to the property's first developed use, or back to 1940, whichever is earlier. This requires reviewing only as many standard historical sources as are reasonably ascertainable and likely to be useful.

The historical topographic quadrangles do not include the far eastern portion of the northeastern parcel. However, aerials were reviewed. Based on the rural nature of the Property, the other sources of information regarding historic use, and the most recently available topographic quadrangles and aerials, this data gap does not affect our ability to identify RECs on the Property.

Considering that developed use of the Property is limited to cattle grazing and prior residential uses and that there is no other documented or suspected use of the Property potentially indicating a REC, WestLand did not conduct a city directory search, Sanborn Fire Insurance Map search, building department record search or other historic record searches. There were no data failures or limitations potentially affecting conclusions regarding the identification of RECs for the Property (site access limitations, physical obstructions to observations, outstanding information requests, historical data failure, etc.). Considering the known history of the site, the results of the site reconnaissance, and other completed research, this assessment is considered complete.

On August 6, 2020, WestLand contacted representatives for the BLM and requested that the User Questionnaire be completed for the Property in support of the Southeastern Land Exchange and Conservation Act of 2013. As of the date of this report, a returned questionnaire has not yet been received. If the User Questionnaire is received after this report is finalized, it may be incorporated into the Phase I ESA report as an addendum to assist the Bureau of Land Management in qualifying for landowner liability protections.

10. ADDITIONAL SERVICES

No additional services beyond the standard ASTM scope were considered as part of this assessment.

11. QUALIFICATIONS AND SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

Mark F. Taylor, P.E. believes that, to the best of his professional knowledge, he meets the definition of "environmental professional" as defined in §312.10 of 40 CFR 312. Mark Taylor possesses the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject Property. He has developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

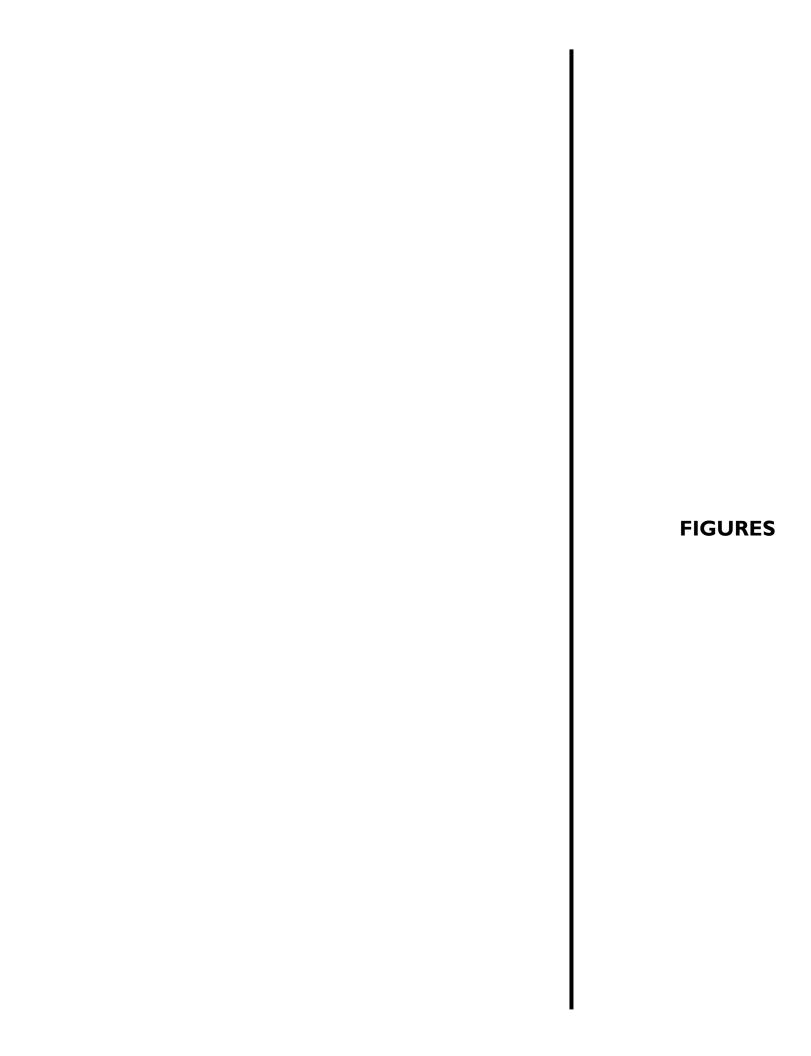
Mark Taylor is the leading environmental professional assigned to perform project oversight for this Phase I ESA. Patrick Mette and Samantha Blonder conducted the site reconnaissance under the direction of Mark Taylor. Diana Sandoval conducted the interviews, regulatory inquiries, and historical research. Christopher Rife reviewed the findings in this report. Their work was conducted under the supervision of the above-named environmental professional. Mark Taylor reviewed, interpreted, and declared the information included in this report as complete. Resumes for the key individuals participating in the preparation of this report are provided in **Appendix J**.

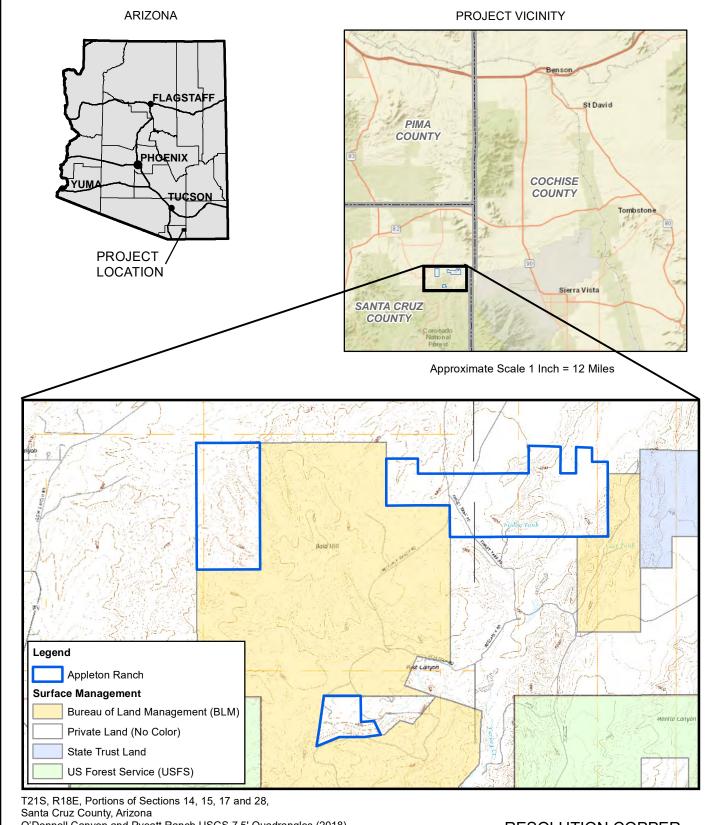
Md F. Tyla	09/04/2020
Mark F. Taylor, P.E.	Date

12. REFERENCES

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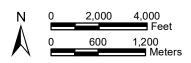
WestL	and Resources, Inc. 2004a. Ecological Overview: Appleton Ranch Parcel Santa Cruz County, Arizona. <i>Prepared for Resolution Copper Mining</i> . Tucson, Arizona: WestLand Resources, Inc. May 26, 2004.
	2004b. Phase I Environmental Site Assessment: Appleton Ranch Site Santa Cruz County, Arizona. <i>Prepared for Swift Current Land & Cattle Company, LLC.</i> Tucson, Arizona: WestLand Resources, Inc. March 22, 2004.
	2004c. Wetlands and Floodplains Report. <i>Prepared for Resolution Copper Company.</i> Tucson, Arizona: WestLand Resources, Inc. October 2004.
	2016. Phase I Environmental Site Assessment Non-Federal Parcel, Appleton Ranch Santa Cruz County, Arizona. <i>Prepared for Resolution Copper</i> . Tucson, Arizona: WestLand Resources, Inc. September 2016.





T21S, R18E, Portions of Sections 14, 15, 17 and 28, Santa Cruz County, Arizona
O'Donnell Canyon and Pyeatt Ranch USGS 7.5' Quadrangles (2018)
Surface Management: BLM 2019, WRI modified 2019
Image Source: ArcGIS Online, World Street Map

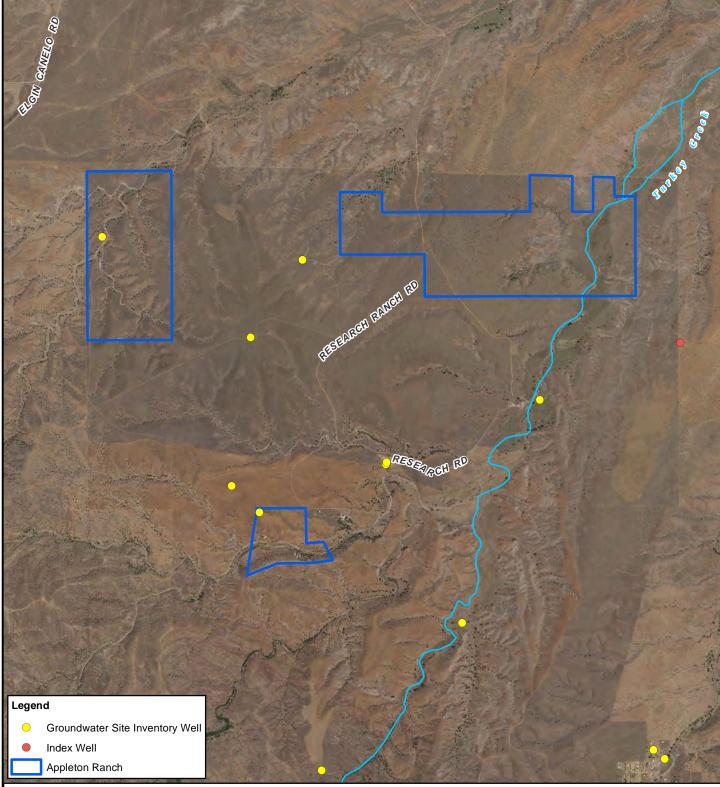
WestLand Resources



RESOLUTION COPPER

Phase I ESA for Appleton Ranch

VICINITY MAP Figure 1

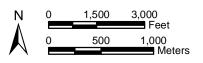


T21S, R18E, Portions of Sections 14, 15, 17 and 28,

Santa Cruz County, Arizona
Data Source: ADWR, Groundwater Site Inventory 01/07/2020

Image Source: USDA NAIP 2019

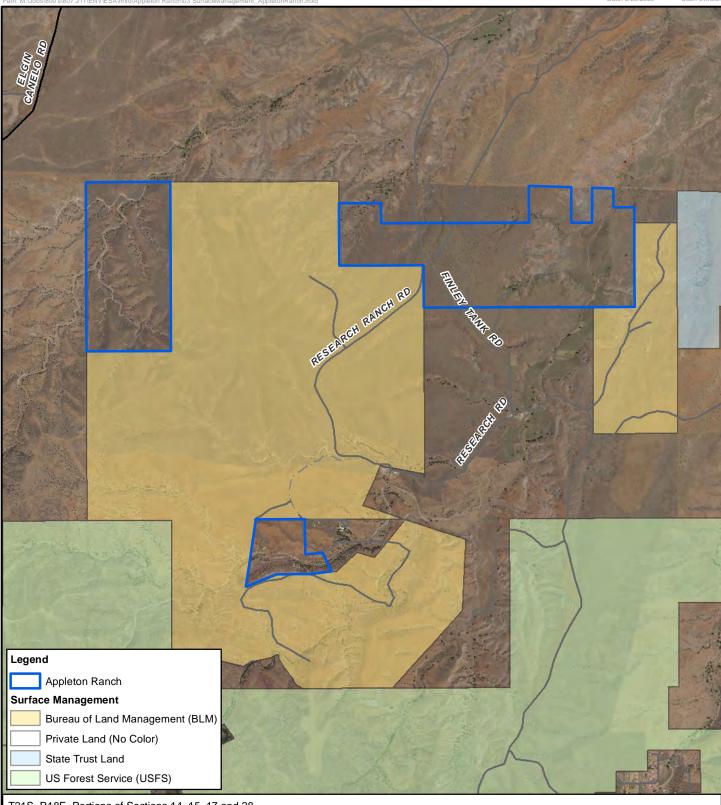
WestLand Resources



RESOLUTION COPPER

Phase I ESA for Appleton Ranch

AERIAL OVERVIEW WITH ADWR REGISTERED WELLS Figure 2



T21S, R18E, Portions of Sections 14, 15, 17 and 28, Santa Cruz County, Arizona Surface Management: BLM 2019, WRI modified 2019

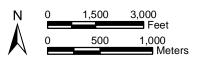
Image Source: USDA NAIP 2019

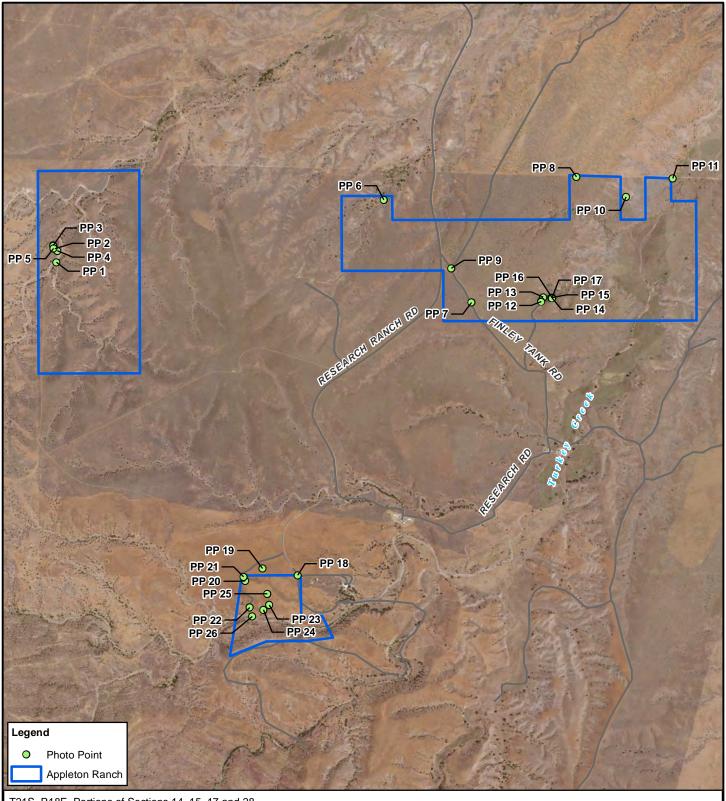
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Phase I ESA for Appleton Ranch

SURFACE MANAGEMENT Figure 3







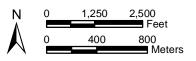
T21S, R18E, Portions of Sections 14, 15, 17 and 28, Santa Cruz County, Arizona Image Source: USDA NAIP 2019

RESOLUTION COPPER

Phase I ESA for Appleton Ranch

SITE RECONNAISSANCE MAP WITH SELECT FEATURES Figure 4





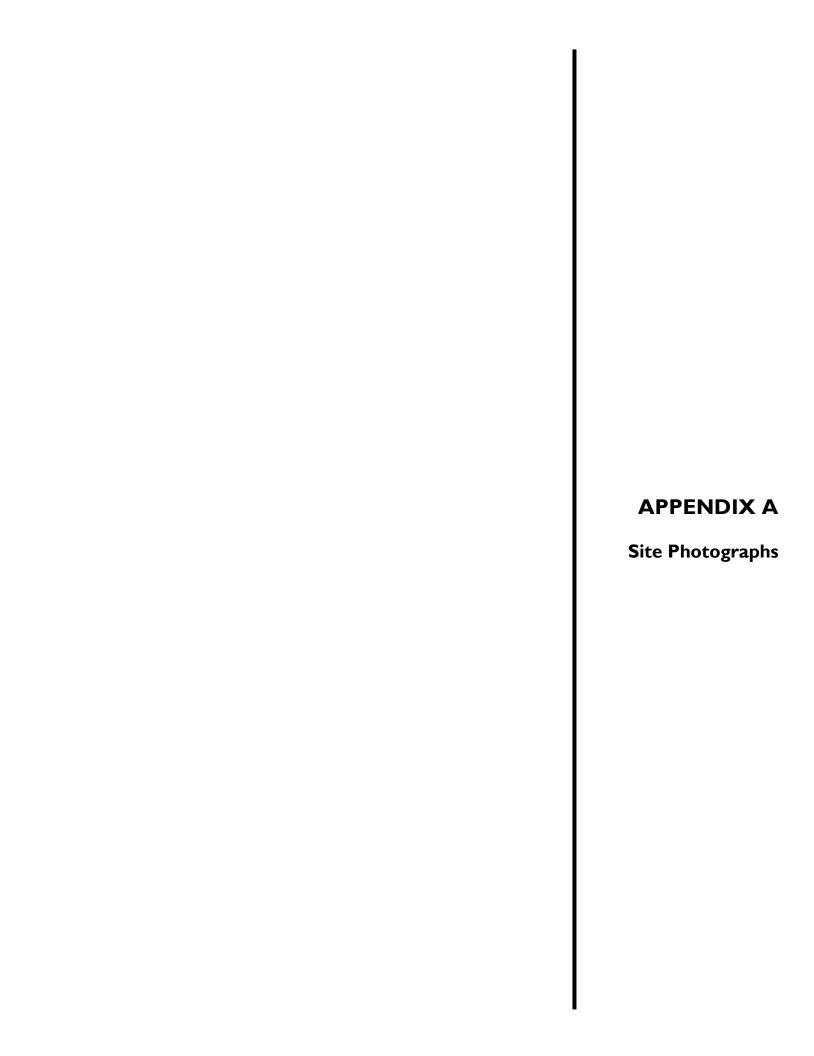




Photo 1. Overview looking southeast within the drainage channel tributary to Vaughn Canyon.



Photo 2. Pipeline from windmill and well to trough and overflow for the cattle pond.



Photo 3. Water trough located north of the windmill and tank.





Photo 4. Windmill and tank.



Photo 5. Cattle pond.



Photo 6. Overview of the western side of the largest parcel, looking southeast.





Photo 7. Research Ranch Road running south through the parcel.



Photo 8.Fence line and powerline along the larger Appleton-Whittell Research Ranch Boundary, north of the Property.



Photo 9. Utility box near northern center of Property.





Photo 10.

This area was noted during the site visit due to the difference in appearance of soil and vegetation from the surrounding areas. Upon review of aerial imagery, this appears to be the result of natural erosion from a nearby hill. The noted area is outside the subject Property, but within Appleton-Whittell Research Ranch.



Photo 11.

Overview from the northeast portion of the parcel, looking southeast. The boundaries of the larger Appleton-Whittell Research Ranch area were observed to be fenced or gated in the areas visited by the survey team.



Photo 12.

Solar powered well site, in the southeastern part of the northern parcel.





Photo 13. Pipe in ground, possibly used as marker.



Photo 14. Pipe in ground, possibly used as a marker.



Photo 15. Stock pond in a wooded area.





Photo 16. Remnants of possible experiment station.



Photo 17. Wildlife camera stationed on tree.



Photo 21. Gate to southern parcel.





Photo 18. Abandoned water trough.



Photo 19. Solar powered well, empty concrete water tank, and smaller metal water tank.



Photo 20. Abandoned water trough.





Photo 21. Foundation of former ranch home, looking south.



Photo 26. Abandoned water faucet on ranch house parcel.



Photo 22.Metal power pole that previously served the ranch house. Old wooden power poles are adjacent lying on the ground.



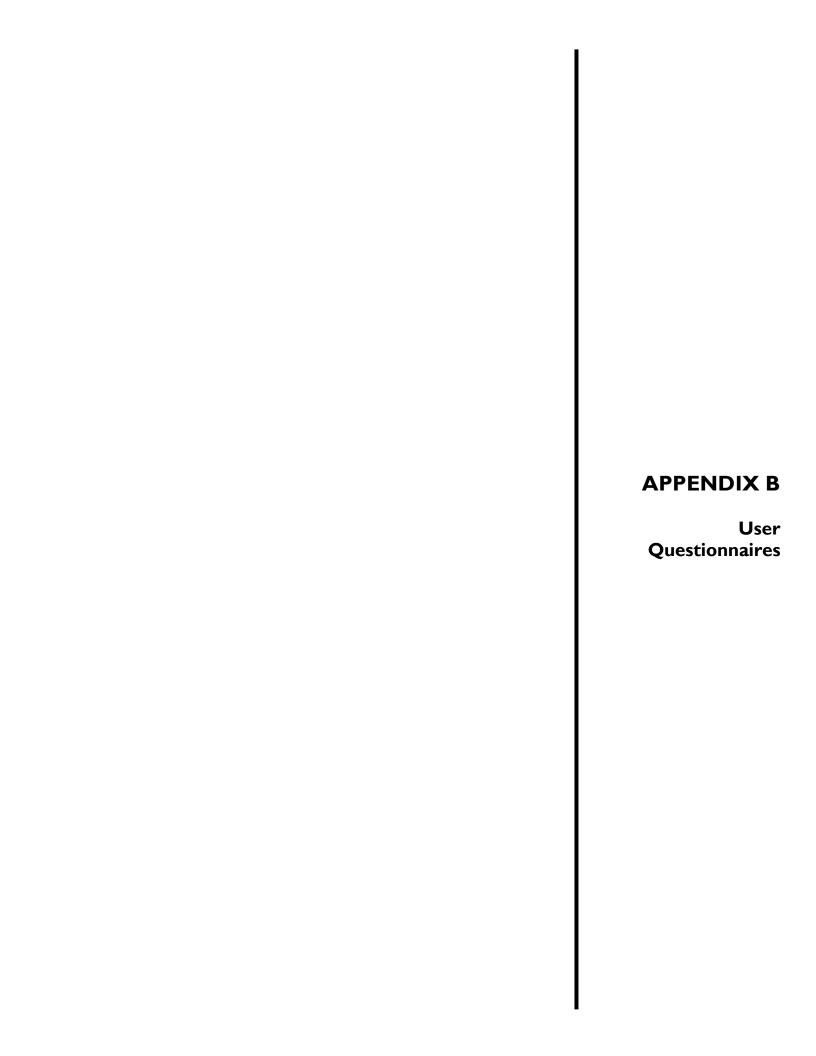


Photo 23. Remnants of infrastructure near old ranch house foundation.



Photo 24. Overview of land looking south from ranch house.





PHASE I ENVIRONMENTAL SITE ASSESSMENT (ASTM E 1527-13 & 2247-08)

USER QUESTIONNAIRE

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "*Brownfields Amendments*"), the *user* must conduct the following inquiries required by 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31. These inquiries must also be conducted by EPA Brownfield Assessment and Characterization grantees. The *user* should provide the following information to the *environmental professional*. Failure to conduct these inquiries could result in a determination that "all appropriate inquiries" is not complete.

(1). Environmental cleanup liens that are filed or recorded against the property (40 CFR 312.25).

Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law?

No

(2). Activity and land use limitations that are in place on the Property or that have been filed or recorded against the *property* (40 CFR 312.26). Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

No

(3). Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).

As the user of this ESA do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the *property* or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes

(4). Relationship of the purchase price to the fair market value of the *property* if it were not contaminated (40 CFR 312.29). Does the purchase price/lease being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?

No information indicating the value of the Property had been reduced as a result of environmental issues.

- (5). Commonly known or reasonably ascertainable information about the property (40 CFR 312.30). Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user:
 - (a.) Do you know the past uses of the *property*?

The Property and surrounding area are rolling grasslands formerly used for cattle grazing, and largely devoid of development such as buildings or major earthwork. Currently the Property is managed similarly to adjacent ecological research lands where cattle grazing is restricted

- (b.) Do you know of specific chemicals that are present or once were present at the *property*?

 No hazardous substance containers or unidentified substance containers were identified on property. Small aboveground storage tanks for petroleum products are present on the adjoining Audubon property and used for site maintenance.
- (c.) Do you know of spills or other chemical releases that have taken place at the *property*?

No spills or releases known.

(d.) Do you know of any environmental cleanups that have taken place at the *property*?

Nο

(6). The degree of obviousness of the presence of likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

As the user of this *ESA*, based on your knowledge and experience related to the *property* are there any obvious indicators that point to the presence or likely presence of contamination at the *property*?

No

In addition, certain information should be collected, if available, and provided to the environmental professional selected to conduct the Phase I. This information is intended to assist the environmental professional but is not necessarily required to qualify for one of the LLPs. The information includes:

- (a) The reason why the Phase I is required
 Support of the land exchange between the US and Resolution Copper Mining
- (b) The type of *property* and type of *property* transaction, for example, sale, purchase, exchange, etc. Exchange
- (c) The complete and correct address for the *property* (a map or other documentation showing *property* location and boundaries is helpful).

Not needed for this questionnaire

(d) The scope of services desired for the Phase I (including whether any parties to the *property* transaction may have a required standard scope of services on whether any considerations beyond the requirements of Practice E 1527/2247 are to be considered).

Standard

(e) Identification of all parties who will rely on the Phase I report.

Resolution Copper Mining, US Forest Service, Bureau of Land Management

(f) Identification of the site contact and how the contact can be reached. - Are there previous site contacts that should be interviewed? Linda Kennedy, Ph.D., Director 520-455-5522

lkennedy@audubon.org

- (g) Any special terms and conditions which must be agreed upon by the environmental professional.

 N/A
- (h) Any other knowledge or experience with the *property* that may be pertinent to the environmental professional (for example, copies of any available prior environmental site assessment reports, documents, correspondence, etc., concerning the *property* and its environmental condition).

N/A

Name, Title, and Organization of person interviewed:

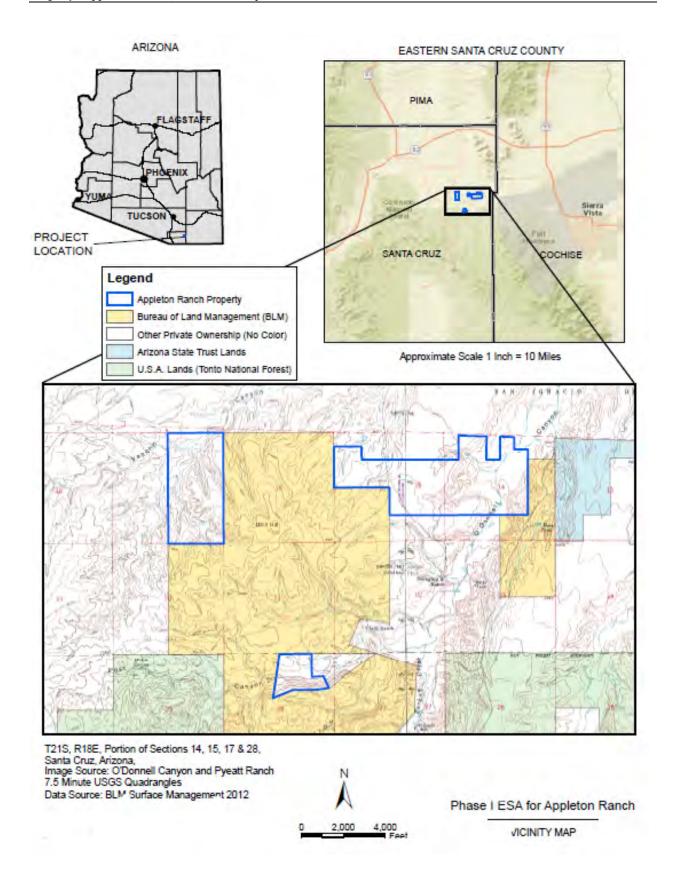
Sterling Hundley, Controller, RESOLUTION COPPER COMPANY

Interview Medium (phone, email, in-person):

Email and phone

Date of Interview:

08/06/2020



PHASE I ENVIRONMENTAL SITE ASSESSMENT

OWNER/ OPERATOR/OCCUPANT QUESTIONNAIRE

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(1). Please describe the current uses of the <i>property</i> , if known.
Conservation and research
(2). Please describe the past/historic use(s) of the <i>property</i> , if known.
Grazing until 1968
(3). Name the current and any past owners or occupants of the <i>property</i> , if known.
Resolution Copper Mining LLC is current owner. The Appleton family bought it in the 1950s and owned until RCML in 2005
(4). Please describe the past and/or current uses of adjoining properties, if known.
Only other known uses are residential and grazing.
(5). Please describe the general past and/or current uses of the surrounding area, if known. (i.e. residential, commercial, agricultural, industrial etc.)
Surrounding land uses has largely been the same as uses today, similar to the Property.
(6). Are you aware of any chemicals/petroleum products in individual containers greater than 5-gallons that are present or once were present at the <i>property</i> (including used automotive/industrial batteries, pesticides, paints, solvents acids, bases, antifreeze, gasoline, diesel, fuel oil, kerosene, lubricating oil, benzene, etc)? This includes industrial drums (typically 55-gallons).
Yes No_X Unknown
Only pre-1950s if anything, Nothing known. Well sites use wind power and solar, not oil to power wells. (7). Do you know of spills or other chemical releases that have taken place at the <i>property</i> ?
Yes No_X Unknown
(8). Do you know of any environmental cleanups that have taken place at the <i>property</i> ?
Yes No_X Unknown
The 70 acre parcel had a house at once point which burnt in the Ryan Fire of 2002. Only the house pad remains. (9). Are you aware of any environmental cleanup liens against the <i>property</i> ?
Yes No_X Unknown
(10). Are you aware of any engineering controls (capping, slurry walls or water treatment), land use restrictions or institutional controls (deed restriction, restrictive covenants, easements or zoning) intended to reduce exposure of a hazardous substance or petroleum product at the <i>property</i> ?
Yes No_X Unknown
(11). Are there any above ground storage tanks, underground storage tanks, vent pipes or access ways indicating storage tanks at the <i>property</i> ?
Yes No Unknown_X
A water or septic tank count be located out by the house. It is not known if these tanks would have been closed.
(12). Are there any PCBs (transformers, hydraulic equipment) at the <i>property</i> ?
Yes No_X_ Unknown
Only at the ranch headquarters and on adjoining land. Page 1 of 3

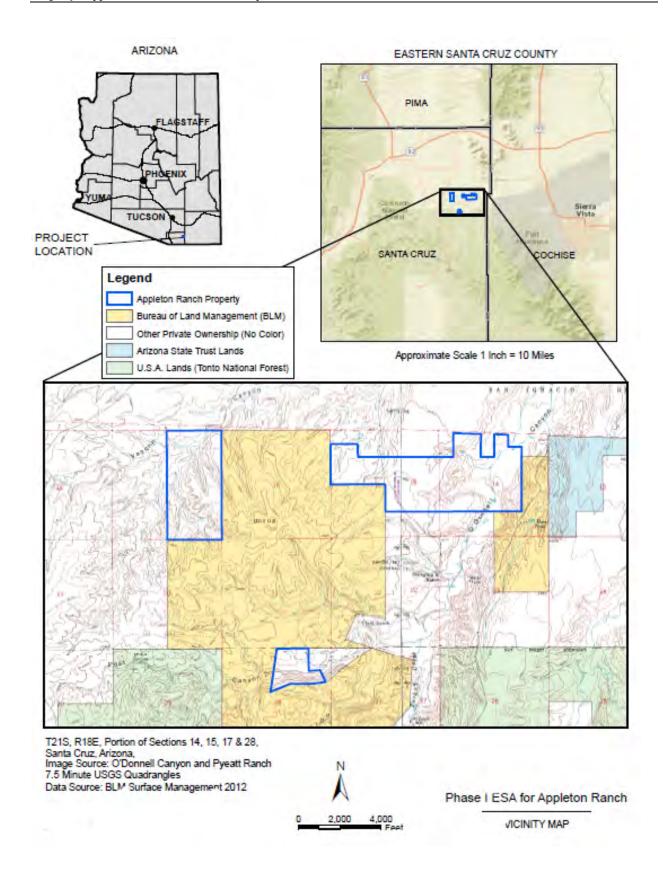
	lave you obse al spill at the		soil/pavement, corrosion, or stressed vegetation that may indicate a petroleum or
	Yes	No_X	Unknown
(14). H	ave you obser	rved pits, por	nds, or lagoons associated with wastewater treatment/disposal at the property?
Only p databa (15). A	Yes_ onds would be re se searched in rec re you aware	No X elated to water. Scords review)]. of any waste	Unknown
	Yes	No_x_	Unknown
(16). A	re you aware	of any wells	located at the <i>property</i> (dry, irrigation, injection, or abandoned)?
	o served by wind	lmill and anothe	Unknown try by solar power (Finley Tank), one at each of the three Property areas. systems at the <i>property</i> ?
	ibly by old ranch	house remains	Unknown_X
	Yes	No_X	Unknown
	as dirt fill bee	en brought to	the property that originated from a site of unknown origin or from a contaminated
site?	Yes	No <u>X</u>	Unknown
	are there or ha		been any flooring, drains, or walls located within the facility that are stained by nitting odors?
	Yes	No_X	Unknown
conditi	ons at the pr	operty or co	er information that may be pertinent to identifying past and present environmental opies of any available prior <i>environmental site assessment reports</i> , documents, the <i>property</i> and its environmental condition?
(22). petrole relevan govern	ng in the last 50 ; Are you awar um products i at to hazardou	years. Condition to of (1) any j n, on, or from s substances regarding an	Unknown
	Yes	No_X	Unknown

Name, Title, and Organization of person interviewed:

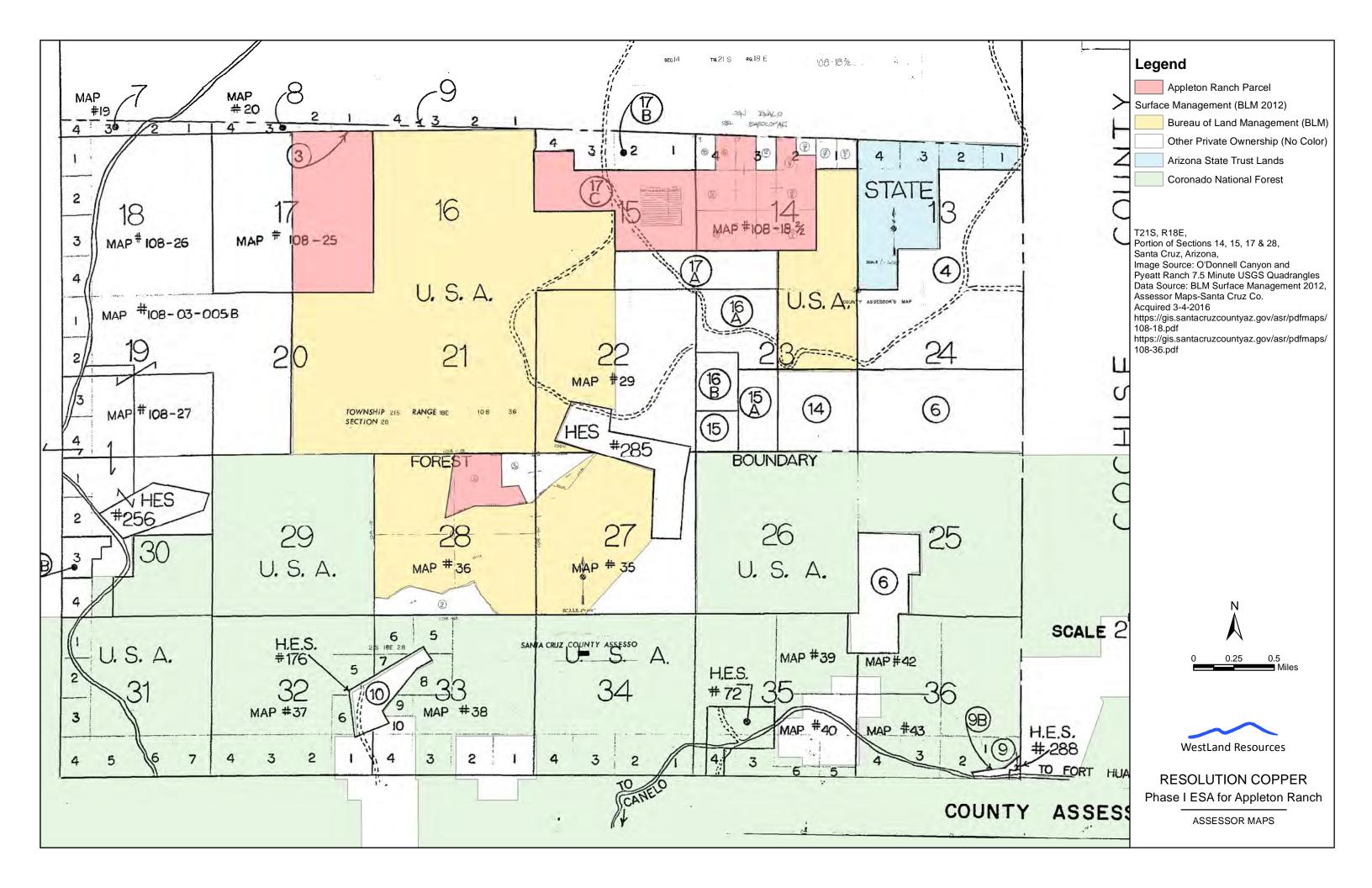
Sterling Hundley, Controller, RESOLUTION COPPER COMPANY

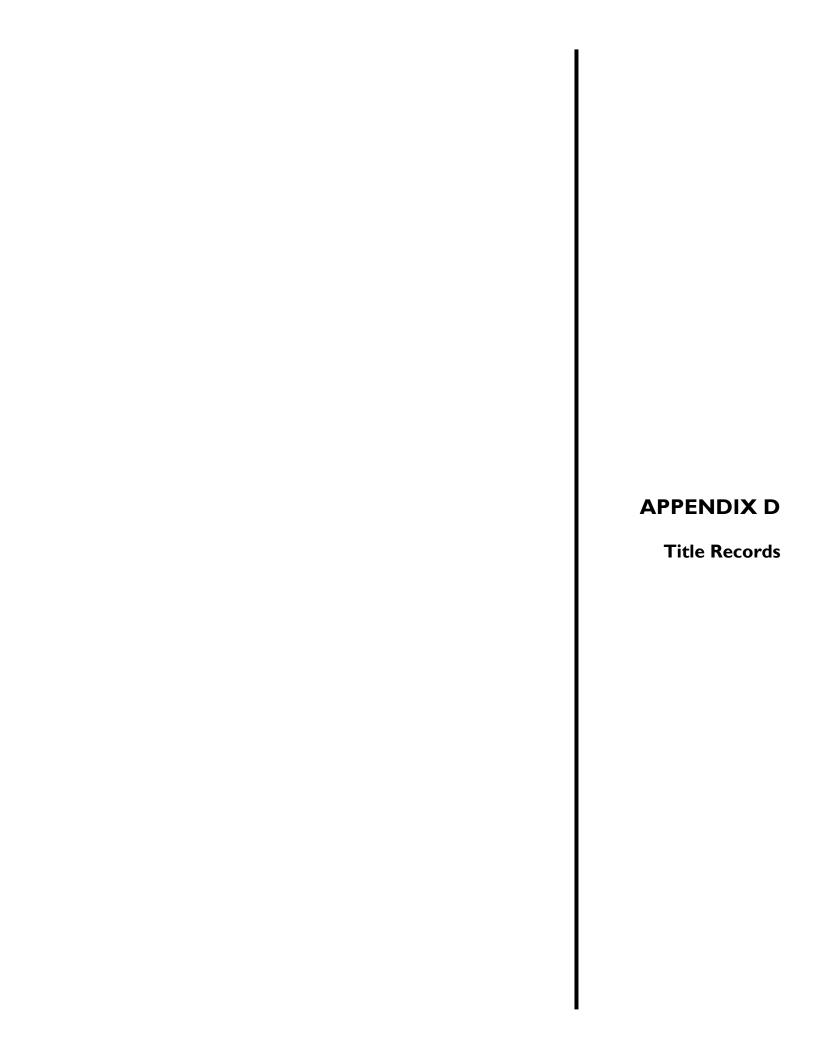
Interview Medium (phone, email, in-person):

Email and phone **Date of Interview:**



APPENDIX C Pinal County Assessor's Record Maps





Corporation Service Company

2711 Centerville Road Suite 400, Wilmington, DE, 19808 (888) 690-2882 sop@escinfo.com

United States Corporation Company

NOGALES, AZ 85621 NONE STATED

Form Prepared By: Shanna Brewer

The Prentice-Hall Corporation System, Inc.

NOTICE OF SERVICE OF PROCESS Date Processed: 01-MAR-04 Transmittal #: AZ2020736C ALL. To: MS. SHANNON CROMPTON Redirect sent to: RIO TINTO SERVICES, INC. 1343 SOUTH 1800 EAST SALT LAKE CITY UT 84108 TYPE OF REPRESENTATION: Statutory We enclose the following documents which were served upon: Corporation Service Company for as registered agent in Arizona SWIFT CURRENT LAND & CATTLE, LLC (ID#: 2166382) Documents were served on 01-MAR-04 via Regular Mail (First Class) ID#: N/A Title of Action: LANDAMERICA LAWYERS TITLE Case #: FILE NO. 01320924 vs. SWIFT CURRENT LAND & CATTLE, LLC Court: NONE STATED Nature of Case: RE: INSURANCE AND REQUIREMENTS A self-addressed stamped Summons Notice of Mechanic's Lien envelope enclosed Notice of Attorney's Lien Complaint Notice of Default Judgment Duplicate copies of the Notice Garnishment and Acknowledgement enclosed Subpoena Other: LETTER; ETC. Answer Due: SEE DOCUMENT Documents Sent: Federal Express ID#: Spoke to: N/A Call Placed: No call placed Comments: NONE Attorney for Claimant: ALEXA RAMIREZ LAWYERS TITLE OF ARIZONA 1780 N. MASTICK WAY, SUITE F

Original Client Copy - for your records

The information on this transmittal is provided for use in forwarding the attached documents. This information does not constitute a legal opinion as to the facts or details of this action. These should be obtained from the documents themselves. The receiver of this transmittal is responsible for interpreting the documents and for taking appropriate action. If you have received only a copy of the transmittal, you should be aware that the documents have been sent to the original addressee. You should contact that addressee for details or interpretations of the content of those documents.

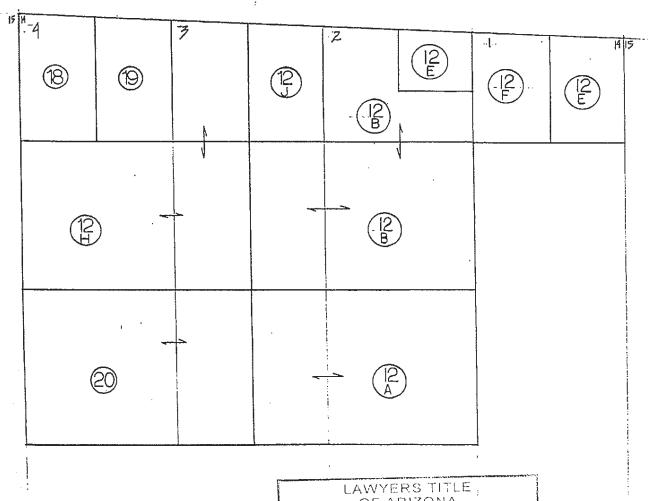
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SAN IGNACIO
PEL BAROCOMARI



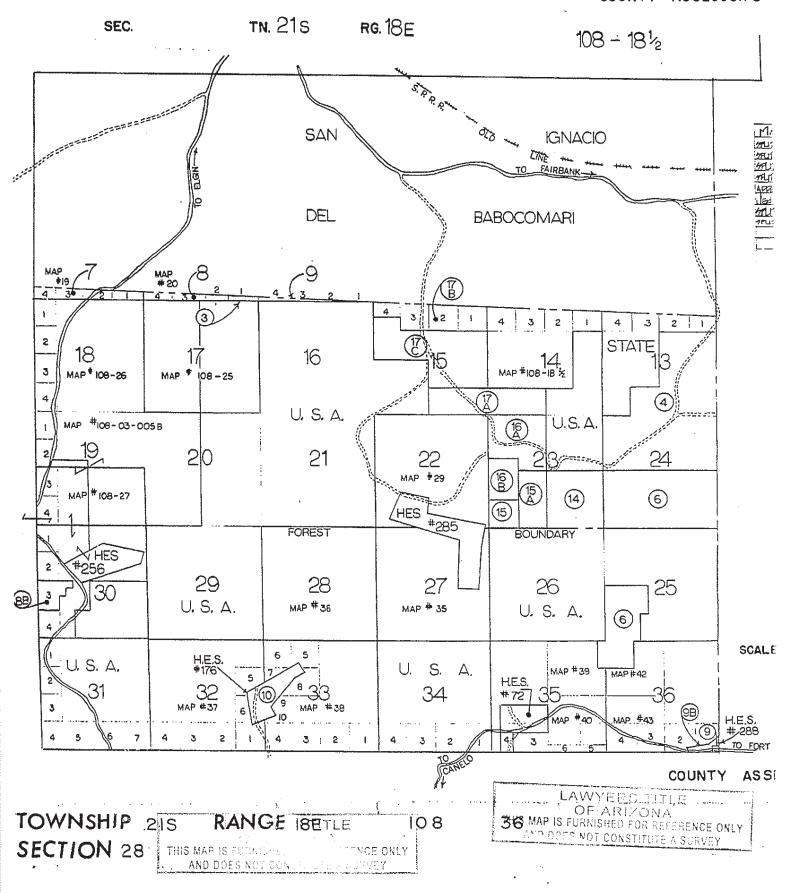
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AND DOES NOT CONSTITUTE A SURVEY

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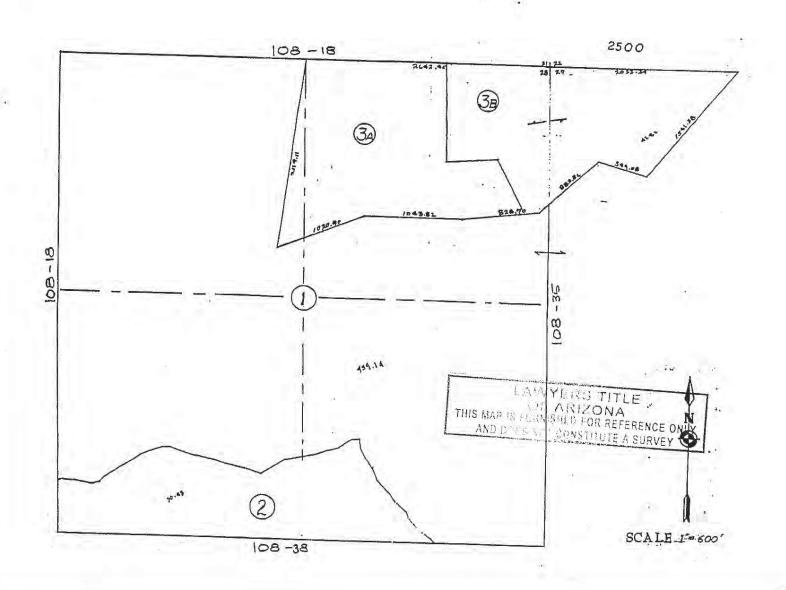
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WNSHIP 215 RANGE IBE 108 36





LAWYERS TITLE INSURANCE CORPORATION, a Virginia corporation, herein called the Company, for valuable consideration, hereby commits to issue its policy or policies of title insurance, as identified in Schedule A, in favor of the proposed Insured named in Schedule A, as owner or mortgagee of the estate or interest covered hereby in the land described or referred to in Schedule A, upon payment of the premiums and charges therefor; all subject to the provisions of Schedules A and B and to the Conditions and Stipulations hereof.

This Commitment shall be effective only when the identity of the proposed Insured and the amount of the policy or policies committed for have been inserted in Schedule A hereof by the Company, either at the time of the issuance of this Commitment or by subsequent endorsement.

This Commitment is preliminary to the issuance of such policy or policies of title insurance and all liability and obligations hereunder shall cease and terminate six (6) months after the effective date hereof or when the policy or policies committed for shall issue, whichever first occurs, provided that the failure to issue such policy or policies is not the fault of the Company.

IN WITNESS WHEREOF, LAWYERS TITLE INSURANCE CORPORATION has caused its corporate name and seal to be hereunto affixed by its duly authorized officers, the Commitment to become valid when countersigned by an authorized officer or agent of the Company.

LAWYERS TITLE INSURANCE CORPORATION

Janet a. algort

Attest:

Secretary

JAD. Web

SEAL 1925

By:

President

DISCLOSURE NOTICES

Good Funds Law

Arizona Revised Statutes Section 6-843 regulates the disbursement of escrow funds by an escrow agent. The law requires that funds be deposited in the escrow agent's escrow account and available for withdrawal prior to disbursement. Funds deposited with the Company by wire transfer may be disbursed upon receipt. Funds deposited with the Company in the form of cashier's checks, certified checks or teller's checks, or checks which are made by an affiliate of a state or federally regulated depository institution when the check is drawn on that institution, may be disbursed the same day as deposited. If funds are deposited with the Company by other methods, recording and/or disbursement may be delayed.

Privacy Notice (15 U.S.C. 6801 and 16 CFR Part 313):

We collect nonpublic personal information about you from information you provide on forms and documents and from other people such as your lender, real estate agent, attorney, escrow, etc. We do not disclose any nonpublic personal information about our customers or former customers to anyone, except as permitted by law. We restrict access to nonpublic personal information about you to those employees who need to know that information in order to provide products or services to you. We maintain physical, electronic and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

PURCHASER DWELLING ACTIONS NOTICE

Pursuant to Arizona Revised Statutes Section 12-1363.N, notice is hereby provided to the purchaser of a dwelling of the provisions of Arizona Revised Statutes Sections 12-1361, 1362 and 1363. These statutory sections set forth the requirements to be met by a purchaser prior to bringing an action against the seller of a dwelling arising out of or related to the design, construction, condition or sale of the dwelling. "Dwelling" means a single or multifamily unit designed for residential use and common areas and improvements owned or maintained by an association or its members. "Seller" means any person, firm, partnership, corporation, association or other organization engaged in the business of designing, constructing or selling dwellings. The complete statutory sections can be viewed on the Arizona State Legislature's web site: www.azleq.state.az.us/ars/ars.htm.

NOTICE:

Pursuant to Arizona Revised Statutes 11-480, effective January 1, 1991, the County Recorder may not accept documents for recording that do not comply with the following:

- a Print must be ten-point type (pica) or larger.
- b Margins of at least one-half inch along the left and right sides one-half inch across the bottom and at least two inches on top for recording and return address information.
- c Each instrument shall be no larger than 8 ½ inches in width and 14 inches in length.

Escrow Officer: Alexa Ramirez Lawyers Title of Arizona 1780 N. Mastick Way Suite F Nogales, Az 85621

COMMITMENT FOR TITLE INSURANCE

Issued by

Lawyers Title Insurance Corporation

SCHEDULE A

1. Effective Date: February 2, 2004 at 7:30 a.m. File No.: 01320924

2. Policy or Policies to be issued: ALTA Std. Owners Policy 10-17-92

Proposed Insured:

Swift Current Land & Cattle LLC, an Arizona limited

liability company

Liability:

\$3,400,000.00

Policy or Policies to be issued: None

Proposed Insured:

Liability:

\$

Policy or Policies to be issued: None

Proposed Insured:

Liability:

\$

- 3. The estate or interest in the land described or referred to in the Commitment and covered herein is A FEE.
- 4. Title to the said estate or interest in said land is at the effective date hereof vested in:

See Exhibit B attached hereto and made a part hereof.

5. The land referred to in this Commitment is situated in the County of Santa Cruz, State of ARIZONA, and is described as follows:

As fully set forth on "Exhibit A" attached hereto and by this reference incorporated herein

Title Officer: /P17

Typist: c18

Amended: February 20, 2004 No.

Page 3 of 27

EXHIBIT "A"

Parcel 1:

The Northwest quarter of the Southeast quarter and the East half of the Northeast quarter of the Southwest quarter of Section 14, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona.

APN 108-18-012A

Parcel 2:

Lot 2;

The Southwest quarter of the Northeast quarter and the East half of the Southeast quarter of the Northwest quarter of Section 14, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona;

EXCEPT the Northeast quarter of said Lot 2 conveyed by Deed recorded in Docket 416 at page 491.

APN 108-18-012B

Parcel 3:

Lot 3:

The Southwest quarter of the Northwest quarter and the West half of the Southeast quarter of the Northwest quarter of Section 14, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona;

EXCEPT that portion of said Lot 3 conveyed by Deeds recorded in Docket 633 at page 134 and Docket 633 at page 135.

APN 108-18-012H

Parcel 4:

Lot 4;

The Northwest quarter of the Southwest quarter and the West half of the Northeast quarter of the Southwest quarter all in Section 14, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona

EXCEPT that portion of said Lot 4 conveyed by Deed recorded in Docket 545 at page 610;

EXCEPT all coal and other minerals as reserved in the Patent from the United States of America.

APN 108-18-019 and 108-18-020

EXHIBIT "A" (Continued)

Parcel 5:

The south half of Lot 4, the south half of the North half and the Northwest quarter of the Southeast quarter of Section 15, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona.

Portion of APN 108-18-017C

Parcel 6:

The Northeast quarter of the Southeast quarter of Section 15, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona;

EXCEPT all coal and other minerals as reserved in the Patent from the United States of America.

Portion of APN 108-18-017C

Parcel 7:

The East half of Section 17, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona.

Parcel 8:

A tract or parcel of land being a portion of Sections 27 and 28, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona, more particularly described as follows:

BEGINNING at the corner common to Sections 21, 22, 27 and 28 of said Township and Range, a G.L.O. brass cap firmly set and properly marked;

THENCE North 89 degrees 58 minutes East, 2022.24 feet along and upon the North line of said Section 27 to a point thereon, being also corner No. 4 of H.E.S. No. 285;

THENCE South 39 degrees 40 minutes 30 seconds West, 1541.38 feet to an angle point;

THENCE North 72 degrees 44 minutes 30 seconds West, 549.08 feet to an angle point;

THENCE South 48 degrees 83 minutes West, 883.86 feet to an angle point;

THENCE South 82 degrees 36 minutes West, 828.70 feet to an angle point;

THENCE North 89 degrees 58 minutes 15 seconds West, 1043.82 feet to an angle point;

THENCE South 68 degrees 16 minutes 45 seconds West, 1020.90 feet to an angle point;

THENCE North 8 degrees 32 minutes 15 seconds East, 2119.11 feet to the quarter corner common to said Sections 21 and 28;

EXHIBIT "A" (Continued)

THENCE North 89 degrees 58 minutes East, 2642.95 feet to the place of beginning, all according to a transit survey made in June, 1974, by Robert Lenon, P.E. of Patagonia, Arizona, from the results of which this description was prepared by him at that time, with bearings referred to the meridian as determined from the average of 4 direct solar observations made at said Section corner;

EXCEPT any portion lying within the property conveyed by Deed recorded in Docket 468 at page 642 described as follows:

BEGINNING at the corner common to Sections 21, 22, 27 and 28 of said Township and Range, being a G.L.O. brass cap pipe firmly set and properly marked;

THENCE North 89 degrees 58 minutes 00 seconds East, 2020.03 feet along and upon the North line of said Section 27, to a point thereof, also being corner No. 4 of H.E.S. No. 285;

THENCE South 39 degrees 37 minutes 20 seconds West, 1539.65 feet;

THENCE North 72 degrees 45 minutes 04 seconds West, 549.09 feet;

THENCE South 48 degrees 01 minutes 54 seconds West, 883.94 feet;

THENCE South 82 degrees 34 minutes 49 seconds West, 186.35 feet;

THENCE North 26 degrees 42 minutes 49 seconds West, 643.82 feet;

THENCE South 85 degrees 45 minutes 02 seconds West, 549.80 feet;

THENCE North 01 degrees 29 minutes 22 seconds West, 1102.46 feet to a point on the North line of said Section 28;

THENCE North 89 degrees 58 minutes 00 seconds East along said North section line 1194.62 feet to the point of beginning.

SCHEDULE B - SECTION I REQUIREMENTS

The following are the requirements to be complied with prior to the issuance of said policy or policies. Any other instrument recorded subsequent to the date hereof may appear as an exception under Schedule B of the policy to be issued. Unless otherwise noted, all documents must be recorded in the office of the Recorder of the County in which said property is located.

- 1. TAXES for the year 2003 are shown paid in the amount of \$28.44. (State Tax Parcel No. 108-18-012A) (Parcel 1)
- 2. TAXES for the year 2003 are shown paid in the amount of \$27.58. (State Tax Parcel No. 108-18-012B) (Parcel 2)
- 3. TAXES for the year 2003 are shown paid in the amount of \$24.84. (State Tax Parcel No. 108-18-012H) (Parcel 3)
- 4. TAXES for the year 2003 are shown paid in the amount of \$5.52. (State Tax Parcel No. 108-18-019) (portion of Parcel 4)
- 5. TAXES for the year 2003 are shown paid in the amount of \$19.46. (State Tax Parcel No. 108-18-020) (portion of Parcel 4)
- 6. TAXES for the year 2003 are shown paid in the amount of \$120.72. (State Tax Parcel No. 108-18-017C) (Parcels 5 and 6)
- 7. TAXES for the year 2003 are shown paid in the amount of \$104.04. (State Tax Parcel No. 108-25-001) (Parcel 7)
- 8. TAXES for the year 2003 are shown paid in the amount of \$847.02. (State Tax Parcel No. 108-36-003A) (Parcel 8)
- 9. RECORD Deed from Lynne Appleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969 to Marc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 and as amended and restated by First Amendment dated January 25, 1969.

This Deed necessary to correct the Grantor in the Deed dated December 23, 1985, recorded January 09, 1986 in Docket 416 at page 478. On this date Lynne Appleton held title as Lynne Appleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969 by Deed dated January 27, 1970, recorded February 09, 1970 in Docket 110 at page 391. If it is the intent of Marc Francis Appleton to hold title as Marc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 and as amended and restated by First Amendment dated January 25, 1969, the name of the Grantee must also be corrected. The legal description for this Deed should be only for Parcel 1 of paragraph 5 of Schedule A, tax parcel No. 108-18-012A.

NOTE:

Disclosure of beneficiaries for Lynne Appleton Trust under Agreement dated June 16, 1969 in compliance with A.R.S. 33-404 is recorded in:

Docket

213

Page

359

SCHEDULE B - SECTION I REQUIREMENTS (Continued)

NOTE:

Disclosure of beneficiaries for Marc Francis Appleton Trust under Agreement dated April 15, 1966 in compliance with A.R.S. 33-404 is recorded in:

Docket

212

Page

273

10. RECORD Deed from Lee Appleton, Trustee of the Lee Appleton Trust under Agreement dated January 14, 1972 to Marc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 and as amended and restated by First Amendment dated January 25, 1969.

This Deed necessary to correct the Grantor in the Deed dated December 24, 1985, recorded January 09, 1986 in Docket 416 at page 482. On this date Lee Appleton held title as Lee Appleton, Trustee of the Lee Appleton Trust under Agreement dated January 14, 1972 by Deed dated February 19, 1976, recorded March 01, 1976 in Docket 203 at page 51. If it is the intent of Marc Francis Appleton to hold title as Marc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 and as amended and restated by First Amendment dated January 25, 1969, the name of the Grantee must also be corrected. The legal description for this Deed should be only for Parcel 1 of paragraph 5 of Schedule A, tax parcel No. 108-18-012A.

NOTE

Disclosure of beneficiaries for Lee Appleton Trust under Agreement dated January 14, 1972 in compliance with A.R.S. 33-404 is recorded in:

Docket

212

Page

145

NOTE:

Disclosure of beneficiaries for Marc Francis Appleton Trust under Agreement dated April 15, 1966 in compliance with A.R.S. 33-404 is recorded in:

Docket

212

Page

273

11. RECORD Quit Claim Deed from Marc Francis Appleton, a married man as his sole and separate property to Marc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 and as amended and restated by First Amendment dated January 25, 1969.

This Deed necessary to convey the interest he may have acquired individually by Deed dated December 26, 1985, recorded January 09, 1986 in Docket 416 at page 474. The legal description for this Deed should be only for Parcel 1 of paragraph 5 of Schedule A, tax parcel No. 108-18-012A.

NOTE:

Disclosure of beneficiaries for Marc Francis Appleton Trust under Agreement dated April 15, 1966 in compliance with A.R.S. 33-404 is recorded in:

Docket

212

Page

273

SCHEDULE B - SECTION I REQUIREMENTS (Continued)

12. RECORD Deed from Marc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 and as amended and restated by First Amendment dated
 January 25, 1969 to Lee Appleton, Trustee of the Lee Appleton Trust under Agreement dated January 14, 1972

This Deed necessary to correct the Grantor in the Deed dated December 26, 1985, recorded January 09, 1986 in Docket 416 at page 479. On this date, Mark Francis Appleton held title as Marc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 and as amended and restated by First Amendment dated January 25, 1969 in Docket 110 at page 393. If it is the intent of Lee Appleton to hold title as Lee Appleton, Trustee of the Lee Apleton Trust under Agreement dated January 14, 1972 the name of the Grantee must also be corrected. The legal description for this Deed should be only for Parcel 2 of paragraph 5 of Schedule A, tax parcel No. 108-18-012B.

NOTE:

Disclosure of beneficiaries for Marc Francis Appleton Trust under Agreement dated April 15, 1966 in compliance with A.R.S. 33-404 is recorded in:

Docket

212

Page

273

NOTE:

Disclosure of beneficiaries for Lee Appleton Trust under Agreement dated January 14, 1972 in compliance with A.R.S. 33-404 is recorded in:

Docket

212

Page

145

13. RECORD Deed from Lynne Appleton, Trustee of the Lynne Appleton Trust under agreement dated June 16, 1969 to Lee Appleton, Trustee of the Lee Appleton Trust under Agreement dated January 14, 1972.

This Deed necessary to correct the Grantor in the Deed dated December 23, 1985, recorded January 09, 1986 in Docket 416 at page 483. On this date Lynne Appleton held title as Lynne Appleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969 by Deed dated January 27, 1970, recorded February 09, 1970 in Docket 110 at page 391. If it is the intent of Lee Appleton to hold title as Lee Appleton, Trustee of the Lee Appleton Trust under Agreement dated January 14, 1972, the name of the Grantee must also be corrected. The legal description for this Deed should be only for Parcel 2 of paragraph 5 of Schedule A, tax parcel No. 108-18-012B.

NOTE:

Disclosure of beneficiaries for Lynne Appleton Trust under Agreement dated June 16, 1969 in compliance with A.R.S. 33-404 is recorded in:

Docket

213

Page

359

NOTE:

Disclosure of beneficiaries for Lee Appleton Trust under Agreement dated January 14, 1972 in compliance with A.R.S. 33-404 is recorded in:

Docket

212

Page

145

SCHEDULE B - SECTION I REQUIREMENTS (Continued)

14. RECORD Deed from Lee Appleton, a single woman to Lee Appleton, Trustee of the Lee Appleton Trust under Agreement dated January 14, 1972.

This Deed necessary to convey any interest she may have acquired individually by Deed dated December 26, 1985, recorded January 09, 1986 in Docket 416 at page 475. The legal description for this Deed should be only for Parcel 2 of paragraph 5 of Schedule A, tax parcel No. 108-18-012B.

NOTE:

Disclosure of beneficiaries for Lee Appleton Trust under Agreement dated January 14, 1972 in compliance with A.R.S. 33-404 is recorded in:

Docket

212

Page

145

15. RECORD Deed from Marc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 and as amended and restated by First Amendment dated January 25, 1969 to Lynne Appleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969.

This Deed necessary to correct the Grantor in the Deed dated December 26, 1985 recorded January 09, 1986 in Docket 416 at page 480. On this dated Marc Francis Appleton held title as Marc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 and as amended and restated by First Amendment dated January 25, 1969 in Docket 110 at page 393. If it is the intent of Lynne Appleton to hold title as Lynne Appleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969, the name of the Grantee must also be corrected. The legal description for this Deed should be only for Parcel 3 of paragraph 5 of Schedule A, tax parcel No. 108-18-012H.

NOTE:

Disclosure of beneficiaries for Marc Francis Appleton Trust under Agreement dated April 15, 1966 in compliance with A.R.S. 33-404 is recorded in:

Docket

212

Page

273

NOTE:

Disclosure of beneficiaries for Lynne Appleton Trust under Agreement dated June 16, 1969 in compliance with A.R.S. 33-404 is recorded in:

Docket

213

Page

359

16. RECORD Deed from Lee Appleton, Trustee of the Lee Appleton Trust under Agreement dated January 14, 1972 to Lynne Appleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969.

This Deed necessary to correct the Grantor in the Deed dated December 24, 1985 recorded January 09, 1986 in Docket 416 at page 484. On this date Lee Appleton held title as Lee Appleton, Trustee of the Lee Appleton Trust under Agreement dated January 14, 1972 by Deed dated 021976 recorded March 01, 1976 in Docket 203 at page 51. If it is the intent of Lynne Appleton to hold title as Lynne Appleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969, the name of the Grantee must also be corrected. The legal description for this Deed should be only for Parcel 3 of paragraph 5 of Schedule A, tax parcel No. 108-18-012H.

SCHEDULE B - SECTION I REQUIREMENTS (Continued)

NOTE:

Disclosure of beneficiaries for Lee Appleton Trust under Agreement dated January 14, 1972 in compliance with A.R.S. 33-404 is recorded in:

Docket

212

Page 145

NOTE:

Disclosure of beneficiaries for Lynne Appleton Trust under Agreement dated June 16, 1969 in compliance with A.R.S. 33-404 is recorded in:

Docket

213 359

Page

17. RECORD Deed from Lynne Appleton, a married woman as her sole and separate property to Lynne Appleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969.

This Deed necessary to convey any interest she may have acquired individually by Deed dated December 26, 1985 recorded January 09, 1986 in Docket 416 at page 476. The legal description for this Deed should be only for Parcel 3 of paragraph 5 of Schedule A, tax parcel No. 108-18-012H.

NOTE:

Disclosure of beneficiaries for Lynne Appleton Trust under Agreement dated June 16, 1969 in compliance with A.R.S. 33-404 is recorded in:

Docket

213

Page

359

18. RECORD Deed from Marc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 and as amended and restated by First Amendment dated January 25, 1969 to Peter Bryce Appleton, as Trustee under Agreement dated September 18, 1964.

This Deed necessary to correct the Grantor in the Deed dated December 26, 1985 recorded January 09, 1986 in Docket 416 at page 477. On this date title was held by Marc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 and as amended and restated by First Amendment dated January 25, 1969 by Deed dated January 24, 1970 recorded February 09, 1970 in Docket 110 at page 393.

As of September 01, 1989 Peter Bryce Appleton holds title as Peter Bryce Appleton, as Trustee under Agreement dated September 18, 1964 by Deed dated September 01, 1989 recorded September 11, 1989 in Docket 508 at page 804. The legal description for this Deed should be only for Parcel 4 of paragraph 5 of Schedule A, tax parcel No. 108-18-019 and 108-18-020.

19. RECORD Deed from Lynne Appleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969 to Peter Bryce Appleton, Trustee of Peter Bryce Appleton, Trust under Agreement dated September 18, 1964.

This Deed necessary to correct the Grantor in the Deed dated December 23, 1985 recorded January 09, 1986 in Docket 416 at page 481. On this date title was held by Lynne Appleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969 by Deed dated January 27, 1970 recorded February 09, 1970 in Docket 110 at page 391.

As of September 01, 1989 Peter Bryce Appleton holds title as Peter Bryce Appleton, as Trustee under Agreement dated September 18, 1964 by Deed dated September 01, 1989 recorded September 11, 1989 in Docket 508 at page 804. The legal description for this Deed should be only for Parcel 4 of paragraph 5 of Schedule A, tax parcel No. 108-18-019 and 108-18-020.

SCHEDULE B - SECTION I REQUIREMENTS (Continued)

 RECORD Deed from Lee Appleton, Trustee of the Lee Appleton Trust under Agreement dated January 14, 1972 to Peter Bryce Appleton, as Trustee under Agreement dated September 18, 1964.

This Deed necessary to correct the Grantor in the Deed dated December 24, 1985 recorded January 09, 1986 recorded in Docket 416 at page 485. On this date title was held by Lee Appleton, Trustee of the Lee Appleton Trust under Agreement dated January 14, 1972 by Deed dated February 19, 1976 recorded March 01, 1976 in Docket 203 at page 51.

As of September 01, 1989 Peter Bryce Appleton holds title as Peter Bryce Appleton, as Trustee under Agreement dated September 18, 1964 by Deed dated September 01, 1989 recorded September 11, 1989 in Docket 508 at page 804. The legal description for this Deed should be only for Parcel 4 of paragraph 5 of Schedule A, tax parcel No. 108-18-019 and 108-18-020.

21. RECORD Mutual Cancellation of Lease:

Lessor Francis Henry Appleton III, Ariel Bryce Appleton, Peter Bryce Appleton,

Marc Francis Appleton, Lynne Appleton and Lee Appleton

Lessee The Research Ranch Foundation, an Arizona non-profit corporation,

formerly The Research Ranch, an Arizona non-profit corporation

Dated September 01, 1972

Recorded December 11, 1972

Docket 151 Page 491

22. RECORD Quit Claim Deed from National Audubon Society, Inc., a New York non-profit corporation to Swift Current Land & Cattle LLC, an Arizona limited liability company.

This Deed necessary to assign any interest they may have by reason of the Agreement shown in Exhibit A attached to the Deed recorded in Docket 374 at page 46..

23. RECORD corrective instrument correcting the instrument referred to below for the reason stated:

Docket 753

Page 236 and Docket 899 at page 703

Reason for correction to correct the legal description of said Deeds to read as described in Parcel 8 shown in paragraph 4 of Schedule A.

24. FURNISH copy of filed Articles of organization of the limited liability company named below which states whether said limited liability company is member managed or manager managed:

Bolson Holdings, LLC, a Delaware limited liability company

25. SUBMIT fully executed copy of the Operating Agreement (and all amendments) of the limited liability company named below for examination. The right is reserved to make additional requirements upon said examination.

Bolson Holdings, LLC, a Delaware limited liability company

SCHEDULE B - SECTION I REQUIREMENTS (Continued)

26. FURNISH copy of Certificate of Registration of the foreign limited liability company named below filed with the Arizona Corporation Commission.

Bolson Holdings, LLC, a Delaware limited liability company

-or-

Proper showing that said limited liability company is in good standing in its domiciliary jurisdiction.

The right is reserved to make additional requirements upon examination of said certificate.

27. FURNISH the Company a copy of the Articles of Organization, stamped "filed" by the Arizona Corporation Commission and a fully executed copy of the Operating Agreement and all amendments thereto for the following named Limited Liability Company:

Swift Current Land & Cattle, LLC, an Arizona limited liability company

28. SUBMIT fully executed copy of the Trust Agreement and all amendments showing that the Trustee has the authority to consummate this transaction.

Name of Trust: Peter Bryce Appleton Irrevocable Trust dated December 12, 1983 f/b/o Amy Appleton

29. SUBMIT fully executed copy of the Trust Agreement and all amendments showing that the Trustee has the authority to consummate this transaction.

Name of Trust: Peter Bryce Appleton Irrevocable Trust dated December 12, 1983 f/b/o Sarah Appleton

30. SUBMIT fully executed copy of the Trust Agreement and all amendments showing that the Trustee has the authority to consummate this transaction.

Name of Trust: Peter Bryce Appleton Irrevocable Trust dated December 12, 1983 f/b/o Nathan Cooper Appleton

31. RECORD Deed from Peter Bryce Appleton, Trustee of the Peter Bryce Appleton Trust under Agreement dated September 18, 1964 to Swift Current Land & Cattle LLC, an Arizona limited liability company.

NOTE:

Disclosure of beneficiaries in compliance with A.R.S. 33-404 is recorded in:

Docket

211

Page

441

NOTE: ARS 11:1133 may require the completion and filing of an Affidavit of Value.

32. RECORD Deed from Marc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 toSwift Current Land & Cattle LLC, an Arizona limited liability company.

NOTE:

Disclosure of beneficiaries in compliance with A.R.S. 33-404 is recorded in:

Docket

212

Page

274

NOTE: ARS 11:1133 may require the completion and filing of an Affidavit of Value.

SCHEDULE B - SECTION I REQUIREMENTS (Continued)

33.	RECORD Deed from Lee Appleton, Trustee of the Lee Appleton Trust under Agreement da January 14, 1972 toSwift Current Land & Cattle LLC, an Arizona limited liability company		
	NOTE: Disclosure of beneficiaries Docket 21 Page 14		
	NOTE: ARS 11:1133 may	require the completion and filing of an Affidavit of Value.	
34.	RECORD Deed from Lynne Apleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969 to Swift Current Land & Cattle LLC, an Arizona limited liability company.		
	NOTE: ARS 11:1133 may require the completion and filing of an Affidavit of Value.		
	NOTE: Disclosure of beneficiaries Docket 21 Page 36		
35.	PROPER showing as to the marital status of Amy Appleton on August 31, 1992 by reason of instrument recorded in Docket 594 at page 432 and the proper divesting of the interest of the spouse, if married. The right is reserved to make additional exceptions or requirements based upon information furnished.		
36.	PROPER showing as to the marital status of Nathan Cooper Appleton on July 16, 1997 by reason of instrument recorded in Docket 729 at page 656 and the proper divesting of the interest of the spouse, if married. The right is reserved to make additional exceptions or requirements based upon information furnished.		
37.	RECORD corrective instru stated: Recorded Docket Page Reason for correction	July 23, 2003 990 271 to show marital status of Grantee and to comply with ARS33-404 disclosing beneficiary of Trust	
38.		Appleton, a woman, Nathan Cooper Appleton, a ah Appleton, a woman to Swift Current Land & Cattle bility company.	

NOTE: ARS 11:1133 may require the completion and filing of an Affidavit of Value.

SCHEDULE B - SECTION I REQUIREMENTS (Continued)

39. RECORD Deed from Bolson Holdings, LLC, a Delaware limited liability company to Swift Current Land & Cattle LLC, an Arizona limited liability company.

NOTE: ARS 11:1133 may require the completion and filing of an Affidavit of Value.

40. Approval by the parties to this transaction of the description used in this report.

END OF SCHEDULE B - SECTION I

SCHEDULE B - SECTION II EXCEPTIONS

hedule B of policy or policies to be issued will contain exceptions to the following matters unless the same are disposed of the satisfaction of the Company:

Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date the proposed Insured acquires for value of record the estate or interest or mortgage thereon covered by this commitment.

RESERVATIONS contained in the Patent from the United States of America, reading as follows: SUBJECT to any vested and accrued water rights for mining, agricultural, manufacturing or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local customs, laws and decisions of courts; and there is reserved from the lands hereby granted, a right of way thereon for ditches or canals constructed by the authority of the United States of America recorded in Book 12 of Deeds at page 22.

Affects the south half of Lot 4 and the south half of the North half of Section 15.

RESERVATIONS contained in the Patent from the United States of America, reading as follows: SUBJECT to any vested and accrued water rights for mining, agricultural, manufacturing or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local customs, laws and decisions of courts; and there is reserved from the lands hereby granted, a right of way thereon for ditches or canals constructed by the authority of the United States of America in Book 13 of Miscellaneous Records at page 606.

Affects Lots 2 and 3, Southwest quarter of Northeast quarter; south half of Northwest quarter; North half of Southwest quarter and Northwest quarter of Southeast quarter of Section 14.

RESERVATIONS contained in the Patent from the United States of America, reading as follows: SUBJECT to any vested and accrued water rights for mining, agricultural, manufacturing or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local customs, laws and decisions of courts; and there is reserved from the lands hereby granted, a right of way thereon for ditches or canals constructed by the authority of the United States of America in Book 13 of Miscellaneous Records at page 607.

Affects Northeast guarter of the Southeast guarter of Section 15 and Lot 4 of Section 14.

RESERVATIONS contained in the Patent from the United States of America, reading as follows: SUBJECT to any vested and accrued water rights for mining, agricultural, manufacturing or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local customs, laws and decisions of courts; and there is reserved from the lands hereby granted, a right of way thereon for ditches or canals constructed by the authority of the United States of America in Book 15 of Deeds at page 124.

Affects Northwest quarter of Southeast quarter of Section 15.

RESERVATIONS contained in the Patent from the United States of America, reading as follows: SUBJECT to any vested and accrued water rights for mining, agricultural, manufacturing or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local customs, laws and decisions of courts; and there is reserved from the lands hereby granted, a right of way thereon for ditches or canals constructed by the authority of the United States of America in Book 15 of Deeds at page 196.

Affects North half of Northeast quarter of Section 28.

RESERVATIONS contained in the Patent from the State of Arizona, reading as follows:

- a) Excepting and reserving unto the United States rights of way for ditches and canals constructed by their authority.
- b) This Patent is issued subject to any and all easements or rights of way heretofore legally obtained and now in full force and effect in Book 26 of Deeds at page 208.

Affects East half of Section 17.

RESERVATIONS contained in the Patent from the United States of America, reading as follows:

SUBJECT to any vested and accrued water rights for mining, agricultural, manufacturing or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local customs, laws and decisions of courts; and there is reserved from the lands hereby granted, a right of way thereon for ditches or canals constructed by the authority of the United States of America in Docket 37 at page 501.

Affects south half of Northeast quarter and the Northwest quarter of Section 28.

TAXES for the year 2004, a lien not yet due and payable.

RIGHT OF ENTRY to prospect for, mine and remove the minerals in said land as reserved in Patent to said land. Affects Parcels 4 and 6

- Reservation of all oil, coal and other minerals as set forth in Deed recorded in Book 16 of Deeds at page 372.
- . Reservation of one half of all mineral rights as set forth in Deed recorded in Docket 16 at page 383.
- Reservation of a 55% interest in all oil, gas, coal and other minerals as set forth in Deed recorded in Book 33 of Deeds at page 178.
- Reservation of oil, gas, mineral, water and other subsurface rights as set forth in the following Deeds recorded in Docket 416 at page 474, Docket 416 at page 475, Docket 416 at page 476, Docket 416 at page 477, Docket 416 at page 478, Docket 416 at page 479, Docket 416 at page 480, Docket 416 at page 481, Docket 416 at page 482, Docket 416 at page 483, Docket 416 at page 484, Docket 416 at page 485, Docket 416 at page 486, Docket 416 at page 488.
- All oil, gas, mineral, water and other subsurface rights conveyed by Deed recorded in Docket 508 at page 804.
 - EASEMENT and rights incident thereto, as set forth in instrument:

Recorded in Book 22 of Miscellaneous Records

Page 157

Purpose electric transmission lines and related facilities

(affects the Northeast quarter of the Northwest quarter and the West half of the Northeast quarter of Section 14)

EASEMENT and rights incident thereto, as set forth in instrument:

Recorded in Docket 27 Page 281

Purpose telephone and telegraph lines

(affects the East 10 feet of Section 15)

- '. Terms and conditions as set forth in that certain Agreement attached to the deed recorded in docket 374 at page 46.
- 3. EASEMENT and rights incident thereto, as set forth in instrument:

Recorded in Docket 427 Page 338

Purpose ingress and egress

(affects an undefined portion of Section 14)

EASEMENT and rights incident thereto, as set forth in instrument:

Recorded in Docket 468 Page 651

Purpose ingress and egress

(affects Section 15)

). EASEMENT and rights incident thereto, as set forth in instrument:

Recorded in Docket 517 Page 155

Purpose electric transmission or distribution line

(affects Section 28)

EASEMENT and rights incident thereto, as set forth in instrument:

Recorded in Docket

559 680

Page

telecommunication facilities

Purpose (affects Section 15)

END OF SCHEDULE B - SECTION II

EXHIBIT "B"

arc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 and as nended and restated by First Amendment dated January 25, 1969, as to Parcel 1;

e Appleton, Trustee of the Lee Appleton Trust under Agreement dated January 14, 1972, as to Parcel 2;

nne Appleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969, as to Parcel 3;

eter Bryce Appleton, Trustee of the Peter Bryce Appleton Trust under Agreement dated September 18, 1964, as Parcel 4;

olson Holdings, L.L.C., a Delaware limited liability company, as to Parcels 5, 6 and 8;

arc Francis Appleton, Trustee of the Marc Francis Appleton Trust under Agreement dated April 15, 1966 as to an idivided ¼ interest;

nne Appleton, Trustee of the Lynne Appleton Trust under Agreement dated June 16, 1969 as to an undivided ¼ terest;

e Appleton, Trustee of the Lee Appleton Trust under Agreement dated January 14, 1972 as to an undivided ¼ terest;

eter Bryce Appleton, Trustee of the Peter Bryce Appleton Trust under Agreement dated September 18, 1964 as an undivided 1/16 interest;

ny Appleton, a	woman, as to an undivided 1/16 interest;
athan Cooper Appleton, a _	man, as to an undivided 1/16 interest;
arah Appleton, a	_ woman, as to an undivided 1/16 interest.

MMITMENT CONDITIONS AND STIPULATIONS

The term mortgage, when used herein, shall include deed of trust, trust deed, or other security instrument

If the proposed mutred has or acquires actual knowledge of any defect, lien, encumbrance, adverse claim or other matter affecting the estate or interest or mortgage thereon covered by this Commitment other than those shown in Schedule B hereof, and shall fail to disclose such knowledge to the Company in writing, the Company shall be releved from hability for any loss or damage resulting from any act or rehance hereon to the extent the Company is prejudiced by failure to so disclose such knowledge. If the proposed Insured shall disclose such knowledge to the Company, or if the Company, or if the Company otherwise acquires actual knowledge of any such defect, lien, encumbrance, adverse claim or other matter, the Company at its option may amend Schedule B of this Commitment accordingly, but such amendment shall not relieve the Company from liability previously incurred pursuant to paragraph 3 of these Conditions and

Liability of the Company under this Commitment shall be only to the named proposed insured and such parties included under the definition of insured in the form of policy or policies committed for and only for actual loss incurred in reliance hereon in undertaking in good faith, (a) to comply with the requirements hereof, or (b) to eliminate exceptions shown in Schedule B, or (c) to acquire or create the estate or interest or mortgage thereon covered by this Commitment. In no event shall such liability exceed the amount stated in Schedule A for the policy or policies committed for and such liability is subject to the insuring provisions, the Conditions and Stipulations, and the Exclusions

from Coverage of the form of policy or policies committed for in favor of the proposed insured which are hereby incorporated by reference and are made a part of this Commitment except as expressly modified herein.

Any action or actions or rights of action that the proposed insured may have or may bring against the Company arising out of the status of the title to the estate or interest or the status of the mortgage thereon covered by this Commitment must be based on and are subject to the provisions of this Commitment

AMERICAN LAND TITLE ASSOCIATION LOAN POLICY (10-17-92) WITH ALTA ENDORSEMENT-FORM I COVERAGE

and

AMERICAN LAND TITLE ASSOCIATION LEASEHOLD LOAN POLICY (10-17-92) WITH ALTA ENDORSEMENT-FORM I COVERAGE **EXCLUSIONS FROM COVERAGE**

following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorney's fees or expenses which arise by reason of

- Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land, (ii) the character, dimensions or location of any improvement now or hereafter erected on the land, (iii) a separation in ownership or a change in the dimensions or location of any improvement now or hereafter erected on the land, (iii) a separation in ownership or a change in the dimensions or location of any improvement now or hereafter erected on the land, (iii) a separation in ownership or a change in the dimensions or location of any improvement now or hereafter erected on the land, (iii) a separation in ownership or a change in the dimensions or location of any improvement now or hereafter erected on the land, (iii) a separation in ownership or a change in the dimensions or location of any improvement now or hereafter erected on the land, (iii) a separation in ownership or a change in the dimensions or location of any improvement now or hereafter erected on the land. (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
- Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation effecting the land has been recorded in the public records at Date of Policy

Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge

Defects, liens, encumbrances, adverse claims or other matters

- created, suffered, assumed or agreed to by the insured claimant'
 not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy,
- resulting in no loss or damage to the insured claimant.
- attaching or created subsequent to Date of Policy; (except to the extent that this policy insures the priority of the lien of the insured mortgage over any statutory lien for services, labor or material) or
- resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy

Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with applicable doing business laws of the state in which the land is situated.

Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.

Any statutory lien for services, labor or materials (or the claim of priority of any statutory lien for services, labor or materials over the lien of the insured mortgage) arising from an improvement or work related to the land which is contracted for and commenced subsequent to Date of Policy and is not financed in whole or in part by proceeds of the indebtedness secured by the insured mortgage, which at Date of Policy the insured has advanced or is obligated to

Any claim which arises out of the transaction creating the interest of the mortgagee insured by this Policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on

- the transaction creating the interest of the insured mortgagee being deemed a fraudulent conveyance or fraudulent transfer, or
- the subordination of the interest of the insured mortgagee as a result of the application of the doctrine of equitable subordination; or
- the transaction creating the interest of the insured mortgagee being deemed a preferential transfer except where the preferential transfer results from the failure:
- to timely record the instrument of transfer; or
- (ii) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

above policy forms may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the wing General Exceptions:

EXCEPTIONS FROM COVERAGE

policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of

Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

Any facts, rights, interests or claim which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.

Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.

Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.

(a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof, (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public

AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY (10-17-92)

And

AMERICAN LAND TITLE ASSOCIATION LEASEHOLD OWNER'S POLICY (10-17-92) EXCLUSIONS FROM COVERAGE

following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of

- Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land, (ii) the character, dimensions or location of any improvement now or hereafter erected on the land, (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violating affecting the land has been recorded in the public records at Date of Policy.
- Any governmental policy power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.

Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge

Defects, liens, encumbrances, adverse claims or other matters:

- created, suffered, assumed or agreed to by the insured claimant'
- not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
- resulting in no loss or damage to the insured claimant:
- attaching or created subsequent to Date of Policy, (except to the extent that this policy insures the priority of the lien of the insured mortgage over any statutory lien for services, labor or material) or (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.

 Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by the policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
- the transaction creating the estate or interest insured by this policy being deemed a fraudulent conveyance or fraudulent transfer; or the transaction creating the estate or interest insured by the policy being deemed a preferential transfer except where the preferential transfer results from the failure: (b)
 - to timely record the instrument of transfer; or
 - (ii) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

above policy forms may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage Policy will also include the owing General Exceptions

EXCEPTIONS FROM COVERAGE

3 policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of.

Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.

Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

Any facts, rights, interests or claim which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.

Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.

Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.

(a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof, (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records

AMERICAN LAND TITLE ASSOCIATION HOMEOWNER'S POLICY OF TITLE INSURANCE (10/17/98) **EXCLUSIONS**

Idition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from

Governmental police power, and the existence or violation of any law or government regulation. This includes ordinances, laws and regulations concerning

- building zoning
- land use
- improvements on the Land
- land division
- environmental protection

This Exclusion does not apply to violations or the enforcement of these matters if notice of the violation or enforcement appears in the Public Records at the Policy Date. This Exclusion does not limit the coverage described in Covered Risk 14, 15, 16, 17 or 24

The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not apply to violations of building codes if notice of the violation appears in the Public Records at the Policy Date.

The right to take the Land by condemning it, unless

- ight to take the Land by Consenting It, unless a notice of exercising the right appears in the Public Records at the Policy Date, or the taking happened before the Policy date and is binding on You if You bought the Land without knowing of the taking. Risks

- that are created, allowed, or agreed to by You, whether or not they appear in the Public Records;
- that are known to You at the Policy Date, but not to Us, unless they appear in the Public Records at the Policy Date; that result in no loss to You, or
- that first occur after the Policy Date this does not limit the coverage described in Covered Risk 7, 8d, 22, 23, 24 or 25.

Failure to pay value for Your Title. Lack of a right:

- to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and

b. in streets, alleys, or waterways that touch the land.
This Exclusion does not limit the coverage described in Covered Risk 11 or 18

AMERICAN LAND TITLE ASSOCIATION RESIDENTIAL TITLE INSURANCE POLICY (6-2-87) EXCLUSIONS

idition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from

Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:

- Land use
- Improvements on the land
- Land division
- Environmental protection

This exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date. This exclusion does not limit the zoning coverage described in items 12 and 13 of Covered Title Risks.

The right to take the land by condemning it, unless;

- A notice of exercising the right appears in the public records on the Policy Date
- The taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking

- Title Risks:
- That are created, allowed, or agreed to by you That are known to you, but not to us, on the Policy Date - unless they appeared in the Public Records
- That result in no loss to you
- That first affect your title after the Policy Date this does not limit the labor and material lien coverage in Item B of Covered Title Risks

Failure to pay value for your title.

- To any land outside the area specifically described and referred to in Item 3 of Schedule A
- In streets, alleys, or waterways that touch your land

exclusion does not limit the access coverage in Item 5 of Covered Title Risks

APPENDIX E

EDR Environmental Lien and AUL Search

Appleton Ranch

Appleton Ranch Elgin, AZ 85611

Inquiry Number: 6085233.1

June 10, 2020

EDR Environmental Lien and AUL Search



EDR Environmental Lien and AUL Search

The EDR Environmental Lien and AUL Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- · search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business.

Please contact EDR at 1-800-352-0050 with any questions or comments.

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EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

Appleton Ranch Appleton Ranch Elgin, AZ 85611

ENVIRONMENTAL LIEN							
Environmental Lien:	Found	Not Found	×				
OTHER ACTIVITY AND USE LIMITATIONS (AULs)							
AULs:	Found	Not Found	×				

RESEARCH SOURCE

Source 1:

SANTA CRUZ COUNTY RECORDER Santa Cruz, AZ

PROPERTY INFORMATION

Deed 1:

Type of Deed: WARRANTY DEED

Title is vested in: RESOLUTION COPPER MINING, LLC
Title received from: SWIFT CURRENT LAND & CATTLE, LLC

 Deed Dated
 4/8/2020

 Deed Recorded:
 4/8/2020

 Book:
 NA

 Page:
 NA

 Volume:
 NA

Instrument: 2020-02105

Docket: NA

Land Record Comments: Miscellaneous Comments:

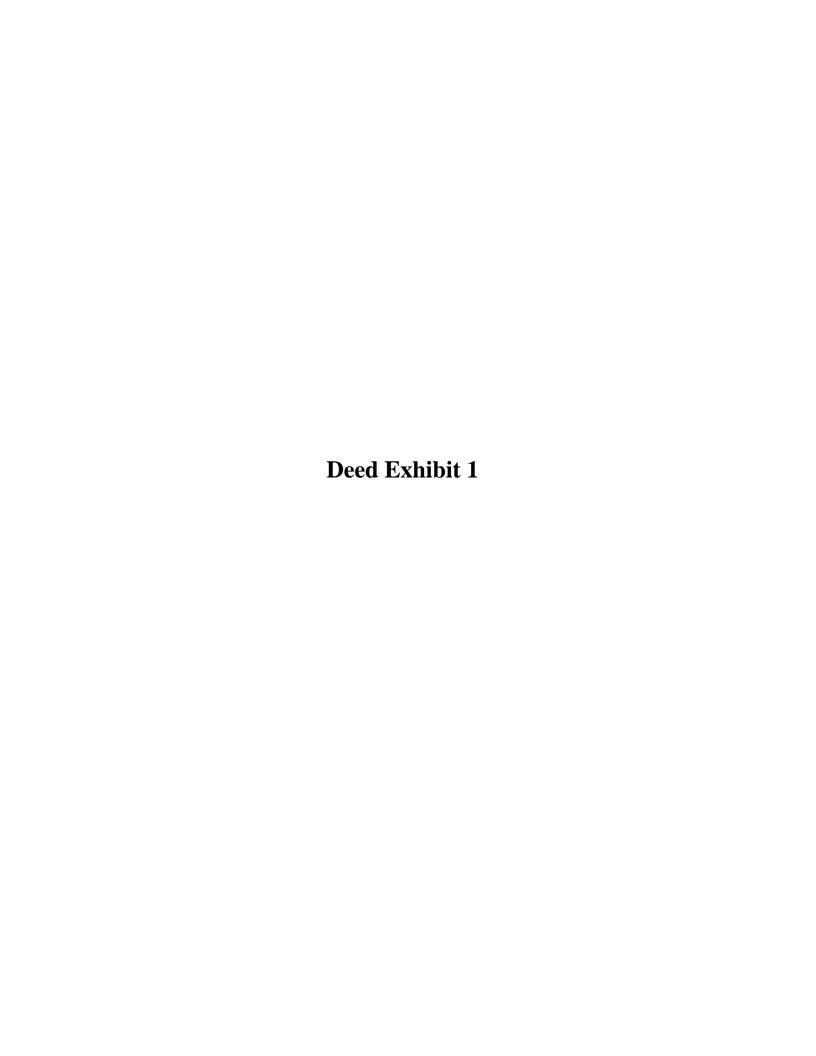
Legal Description: SEE EXHIBIT

Legal Current Owner: RESOLUTION COPPER MINING, LLC

Parcel # / Property Identifier: 108-18-019, 108-18-012H, 108-18-012A, 108-18-012B, 108-25-001, 108-18-020, 108-18-012H, 108-18-012A, 108-18-012B, 108-25-001, 108-18-020, 108-020, 10

017C, 108-36-003A

Comments: SEE EXHIBIT



2020-02105
Page 1 of 6
Requested By: FIRST AMERICAN TITLE INSURANCE COMPA
SUZANNE SAINZ, RECORDER
SANTA CRUZ COUNTY, ARIZONA
04-08-2020 04:15 PM Recording Fee \$30.00

After recording return to:

Resolution Copper Mining LLC Attn: Legal Department 102 Magma Heights, Box 1944 Superior, AZ 85173

Exempt pursuant to A.R.S. § 11-1134.B.7(b)

WARRANTY DEED

FOR THE CONSIDERATION of Ten Dollars (\$10.00) and other valuable considerations, **SWIFT CURRENT LAND & CATTLE LLC**, whose address is 102 Magma Heights, Box 1944, Superior, AZ 85173, ("Grantor") does hereby convey to **RESOLUTION COPPER MINING LLC**, a Delaware limited liability company, whose address is 102 Magma Heights, Box 1944, Superior, AZ 85173 ("Grantee"); that certain real property situated in Santa Cruz County, Arizona, more particularly described in Exhibit A (the "Property"), together with the water rights and claims described in Exhibit B, attached hereto and by this reference incorporated herein;

TOGETHER WITH all associated rights, water rights, tenements, hereditaments and appurtenances thereto belonging, or otherwise appertaining thereto;

SUBJECT TO:

- 1. Current taxes;
- 2. All matters of record in the official records of Santa Cruz County, or would be apparent by an inspection of the property conveyed hereby;
- 3. Reservations in patents from the United States of America or the State of Arizona.

TO HAVE AND TO HOLD the same, together with the appurtenances and privileges thereunto incident, unto the Grantee, its successors and assigns forever.

GRANTOR WARRANTS title to the Property against all persons whomsoever, subject only to those matters described above.

Presented for recording without liability for acceptability or sufficiency by FIRST AMERICAN TITLE

DATED this 24th day of March, 2020.

GRANTOR:

SWIFT CURRENT LAND & CATTLE LLC

By: Sterling Hundley

Its: Controller

STATE OF ARIZONA

) ss.

County of Pinal

The foregoing instrument was acknowledged before me this 24th day of March, 2020, by Sterling Hundley, its Controller.

My commission expires:

May 31, 20 22

JESSICA D CASTILLO Notary Public, State of Arizona Pinal County My Commission Expires May 31, 2022

EXHIBIT A

PARCEL NO. 1:

The Northwest quarter of the Southeast quarter and the East half of the Northeast quarter of the Southwest quarter of Section 14, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona.

PARCEL NO. 2:

Lot 2 and the Southwest quarter of the Northeast quarter and the East half of the Southeast quarter of the Northwest quarter of Section 14, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona;

EXCEPT the Northeast quarter of said Lot 2, as conveyed by Deed recorded in Docket 416 at page 491.

PARCEL NO. 3:

Lot 3 and the Southwest quarter of the Northwest quarter and the West half of the Southeast quarter of the Northwest quarter of Section 14, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona.

EXCEPT the Northeast quarter and the Southeast quarter of Lot 3, as conveyed by Deeds recorded in Docket 633 at pg. 134 and Docket 633 at page 135.

PARCEL NO. 4:

Lot 4 and the Northwest quarter of the Southwest quarter and the West half of the Northeast quarter of the Southwest quarter of Section 14, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona;

EXCEPT the West half of Lot 4, as conveyed by Deed recorded in Docket 545 at page 610;

EXCEPT all coal and other minerals as reserved in Patent No. 803175 from the United States of America, recorded at book 13, page 607, in the records of the Santa Cruz County Recorder.

PARCEL NO. 5:

The South half of Lot 4, the South half of the North half and the North half of the Southeast quarter of Section 15, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona;

EXCEPT all coal and other minerals as reserved in Patent No. 803175 from the United States of America, recorded at book 13, page 607, in the records of the Santa Cruz County Recorder.

PARCEL NO. 6:

The East half of Section 17, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona.

PARCEL NO. 7:

All that portion of Section 28, Township 21 South, Range 18 East, Gila and Salt River Base and Meridian, Santa Cruz County, Arizona, more particularly described as follows:

BEGINNING at the corner common to Sections 21, 22, 27 and 28 of said Township and Range, a G.L.O. brass cap firmly set and properly marked;

THENCE South 89 degrees 58 minutes 00 Seconds West, 1,194.62 feet along and upon the North line of said Section 28;

THENCE South 01 degrees 29 minutes 22 seconds East, 1,102.46 feet;

THENCE North 85 degrees 45 minutes 02 seconds East 549.81 feet;

THENCE South 26 degrees 42 minutes 49 Seconds East, 643.82 feet;

THENCE South 82 degrees 34 minutes 49 Seconds West, 642.26 feet;

THENCE North 89 degrees 59 minutes 20 seconds West, 1,043.72 feet;

THENCE South 68 degrees 15 minutes 26 seconds West, 1,020.59 feet;

THENCE North 08 degrees 35 minutes 36 seconds East, 2,119.11 feet to the North Quarter corner of said Section 28;

THENCE North 89 degrees 58 minutes 00 Seconds East, 1,445.41 feet along and upon the North line of Section 28 to the Point of Beginning.

Exhibit B

Water Rights

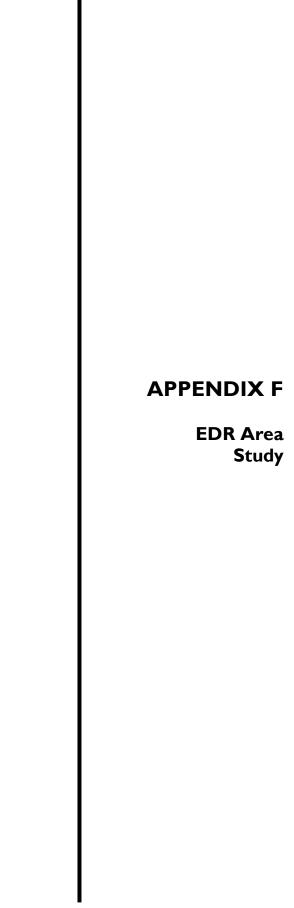
All of the water rights and claims appurtenant to the Property as described in the table below:

Reg. No.	Location	<u>Use</u>
38-94410	NE ¹ / ₄ SW ¹ / ₄ Sec. 14, T21S, R18E	Wildlife Conservation
38-94411	NE ¹ / ₄ SW ¹ / ₄ Sec. 14, T21S, R18E	Wildlife Conservation
38-94412	NW ¹ / ₄ SE ¹ / ₄ Sec. 14, T21S, R18E	Wildlife Conservation
38-94418	NW ¹ / ₄ SW ¹ / ₄ Sec. 14, T21S, R18E	Stockwatering
38-94394	NE ¹ / ₄ SE ¹ / ₄ Sec. 15, T21S, R18E	Wildlife Conservation
3A-1830; WR#2564	NW ¹ / ₄ SW ¹ / ₄ Sec. 14, T21S, R18E	Stockwatering
4A-4333; WR#2569; A-2640	NW ¹ / ₄ SW ¹ / ₄ Sec. 14, T21S, R18E	Stockwatering
38-94398	SW¼ NW¼ Sec. 15, T21S, R18E	Wildlife Conservation
38-94399	SW¼ NW¼ Sec. 15, T21S, R18E	Wildlife Conservation
38-94400	SW ¹ / ₄ NW ¹ / ₄ Sec. 15, T21S, R18E	Wildlife Conservation
38-94401	SW¼ NW¼ Sec. 15, T21S, R18E	Wildlife Conservation
38-94402	SW¼ NW¼ Sec. 15, T21S, R18E	Wildlife Conservation
38-94396	NW ¹ / ₄ NW ¹ / ₄ Sec. 15, T21S, R18E	Wildlife Conservation
38-94397	NW ¹ / ₄ NW ¹ / ₄ Sec. 15, T21S, R18E	Wildlife Conservation
38-94393	NW¼ NW¼ Sec. 15, T21S, R18E	Wildlife Conservation
38-94403	NW ¹ / ₄ NW ¹ / ₄ Sec. 15, T21S, R18E	Wildlife Conservation
38-94404	SE¼ NW¼ Sec. 15, T21S, R18E	Wildlife Conservation
38-94405	SE¼ NW¼ Sec. 15, T21S, R18E	Wildlife Conservation
38-94419	SW1/4 NE1/4 Sec. 17, T21S, R18E	Wildlife Conservation
38-94420	SE ¹ / ₄ SE ¹ / ₄ Sec. 17, T21S, R18E	Wildlife Conservation

All of the rights to the following wells to the extent located on the Property:

Registration #	Location	Use
55-650978	T21S,R18E,S28	Stockwatering/Wildlife
55-648930	T21S,R18E,S17	Stockwatering/Wildlife
55-566294	T21S,R18E,S15	Stockwatering/Wildlife

I:\FILES\DOCS\RESO03\160579\RE\I1G4368.DOC



Appleton Ranch

Appleton Ranch Elgin, AZ 85611

Inquiry Number: 6085233.2s

June 09, 2020

EDR Area / Corridor Report



TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Mapped Sites Summary	2
Key Map.	2
Map Findings Summary	 3
Focus Maps.	7
Map Findings.	29
Orphan Summary	OR-1
Government Records Searched/Data Currency Tracking	GR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

SUBJECT PROPERTY INFORMATION

ADDRESS

APPLETON RANCH ELGIN, AZ 85611

TARGET PROPERTY SEARCH RESULTS

The Target Property was identified in the following databases.

Page Numbers and Map Identifications refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in **bold italics** are in multiple databases.

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

Unmappable (orphan) sites are not considered in the foregoing analysis.

MAPPED SITES SUMMARY

Target Property: APPLETON RANCH ELGIN, AZ 85611

MAP ID / FOCUS MAP SITE NAME

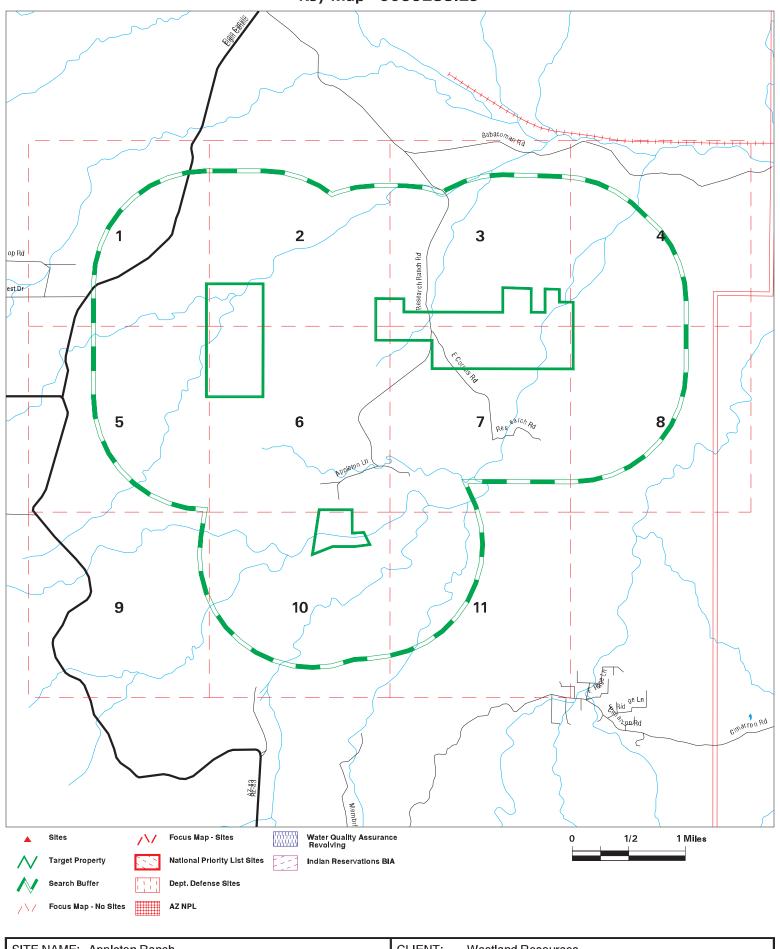
ADDRESS

DATABASE ACRONYMS

DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Key Map - 6085233.2s



SITE NAME: Appleton Ranch ADDRESS: Appleton Ranch CITY/STATE: Elgin AZ ZIP: 85611 CLIENT: Westland Resources CONTACT: Patrick Mette

INQUIRY #: 6085233.2s DATE: 06/09/20

9:55 AM

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted	
STANDARD ENVIRONME	NTAL RECORD	<u>s</u>							
Federal NPL site list									
NPL Proposed NPL NPL LIENS	1.000 1.000 1.000		0 0 0	0 0 0	0 0 0	0 0 0	NR NR NR	0 0 0	
Federal Delisted NPL sit	e list								
Delisted NPL	1.000		0	0	0	0	NR	0	
Federal CERCLIS list									
FEDERAL FACILITY SEMS	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0	
Federal CERCLIS NFRA	P site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0	
Federal RCRA CORRAC	TS facilities li	st							
CORRACTS	1.000		0	0	0	0	NR	0	
Federal RCRA non-CORRACTS TSD facilities list									
RCRA-TSDF	0.500		0	0	0	NR	NR	0	
Federal RCRA generator	rs list								
RCRA-LQG RCRA-SQG RCRA-VSQG	0.250 0.250 0.250		0 0 0	0 0 0	NR NR NR	NR NR NR	NR NR NR	0 0 0	
Federal institutional con engineering controls re									
LUCIS US ENG CONTROLS US INST CONTROLS	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0	
Federal ERNS list									
ERNS	TP		NR	NR	NR	NR	NR	0	
State- and tribal - equivalent NPL									
AZ NPL AZ WQARF	1.000 1.000		0 0	0 0	0 0	0 0	NR NR	0 0	
State- and tribal - equivalent CERCLIS									
SPL SHWS	1.000 1.000		0 0	0 0	0 0	0 0	NR NR	0 0	
State and tribal landfill and/or solid waste disposal site lists									
SWF/LF	0.500		0	0	0	NR	NR	0	
State and tribal leaking	storage tank l	ists							
LUST	0.500		0	0	0	NR	NR	0	

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	<u>1/2 - 1</u>	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registere	d storage tar	nk lists						
FEMA UST UST AST INDIAN UST	0.250 0.250 0.250 0.250		0 0 0 0	0 0 0 0	NR NR NR NR	NR NR NR NR	NR NR NR NR	0 0 0 0
State and tribal institutio control / engineering con		ıs						
AZURITE AUL	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
State and tribal voluntary	/ cleanup site	es						
VCP INDIAN VCP	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
State and tribal Brownfie	lds sites							
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONME	NTAL RECOR	<u>os</u>						
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / S Waste Disposal Sites	Colid							
SWTIRE INDIAN ODI ODI DEBRIS REGION 9 IHS OPEN DUMPS	0.500 0.500 0.500 0.500 0.500		0 0 0 0	0 0 0 0	0 0 0 0	NR NR NR NR NR	NR NR NR NR NR	0 0 0 0
Local Lists of Hazardous Contaminated Sites	waste /							
US HIST CDL CDL US CDL PFAS	TP TP TP 0.500		NR NR NR 0	NR NR NR 0	NR NR NR 0	NR NR NR NR	NR NR NR NR	0 0 0 0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS SPILLS SPILLS 90	TP TP TP		NR NR NR	NR NR NR	NR NR NR	NR NR NR	NR NR NR	0 0 0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	Ö	ő	NR	NR	Õ
US FIN ASSUR	TP		NR	NR	NŘ	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	Ö
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS MLTS	TP TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	Ö
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS US MINES	TP 0.250		NR 0	NR 0	NR NR	NR NR	NR NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0 0
FINDS	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	Ő
ECHO	TP		NR	NR	NR	NR	NR	Ő
DOCKET HWC	TP		NR	NR	NR	NR	NR	Ö
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
Aquifer	TP		NR	NR	NR	NR	NR	0
AZ DOD	0.500		0	0	0	NR	NR	0
Dry Wells	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMAP Enforcement	TP TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0
MANIFEST	0.250		0	0	NR	NR	NR	0
SPDES	TP		NR	NR	NR	NR	NR	0
VAPOR	0.500		0	0	0	NR	NR	Ő
UIC	TP		NR	NR	NR	NR	NR	Ö
WWFAC	0.500		0	0	0	NR	NR	Ō
MINES MRDS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0

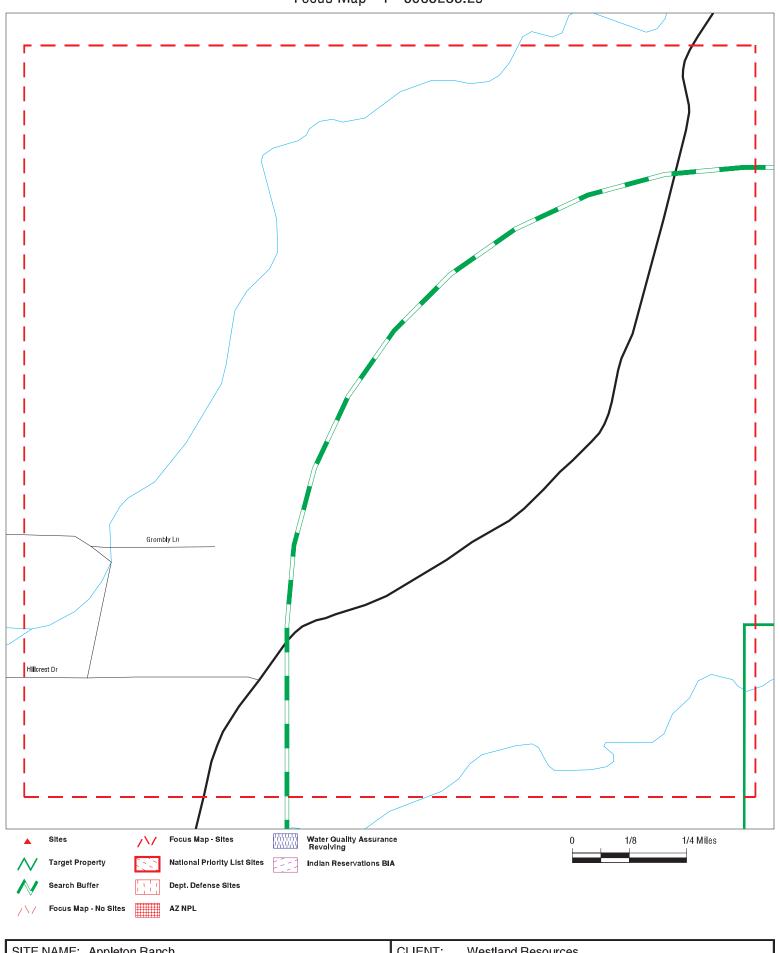
Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted	
EDR Hist Auto EDR Hist Cleaner	0.125 0.125		0 0	NR NR	NR NR	NR NR	NR NR	0 0	
EDR RECOVERED GOVERNMENT ARCHIVES Exclusive Recovered Govt. Archives									
RGA HWS RGA LF RGA LUST	TP TP TP		NR NR NR	NR NR NR	NR NR NR	NR NR NR	NR NR NR	0 0 0	
- Totals		0	0	0	0	0	0	0	

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

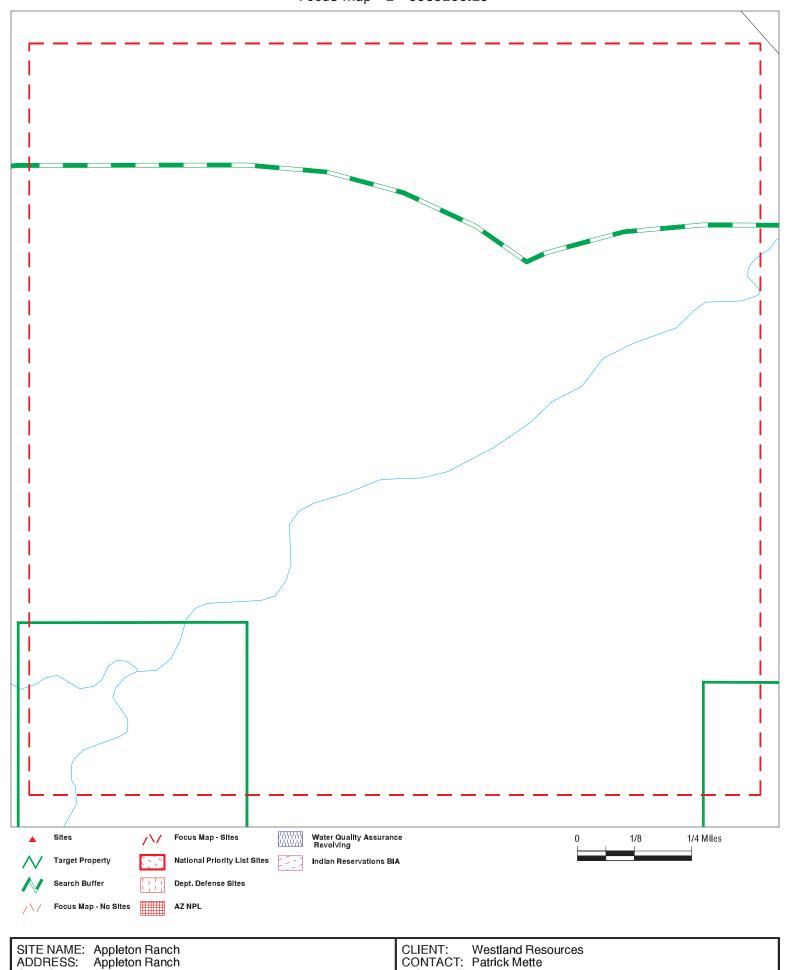
Sites may be listed in more than one database



SITE NAME: Appleton Ranch ADDRESS: Appleton Ranch CITY/STATE: Elgin AZ ZIP: 85611 CLIENT: Westland Resources
CONTACT: Patrick Mette
INQUIRY #: 6085233.2s
DATE: 06/09/20

Target Property: APPLETON RANCH ELGIN, AZ 85611

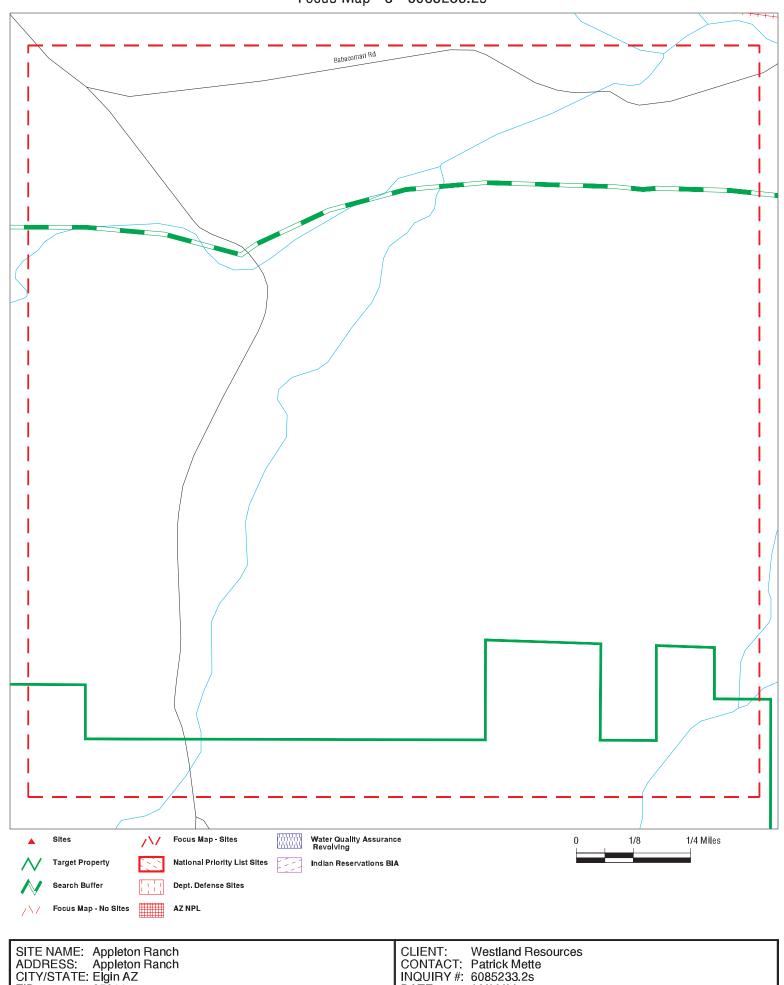
MAP ID / DIST (ft. & mi.) FOCUS MAP SITE NAME ADDRESS DATABASE ACRONYMS DIRECTION



ADDRESS: Appleton Ranch CITY/STATE: Elgin AZ ZIP: 85611 CONTACT: Westland Resources
CONTACT: Patrick Mette
INQUIRY#: 6085233.2s
DATE: 06/09/20

Target Property: APPLETON RANCH ELGIN, AZ 85611

MAP ID / DIST (ft. & mi.) FOCUS MAP SITE NAME ADDRESS DATABASE ACRONYMS DIRECTION



DATE: 06/09/20

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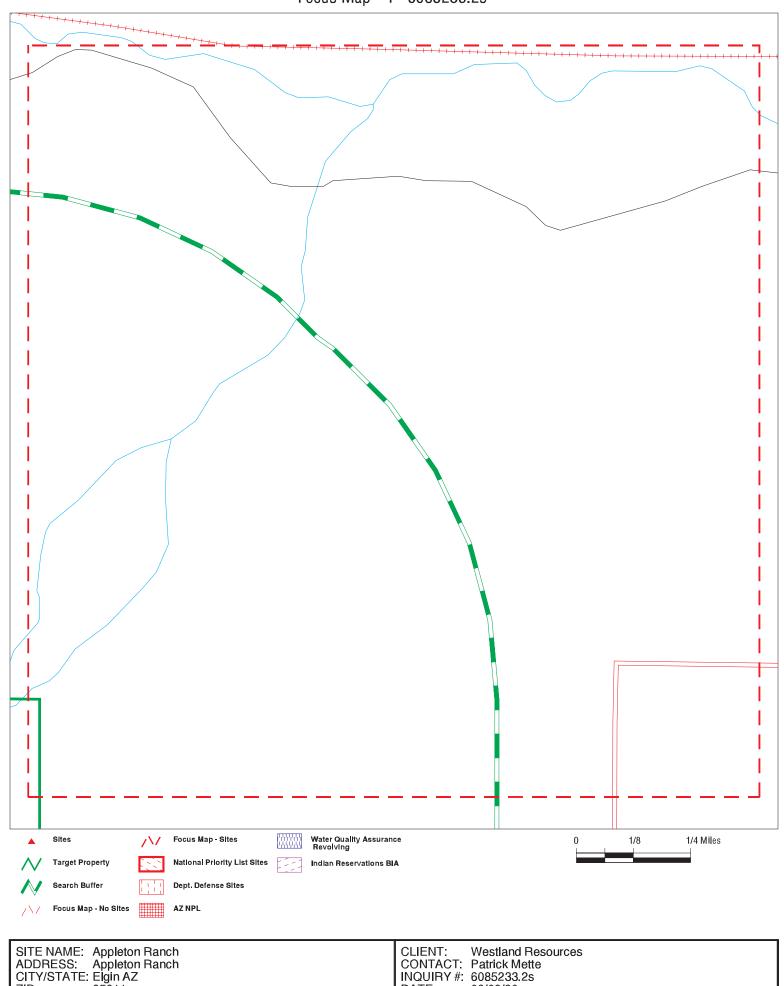
ZIP:

85611

Target Property: APPLETON RANCH ELGIN, AZ 85611

MAP ID / DIST (ft. & mi.) FOCUS MAP SITE NAME ADDRESS DATABASE ACRONYMS DIRECTION

Focus Map - 4 - 6085233.2s



ZIP:

85611

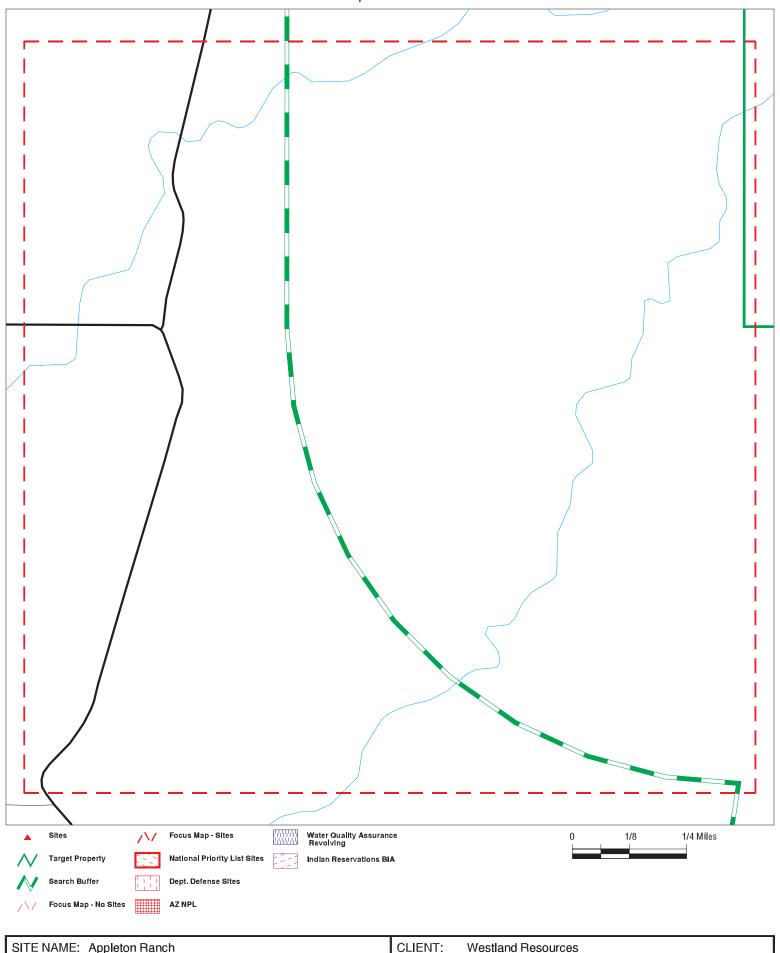
DATE: 06/09/20

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Target Property: APPLETON RANCH ELGIN, AZ 85611

MAP ID / DIST (ft. & mi.) FOCUS MAP SITE NAME ADDRESS DATABASE ACRONYMS DIRECTION

Focus Map - 5 - 6085233.2s



SITE NAME: Appleton Ranch ADDRESS: Appleton Ranch CITY/STATE: Elgin AZ ZIP: 85611 CLIENT: Westland Resources
CONTACT: Patrick Mette
INQUIRY#: 6085233.2s

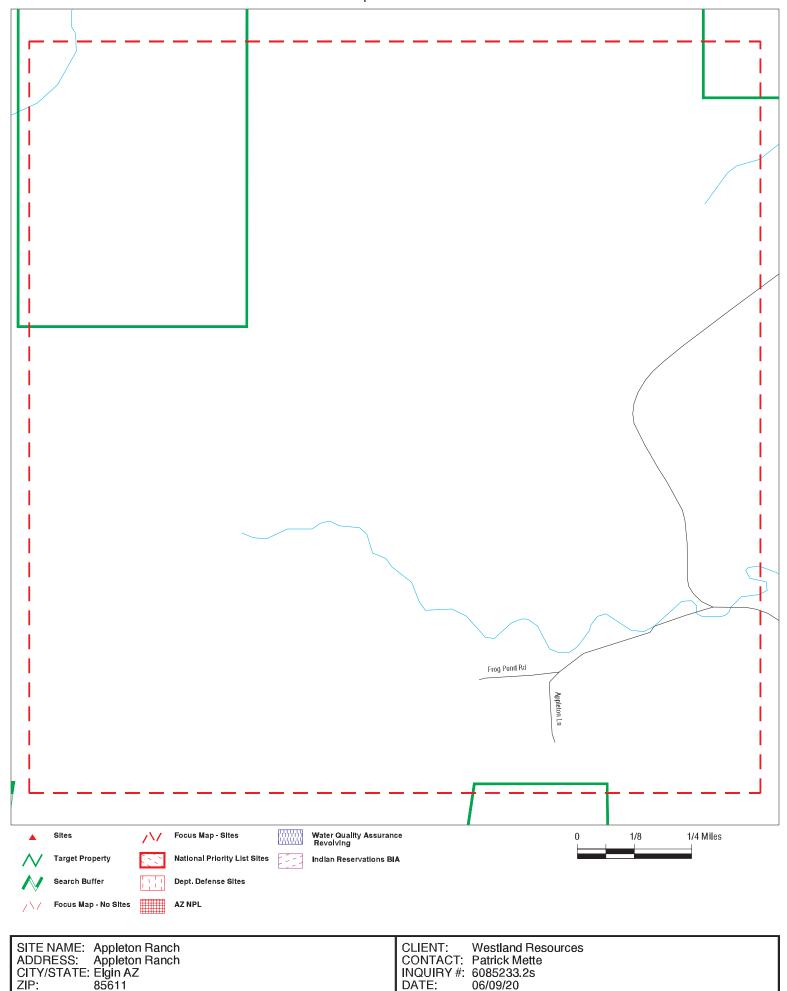
06/09/20

DATE:

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Target Property: APPLETON RANCH ELGIN, AZ 85611

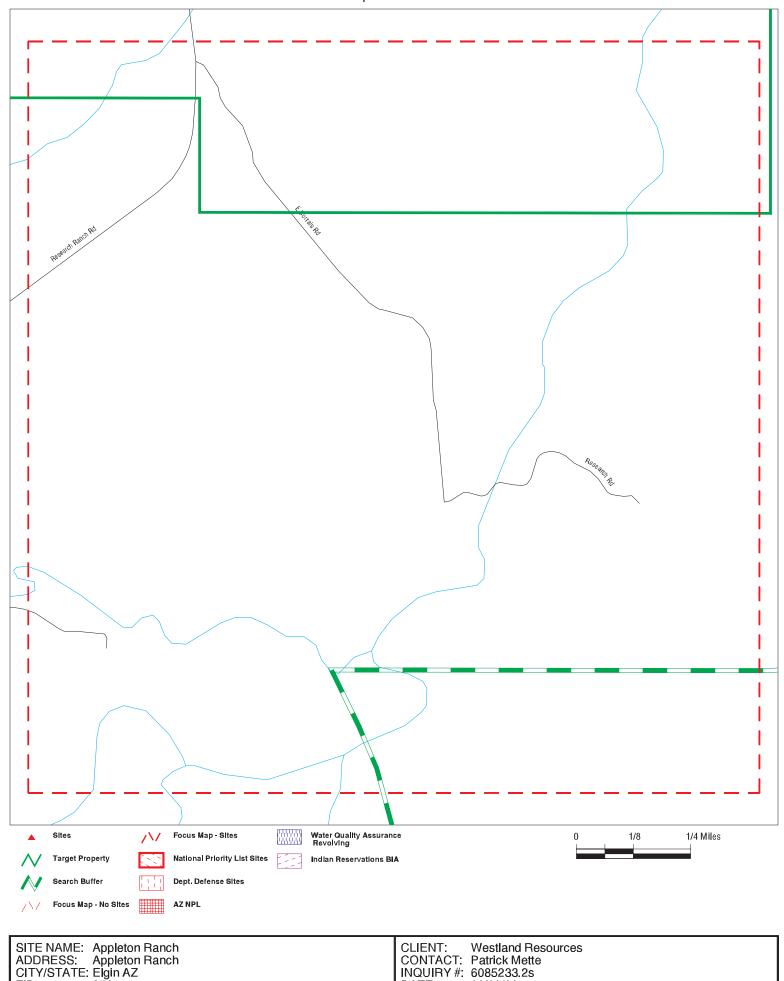
MAP ID / DIST (ft. & mi.) FOCUS MAP SITE NAME ADDRESS DATABASE ACRONYMS DIRECTION



Copyright © 2020 EDR, Inc. © 2015 TomTom Rel. 2015.

Target Property: APPLETON RANCH ELGIN, AZ 85611

MAP ID / DIST (ft. & mi.) FOCUS MAP SITE NAME ADDRESS DATABASE ACRONYMS DIRECTION



ZIP:

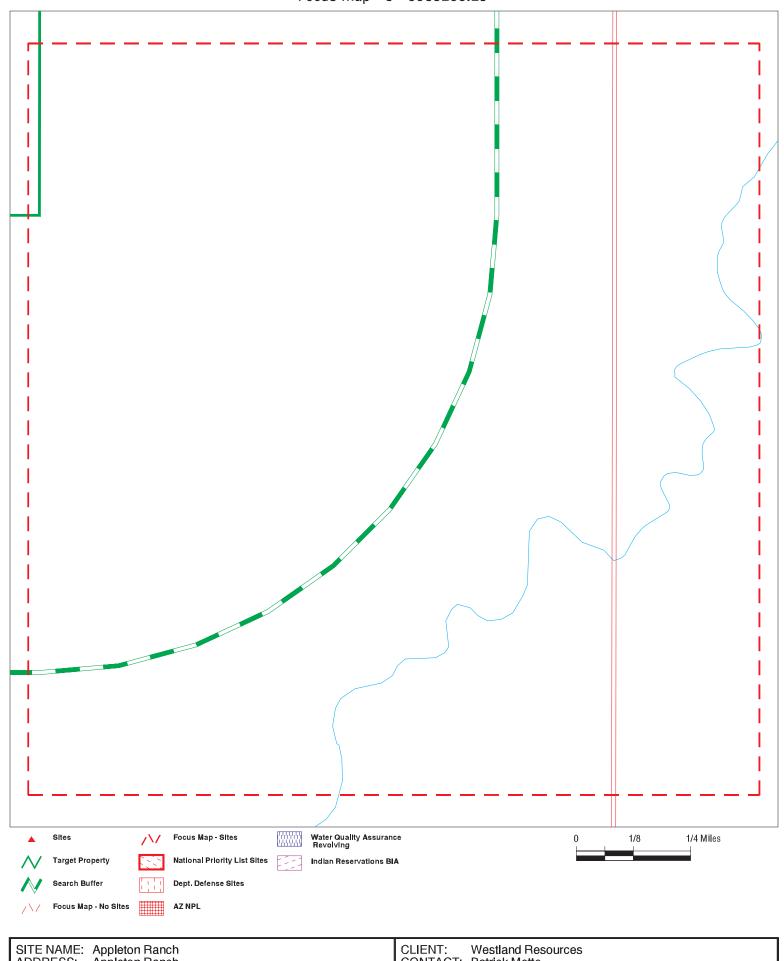
85611

DATE: 06/09/20

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Target Property: APPLETON RANCH ELGIN, AZ 85611

MAP ID / DIST (ft. & mi.) FOCUS MAP SITE NAME ADDRESS DATABASE ACRONYMS DIRECTION

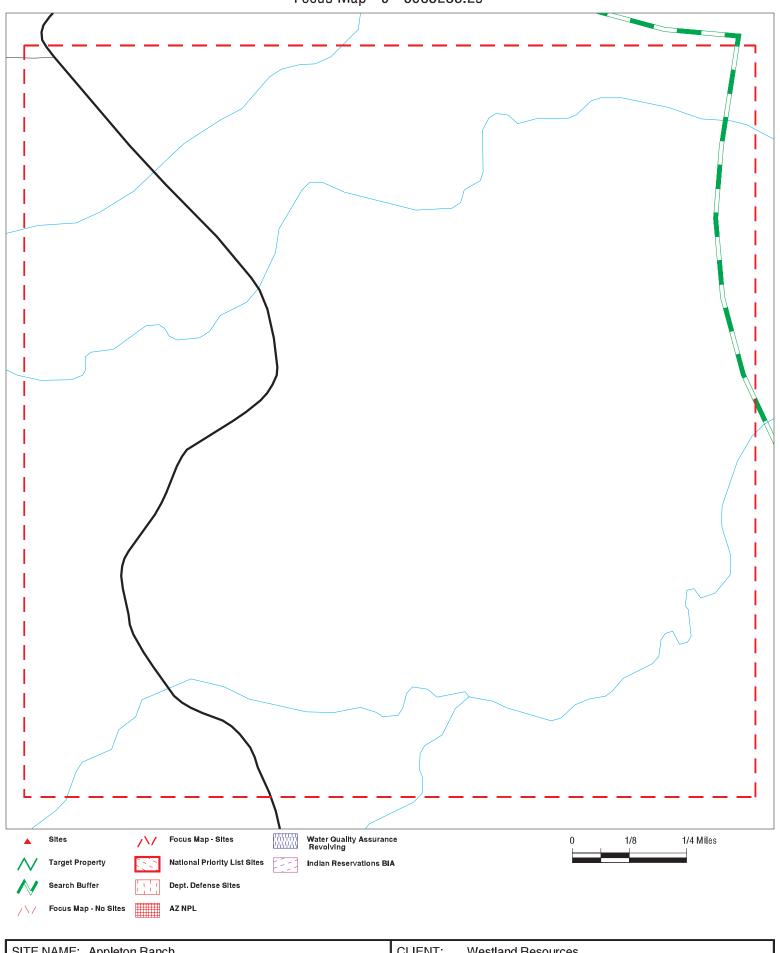


SITE NAME: Appleton Ranch ADDRESS: Appleton Ranch CITY/STATE: Elgin AZ ZIP: 85611 CLIENT: Westland Resources
CONTACT: Patrick Mette
INQUIRY #: 6085233.2s
DATE: 06/09/20

Target Property: APPLETON RANCH ELGIN, AZ 85611

MAP ID / DIST (ft. & mi.) FOCUS MAP SITE NAME ADDRESS DATABASE ACRONYMS DIRECTION

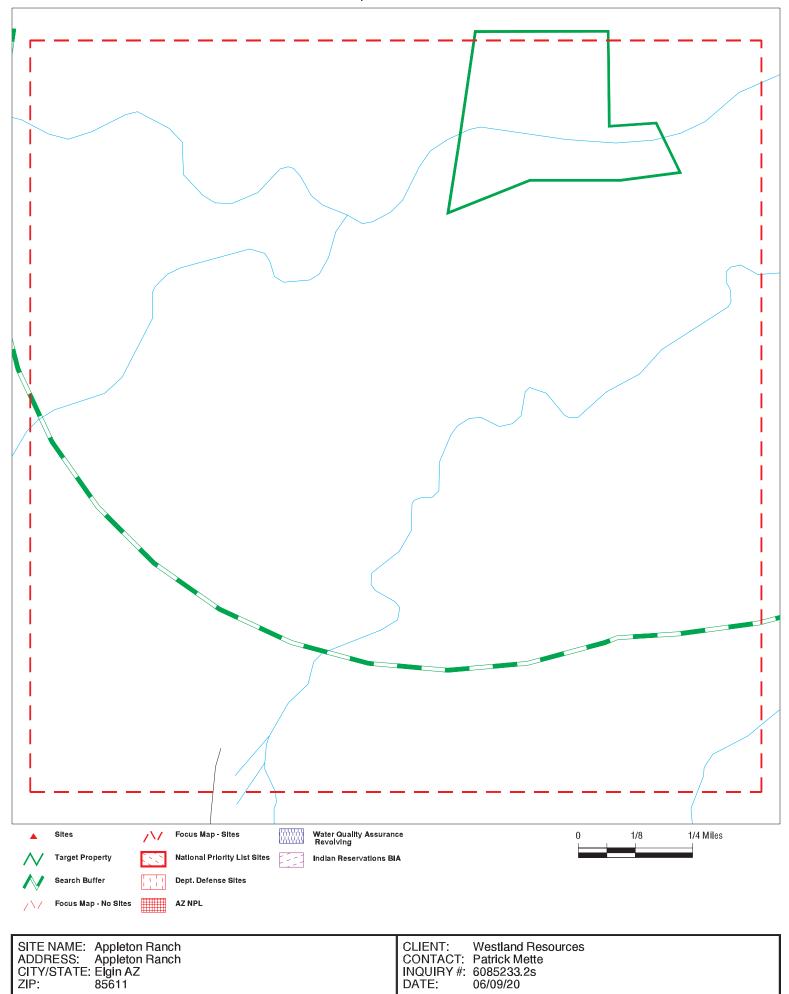
Focus Map - 9 - 6085233.2s



SITE NAME: Appleton Ranch ADDRESS: Appleton Ranch CITY/STATE: Elgin AZ ZIP: 85611 CLIENT: Westland Resources
CONTACT: Patrick Mette
INQUIRY #: 6085233.2s
DATE: 06/09/20

Target Property: APPLETON RANCH ELGIN, AZ 85611

MAP ID / DIST (ft. & mi.) FOCUS MAP SITE NAME ADDRESS DATABASE ACRONYMS DIRECTION

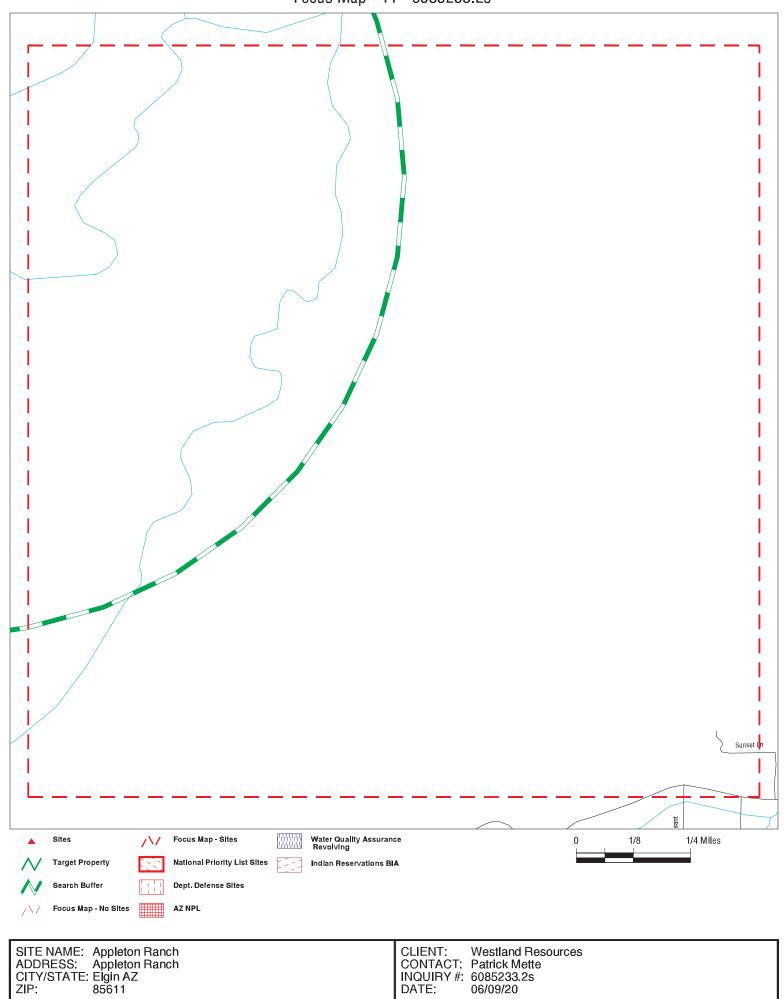


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DATE:

Target Property: APPLETON RANCH ELGIN, AZ 85611

MAP ID / DIST (ft. & mi.) FOCUS MAP SITE NAME ADDRESS DATABASE ACRONYMS DIRECTION



INQUIRY#: 6085233.2s DATE: 06/09/20

Target Property: APPLETON RANCH ELGIN, AZ 85611

MAP ID /
FOCUS MAP SITE NAME ADDRESS DATABASE ACRONYMS

DIST (ft. & mi.) DIRECTION

Map ID		MAP FINDINGS		
Direction			ı	EDD 10 11 1
Distance				EDR ID Number
Elevation	Site		Database(s)	EPA ID Number

NO SITES FOUND

Count: 0 records ORPHAN SUMMARY

City EDR ID Site Name Site Address Zip Database(s)

NO SITES FOUND

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/2020 Source: EPA
Date Data Arrived at EDR: 05/06/2020 Telephone: N/A

Date Made Active in Reports: 05/28/2020 Last EDR Contact: 06/03/2020

Number of Days to Update: 22 Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: 202-564-7333

EPA Region 1 EPA Region 6

Telephone 617-918-1143 Telephone: 214-655-6659

EPA Region 3 EPA Region 7

Telephone 215-814-5418 Telephone: 913-551-7247

EPA Region 4 EPA Region 8

Telephone 404-562-8033 Telephone: 303-312-6774

EPA Region 5 EPA Region 9

Telephone 312-886-6686 Telephone: 415-947-4246

EPA Region 10

Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/27/2020 Source: EPA
Date Data Arrived at EDR: 05/06/2020 Telephone: N/A

Date Made Active in Reports: 05/28/2020 Last EDR Contact: 06/03/2020 Number of Days to Update: 22 Next Scheduled EDR Contact:

Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991 Date Data Arrived at EDR: 02/02/1994 Date Made Active in Reports: 03/30/1994

Number of Days to Update: 56

Source: EPA

Telephone: 202-564-4267 Last EDR Contact: 08/15/2011

Next Scheduled EDR Contact: 11/28/2011 Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/27/2020 Date Data Arrived at EDR: 05/06/2020 Date Made Active in Reports: 05/28/2020

Number of Days to Update: 22

Source: EPA Telephone: N/A

Last EDR Contact: 06/03/2020

Next Scheduled EDR Contact: 07/13/2020 Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019 Date Data Arrived at EDR: 04/05/2019 Date Made Active in Reports: 05/14/2019

Number of Days to Update: 39

Source: Environmental Protection Agency Telephone: 703-603-8704

Last EDR Contact: 04/03/2020

Next Scheduled EDR Contact: 07/13/2020 Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Lindate: 22

Number of Days to Update: 22

Source: EPA Telephone: 800-424-9346 Last EDR Contact: 06/03/2020

Next Scheduled EDR Contact: 07/27/2020 Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/27/2020 Date Data Arrived at EDR: 05/06/2020 Date Made Active in Reports: 05/28/2020

Number of Days to Update: 22

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 06/03/2020

Next Scheduled EDR Contact: 07/27/2020 Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/23/2020 Date Data Arrived at EDR: 03/25/2020 Date Made Active in Reports: 05/21/2020

Number of Days to Update: 57

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 03/25/2020

Next Scheduled EDR Contact: 07/06/2020 Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/23/2020 Date Data Arrived at EDR: 03/25/2020 Date Made Active in Reports: 05/21/2020

Number of Days to Update: 57

Source: Environmental Protection Agency

Telephone: (415) 495-8895 Last EDR Contact: 03/25/2020

Next Scheduled EDR Contact: 07/06/2020 Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020 Date Data Arrived at EDR: 03/25/2020 Date Made Active in Reports: 05/21/2020

Number of Days to Update: 57

Source: Environmental Protection Agency Telephone: (415) 495-8895

Last EDR Contact: 03/25/2020

Next Scheduled EDR Contact: 07/06/2020 Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/23/2020 Date Data Arrived at EDR: 03/25/2020 Date Made Active in Reports: 05/21/2020

Number of Days to Update: 57

Source: Environmental Protection Agency

Telephone: (415) 495-8895 Last EDR Contact: 03/25/2020

Next Scheduled EDR Contact: 07/06/2020 Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation
and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database
includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste
as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate
less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020 Date Data Arrived at EDR: 03/25/2020 Date Made Active in Reports: 05/21/2020

Number of Days to Update: 57

Source: Environmental Protection Agency

Telephone: (415) 495-8895 Last EDR Contact: 03/25/2020

Next Scheduled EDR Contact: 07/06/2020 Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/04/2019 Date Data Arrived at EDR: 11/13/2019 Date Made Active in Reports: 01/28/2020

Number of Days to Update: 76

Source: Department of the Navy Telephone: 843-820-7326 Last EDR Contact: 05/14/2020

Next Scheduled EDR Contact: 08/24/2020 Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2020 Date Data Arrived at EDR: 02/20/2020 Date Made Active in Reports: 05/15/2020

Number of Days to Update: 85

Source: Environmental Protection Agency

Telephone: 703-603-0695 Last EDR Contact: 05/15/2020

Next Scheduled EDR Contact: 09/07/2020 Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2020 Date Data Arrived at EDR: 02/20/2020 Date Made Active in Reports: 05/15/2020

Number of Days to Update: 85

Source: Environmental Protection Agency

Telephone: 703-603-0695 Last EDR Contact: 05/15/2020

Next Scheduled EDR Contact: 09/07/2020

Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous

substances.

Date of Government Version: 12/16/2019 Date Data Arrived at EDR: 12/19/2019 Date Made Active in Reports: 03/06/2020

Number of Days to Update: 78

Source: National Response Center, United States Coast Guard

Telephone: 202-267-2180 Last EDR Contact: 03/24/2020

Next Scheduled EDR Contact: 07/06/2020 Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

AZ NPL: NPL Detail Listing

Detailed site information for NPL sites from the Arizona Department of Environmental Quality.

Date of Government Version: 09/30/2019 Date Data Arrived at EDR: 11/20/2019 Date Made Active in Reports: 01/23/2020

Number of Days to Update: 64

Source: Department of Environmental Quality

Telephone: 602-771-4609 Last EDR Contact: 05/14/2020

Next Scheduled EDR Contact: 08/31/2020 Data Release Frequency: Varies

WQARF: Water Quality Assurance Revolving Fund Sites

Sites which may have an actual or potential impact upon the waters of the state, cause by hazardous substances. The WQARF program provides matching funds to political subdivisions and other state agencies for clean-up activities.

Date of Government Version: 09/30/2019 Date Data Arrived at EDR: 11/20/2019 Date Made Active in Reports: 01/23/2020

Number of Days to Update: 64

Source: Department of Environmental Quality

Telephone: 602-771-4360 Last EDR Contact: 05/14/2020

Next Scheduled EDR Contact: 08/31/2020 Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SPL: Superfund Program List

The list is representative of the sites and potential sites within the jurisdiction of the Superfund Program Section. It is comprised of the following elements: 1) Water Quality Assurance Revolving Fund Registry Sites; 2) Potential WQARF Registry sites; 3) NPL sites; and 4) Department of Defense sites requiring SPS oversight.

Date of Government Version: 08/25/2004 Date Data Arrived at EDR: 04/04/2018 Date Made Active in Reports: 05/17/2018

Number of Days to Update: 43

Source: Department of Environmental Quality

Telephone: 602-771-4360 Last EDR Contact: 04/16/2020

Next Scheduled EDR Contact: 08/10/2020 Data Release Frequency: No Update Planned

SHWS: ZipAcids List

The ACIDS list consists of more than 750 locations subject to investigation under the State Water Quality Assurance Revolving Fund (WQARF) and Federal CERCLA programs. The list is no longer updated by the state.

Date of Government Version: 01/03/2000 Date Data Arrived at EDR: 04/11/2000 Date Made Active in Reports: 05/16/2000

Number of Days to Update: 35

Source: Department of Environmental Quality

Telephone: 602-771-4360 Last EDR Contact: 03/12/2020

Next Scheduled EDR Contact: 06/29/2020 Data Release Frequency: No Update Planned

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Directory of Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/31/2019 Date Data Arrived at EDR: 02/11/2020 Date Made Active in Reports: 04/29/2020

Number of Days to Update: 78

Source: Department of Environmental Quality

Telephone: 602-771-2300 Last EDR Contact: 04/06/2020

Next Scheduled EDR Contact: 07/20/2020 Data Release Frequency: Varies

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Listing

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 01/16/2020 Date Data Arrived at EDR: 01/22/2020 Date Made Active in Reports: 03/10/2020

Number of Days to Update: 48

Source: Department of Environmental Quality

Telephone: 602-771-4345 Last EDR Contact: 04/10/2020

Next Scheduled EDR Contact: 07/20/2020 Data Release Frequency: Semi-Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/11/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 68

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/03/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/14/2020

Number of Days to Update: 72

Source: EPA Region 8 Telephone: 303-312-6271 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/15/2019 Date Data Arrived at EDR: 12/17/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 55

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/04/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/27/2020

Number of Days to Update: 85

Source: Environmental Protection Agency

Telephone: 415-972-3372 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/10/2019 Date Data Arrived at EDR: 12/05/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 67

Source: EPA Region 4 Telephone: 404-562-8677 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 68

Source: EPA Region 1 Telephone: 617-918-1313 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/01/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 68

Source: EPA, Region 5 Telephone: 312-886-7439 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020

Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/02/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 68

Source: EPA Region 6 Telephone: 214-665-6597 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 08/27/2019 Date Data Arrived at EDR: 08/28/2019 Date Made Active in Reports: 11/11/2019

Number of Days to Update: 75

Source: FEMA

Telephone: 202-646-5797 Last EDR Contact: 03/19/2020

Next Scheduled EDR Contact: 07/20/2020 Data Release Frequency: Varies

UST: Underground Storage Tank Listing

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 01/16/2020 Date Data Arrived at EDR: 01/22/2020 Date Made Active in Reports: 03/10/2020

Number of Days to Update: 48

Source: Department of Environmental Quality

Telephone: 602-771-4345 Last EDR Contact: 04/10/2020

Next Scheduled EDR Contact: 07/20/2020 Data Release Frequency: Annually

AST: List of Aboveground Storage Tanks

Aboveground storage tanks that the Dept. of Building & Fire Safety have permitted.

Date of Government Version: 12/05/2019 Date Data Arrived at EDR: 12/06/2019 Date Made Active in Reports: 01/31/2020

Number of Days to Update: 56

Source: Department of Building & Fire Safety

Telephone: 602-364-1003 Last EDR Contact: 06/03/2020

Next Scheduled EDR Contact: 09/21/2020 Data Release Frequency: No Update Planned

AST 2: Aboveground Storage Tank Listing

A listing of aboveground storage tank site locations.

Date of Government Version: 12/05/2019 Date Data Arrived at EDR: 01/15/2020 Date Made Active in Reports: 03/10/2020

Number of Days to Update: 55

Source: Department of Environmental Quality

Telephone: 602-771-4380 Last EDR Contact: 06/08/2020

Next Scheduled EDR Contact: 09/21/2020 Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian

land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/02/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 68

Source: EPA Region 6 Telephone: 214-665-7591 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/11/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 68

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/03/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/14/2020

Number of Days to Update: 72

Source: EPA Region 8 Telephone: 303-312-6137 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/11/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 68

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/10/2019 Date Data Arrived at EDR: 12/05/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 67

Source: EPA Region 4 Telephone: 404-562-9424 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/04/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/27/2020

Number of Days to Update: 85

Source: EPA Region 9 Telephone: 415-972-3368 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/01/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 68

Source: EPA Region 5 Telephone: 312-886-6136 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020

Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2019 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 68

Source: EPA, Region 1 Telephone: 617-918-1313 Last EDR Contact: 05/20/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

AZURITE: Remediation and DEUR/VEMUR Tracking System

ADEQ maintains a repository listing sites remediated under programs administered by the department.

Date of Government Version: 11/19/2018 Date Data Arrived at EDR: 11/19/2018 Date Made Active in Reports: 11/30/2018

Number of Days to Update: 11

Source: Department of Environmental Quality Telephone: 602-771-4397

Last EDR Contact: 03/20/2020

Next Scheduled EDR Contact: 06/29/2020 Data Release Frequency: Varies

AUL: DEUR Database

Activity and use limitations include both engineering controls and institutional controls. DEUR and VEMUR sites. DEUR: Declaration of Environmental Use Restriction. A restrictive land use covenant that is required when a property owner elects to use an institutional (i.e., administrative) control or engineering (i.e., physical) control as a means to meet remediation goals. The DEUR runs with and burdens the land, and requires maintenance of any institutional or engineering controls. VEMUR: Voluntary Environmental Mitigation Use Restriction. A restrictive land use covenant that, prior to July 18, 2000, was required when a property owner elected to remediate the property to non-residential uses. Effective July 18, 2000, the DEUR replaced the VEMUR as a restrictive use covenant.

Date of Government Version: 10/03/2019 Date Data Arrived at EDR: 10/04/2019 Date Made Active in Reports: 12/12/2019

Number of Days to Update: 69

Source: Department of Environmental Quality

Telephone: 602-771-4397 Last EDR Contact: 03/20/2020

Next Scheduled EDR Contact: 06/29/2020 Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008 Date Data Arrived at EDR: 04/22/2008 Date Made Active in Reports: 05/19/2008

Number of Days to Update: 27

Source: EPA, Region 7 Telephone: 913-551-7365 Last EDR Contact: 04/20/2009

Next Scheduled EDR Contact: 07/20/2009

VCP: Voluntary Remediation Program Sites

Sites involved in the Voluntary Remediation Program.

Date of Government Version: 02/08/2019 Date Data Arrived at EDR: 04/23/2019 Date Made Active in Reports: 06/03/2019

Number of Days to Update: 41

Source: Department of Environmental Quality

Telephone: 602-771-4411 Last EDR Contact: 03/30/2020

Next Scheduled EDR Contact: 07/13/2020

Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015 Date Data Arrived at EDR: 09/29/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 142

Source: EPA, Region 1 Telephone: 617-918-1102 Last EDR Contact: 03/18/2020

Next Scheduled EDR Contact: 07/06/2020

Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Tracking System

Information relating to Brownfields sites in Arizona.

Date of Government Version: 02/08/2019 Date Data Arrived at EDR: 04/23/2019 Date Made Active in Reports: 06/03/2019

Number of Days to Update: 41

Source: Department of Environmental Quality

Telephone: 602-771-4401 Last EDR Contact: 03/30/2020

Next Scheduled EDR Contact: 07/13/2020

Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/02/2019 Date Data Arrived at EDR: 12/16/2019 Date Made Active in Reports: 03/06/2020

Number of Days to Update: 81

Source: Environmental Protection Agency

Telephone: 202-566-2777 Last EDR Contact: 06/02/2020

Next Scheduled EDR Contact: 06/29/2020 Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWTIRE: Solid Waste Tire Facilities

A waste tire "facility" means a solid waste facility at which waste tires are stored outdoors on any day.

Date of Government Version: 12/06/2019 Date Data Arrived at EDR: 12/09/2019 Date Made Active in Reports: 01/31/2020

Number of Days to Update: 53

Source: Department of Environmental Quality

Telephone: 602-771-4132 Last EDR Contact: 05/18/2020

Next Scheduled EDR Contact: 09/07/2020

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998 Date Data Arrived at EDR: 12/03/2007 Date Made Active in Reports: 01/24/2008

Number of Days to Update: 52

Source: Environmental Protection Agency

Telephone: 703-308-8245 Last EDR Contact: 04/16/2020

Next Scheduled EDR Contact: 08/10/2020 Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside

County and northern Imperial County, California.

Date of Government Version: 01/12/2009 Date Data Arrived at EDR: 05/07/2009 Date Made Active in Reports: 09/21/2009

Number of Days to Update: 137

Source: EPA, Region 9 Telephone: 415-947-4219 Last EDR Contact: 04/09/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258

Subtitle D Criteria.

Date of Government Version: 06/30/1985 Date Data Arrived at EDR: 08/09/2004 Date Made Active in Reports: 09/17/2004

Number of Days to Update: 39

Source: Environmental Protection Agency

Telephone: 800-424-9346 Last EDR Contact: 06/09/2004 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014 Date Data Arrived at EDR: 08/06/2014 Date Made Active in Reports: 01/29/2015

Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service

Telephone: 301-443-1452 Last EDR Contact: 05/01/2020

Next Scheduled EDR Contact: 08/10/2020

Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 06/11/2019 Date Data Arrived at EDR: 06/13/2019 Date Made Active in Reports: 09/03/2019

Number of Days to Update: 82

Source: Drug Enforcement Administration

Telephone: 202-307-1000 Last EDR Contact: 05/18/2020

Next Scheduled EDR Contact: 09/07/2020 Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab seizures in Arizona.

Date of Government Version: 10/28/2019 Date Data Arrived at EDR: 10/30/2019 Date Made Active in Reports: 12/12/2019

Number of Days to Update: 43

Source: Board of Technical Registration

Telephone: 602-364-4931 Last EDR Contact: 03/18/2020

Next Scheduled EDR Contact: 07/06/2020

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 06/11/2019 Date Data Arrived at EDR: 06/13/2019 Date Made Active in Reports: 09/03/2019

Number of Days to Update: 82

Source: Drug Enforcement Administration

Telephone: 202-307-1000 Last EDR Contact: 05/18/2020

Next Scheduled EDR Contact: 09/07/2020 Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Listing

Arizona?s Public Water System Screening for Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) Final Report. The purpose of the grant was to screen Public Water System (PWS) drinking water wells in Arizona potentially impacted by perfluorooctanoic acid (PFOA) and/or perfluorooctane sulfonate (PFOS) contamination.

Date of Government Version: 11/01/2018 Date Data Arrived at EDR: 02/07/2020 Date Made Active in Reports: 04/22/2020

Number of Days to Update: 75

Source: Department of Environmental Quality

Telephone: 602-364-3118 Last EDR Contact: 05/08/2020

Next Scheduled EDR Contact: 08/17/2020

Data Release Frequency: Varies

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 04/27/2020 Date Data Arrived at EDR: 05/06/2020 Date Made Active in Reports: 05/28/2020

Number of Days to Update: 22

Source: Environmental Protection Agency

Telephone: 202-564-6023 Last EDR Contact: 06/03/2020

Next Scheduled EDR Contact: 07/13/2020 Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/05/2019 Date Data Arrived at EDR: 12/06/2019 Date Made Active in Reports: 02/14/2020

Number of Days to Update: 70

Source: U.S. Department of Transportation

Telephone: 202-366-4555 Last EDR Contact: 03/24/2020

Next Scheduled EDR Contact: 07/06/2020 Data Release Frequency: Quarterly

SPILLS: Hazardous Material Logbook

Chemical spills and incidents referred to the Emergency Response Unit.

Date of Government Version: 11/15/2001 Date Data Arrived at EDR: 06/28/2007 Date Made Active in Reports: 07/24/2007

Number of Days to Update: 26

Source: Department of Environmental Quality

Telephone: 602-771-4153 Last EDR Contact: 05/15/2020

Next Scheduled EDR Contact: 09/07/2020 Data Release Frequency: Varies

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/11/2001 Date Data Arrived at EDR: 01/03/2013 Date Made Active in Reports: 02/11/2013

Number of Days to Update: 39

Source: FirstSearch Telephone: N/A

Last EDR Contact: 01/03/2013 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/23/2020 Date Data Arrived at EDR: 03/25/2020 Date Made Active in Reports: 05/21/2020

Number of Days to Update: 57

Source: Environmental Protection Agency

Telephone: (415) 495-8895

Last EDR Contact: 03/25/2020

Next Scheduled EDR Contact: 07/06/2020 Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/28/2020 Date Data Arrived at EDR: 02/19/2020 Date Made Active in Reports: 05/14/2020

Number of Days to Update: 85

Source: U.S. Army Corps of Engineers

Telephone: 202-528-4285 Last EDR Contact: 05/18/2020

Next Scheduled EDR Contact: 08/31/2020

Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 11/10/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 62

Source: USGS

Telephone: 888-275-8747 Last EDR Contact: 04/10/2020

Next Scheduled EDR Contact: 07/20/2020 Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018 Date Data Arrived at EDR: 04/11/2018 Date Made Active in Reports: 11/06/2019

Number of Days to Update: 574

Source: U.S. Geological Survey Telephone: 888-275-8747 Last EDR Contact: 04/06/2020

Next Scheduled EDR Contact: 07/20/2020

Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017 Date Data Arrived at EDR: 02/03/2017 Date Made Active in Reports: 04/07/2017

Number of Days to Update: 63

Source: Environmental Protection Agency

Telephone: 615-532-8599 Last EDR Contact: 05/15/2020

Next Scheduled EDR Contact: 08/24/2020 Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/16/2019 Date Data Arrived at EDR: 12/19/2019 Date Made Active in Reports: 02/27/2020

Number of Days to Update: 70

Source: Environmental Protection Agency

Telephone: 202-566-1917 Last EDR Contact: 03/24/2020

Next Scheduled EDR Contact: 07/06/2020 Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013 Date Data Arrived at EDR: 03/21/2014 Date Made Active in Reports: 06/17/2014

Number of Days to Update: 88

Source: Environmental Protection Agency

Telephone: 617-520-3000 Last EDR Contact: 05/04/2020

Next Scheduled EDR Contact: 08/17/2020 Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017 Date Data Arrived at EDR: 05/08/2018 Date Made Active in Reports: 07/20/2018

Number of Days to Update: 73

Source: Environmental Protection Agency

Telephone: 703-308-4044 Last EDR Contact: 05/08/2020

Next Scheduled EDR Contact: 08/17/2020 Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016 Date Data Arrived at EDR: 06/21/2017 Date Made Active in Reports: 01/05/2018

Number of Days to Update: 198

Source: EPA

Telephone: 202-260-5521 Last EDR Contact: 03/20/2020

Next Scheduled EDR Contact: 06/29/2020 Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018 Date Data Arrived at EDR: 02/05/2020 Date Made Active in Reports: 04/24/2020

Number of Days to Update: 79

Source: EPA

Telephone: 202-566-0250 Last EDR Contact: 05/21/2020

Next Scheduled EDR Contact: 08/31/2020 Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 05/01/2019 Date Data Arrived at EDR: 10/23/2019 Date Made Active in Reports: 01/15/2020

Number of Days to Update: 84

Source: EPA

Telephone: 202-564-4203 Last EDR Contact: 04/21/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/27/2020 Date Data Arrived at EDR: 05/06/2020 Date Made Active in Reports: 05/28/2020

Number of Days to Update: 22

Source: EPA

Telephone: 703-416-0223 Last EDR Contact: 06/03/2020

Next Scheduled EDR Contact: 09/14/2020 Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/05/2019 Date Data Arrived at EDR: 11/20/2019 Date Made Active in Reports: 04/17/2020

Number of Days to Update: 149

Source: Environmental Protection Agency

Telephone: 202-564-8600 Last EDR Contact: 04/15/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995 Date Data Arrived at EDR: 07/03/1995 Date Made Active in Reports: 08/07/1995

Number of Days to Update: 35

Source: EPA

Telephone: 202-564-4104 Last EDR Contact: 06/02/2008

Next Scheduled EDR Contact: 09/01/2008 Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 01/30/2020 Date Data Arrived at EDR: 02/06/2020 Date Made Active in Reports: 02/14/2020

Number of Days to Update: 8

Source: EPA

Telephone: 202-564-6023 Last EDR Contact: 06/03/2020

Next Scheduled EDR Contact: 08/17/2020 Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019 Date Data Arrived at EDR: 10/11/2019 Date Made Active in Reports: 12/20/2019

Number of Days to Update: 70

Source: EPA

Telephone: 202-566-0500 Last EDR Contact: 04/10/2020

Next Scheduled EDR Contact: 07/20/2020 Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016 Date Data Arrived at EDR: 11/23/2016 Date Made Active in Reports: 02/10/2017

Number of Days to Update: 79

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 03/26/2020

Next Scheduled EDR Contact: 07/20/2020 Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-566-1667 Last EDR Contact: 08/18/2017

Next Scheduled EDR Contact: 12/04/2017 Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA

Telephone: 202-566-1667 Last EDR Contact: 08/18/2017

Next Scheduled EDR Contact: 12/04/2017 Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/2019 Date Data Arrived at EDR: 10/25/2019 Date Made Active in Reports: 01/15/2020

Number of Days to Update: 82

Source: Nuclear Regulatory Commission Telephone: 301-415-7169

Last EDR Contact: 04/10/2020

Next Scheduled EDR Contact: 08/03/2020 Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018 Date Data Arrived at EDR: 12/04/2019 Date Made Active in Reports: 01/15/2020

Number of Days to Update: 42

Source: Department of Energy Telephone: 202-586-8719 Last EDR Contact: 06/05/2020

Next Scheduled EDR Contact: 09/14/2020 Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017 Date Data Arrived at EDR: 03/05/2019 Date Made Active in Reports: 11/11/2019

Number of Days to Update: 251

Source: Environmental Protection Agency

Telephone: N/A

Last EDR Contact: 06/01/2020

Next Scheduled EDR Contact: 09/14/2020 Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019 Date Data Arrived at EDR: 11/06/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 96

Source: Environmental Protection Agency

Telephone: 202-566-0517 Last EDR Contact: 05/08/2020

Next Scheduled EDR Contact: 08/17/2020

Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019 Date Data Arrived at EDR: 07/01/2019 Date Made Active in Reports: 09/23/2019

Number of Days to Update: 84

Source: Environmental Protection Agency

Telephone: 202-343-9775 Last EDR Contact: 07/01/2019

Next Scheduled EDR Contact: 07/13/2020 Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2007

Next Scheduled EDR Contact: 03/17/2008

Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2008

Next Scheduled EDR Contact: 03/17/2008 Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020 Date Data Arrived at EDR: 01/28/2020 Date Made Active in Reports: 04/17/2020

Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety

Telephone: 202-366-4595 Last EDR Contact: 04/28/2020

Next Scheduled EDR Contact: 08/10/2020 Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2019 Date Data Arrived at EDR: 01/17/2020 Date Made Active in Reports: 03/06/2020

Number of Days to Update: 49

Source: Department of Justice, Consent Decree Library

Telephone: Varies

Last EDR Contact: 03/26/2020

Next Scheduled EDR Contact: 07/20/2020

Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015 Date Data Arrived at EDR: 02/22/2017 Date Made Active in Reports: 09/28/2017

Number of Days to Update: 218

Source: EPA/NTIS Telephone: 800-424-9346 Last EDR Contact: 03/25/2020

Next Scheduled EDR Contact: 07/06/2020 Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 07/14/2015 Date Made Active in Reports: 01/10/2017

Number of Days to Update: 546

Source: USGS

Telephone: 202-208-3710 Last EDR Contact: 04/10/2020

Next Scheduled EDR Contact: 07/20/2020 Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017 Date Data Arrived at EDR: 09/11/2018 Date Made Active in Reports: 09/14/2018

Number of Days to Update: 3

Source: Department of Energy Telephone: 202-586-3559 Last EDR Contact: 04/29/2020

Next Scheduled EDR Contact: 08/17/2020 Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019 Date Data Arrived at EDR: 11/15/2019 Date Made Active in Reports: 01/28/2020

Number of Days to Update: 74

Source: Department of Energy Telephone: 505-845-0011 Last EDR Contact: 05/18/2020

Next Scheduled EDR Contact: 08/31/2020 Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/27/2020 Date Data Arrived at EDR: 05/06/2020 Date Made Active in Reports: 05/28/2020

Number of Days to Update: 22

Source: Environmental Protection Agency

Telephone: 703-603-8787 Last EDR Contact: 06/03/2020

Next Scheduled EDR Contact: 07/13/2020 Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites

may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001 Date Data Arrived at EDR: 10/27/2010 Date Made Active in Reports: 12/02/2010

Number of Days to Update: 36

Source: American Journal of Public Health

Telephone: 703-305-6451 Last EDR Contact: 12/02/2009 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016 Date Data Arrived at EDR: 10/26/2016 Date Made Active in Reports: 02/03/2017

Number of Days to Update: 100

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data A listing of minor source facilities.

Date of Government Version: 10/12/2016 Date Data Arrived at EDR: 10/26/2016 Date Made Active in Reports: 02/03/2017

Number of Days to Update: 100

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/11/2020 Date Data Arrived at EDR: 02/25/2020 Date Made Active in Reports: 05/21/2020

Number of Days to Update: 86

Source: Department of Labor, Mine Safety and Health Administration

Telephone: 303-231-5959 Last EDR Contact: 05/21/2020

Next Scheduled EDR Contact: 09/07/2020 Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 03/31/2020 Date Data Arrived at EDR: 04/01/2020 Date Made Active in Reports: 05/21/2020

Number of Days to Update: 50

Source: DOL, Mine Safety & Health Admi

Telephone: 202-693-9424 Last EDR Contact: 05/27/2020

Next Scheduled EDR Contact: 09/14/2020 Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/16/2018 Date Data Arrived at EDR: 02/28/2020 Date Made Active in Reports: 05/22/2020

Number of Days to Update: 84

Source: USGS

Telephone: 703-648-7709 Last EDR Contact: 05/27/2020

Next Scheduled EDR Contact: 09/07/2020 Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011 Date Data Arrived at EDR: 06/08/2011 Date Made Active in Reports: 09/13/2011

Number of Days to Update: 97

Source: USGS

Telephone: 703-648-7709 Last EDR Contact: 05/21/2020

Next Scheduled EDR Contact: 09/07/2020

Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/05/2020 Date Data Arrived at EDR: 03/06/2020 Date Made Active in Reports: 05/29/2020

Number of Days to Update: 84

Source: Department of Interior Telephone: 202-208-2609 Last EDR Contact: 06/03/2020

Next Scheduled EDR Contact: 09/21/2020 Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2020 Date Data Arrived at EDR: 03/03/2020 Date Made Active in Reports: 05/28/2020

Number of Days to Update: 86

Source: EPA

Telephone: (415) 947-8000 Last EDR Contact: 06/02/2020

Next Scheduled EDR Contact: 09/14/2020 Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017 Date Data Arrived at EDR: 01/17/2019 Date Made Active in Reports: 04/01/2019

Number of Days to Update: 74

Source: Department of Defense Telephone: 703-704-1564 Last EDR Contact: 04/03/2020

Next Scheduled EDR Contact: 07/27/2020 Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018 Date Data Arrived at EDR: 07/26/2018 Date Made Active in Reports: 10/05/2018

Number of Days to Update: 71

Source: Environmental Protection Agency

Telephone: 202-564-0527 Last EDR Contact: 05/18/2020

Next Scheduled EDR Contact: 09/07/2020 Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/05/2020 Date Data Arrived at EDR: 01/07/2020 Date Made Active in Reports: 03/06/2020

Number of Days to Update: 59

Source: Environmental Protection Agency

Telephone: 202-564-2280 Last EDR Contact: 04/07/2020

Next Scheduled EDR Contact: 07/20/2020 Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels

Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/18/2020 Date Data Arrived at EDR: 02/19/2020 Date Made Active in Reports: 05/14/2020

Number of Days to Update: 85

Source: EPA

Telephone: 800-385-6164 Last EDR Contact: 05/19/2020

Next Scheduled EDR Contact: 08/31/2020 Data Release Frequency: Quarterly

AIRS: Arizona Airs Database

Arizona major (has the potential to emit over 100 tons of criteria pollutant) and minor (below 100 tons) sources.

Date of Government Version: 01/13/2020 Date Data Arrived at EDR: 01/15/2020 Date Made Active in Reports: 03/10/2020

Number of Days to Update: 55

Source: Department of Environmental Quality

Telephone: 602-771-2344 Last EDR Contact: 03/20/2020

Next Scheduled EDR Contact: 07/13/2020 Data Release Frequency: Semi-Annually

AQUIFER: Waste Water Treatment Facilities

Waste Water Treatment Facilities with APP (Aquifer Protection Permits.)

Date of Government Version: 03/02/2020 Date Data Arrived at EDR: 03/04/2020 Date Made Active in Reports: 03/10/2020

Number of Days to Update: 6

Source: Department of Environmental Quality

Telephone: 602-771-4623 Last EDR Contact: 04/29/2020

Next Scheduled EDR Contact: 08/24/2020 Data Release Frequency: Semi-Annually

DOD: Department of Defense Sites

These sites are federal facilities that are either being assessed for potential contamination, or have active remediation taking place on them.

Date of Government Version: 09/30/2019 Date Data Arrived at EDR: 11/20/2019 Date Made Active in Reports: 01/23/2020

Number of Days to Update: 64

Source: Department of Environmental Quality

Telephone: 602-771-4360 Last EDR Contact: 05/14/2020

Next Scheduled EDR Contact: 08/31/2020 Data Release Frequency: Annually

DRY WELLS: Drywell Registration

A drywell is a bored, drilled, or driven shaft or hole whose depth is greater than its width and is designed and constructed specifically for the disposal of storm water.

Date of Government Version: 06/10/2019 Date Data Arrived at EDR: 06/13/2019 Date Made Active in Reports: 08/20/2019

Number of Days to Update: 68

DRYCLEANERS: Drycleaner Facility Listing
A listing of drycleaner facilities in Arizona.

Date of Government Version: 04/11/2014 Date Data Arrived at EDR: 04/15/2014 Date Made Active in Reports: 05/12/2014

Number of Days to Update: 27

Source: Department of Environmental Quality

Telephone: 602-771-4686 Last EDR Contact: 05/14/2020

Next Scheduled EDR Contact: 08/31/2020 Data Release Frequency: Semi-Annually

Source: Department of Environmental Quality

Telephone: 602-771-4335 Last EDR Contact: 03/12/2020

Next Scheduled EDR Contact: 06/29/2020

Data Release Frequency: Varies

EMAP: All Places of Interest Listing

A listing of all places of interest to the Department of Environmental Quality, including air, waste and water

sites.

Date of Government Version: 01/03/2020 Date Data Arrived at EDR: 01/07/2020 Date Made Active in Reports: 03/09/2020

Number of Days to Update: 62

Source: Department of Environmental Quality

Telephone: 602-771-4380 Last EDR Contact: 05/27/2020

Next Scheduled EDR Contact: 09/14/2020

Data Release Frequency: Varies

ENF: Enforcement and Violation Listing

A listing of enforcement and violation cases in the state of Arizona.

Date of Government Version: 02/14/2020 Date Data Arrived at EDR: 02/18/2020 Date Made Active in Reports: 03/10/2020

Number of Days to Update: 21

Source: Department of Environmental Quality

Telephone: 602-771-4424 Last EDR Contact: 04/27/2020

Next Scheduled EDR Contact: 08/10/2020 Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial assurance information for ust sites.

Date of Government Version: 01/17/2020 Date Data Arrived at EDR: 01/22/2020 Date Made Active in Reports: 03/10/2020

Number of Days to Update: 48

Source: Department of Environmental Quality

Telephone: 602-771-4258 Last EDR Contact: 03/23/2020

Next Scheduled EDR Contact: 07/06/2020

Data Release Frequency: Varies

AZ MANIFEST: Manifest Information
Hazardous waste manifest information

Date of Government Version: 12/31/2017 Date Data Arrived at EDR: 07/17/2018 Date Made Active in Reports: 09/05/2018

Number of Days to Update: 50

Source: Department of Environmental Quality

Telephone: N/A

Last EDR Contact: 03/12/2020

Next Scheduled EDR Contact: 06/29/2020 Data Release Frequency: Annually

NPDES: Notice of Intent Construction Stormwater General Permits Database

NPDES permit sites

Date of Government Version: 01/31/2020 Date Data Arrived at EDR: 01/31/2020 Date Made Active in Reports: 04/13/2020

Number of Days to Update: 73

Source: Department of Environmental Quality

Telephone: 602-771-4424 Last EDR Contact: 04/06/2020

Next Scheduled EDR Contact: 07/20/2020

VAPOR: Vapor Intrusion

A listing of vapor intrusion site locations

Date of Government Version: 10/17/2019 Date Data Arrived at EDR: 10/22/2019 Date Made Active in Reports: 12/13/2019

Number of Days to Update: 52

Source: Department of Environmental Quality

Telephone: 602-771-4197 Last EDR Contact: 03/20/2020

Next Scheduled EDR Contact: 06/29/2020

Data Release Frequency: Varies

UIC: Underground Injection Control Wells Underground injection control wells.

> Date of Government Version: 09/30/2015 Date Data Arrived at EDR: 02/05/2016 Date Made Active in Reports: 04/05/2016

Number of Days to Update: 60

Source: Arizona Geological Survey Telephone: 520-770-3500 Last EDR Contact: 04/16/2020

Next Scheduled EDR Contact: 08/10/2020

Data Release Frequency: Varies

WWFAC: Waste Water Treatment Facilities

Statewide list of waste water treatment facilities.

Date of Government Version: 07/09/2012 Date Data Arrived at EDR: 07/23/2012 Date Made Active in Reports: 09/06/2012

Number of Days to Update: 45

Source: Department of Environmental Quality

Telephone: 602-771-4623 Last EDR Contact: 04/09/2020

Next Scheduled EDR Contact: 08/03/2020

Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System Mineral Resources Data System

> Date of Government Version: 04/06/2018 Date Data Arrived at EDR: 10/21/2019 Date Made Active in Reports: 10/24/2019

Number of Days to Update: 3

Source: USGS

Telephone: 703-648-6533 Last EDR Contact: 05/21/2020

Next Scheduled EDR Contact: 09/07/2020 Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 02/05/2015 Date Made Active in Reports: 03/06/2015

Number of Days to Update: 29

Source: EPA

Telephone: 202-564-2497 Last EDR Contact: 03/26/2020

Next Scheduled EDR Contact: 07/20/2020 Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits

An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014 Date Data Arrived at EDR: 01/06/2015 Date Made Active in Reports: 05/06/2015

Number of Days to Update: 120

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 03/26/2020

Next Scheduled EDR Contact: 07/20/2020 Data Release Frequency: Semi-Annually

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES

facilities.

Date of Government Version: 07/14/2011 Date Data Arrived at EDR: 08/05/2011 Date Made Active in Reports: 09/29/2011

Number of Days to Update: 55

Source: EPA, Office of Water Telephone: 202-564-2496 Last EDR Contact: 03/09/2020

Next Scheduled EDR Contact: 06/22/2020 Data Release Frequency: Semi-Annually

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A Source: EDR, Inc.
Date Data Arrived at EDR: N/A Telephone: N/A
Date Made Active in Reports: N/A Last EDR Contact: N/A

Number of Days to Update: N/A Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Source: EDR, Inc.
Date Data Arrived at EDR: N/A Telephone: N/A
Date Made Active in Reports: N/A Last EDR Contact: N/A

Number of Days to Update: N/A Next Scheduled EDR Contact: N/A

Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Source: EDR, Inc.
Date Data Arrived at EDR: N/A Telephone: N/A
Date Made Active in Reports: N/A Last EDR Contact: N/A

Number of Days to Update: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Arizona.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/02/2014

Number of Days to Update: 185

Source: Department of Environmental Quality

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Arizona.

Date of Government Version: N/A

Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/15/2014

Number of Days to Update: 198

Source: Department of Environmental Quality

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists.

Compiled from Records formerly available from the Department of Environmental Quality in Arizona.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/02/2014

Number of Days to Update: 185

Source: Department of Environmental Quality

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/30/2020 Date Data Arrived at EDR: 01/30/2020 Date Made Active in Reports: 03/09/2020

Number of Days to Update: 39

Source: Department of Energy & Environmental Protection

Telephone: 860-424-3375 Last EDR Contact: 05/12/2020

Next Scheduled EDR Contact: 08/24/2020 Data Release Frequency: No Update Planned

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019 Date Data Arrived at EDR: 05/01/2019 Date Made Active in Reports: 06/21/2019

Number of Days to Update: 51

Source: Department of Environmental Conservation

Telephone: 518-402-8651 Last EDR Contact: 04/29/2020

Next Scheduled EDR Contact: 08/10/2020 Data Release Frequency: Quarterly

RI MANIFEST: Manifest information Hazardous waste manifest information

Date of Government Version: 12/31/2018 Date Data Arrived at EDR: 10/02/2019 Date Made Active in Reports: 12/10/2019

Number of Days to Update: 69

Source: Department of Environmental Management

Telephone: 401-222-2797 Last EDR Contact: 05/14/2020

Next Scheduled EDR Contact: 08/31/2020 Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018 Date Data Arrived at EDR: 06/19/2019 Date Made Active in Reports: 09/03/2019

Number of Days to Update: 76

Source: Department of Natural Resources

Telephone: N/A

Last EDR Contact: 06/04/2020

Next Scheduled EDR Contact: 09/21/2020 Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services,

a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary

and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Facilities & Group Homes

Source: Department of Health Services

Telephone: 602-674-4220

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

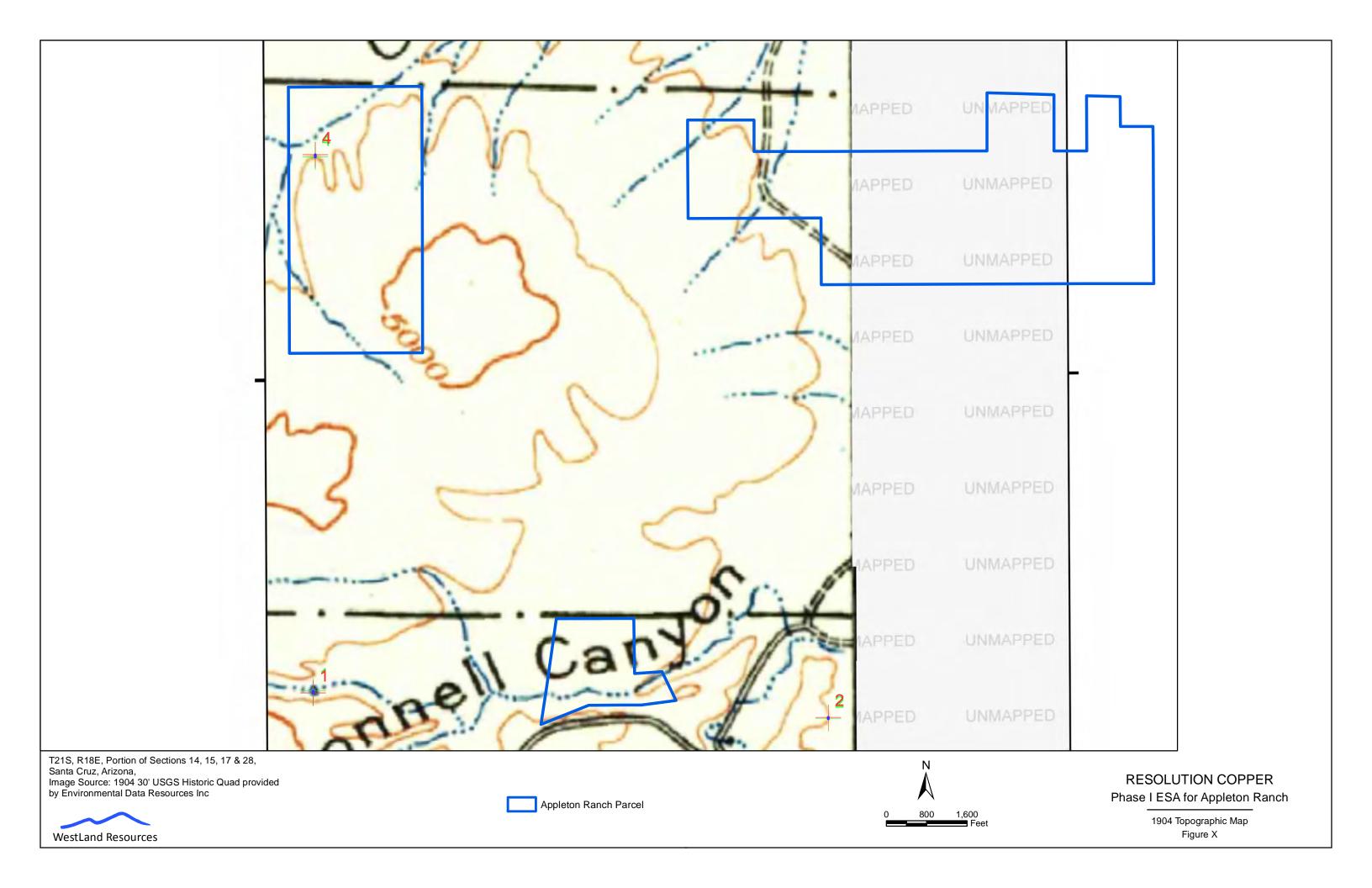
State Wetlands Data: Riparian Vegetation Associated with Perennial Waters

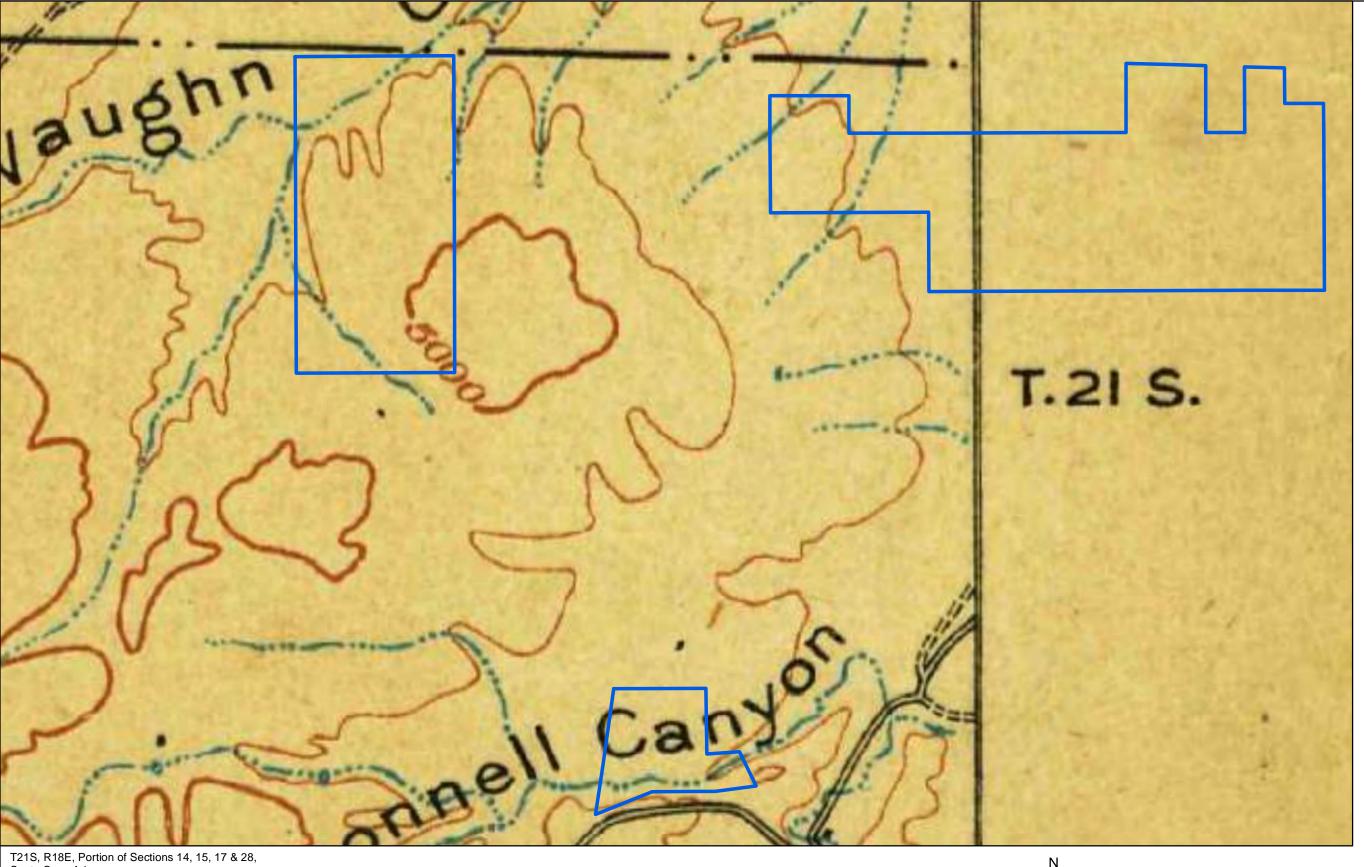
Source: State Land Department Telephone: 602-542-4094

STREET AND ADDRESS INFORMATION

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APPENDIX G Historical Topographic Maps

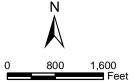




T21S, R18E, Portion of Sections 14, 15, 17 & 28, Santa Cruz, Arizona, Image Source: 1905 30' USGS Historic Quad provided by Environmental Data Resources Inc

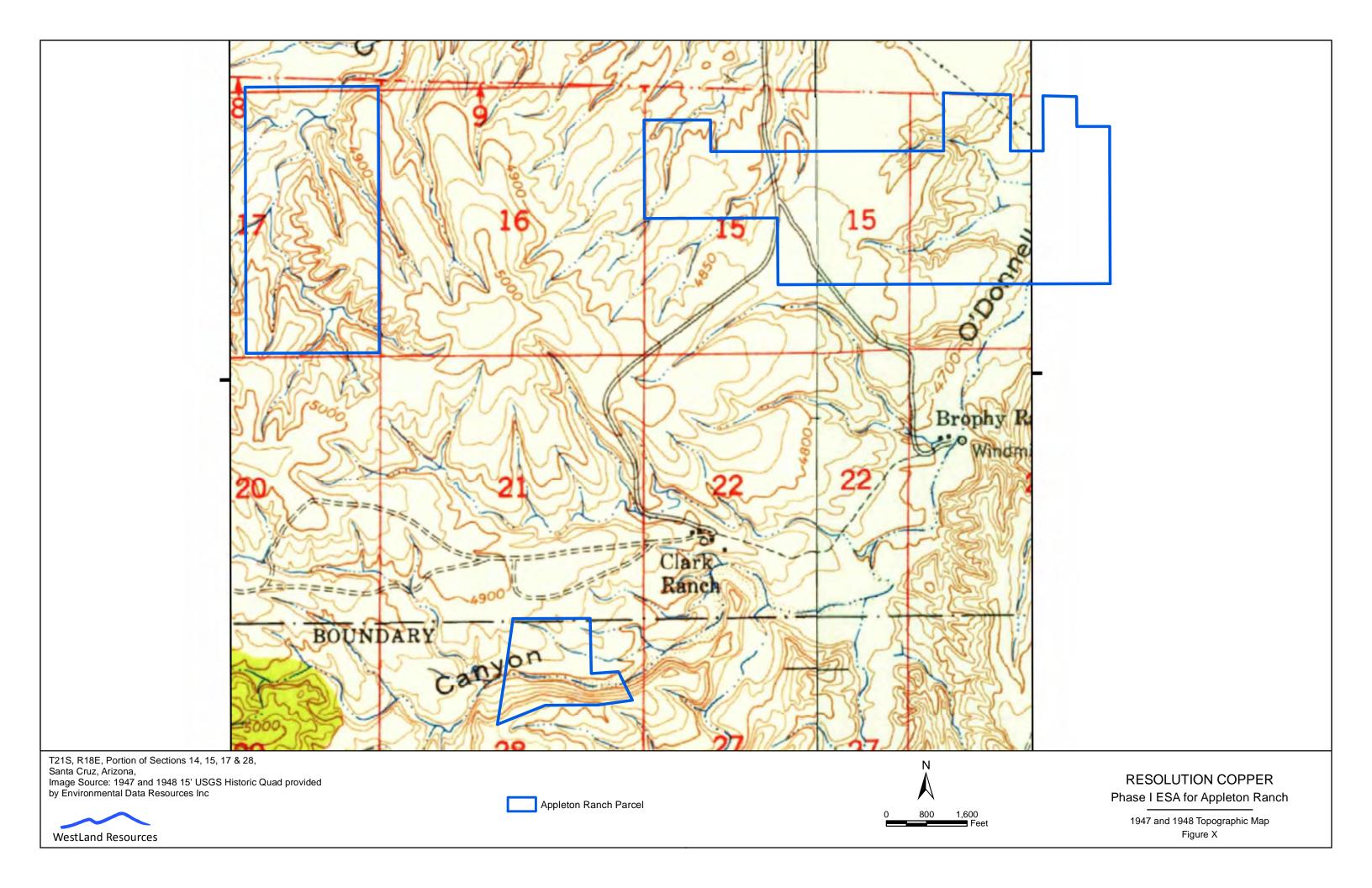
WestLand Resources

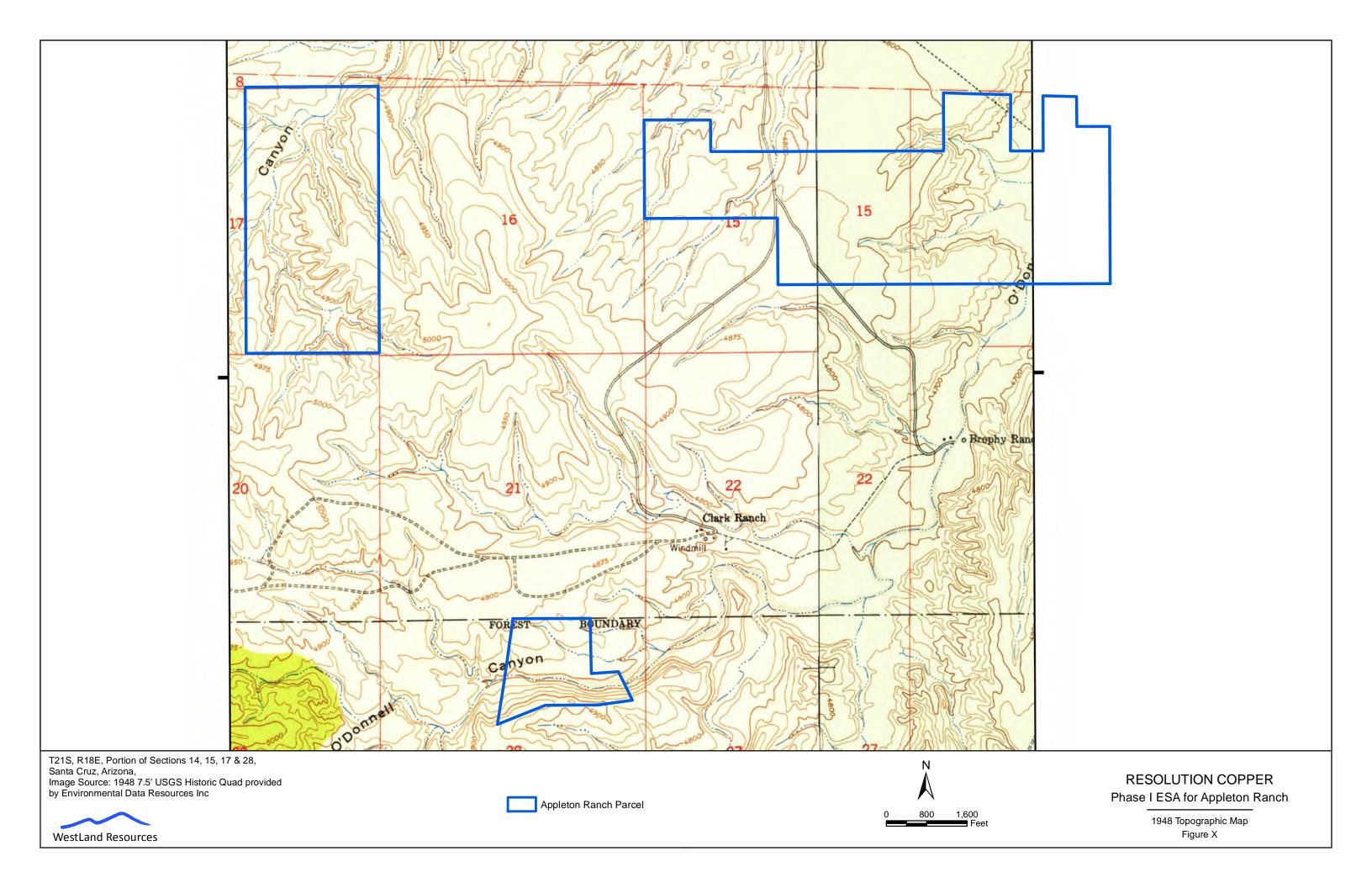
Appleton Ranch Parcel

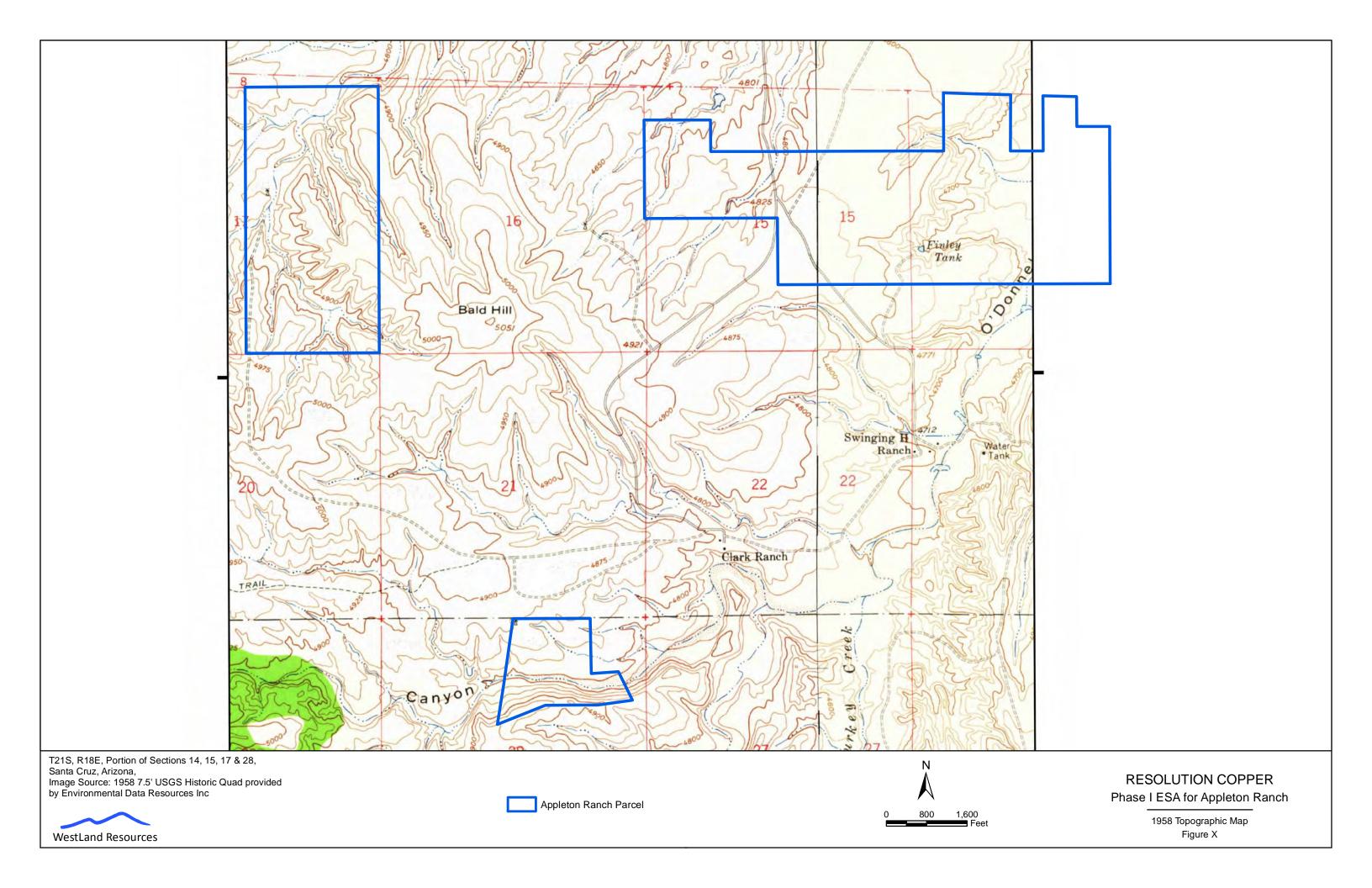


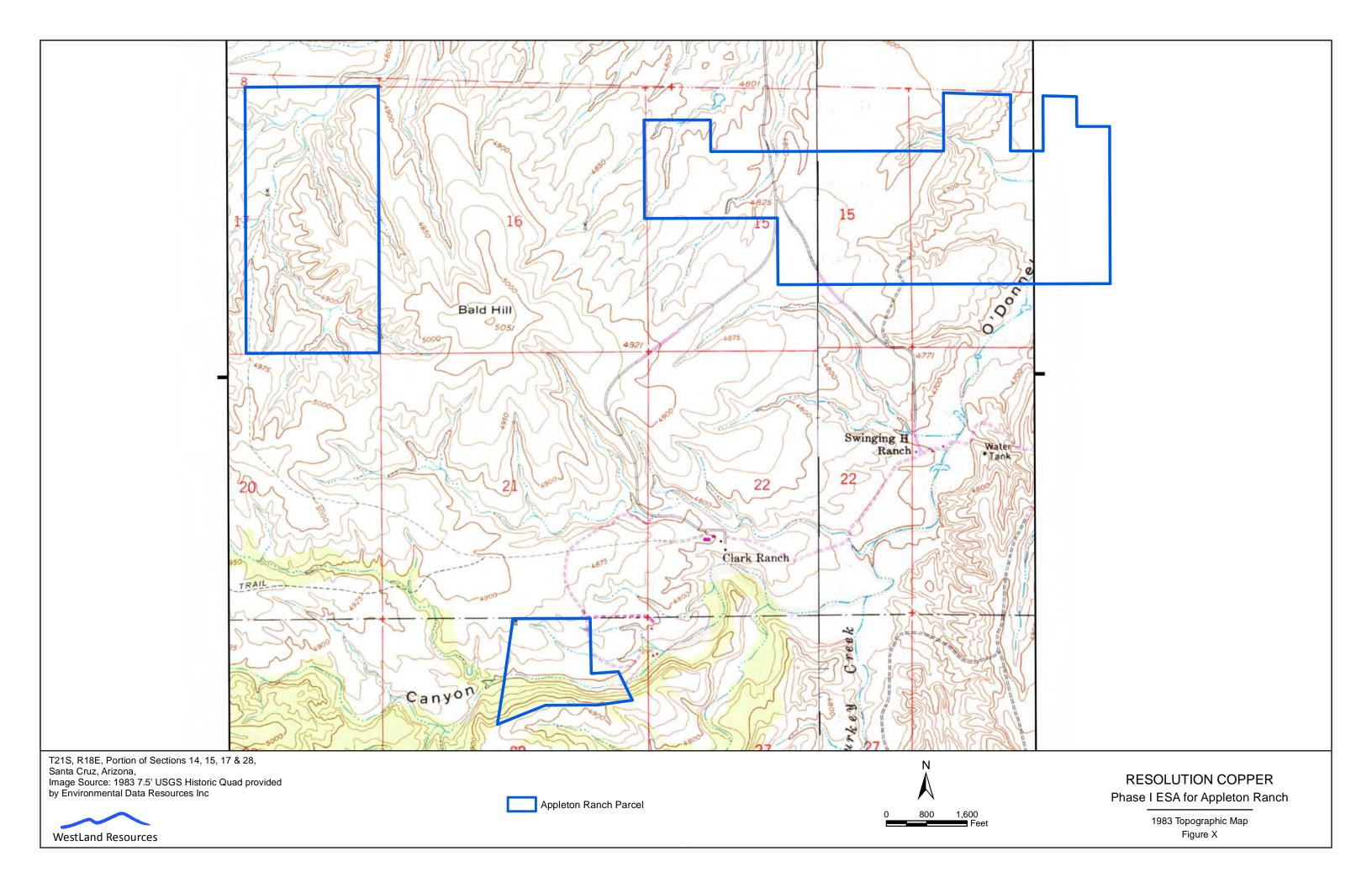
RESOLUTION COPPER
Phase I ESA for Appleton Ranch

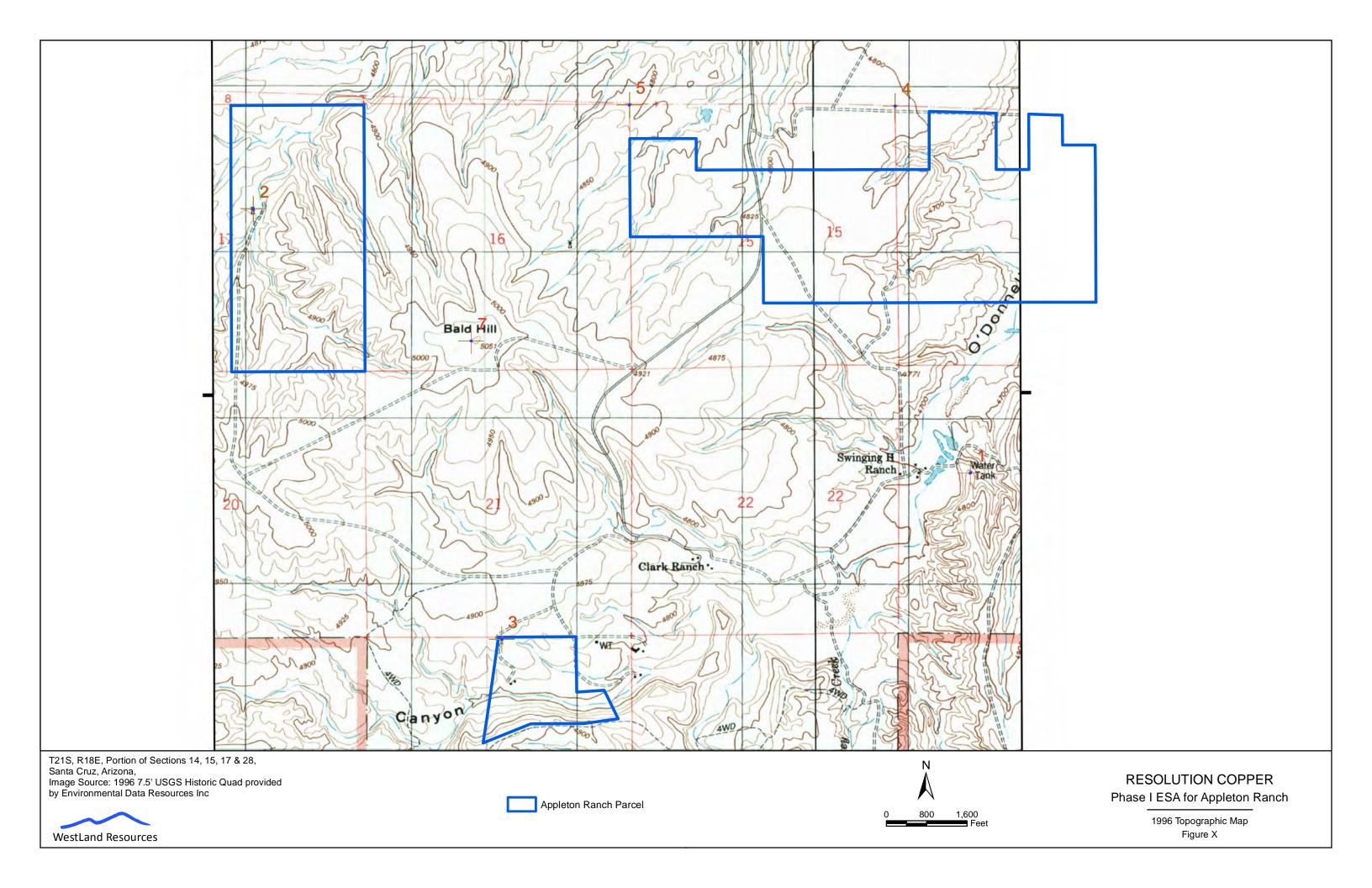
1905 Topographic Map Figure X





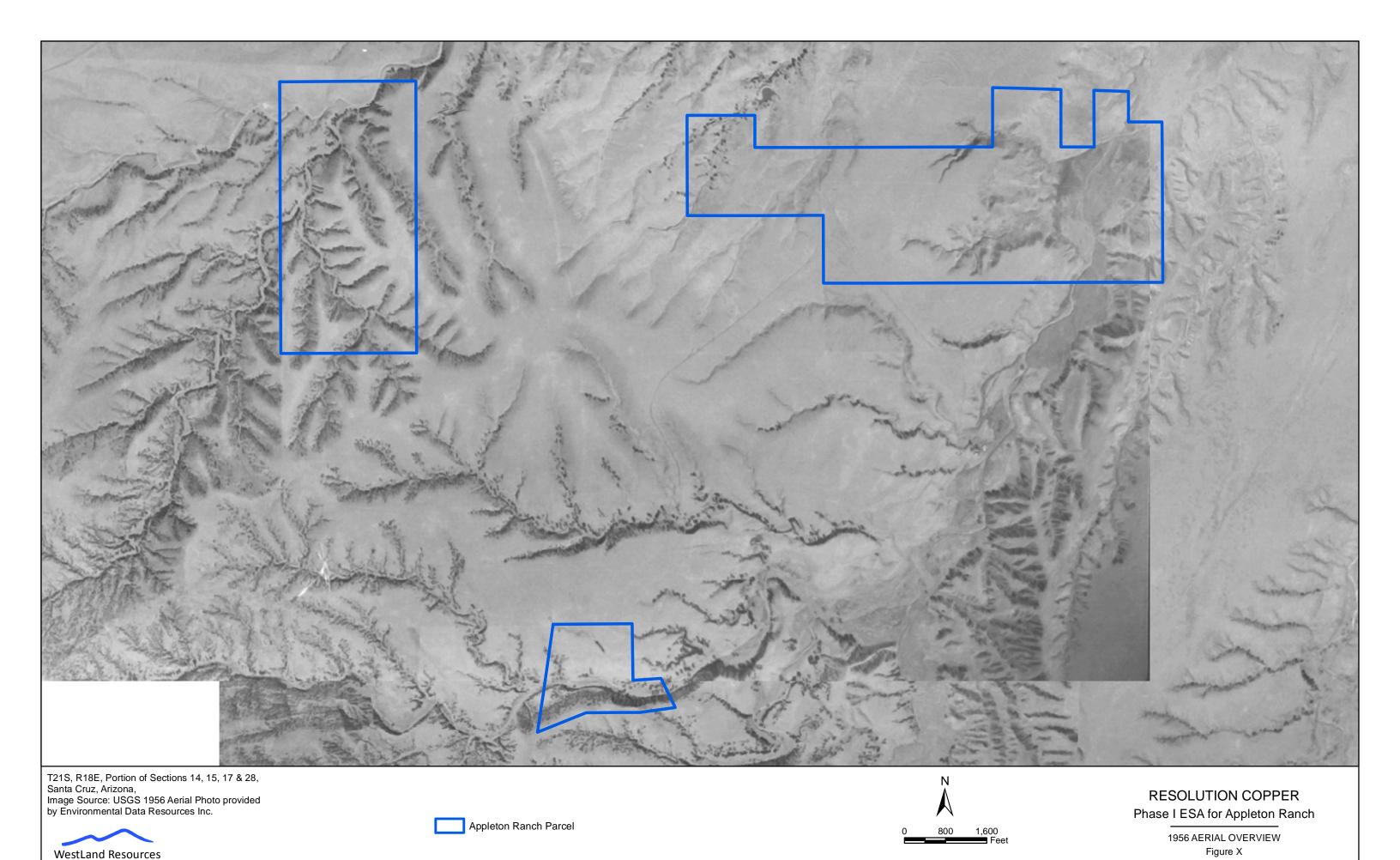


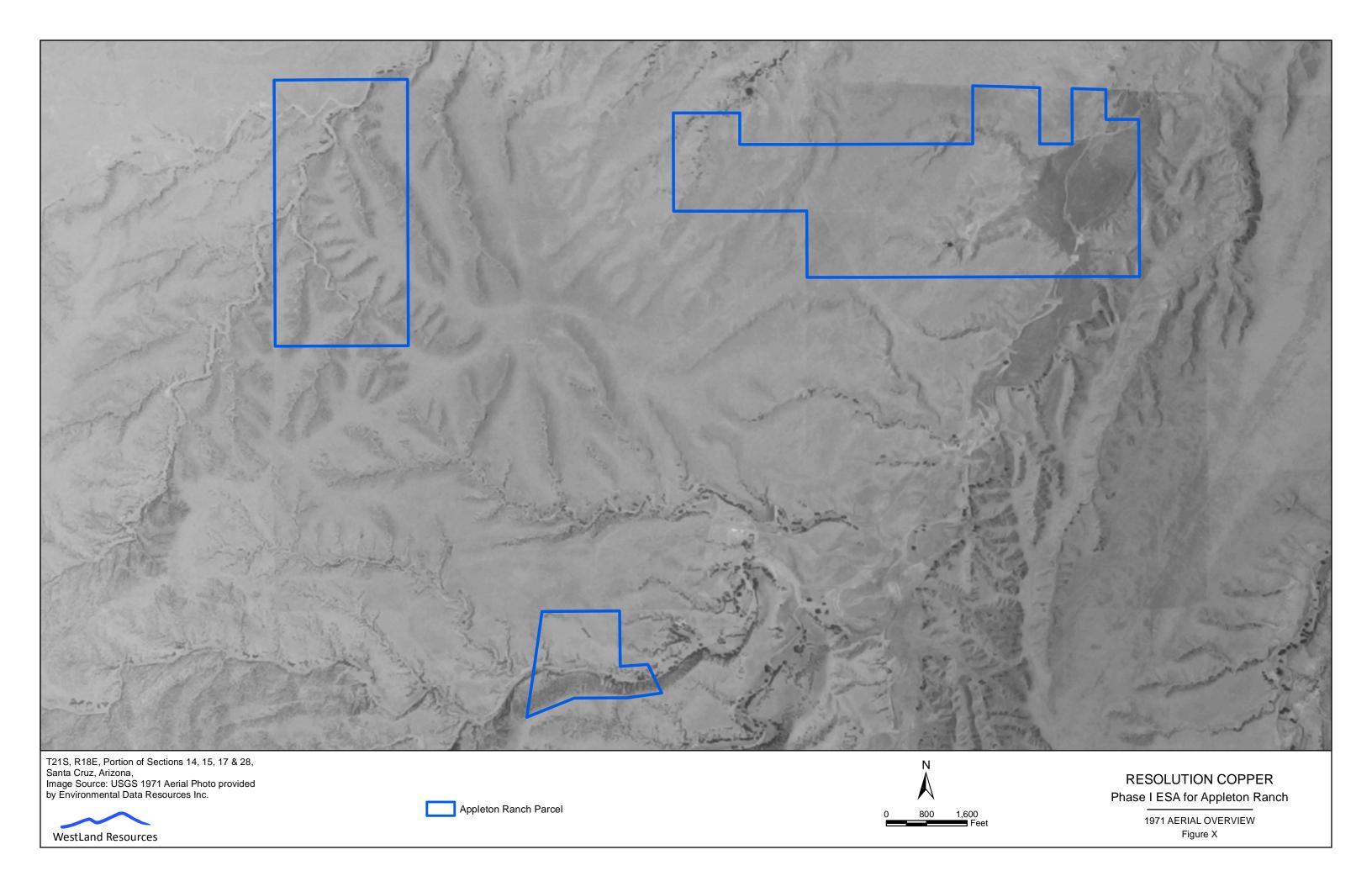


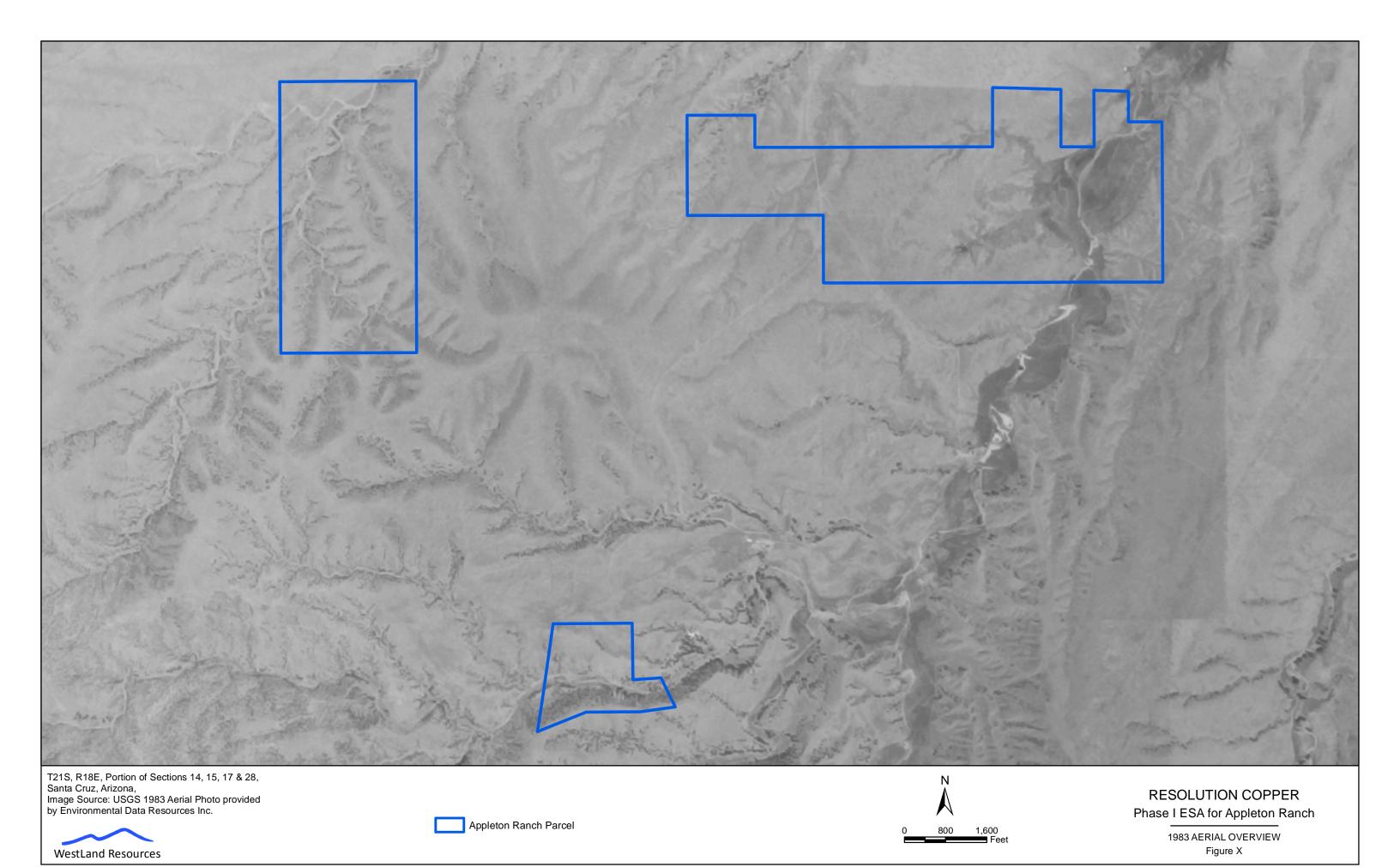


APPENDIX H

Historical Aerial Photographs







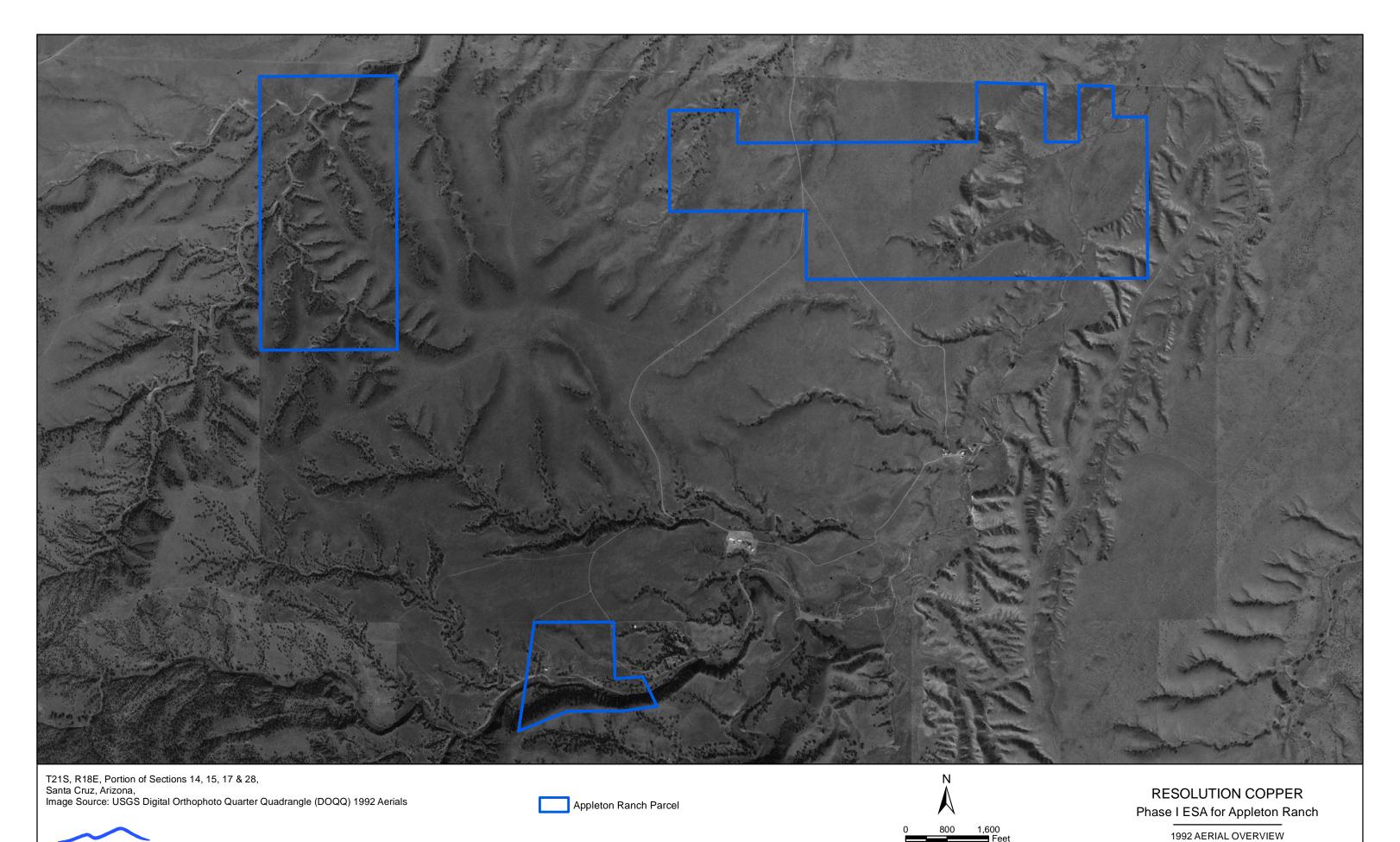
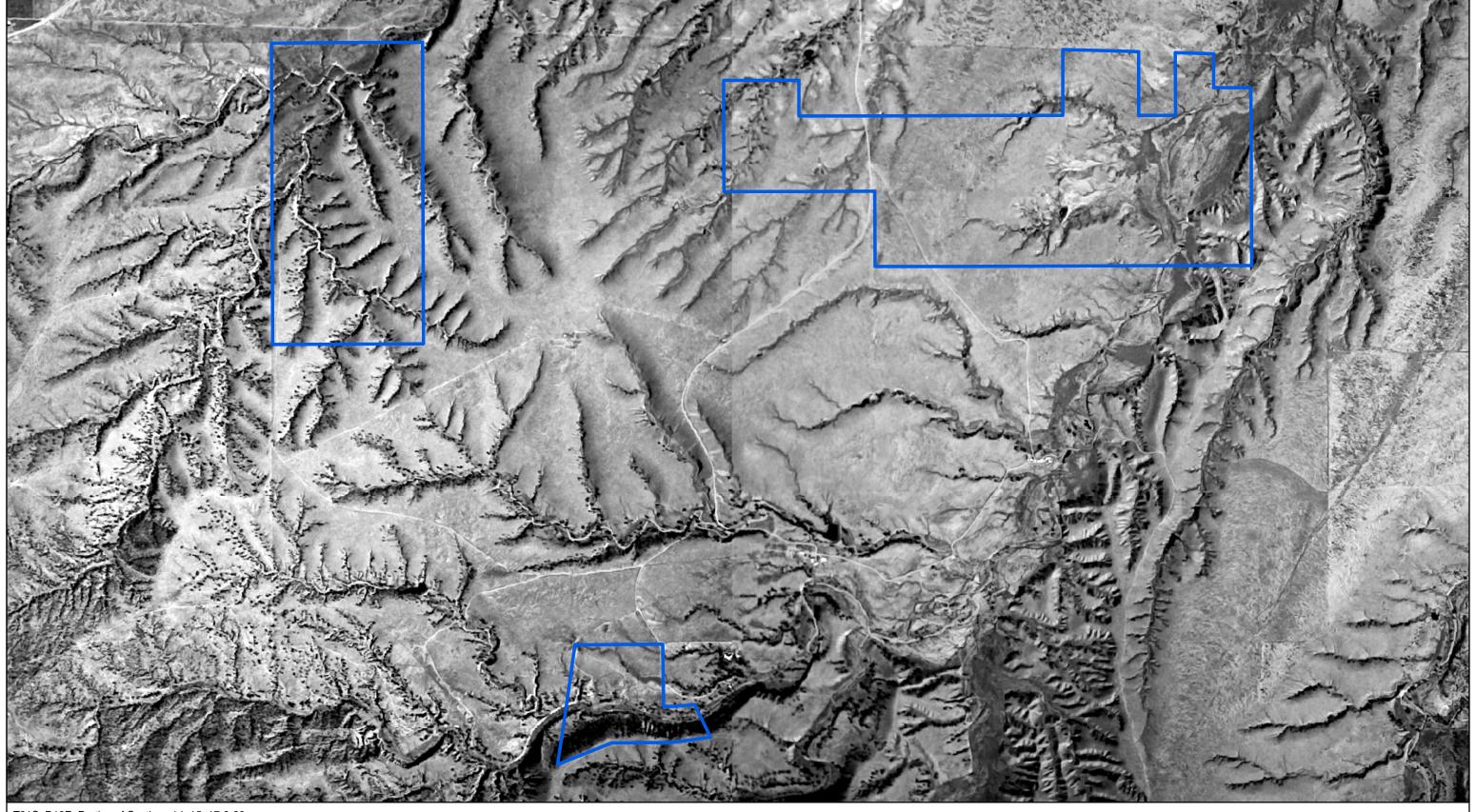


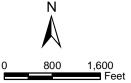
Figure X

WestLand Resources



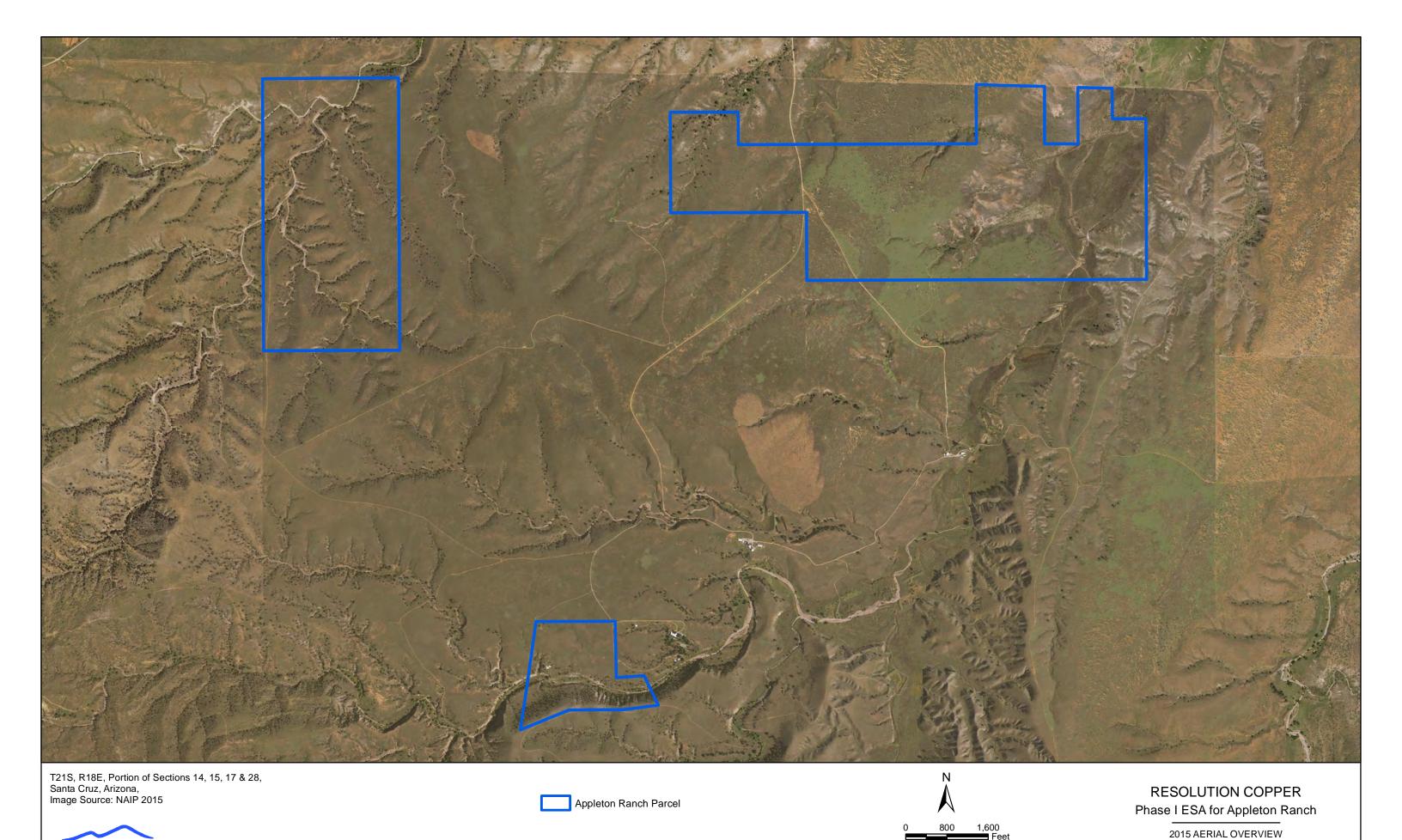
T21S, R18E, Portion of Sections 14, 15, 17 & 28, Santa Cruz, Arizona, Image Source: USGS 2003 Aerial Photo provided by Environmental Data Resources Inc.

Appleton Ranch Parcel



RESOLUTION COPPER
Phase I ESA for Appleton Ranch

2003 AERIAL OVERVIEW Figure X



WestLand Resources

Figure X

APPENDIX I

A History of the Land in the National Audubon Society's Research Ranch

APPLETON-WHITTELL RESEARCH RANCH OF THE NATIONAL AUDUBON SOCIETY

The San Ignacio del Babocomari land grant was established shortly after the Mexican war of independence in 1821, which introduced large scale cattle ranching to the region. Drought decimated the herds in the late 1800's. The combination of overgrazing and drought caused severe soil erosion, which led to changes in the soils, hydrology, and biotic communities in the region. The Appleton family purchased part of the original land grant and, in 1969, established the Research Ranch. The National Audubon Society assumed management in 1980. Audubon's partners include the Bureau of Land Management, U.S. Forest Service, The Nature Conservancy, The Research Ranch Foundation, and Swift Current Land & Cattle LLC.

For more than 30 years, the Research Ranch has protected grassland ecosystems through conservation, research, and education. The mission of the Research Ranch is to formulate, test, and demonstrate methods to restore and safeguard the bioregion, and provide assistance to citizens and policy-makers in the protection and stewardship of our native ecosystems, natural resources and quality of life.

<u>Conservation and Land Management</u>: Cattle were removed from the Research Ranch more than 30 years ago, and efforts are being made to rehabilitate an ecosystem that was not adapted to large grazing herbivores. Erosion control, eradication of exotic species, reseeding of native grasses, and reestablishment of fire are all ongoing processes on the Ranch.

<u>Research</u>: Birds and other animals, plants, soil, microorganisms, and even the air is studied here. All projects have a common goal – how do we preserve and protect grassland ecosystems in the southwest?

<u>Education</u>: Workshops, seminars, field trips, and a website are all designed to help humans coexist with the rest of nature. Experts in geology, plant identification, zoology, hydrology, astronomy, landscape design, Firewise principles, and other topics share their expertise in various programs. Audubon staff members also present programs to civic groups, clubs, and in classrooms.

To protect wildlife habitat and ongoing research projects on the Research Ranch, public access must be restricted. Roads and trails are accessible with permission only. Please do not walk or drive off existing roads or trails, and do not collect any plants, animals, rocks, or artifacts.

Be a part of the Research Ranch Team! We need your help! Your donations are needed to support conservation and research activities at ARR. Please consider a tax-deductible donation to support our efforts to save native grassland ecosystems.

Please reduce waste by sending materials in this packet that you no longer wish to keep back to us in the self-addressed envelope provided. Please consider sending along a donation as well. Please make your check payable to Audubon, and we will send you a receipt.

Thank you!

It costs us about \$2 to provide these materials for you. Your donation of at least this amount would be appreciated.

Audubon's Appleton-Whittell Research Ranch 366 Research Ranch Road Elgin, AZ, 85611 Researchranch@audubon.org 520-455-5522 http://researchranch.audubon.org



Frequently Asked Questions

about the

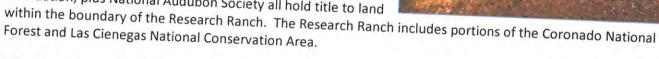
Appleton-Whittell Research Ranch of the National Audubon Society

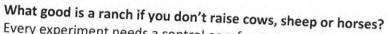
Why does it have such a long name?

The Appletons, Frank, Ariel and their children, turned their cattle ranch into the Research Ranch in 1968 and donated over 1,000 acres of their deeded land to Audubon when Audubon took over management in 1980. At that time, an endowment was established for the Research Ranch with funding from the Whittell Foundation. So the facility became the Appleton-Whittell Research Ranch of the National Audubon Society!

How big is the Research Ranch?

Audubon manages nearly 8,000 acres. The Bureau of Land Management, the U.S. Forest Service, Resolution Copper Company, The Nature Conservancy, and The Research Ranch Foundation, plus National Audubon Society all hold title to land





Every experiment needs a control or reference area. The Research Ranch plays this role so that the effects of domestic species (which are not native to the area) can be determined. The Research Ranch has also been the control/reference area for studies that examine the effects of exurbanization and viticulture plus other studies that need a large, relatively undisturbed area.

Why don't you post a map or directions to the Research Ranch on your website?

In order to protect the conservation and research values for which the Research Ranch was established most of our land-owning partners have stipulated that Audubon restrict and control public access.



What kinds of research are done there?

We're an Audubon facility, so of course lots of scientists study birds here, but that's not all, or even the most common type of research! Climate, soils, hydrology, insects, mammals, reptiles, amphibians, and especially plants are some of the research subjects that draw scientists to the Research Ranch.

Who does research on the Research Ranch?

Qualified scientists from colleges, universities, agencies, non-profit organizations and individuals submit applications to conduct research here. If their project is consonant with our mission, goals and research guidelines they are welcomed.



I know what a desert is and what a forest is, but what is the Research Ranch?

The Research Ranch is part of the Basin and Range province in an area often called the Sky Islands - vast valleys of grass with "islands" of mountains. Early on, most of the Research Ranch was thought to be a Short-grass Prairie, but after the cattle were removed we learned that most of the Ranch is a Madrean-Mixed Grass Prairie with some areas that are Madrean Oak Woodlands. We even have some beautiful riparian areas!



What is the Research Ranch's mission?

The Research Ranch is a living laboratory that determines and demonstrates methods to safeguard and rehabilitate southwestern grasslands, and assists policy makers and other citizens in the care and protection of our native ecosystems, natural resources, and quality of life.



What are the goals of the Research Ranch?

Conservation – to be a premier semi-arid grassland that fosters a natural diversity of native species.

Research – to understand how grasslands and related ecosystems function, and to recognize the key elements that safeguard these ecosystems. Outreach and Education— to advocate for grassland ecosystems by encouraging citizens and policy makers to safeguard and rehabilitate native ecosystems throughout the region.

How many kinds of birds are there on the Research Ranch?

260 species of birds have been documented here. The list includes yearround residents, summer or winter residents and migrants. Biodiversity of the Research Ranch is very rich - almost 600 species of plants, 28 reptile species, 8 species of amphibians, 46 native mammal species, 42 kinds of grasshopper - and that just scratches the surface!



Yes and No! The Forest Service portion of the Research Ranch is open to the public, but access to the remainder is restricted. Please call or e-mail (see below) to make arrangements to visit. Or better yet, ask to be placed on our e-list for announcements about workshops and events in our Living Gently on the Land educational program and collaborative efforts such as the annual Science on the Sonoita Plain symposiums.

How can I learn more about the Research Ranch? You can visit our website and check us out on FaceBook (see below), or read a wonderful book called "View from Bald Hill" by Carl and Jane Bock.

Contact us to see about opportunities to volunteer and remember – we're a charity (501(c)3) – the Research Ranch depends on the generosity of people like you! Your tax deductible donations can be mailed to 366 Research Ranch Road, Elgin, AZ 85611 or made on-line at our website (address below).

A HISTORY OF THE LANDS IN THE NATIONAL AUDUBON SOCIETY'S RESEARCH RANCH NEAR ELGIN, IN SANTA CRUZ COUNTY, ARIZONA

Ву

GLENDON E. COLLINS

June 2008

A HISTORY OF THE LANDS IN THE NATIONAL AUDUBON SOCIETY'S RESEARCH RANCH NEAR ELGIN, IN SANTA CRUZ COUNTY, ARIZONA

ntroduction Page	3
Settlement of the Research Ranch Area	3
Federal Land Surveys and Land Records	4
The National Forest is Established (1905 - 1910)	6
Homesteaders Get Federal Lands for Homes and Ranches (1915 - 1925)	6
Federal Land Patents to Settlers	9
The State Selects the Federal Grazing Lands (1916 - 1923)	9
Land Sales by the State Land Department and the BLM	11
The Forest Service Trades National Forest Land (1962) to Frank Appleton (1962)	12
The Forest Service Withdraws Lands For Research Purposes (1975)	13
The State Trades its Trust Lands to BLM (1986)	13
Frank Appleton "Sells" Land to BLM (1987)	14
National Audubon Society Agreements With Federal Agencies (1982, 1986)	15
BLM Establishes Appleton-Whittell Area of Critical Environmental Concern (1988)	15
Congress Establishes Las Cienegas National Conservation Area (2000)	15
BLM's Las Cienegas Resource Management Plan (2003) A HISTORY OF THE LANDS IN THE NATIONAL AUDUBO SOCIETY'S	16 N
RESEARCH RANCH	

RESEARCH RANCH NEAR ELGIN, IN SANTA CRUZ COUNTY, ARIZONA

Introduction

The Research Ranch, near Elgin in Santa Cruz County, Arizona, is administered by the National Audubon Society. It consists of about 8000 acres of federal and private lands, that are managed for ecosystem research projects by the National Audubon Society, which has cooperative agreements with the federal land management agencies.

This summary of the early history of land settlement of the Research Ranch area and some of the subsequent land transactions is taken primarily from information in the land records of the U. S. Bureau of Land Management (BLM) and the Arizona State Land Department.

This report has been prepared for Research Ranch Director Linda Kennedy by Glendon E. Collins, a retired BLM and Arizona State Land Department employee, and member of the Arizona BLM Resource Advisory Council.

Settlement of the Research Ranch Area

The area that was to become the Research Ranch was first occupied by Native Americans who were gradually displaced in the 1700s and early 1800s by explorers from Mexico who were seeking new lands, riches, and converts to Christianity. The first official record of land ownership in what is now eastern Santa Cruz County is the San Ignacio del Babocomari Grant. This Spanish land grant lies along the Babocomari River valley south of the present day community of Elgin. The land grant was issued by authorities in Spain in 1821, to help solidify Spanish and Mexican claims to the area.

In the Gadsden Purchase of 1853, the United States acquired a large block of land from Mexico to provide a non-mountainous route for a railroad to connect the California coast with the eastern half of the country. The Gadsden Purchase added all of the lands south of the Gila River to what was then the New Mexico Territory.

In 1863, Congress divided the New Mexico Territory by creating a separate Arizona Territory. In 1864, the first Arizona Territorial Legislature created four original Counties, with Pima County covering all of southeastern Arizona. Santa Cruz County was carved out of Pima County in 1899, by the Arizona Legislature.

After the Civil War, the U. S. Army was sent to southern Arizona Territory to help resolve the conflicts between the Apaches and the white settlers that were moving into the area. When the Apache wars ended in the 1880's, ranchers from Texas began bringing herds of cattle to feed on the good grasslands in southern Arizona. The ranchers stayed, and built homes and ranches on the federal public domain lands. However, they couldn't get title to "their" lands, because the federal lands had not yet been surveyed. The federal government could not issue land patents (deeds) until land surveys were made to describe the land parcels to put into the land patents.

The federal land surveys in this area were finally done in the early 1900s. This enabled the ranchers and farmers who were living along the O'Donnell and Turkey Creek drainages to get homestead patents during the 1912 - 1925 period. During that same period, the Arizona State Land Department used its State Trust Land entitlements to select the federal grazing lands that surrounded the homesteads.

By 1960, the Appleton family had purchased some of the homesteaded lands in the O'Donnell and Turkey Creek area. The Appleton family established the Research Ranch in 1969. The National Audubon Society assumed management of the Research Ranch in 1980.

During the 1960 - 1990 period, there were a series of land transactions involving the private land owners, the U. S. Bureau of Land Management, the U. S. Forest Service, and the Arizona State Land Department. These actions rearranged the private and public land ownerships in the area and took other measures to facilitate the purposes of the Research Ranch. In 2000, Congress included the BLM lands in the Research Ranch area in the Las Cienegas National Conservation Area that was established by Public Law 106-538.

Federal Land Surveys and Federal Land Records

The first federal land survey in the Research Ranch area was done in June 1902, to establish the boundaries of the San Ignacio del Babocomari Grant. This "Spanish Land Grant" was recognized as pre-existing private land when Congress established the Arizona Territory in 1863. The federal land survey was done to identify the boundaries of these private lands which were not available for homesteading by the settlers who were moving into the Arizona Territory. The survey was done by cadastral land surveyors working for the federal General Land Office, which was the predecessor of the U. S. Bureau of Land Management.

Ten years later, in 1912, the federal cadastral land surveyors returned to the area to survey the federal public domain lands located south of the San Ignacio del Babocomari Grant. Their job was to survey the federal lands into townships and sections so that the federal lands could be homesteaded and patented to citizens, many of whom were already living on these federal lands.

This cadastral land survey produced Fractional Township 21 South, Range 18 East (T 21 S, R 18 E). **Attachment 1** is a copy of this township survey which was approved on November 14, 1914. It is called a "Fractional Township" because most of the 12 sections in the northern third of T 21 S, R 18 E were not surveyed since they were private lands in the San Ignacio del Babocomari Grant. Only a tiny sliver of federal land in Sections 7, 8, 9 and 10 still exists along the southern boundary of the Grant.

The boundaries of the Appleton-Whittell Research Ranch, as shown on **Attachment 2**, encompass all or parts of Sections 14,15,16, 17, 20, 21, 22, 23, 26, 27, 28, 34, and 35 of T 21 S, R 18 E, along with parts of Sections 2 and 3 of the adjacent Township 22 South, Range 18 East.

The General Land Office, an agency in the Department of the Interior, administered the system for recording homestead and other entries, land patents, withdrawals, designations, and dispositions of the federal lands described in the cadastral surveys. The General Land Office was merged with the federal Grazing Service in 1946 to form a new agency, the U. S. Bureau of Land Management.

These federal land records are represented today by the Master Title Plats and accompanying Historical Indexes that are on file in each of the BLM Offices. **Attachment 3** is a copy of the BLM's Master Title Plat (MTP) for T 21 S, R 18 E. **Attachment 4** is a copy of the Supplemental MTP which was prepared for Section 27 in the Township.

The information on the Master Title Plat and Historical Index of T 21 S, R 18 E shows the historical record of the land transactions and events that have occurred over the past 96 years to transfer lands in this area from federal to State and private ownership and then, in some cases, back to federal ownership. The number listed at the bottom of each land parcel on the MTPs is the key to the land patent and reconveyance documents.

It is important to understand that these federal Master Title Plats show the homestead, public sale and land exchange transactions which transferred the public domain lands out of federal ownership. Once the land has been transferred out of federal ownership, the chain of title information is recorded and is available in the Santa Cruz County Records. This report does not include information on these subsequent transactions.

The National Forest is Established (1905 - 1910)

The National Forest System in Arizona was initiated in the early 1900's with the establishment of "Forest Reserves" on the large blocks of forested federal lands. In southern Arizona, most of the federal lands at the higher elevations were withdrawn into Forest Reserves. Originally, all of the federal lands in T 21 S, R 18 E were included in the first Forest Reserve in this area.

The first notation on the Historical Index records of T 21 S, R 18 E occurred in 1905, when all of the federal lands in this Township were reserved by Public Land Order for the "Huachuca Forest Reserve." (Public Land Orders are documents issued by the Secretary of the Interior to make withdrawals, reservations or other designations of federal public lands)

In 1907, the Huachuca Forest Reserve was renamed the "Huachuca National

Forest" by another Public Land Order.

In 1908, another Public Land Order made two more changes:

- the Huachuca National Forest was renamed the Garces National Forest, and
- the northern boundary of the newly named Garces National Forest was moved two miles southward to release two tiers of sections (Sections 13 - 24) in T 21 S, R 18 E for entry and settlement under the Homestead Act and other federal public land disposal laws.

In 1910, another Public Land Order renamed the Garces National Forest as the Coronado National Forest, the name that continues to this day.

Homesteaders Get Federal Lands for Homes and Ranches (1915 - 1925)

The release of Sections 13 - 24 from the National Forest in 1908, and the approval of the survey of fractional T 21 S, R 18 E in 1914, opened the door for the filing of homestead "claims" by private citizens and "selections" of Trust lands by the State of Arizona. Most of the land which is now in the Research Ranch was transferred out of federal ownership during the 1915 - 1925 period.

Many of the homesteaders were already there when the federal lands were surveyed in 1912. The township survey plat, Attachment 1, shows the locations of the "T. B. Titus House" and the "Fenderson House" in Section 22, and the "Wm. Roth House" in Section 23.

Congress had passed the Homestead Act of 1862 to encourage the settlement and agricultural development of the West. The Act enabled citizens to acquire the federal public domain lands through a process of creating farms and building homes on the federal public domain lands. In order to obtain a patent, the homesteader was required to:

- settle on federal public domain land,
- file papers in the General Land Office to record their "entry" onto the land,
- cultivate at least one-eighth of their homesteaded area,
- live on the land for five years,
- file their "Final Proof" papers with the General Land Office, and
- pay \$1.25 per acre for the land.

A homesteader could acquire up to 320 acres under the Homestead Act. The settlers in T 21 S, R 18 E filed their homestead papers with the General Land Office located in Tucson.

In most cases, the homesteaders selected square or rectangular parcels of land in the sections that conformed to the surveys that had been established by the cadastral surveys. However, there were exceptions where settlers claimed irregular shaped parcels that conformed to the local topography. This usually happened when the settler had moved onto the federal land and staked out his boundaries before the land was surveyed by the federal government.

This was the case in sections 22 and 27 where T. B. Titus was already living on the land when the federal surveyors arrived in 1912. Later when he filed his homestead claim with the General Land Office, a special homestead entry survey had to be made to describe the lands he had "homesteaded". His Homestead Entry Survey 285, **Attachment 5**, approved on July 12, 1917, included portions of Sections 22 and 27 in the creek bottoms near the junction of O'Donnell and Turkey Creeks. Today, the Headquarters of the Research Ranch is located at the site of the T. B. Titus house as shown on the Fractional Township Plat (Attachment 1) and in the northwest corner of Homestead Entry Survey 285 (Attachment 5).

Unfortunately, back in 1917, there may have been a land ownership dispute between neighbors here. The HES 285 survey was made in December 1914, but the survey was not approved by the U. S. Surveyor General's Office until July 12, 1917. At that time it was discovered that HES 285 overlaid the south end of the East 1/2 of Section 22, which was occupied by, and patented to, Mr. Titus's neighbor, Frances Cuthbert Fenderson.

Mr. Fenderson was the first homesteader in the area to file a Homestead application with the General Land Office, and his patent to the 320 acres in the East Half of Section 22 was issued in 1916. A year later, when Mr. Titus's Homestead Entry Survey 285 was approved, it included about 20 acres at the southern end of Section 22 which had already been patented to Mr. Fenderson.

Mr. Titus' homestead claim prevailed. The General Land Office canceled Mr. Fenderson's patent to the 320 acres in the E ½ of Section 22, and issued a corrective patent, **Attachment 6**, to Mr. Fenderson on July 8, 1921, for the remaining 297.82 acres in the E ½ of Section 22. On March 20, 1922, Mr. Titus received his patent, **Attachment 7**, for the entire 159.96 acres in HES 285.

Most of the private lands in Sections 14, 15, 22 and 23 (in the center of the Research Ranch area) were settled and acquired under the provisions of the Homestead Act during the 1915 - 1925 era. These Homestead Patents conveyed both the surface and mineral estates to the homesteader. The federal government retained only the right to build ditches and canals across the land if and when needed for conveying irrigation waters to other properties in the area. This "ditches and canals" reservation is indicated by the "D/C" notation on the parcels shown on the MTP, Attachment 2.

In 1916, Congress passed an amendment to the Homestead Act that was entitled the Stock Raising Homestead Act. It was designed to enable ranchers to acquire land for barns, corrals and other ranch headquarters facilities without having to put the land into cultivation as was required by the original Homestead Act of 1862.

Since Congress did not want to interfere with mineral development in the West, and since ranching and mining were considered to be usually compatible uses, the Stock Raising Homestead Act of 1916 provided that only the surface estate would be conveyed in a Stock Raising Homestead Act patent. The federal mineral estate would remain in federal ownership and would continue to be available for mineral exploration and development under the Mining Law of 1872 and the various federal mineral leasing laws. To help resolve potential conflicts, the Stock Raising Homestead Act spelled out the procedures for how the "miner" would compensate the surface owner for damages to crops and improvements.

Several Stock Raising Homestead patents were issued in the Research Ranch area. The south half of Section 23 of T 21 S, R 18 E was patented in 1924 under the Stock Raising Homestead Act. The "All Min" on the MTP means that the mineral estate on this private land is owned by the federal government. This half section of private land remained open and available for the filing of mining claims and mineral development under the 1872 Mining Law for 76 years until December 6, 2000. On that date, the Congress passed the law that established the Las Cienegas National Conservation Area and closed this federally owned subsurface estate to mineral entry.

Two other 40 acre parcels within the Research Ranch boundary - Lot 4 of Section 14, and the NE¼SE¼ of Section 15 - were also patented under the Stock Raising Homestead Act.

Most of the private lands in the Research Ranch area were patented under the Homestead Acts. Several other private land parcels were patented by land exchanges and public sales as described later in this report.

Federal Land Patents to Settlers

The following is a list of the federal land patents granted to settlers in T 21 S, R 18 E,. The locations of the land parcels are indicated by the patent numbers on the Master Title Plats, Attachments 3 and 4.

Section 14

Homestead Patent No. 803174 to James L. Finley on April 14, 1921.

Stock Raising Homestead Patent No. 803175 to James L. Finley on April 14, 1921.

Section 15

Homestead Patent No. 684794 to Juan Telles on March 20, 1922, also includes lands in Sections 14 and 23.

Section 22

Corrective Homestead Patent No. 813897 to Francis Cuthbert Fenderson on July

18, 1921.

Homestead Patent No. 855360 to Thaddeus B. Titus on March 20, 1922 also includes land in Section 27.

Public Sale Patent No. 1215504 to Francis Henry Appleton on December 19, 1960 which conveyed two tiny parcels of land (Lots 4 and 5) adjacent to Homestead Patent No 855360.

Section 23

Stock Raising Homestead Patent No. 931438 to Willard T. Roath on February 9, 1924.

Sections 27 and 28

Land Exchange Patent 02-62-0119 to Frank Appleton on June 12, 1962.

Section 28

Homestead Patent No. 922250 to John D. Riggs on October 1, 1923.

The State Selects the Federal Grazing Lands (1912 - 1923)

During the first 10 years after Statehood, the Arizona State Land Department acquired about 3000 acres of land in T 21 S, R 18 E for the State School and County Bond Trusts.

The Arizona Statehood Act of February 14, 1912, gave the State of Arizona title to all "unreserved" Sections 2, 16, 32, and 36 in each township for "school sections" which were to be held in Trust by the State and leased or sold to raise funds for support of a public school system in the State. Therefore, title to Section 16, in the northwest corner of the Research Ranch area, automatically passed to the State on November 14, 1914, the date that the cadastral survey of Fractional Township T 21 S, R 18 E, was approved.

Section 2 in T 22 S, R 18 E at the south end of the Research Ranch did not pass to the State as a "school section" because it was "reserved" in the Coronado National Forest. The State was later able to select another 640 acres of public domain lands elsewhere in Arizona "in lieu" of this "school section".

In addition to the "school sections", the Statehood Act also gave the State the right to select over 2 million acres of federal public domain lands for the benefit of fourteen Institutional Grants for universities, penal institutions, hospitals and other public institutions and to pay off County Bonds. The lands in these Institutional Grants were also to be held in Trust and leased or sold to raise funds for the named institutional beneficiaries.

The school sections were "in place" grants of designated sections and the School Trust lands in 2, 16, 32 and 36 are located where the land surveys placed them.

The Institutional Grants were "acreage grants" that the State used to select the best available public domain land.

An excerpt from the 1988-1989 Annual Report of the Arizona State Land Department is included as **Attachment 8**. It describes, in more detail, the ways that the State Land Department acquired its State Trust lands.

During the 1917 - 1923 period the Arizona State Land Department made a series of "selections" of public domain lands in T 21 S, R 18 E for part of its County Bond Grant. The homesteaders had already taken the federal lands with the greatest agricultural potential, so the State focused on selecting the best grazing lands available with the intention of leasing them to the homesteaders and ranchers in the area. The State selected about 2300 acres in Sections 14, 15, 17, 20, 21, 22 and 23 for the County Bond Grant and leased them for livestock grazing purposes.

The homesteaders/ranchers had probably requested the Arizona State Land Department to make these Trust land "selections", because they wanted to get State grazing leases on these lands. Prior to 1934, the General Land Office had no authority to lease the federal public domain lands for livestock grazing, thus ranchers and homesteaders competed in "range wars" over grazing on the federal lands. Ranchers throughout Arizona were begging the State Land Department to use its Trust Land selection rights to select "their" federal grazing areas, so they could have the security of a State Grazing Lease for their ranching operations.

The chaos associated with livestock grazing on the federal public domain land lasted until Congress passed the Taylor Grazing Act (TGA) in 1934. The TGA authorized federal grazing leases, and established Advisory Boards composed of ranchers to designate grazing allotments and allocate livestock grazing use of the public domain lands. However, by 1934, the Arizona State Land Department had selected most of the best public domain grazing lands in Arizona, including those in the T 21 S, R 18 E.

The State Land Department was a major land owner in T 21 S, R 18 E for over 60 years. In 1986, the State's County Bond Trust lands, along with the School Trust lands in Section 16, were re-conveyed back to the BLM in a land exchange that is described later in this report

Land Sales by the State Land Department and the BLM

On February 17, 1943, the State Land Department sold two parcels of their County Bond Trust lands in T 21 S, R 18 E - a 40 acre parcel, the SE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 23, and a 320 acre parcel, the E $\frac{1}{2}$ of Section 17.

The 40 acre parcel was sold to Willard T. Roath. Attachment 9 is a copy of the State's patent to Mr. Roath. The U. S. Geological Survey topographic map of

this area shows a "water tank" on the SE¼NW¼ of Section 23, so presumably Mr. Roath wanted a more secure title to this 40 acre parcel than was provided by the State Grazing lease which he probably had on the land.

The "Willard T. Roath" who received both this State Land Department patent and the federal General Land Office Homestead Patent in 1924, probably was the "Wm. Roth" whose house was noted in Section 23 on the 1914 cadastral survey plat. The federal cadastral surveyors usually did a remarkable job of recording a huge amount of data and information under difficult field circumstances. They probably met homesteader "Bill" Roath" during the survey, and recorded it as "Wm. Roth" on the survey plat.

In 1960, the BLM sold two tiny slivers of federal land totaling 3.29 acres (Lots 4 and 5 in Section 22) to Francis Henry Appleton. These two small Lots were "isolated parcels" of federal land along the borders of patented Homestead Entry Survey 285. The federal public sale regulations in the 1960s gave an "adjacent land owner" a preference right to purchase isolated parcels of public domain lands. Both the BLM and Mr. Appleton were probably pleased to have these two tiny "islands" of federal land added to Mr. Appleton's adjacent private land.

The Forest Service Trades National Forest Lands to Frank Appleton (1962) In 1962, Frank Appleton made a land exchange with the Forest Service to acquire 1,076 acres of Coronado National Forest lands in Sections 27 and 28.

The Forest Service has a special land exchange law that gives the agency the authority to make land exchanges for the benefit of National Forest management programs. In most cases the Forest Service trades federal National Forest lands on the boundaries of National Forests for private land parcels located in the interior areas of the National Forests. During the 1960 - 1980 era, the Forest Service conducted an active land exchange program in Arizona to "block up" the National Forest lands.

Many of these land exchanges were so-called "third party exchanges". They involved three parties - a party who owned private land which the Forest Service wanted to acquire, a party who wanted a piece of National Forest Land which the Forest Service was willing to give up, and the Forest Service. The Forest Service would bring the other two parties together to make the land exchange happen. The "third party" who wanted to acquire National Forest lands would buy the private land that the Forest Service wanted to acquire, and then that "third party" would trade his newly purchased land to the Forest Service for the National Forest land he wanted to acquire. The land exchanges were based on private and federal lands of equal value.

Frank Appleton was a "third party" in 1962, who purchased some private land in the Kaibab National Forest in northern Arizona and traded it for 1,076 acres of Coronado National Forest land in Sections 27and 28, T 21 S, R 18 E.

Attachment 10 is a copy of Patent No. 02-62-0119 dated June 12, 1962. It states that "Frank Appleton, being the owner of a certain tract of land situated and included within the limits of the Kaibab National Forest, Arizona, hasreconveyed and relinquished the said tract to the United States.... and has selected in lieu thereof the following described land:".... in Sections 27 and 28.

These lands in Sections 27 and 28, along with Mr. Appleton's other lands in the area, became a part of the "Research Ranch" which he established in 1969. In 1980, the National Audubon Society assumed management of the Research Ranch.

In 1987, the "third party" exchange process was used again to convey about 800 acres of the land in Sections 27 and 28 back to the federal government. This time the land was transferred to the Bureau of Land Management. The Talley Realty Development, Inc. was the "third party" which facilitated the land exchange between Mr. Appleton and the BLM.

The Forest Service Withdraws Lands for Research Purposes (1975)

The federal lands in the Coronado National Forest are not subject to settlement or sale, but National Forest lands are open to mineral exploration and development under the authorities granted by the Mining Law of 1872. However, most of the National Forest lands within the Research Ranch boundaries have been closed to mining claim location since 1975.

Public Land Order 5835, issued on October 28, 1975, withdrew 355 acres of National Forest lands in Section 26 for a "Research Natural Area" and closed the lands to mining claim location. The outline of this withdrawn area is shown on Attachment 3, the Master Title Plat of T 21 S, R 18 E.

A second Public Land Order 7031, issued February 28, 1994, expanded the withdrawal to cover 2,442 acres of National Forest Lands on the east and south borders of the Research Ranch area. The boundaries of the expanded PLO 7031 withdrawal are also shown on the MTP of T 21 S, R 18 E. This Public Land Order also included other Coronado National Forest Lands in the Parker Canyon Lake Recreation Complex and the Carr Barn Administrative Site. **Attachment 11** is a copy of the March 10, 1994, Federal Register Notice of this withdrawal.

Public Land Order 7031 said that the withdrawal would expire in 20 years, unless extended. The BLM public land records indicate that an extension was approved in 2006.

The State Trades its Trust Lands to the BLM (1986)

In the 1980s, the BLM began an aggressive program of managing environmentally sensitive federal public lands in Arizona. This included making

land exchanges to acquire non-federal lands with environmental or other public values that should be protected in public ownership. In southern Arizona, the BLM took special measures to protect the federal lands in places like Aravaipa Canyon, Baboquavari Peak, and the Muleshoe Ranch. BLM also made land exchanges to acquire private lands in Las Cienegas Ranch near Sonoita, and State Trust lands in the Research Ranch area.

In 1984, the Arizona State Legislature funded a statewide State-Federal Land Exchange Program. The objective was to rearrange intermingled State Trust lands and federal BLM lands to:

- facilitate land management activities of both the State Land Department and the BLM:
- -to relocate state Trust lands nearer to urban areas to increase their income potential; and
- to move State Trust lands with environmental values into federal public ownership.

The "Research Ranch" exchange was one of the first exchanges made in this Federal - State Land Exchange Program. The State traded 2342 acres of County Bond and School Trust lands in T 21 S, R 18 E to the BLM in exchange for BLM lands located in the San Pedro Valley between Benson and Winkelman.

Attachment 12 is a copy of the August 11, 1986 letter and Deed of Reconveyance from the State Land Department which explains that the 2342 acres were being relinquished to the BLM so that they "could be managed by the Bureau of Land Management and the National Audubon Society in a manner to protect and utilize their public values."

Basically, in 1986, the State Land Department returned to the BLM all of the State School Trust and County Bond lands that the State had acquired from the federal government in the 1912 - 1923 period. The only lands not returned to federal ownership were the 40 acre parcel in Section 23 which the State Land Department had sold to Willard T. Roath in 1943, and the 320 acres which the State had sold in the E½ of Section 17.

Frank Appleton "Sells" Land to the BLM (1987)

Shortly after the BLM "reacquired" the State Trust land in the Research Ranch area, Frank Appelton decided to sell his private land in Sections 27 and 28. These were the lands that he had acquired in the 1962 "third party" land exchange with the Forest Service. In 1962, Mr. Appleton had been the "third party" who put up the money to buy the private lands in the Kaibab National Forest that he used to trade to the Forest Service for the National Forest lands in Sections 27 and 28.

When Mr. Appleton wanted to sell these lands in 1987, the BLM found another "third party" to purchase the lands Mr. Appleton wanted to sell. That "third party",

the Talley Realty Development, Inc, then traded these Research Ranch area lands to BLM in exchange for BLM lands in Maricopa County north of Phoenix. **Attachment 13** is a copy of the December 2, 1987 Warranty Deed from Talley Realty Development, Inc. to the United States of America, which transferred the former Appleton lands to the BLM.

In this exchange, BLM acquired about 800 acres in Sections 27 and 28. These 800 acres are designated as "(see remarks)" on the MTP, Attachment 2. The Appletons retained two triangular parcels in Section 28 that are designated by the "02-62-0119" number of the original 1962 National Forest land exchange patent.

National Audubon Society Agreements with Federal Agencies (1982 and 1986)

In 1982, the National Audubon Society and the U. S. Forest Service signed a Memorandum of Agreement "to cooperate in studies to encourage research on factors related to maintaining and improving management of Southwestern desert grasslands and to maintain the established Elgin Research Natural Area". That Memorandum of Agreement is included with this report as **Attachment 14**.

In 1986, the National Audubon Society and the U. S. Bureau of Land Management signed a Cooperative Agreement "to provide for cooperative management between the Bureau of Land Management and the National Audubon Society for the management of public lands within the Appleton-Whittell Biological Research Sanctuary (The Research Ranch)". That Cooperative Agreement is included with this report as **Attachment 15**.

BLM Establishes the Appleton-Whittell Area of Critical Environmental Concern (1988)

The BLM has the authority to designate and name sites and areas which have special environmental or cultural values that need to be protected. Giving sites and area an identity is a powerful tool to use in generating support for protection of the public values on the designated lands. One of the designations that BLM has commonly used is "Area of Critical Environmental Concern".

In 1988, shortly after BLM had acquired the State Trust lands and the Appleton lands in the Research Ranch complex, the BLM administratively designated these newly acquired 3141 acres of public land as the "Appleton-Whittell Area of Critical Environmental Concern". The objective was to help protect the public land portion of the National Audubon Society's 8000 acre Appleton-Whittell Biological Research Sanctuary (Research Ranch).

Congress Establishes the Las Cienegas National Conservation Area (2000) On December 8, 2000, Congress passed Public Law 106-538 which established the Las Cienegas National Conservation Area on the BLM administered lands that the BLM had acquired through land exchanges in the Las Cienegas Ranch and Research Ranch areas.

Public Law 106-538 states that the Las Cienegas National Conservation Area is established "In order to conserve, protect and enhance for the benefit and enjoyment of present and future generations the unique and nationally important aquatic, wildlife, vegetative, archeological, paleontological, scientific, cave, cultural, historical, recreational, educational, scenic, rangeland, and riparian resources and values of the public lands described in subsection (b) while allowing livestock grazing and recreation to continue in appropriate areas,..."

Subsection B says that the Conservation Area "shall consist of approximately 42,000 acres of public lands in Pima and Santa Cruz Counties as generally depicted on the October 2, 2000 maps of the Sonoita Valley Acquisition Planning District and Las Cienegas National Conservation Area".

BLM's Las Cienegas Resource Management Plan (2003)

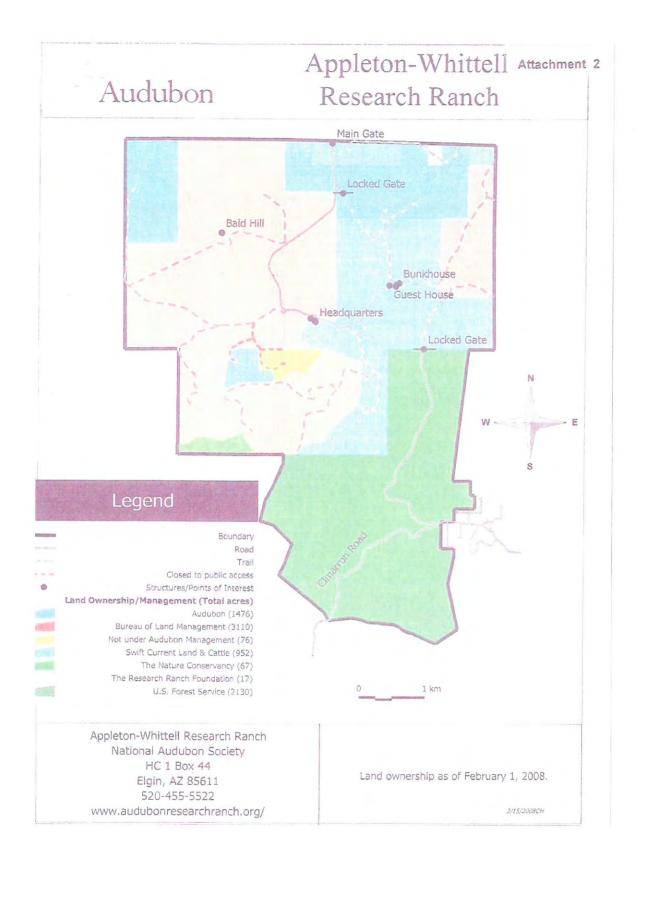
In the BLM's "Las Cienegas Resource Management Plan and Record of Decision" that was issued July 2003, the Appleton-Whittell ACEC was renamed the Appleton-Whittell Research Area of Critical Environmental Concern. It is described as a being "part of a unique laboratory for studying the effects of nongrazing on a desert grassland". The BLM's management objectives for the BLM public land portion of the "Research Ranch" are stated as:

- Designate an ACEC
- Limit motorized vehicles to designated roads and trails
- Prohibit land use action except as authorized by Research Ranch
- Do not open to mineral location, leases or sales
- Implement the 1986 BLM National Audubon Society MOU
- Prohibit surface occupancy for oil/gas lease development

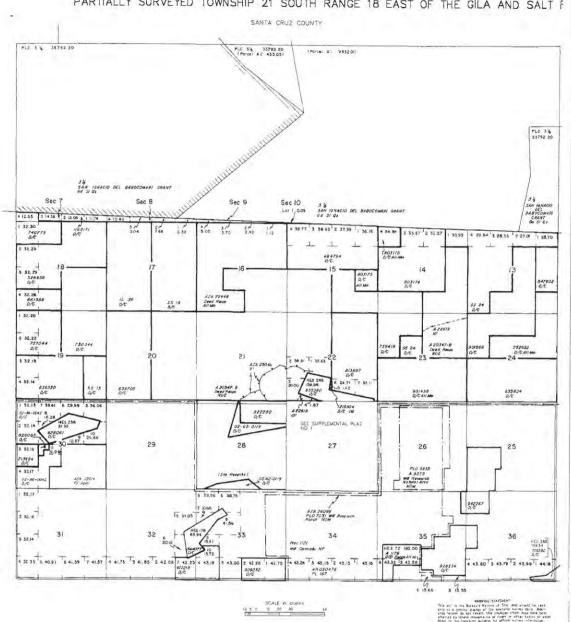
The Research Ranch provides a valuable ecosystem research component to the management of Las Cienegas National Conservation Area (NCA). The Research Ranch has nearly 40 years of research data and analyses of the impacts of livestock grazing on a 8000 acre block of private, BLM and National Forest lands in this "corner" of the Las Cienegas National Conservation Area. **Attachment 16** is a list of the "science projects" being worked on at the Appleton-Whittell Research Ranch, and publications associated with the Research Ranch during 2006/2007. The National Audubon Society's cooperative rangeland research program at the "Research Ranch" continues to be a major asset to the programs of the Las Cienegas National Conservation Area.

List of Attachments

		The state of the s
Attachment	1	Survey Plat of Fractional Township 21 South, Range 18 East
Attachment		Map Showing the Boundaries of the Appleton-Whittell arch Ranch
Attachment	3	BLM Master Title Plat (MTP) of T 21 S, R 18 E
Attachment	4	BLM Master Title Plat of Section 27 in T 21 S, R 18 E
Attachment	5	Plat of Homestead Entry Survey 285
Attachment	6	Federal Land Patent to Frances C. Fenderson
Attachment	7	Federal Land Patent to T. B. Titus
Attachment	8	Description of State Trust Lands and Beneficiaries
Attachment	9	State Land Patent to Willard T. Roath
Attachment	10	National Forest Land Exchange Patent to Frank Appleton
Attachment	11	Public Land Order Withdrawing National Forest Lands for Research Purposes
Attachment	12	State Deed Which Relinquished the Trust Lands to BLM
Attachment	13	Warrenty Deed Transferring the "Appleton" Lands to BLM
Attachment	14	Forest Service - National Audubon Society Memorandum of Agreement
Attachment	15	BLM - National Audubon Society Cooperative Agreement
Attachment	16	Science Projects and Publications on Appleton-Whittell Research Ranch in 2006/2007



Attachment 3 PARTIALLY SURVEYED TOWNSHIP 21 SOUTH RANGE 18 EAST OF THE GILA AND SALT F



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Phoenix 028542

4-1003-R

The United States of America.

Es all to whom these presents shall come, Greeting:

WHEREAS, a Certificate of the Register of the Land Office at Phoenix, Arizona.

has been deposited in the General Land Office, whereby it appears that, pursuant to the Art of Congress of May 20, 1862, "To Secure Homesteads to Actual Settlers on the Public Domain," and the acts supplemental thereto, the claim of Francis Cuthbert Fenderson

has been established and duly consummated, in conformity to law, for the Lots six and seven, the north half of the southeast quarter, and the northeast quarter of Section twenty-two in Township twenty-one south of Range eighteen east of the Gila and Salt River Meridian, Arisona, containing two hundred ninety-seven and eightytwo-hundreiths acres,

according to the Official Plat of the Survey of the said Land, returned to the GENERAL LAND OFFICE by the Surveyor-Seneral:

NOW KNOW YE, That there is, therefore, granted by the UNITED STATES unto the said claimant the tract of Land above described; TO HAVE AND TO HOLD the said tract of Land, with the appurtnances thereof, and the said claimant and to the beins and assigns of the said claimant forecer; subject to any vested and accrued water rights for mining, agricultural, measurementing, or other purposes, and rights to differs and reservais said in connection with such water rights, as may be recognized and acknowledged by the local customs, items, and decisions of courts; and there is reserved from the lands hereby granted a right of way threen for differs or canals constructed by the such controlled to the said claimant.

This patent is issued in lieu of Patent No. 529791, dated May 19, 1916, which has been canceled.

IN TESTIMONY WHEREOF, I. Marren G. Harding.

President of the United States of America, have caused these letters to be made

Patent, and the seal of the General Land Office to be hereunto affixed.

GIVEN under my hand, in the District of Columbia, the EIGHTH

(SEAL.)

day of JULY

in the year of our Lord one thousand

nine hundred and TWENTY-ONE and of the Independence of the

United States the one hundred and FORTY-SIXTH.

By the President: Elemen G. I barding By M. P. Lekny, superfy, Schlesambar,

RECORD OF PATENTS: Patent Number 813897

Phoenix 0279 and 014798

4-1017-R.

The United States of America,

To all to whom these presents shall come, Greeting:

will S. a Cartificate of the Register of the Land Office at Phoenix, Arizons, has been dejosited in the General Land Office, whereby it appears that, pursuant to the Act of Congress of May 20, 1862. "To Secure comesteads to Actual Settlers on the Public Domain," and the acts supplemental thereto, the claim of Thaddeous B. Titus, has been established and duly consummated, in conformity to law, for the H. R. Survey No. 285, embracing a nortion of, Sections twenty-two and twentyseven in Township twenty-one south of Range eighteen east of the Gila and calt River Meridian, Arisons, more particularly bounder and described as follows: Beginning at corner No. 1, from which the north corner to Sections two and three in Township twenty-two south of Range eighteen east of the Gila and Salt River Meridian, bears south three degrees thirty-six minutes east one hundred seventeen and thirteen-hundredths chains distant; thence, north eighty-five degrees forty-three minutes west fifteen and four-hundredths chains to corner No.2; thence, north three degrees thirteen minutes cast thirty-four and sixteen-hundredths chains to corner No. 3; thence, north seventy-one degrees fortyone minutes west thirty and twenty-nine-hundredths chains to corner No. 4; thence, north seventy-one degrees forty-one minutes west twenty-one and eight-hundredths chains to corner No. 5; thence, north twenty-three degrees fifty-eight minutes east twenty and forty-six-hundredths chains to corner No. 6; thence, south seventy-nine degrees night minutes east twenty-one and twenty-three-hundredths chains to corner No. 7: thenco. south ten degrees forty-two minutes west eleven and forty-three-hundreaths chains to corner No. 8; thence, south seventy-eight degrees fortyfive minutes east forty-one and two-hundredths chains to corner No. 9; thence, south eleven degrees three minutes west two and fourteen-hundredths chains to corner No. 10; thence, south eleven degrees three minutes west fourteen and twenty-six-hundredths chains to corner No.11:

RECORD OF PATENTS: Patent Number 855360

thence, south four degrees nineteen minutes west thirty and seventyeight-hundredths chains to corner No. 1, the place of beginning, containing one hundred fifty-nine and ninety-six-hundredths acres, according to the Official Mat of the Survey of the said Land, returned to the General Land Office by the Surveyor General:

NOT KNOW YE, That there is therefore, granted by the UNITED To TES, unto the said claimant the tract of Land above described; TO MAVE AND TO HOLD the said tract of Land, with the appartenances thereof, unto the said claimant and to the beirs and assigns of the said claimant forever; subject to any vested and accrued water rights for mining, agricultural, manufacturing or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local customs, laws and decisions of courts; and there is reserved from the lands hereby granted a right of way thereon for ditches or canals constructed by the authority of the United States.

IN TESTIMONY WHEREOF, I. Marren G. Harding.

President of the United States of America, have counted these letters to be made

Patent, and the Scal of the General Land Diffice to be hereunto officed.

GIVEN under my hand, in the District of Columbia, the TWENTIETH

in the year of our Lord one thousand

nine hundred and TWENTY-TWO

and of the Independence of the

United States the one sundred and FORTY-SIXTH

By the President Darrewy F. Harding.

By the President Darrewy F. Harding.

By Wisland Ough Secretary.

John D. Commile

Acting source of the Secretary lind Effec.

HECORD OF PATENTS: Patent Number 855366

(SEAL)

BENEFICIARY SUMMARY - DETERMINATION OF STATE TRUST LAND LOCATION

Determination of Beneficiaries and Acres

At the time of Statehood, Arizona was granted nearly 10.75 million acres to be held in Trust for lease and sale to produce revenues for support of public schools and other public institutions. These Trust land grants are:

Acres in Millions*

Common School Trust	8,400,000
University Trust	200,000
Legislative, Executive and	25.46.53
Judicial Building Trust	100,000
Penitentiary Trust	100,000
State Hospital Trust	100,000
School for Deaf and Blind	
Trust	100,000
Miners Hospital for	2.4.
Disabled Miners Trust	100,000
Normal Schools Trust	50,000
Charitable, Penal and	20,000
Reformatory Institutions Trust	200,000
Agricultural & Mechanical	
Colleges Trust	150,000
School for Mines Trust	150,000
Military Institute Trust	100,000
County Bond Trust	1,000,000
Total	10,750,000
*Approximate	- July San

A 1929 act authorized an additional 50,000 for the Miners Hospital Trust.

An 1881 act had already granted the Territory of Arizona about 60,000 acres for the University of Arizona Trust.

This brings the total Trust grants to over 10.8 million acres.

Methods of Acquisition

Arizona has acquired these lands in four types of transactions.

 School Sections in Place -As land surveys were completed by the Federal government, title to four "school sections" in each township - Sections 2, 16, 32 and 36 - automatically passed to the State.

- 2. Indemnity Lieu Selections When school section lands were not available to the State because they had been previously claimed by homesteaders or miners or fell within a Federal reservation for a National Forest, Park or Indian Reservation, the State was given the right to select an equal acreage of Federal public domain land as indemnity in lieu of the school sections the State should have received.
- Quantity Grant Selections The State selected the specified acreage of Federal lands for the County bond and each of the individual institutional Trusts.
- Land Exchanges After acquiring title to the Trust lands, the State has traded many of the lands for other Federal lands of equal value in order to relocate and block-up Trust land holdings.

The State acquired its "School Sections in Place" wherever the land surveys placed them. The State chose the lands acquired in the indemnity lieu selection, quantity grant selection and land exchange processes. These choices were made by the State Selection Board consisting of the Governor, State Attorney General and State Land Commissioner. The Land Commissioner in recent years has been replaced on the Board by the State Treasurer. Most of the selections were made in the 1915-1960 era with the selection program being finally completed in 1982. Since the State was precluded by Federal laws from acquiring mineral lands, and since the home-steaders had already acquired most of the potential agricultural lands, the State focused on choosing the best grazing lands. Most of the acreage chosen during the 1915-1960 era was in central and southeastern Arizona, and in the checkerboard land area along the railroad across north central Arizona. As agriculture developed in Arizona, later selections were made in irrigated areas in the Harquahala Valley and the Gila River Valley. The final selections concentrated on commercial and agricultural lands along the Colorado River.

Land exchanges in the 1935-1985 era relocated most of the school selection lands out of the western deserts and into areas close to Phoenix and Tucson and onto better grazing lands in such areas as western Yavapai County.

BENEFICIARY SUMMARY - DETERMINATION OF STATE TRUST LAND LOCATION

Today the original school section pattern exists only in a few locations such as the remote Arizona Strip. About three quarters of the school section acreage has been relocated through selections and exchanges which have consolidated the Trust lands into large blocks in Pinal, Pima, Graham, Greenlee and Cochise Counties in central and southeastern Arizona; north and northwest of Phoenix in Maricopa and Yavapai Counties, and in the checkerboard railroad grant zone across Mohave, Yavapai, Coconino, Navajo and Apache Counties.

Location of State Trust Land

Most of Arizona Trust lands are currently usable only for livestock grazing purposes. Fortunately, several hundred thousand acres of these "grazing lands" have become "urban lands" as Phoenix, Tucson and other cities and towns have expanded. The State's Urban Lands Act passed in 1981 has enabled the Trust to capitalize on the large increase that planning and zoning adds to raw land values, and today the Land Department's urban lands lease and sale program is the largest revenue producer for the Trust.

Nearly all of the most valuable urban Trust lands around the northern border of the Phoenix metropolitan area and north and west of Tucson are Common School Trust lands. The large block of Trust lands on the south and southeast sides of the Tucson metropolitan area is divided amongst the various institutional Trusts. The University of Arizona Trust owns large acreages of timbered lands in the Flagstaff area and agricultural lands near Yuma. However, the majority of the acreage in the other individual institutional Trusts are rural grazing lands with some agricultural potential located primarily in Cochise County, the Altar Valley of Pima County; the Picacho/Red Rock, Oracle Junction and Florence areas of Pinal County, the St. Johns/ Springerville area of Apache County, and the checkerboard areas of western Coconino and Yavapai Counties.

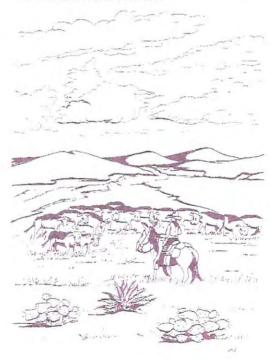
In the 78 years since Statehood, about 1.2 million acres of Trust lands have been disposed of, but a total Trust land acreage of 9,471,207 acres remain. Almost all of the lands are under one or more leases for natural resources uses and commercial

development purposes. About 87 percent of the Trust lands are in the Common School Trust, and over 80 percent of the Trust revenues go to that Trust.

Description of Individual Grants

Descriptions of the Trust lands in the individual institutional grants follow. The acreage cited in the different land areas are only approximate, but the data will give some indication of the resource and income potential of the individual Trust resources. The total acreage of the lease categories listed for each grant is greater than the acreage in each grant, because in many cases there is more than one lease on the same parcel of land.

No description is given of the County Bond grant lands because now that the bonds have been paid for, the revenues from these grant lands go into the Common School Trust fund.



Esperie Land

State of Arizona

ATENT NO. 2668	For Lands (School, Institutional or University)
TO ALL IDATO WHOM	THESE PRESENTS SHALL COME, GREETING:
Whereas	viilage 5 20178 (a mirred man) of the
accordance with the provisions the time of the purchase of the lecution of this conveyance, has and Department of the State of A d situate in the County of	of the laws of the State of Arizona, approved and in force land herein designated and described, and at the time of the made full payment as appears from the records of the State Arizona of and for the following described real estate, lying Arizona of and for the following described real estate, lying Arizona of the Theorem and State of Arizona, to-wit: THE ST CHART OF THE PROPERTY OF MATTER AND RESERVING THE STATE PROPERTY OF THE PROPERTY
thased by the said (a merit of the little of Arizona of all purchase m	acres, more or less, which said described land has been pur- by K. NOLTH has been pur- common and such interest as may have been due therefor, the of Arizona in consideration of the premises, and in conformity
with the laws of the State of Arizon, into the said, the said land above described. TO Havith all the rights, privileges, in belonging unto the said.	a, has sold and granted, and by these presents does sen and grant o R. ROAE and assigns the AVE AND TO HOLD the same as above specified, together nomunities and appurtenances of whatsoever nature hereunto KILLAD T. ROLD (* EMPIRE SEA.) and to
This patent is issued subject tained and now in full force	ssigns forever. to any and all easements or rights of way heretofore legally ob- te and effect.
In Testimony Whereof, I,	SIDNET P. CSEORE Governor of the State
	of Arizona, have caused these letters to be made patent, and the Great Seal of the State of Arizona to be here unto attached. Given under my hand at the City of Phoenix, Arizona, this 27th day of FERGRAT A. D. 19 43

4-1040 (October 1955)

The United States of America.

To all to whom these presents shall come, Greeting:

WERRAS, Frank Appleton, being the owner of a certain tract of land situated and included within the limits of the Raibab Bational Forest, Arisons, has, under the provisions of the Act approved March 20, 1922 (42 Stat. 465), entitled "An Act te consolidate national forest lands", as amended by the Act of February 28, 1925 (43 Stat. 1090), as supplemented by the Act of June 11, 1960 (74 Stat. 205) reconveyed and relinquished the said tract to the United States, and has, under the provisions of the said Act, selected in linu thereof the following described tract of land:

Gila and Salt River Meridian, Arizona.

T. 21 8., R. 18 R.,

Sec. 27, Lots 1, 2, 3, 4, 5, and 6, \$\frac{1}{2}NW\frac{1}{2}, SW\frac{1}{2}, S\frac{1}{2}SE\frac{1}{2};

Sec. 28, SANEL, NWE, St.

The area described contains 1,076.60 acres, according to the Official Plat of the Survey of the said Land, on file in the Bureau of Land Management:

MOW KNOW YE, That the UNITED STATES OF AMERICA, in consideration of the premises, HAS GIVEN AND GRANTED; and by these presents DOES GIVE AND GRANT, unto the said Frank Appleton, and to his heira, the tract above deacribed; TO HANK AND TO HOLD the same, together with all the rights, privileges, immunities, and appurtenences, of whatsoever nature, thereunto belonging, unto the said Frank appleton, and to his heirs and assigns forever. Subject to any vested and accrued water rights for mining, agricultural, manufacturing, or other purposes, and rights to ditches and reservoirs used in connection with such water rights, as may be recognized and acknowledged by the local customs, laws, and decisions of courts; and there is reserved from the lands hereby granted, a right-of-way thereon for ditches or canals constructed by the authority of the United States.

In Testimony Whereof, the undersigned authorized officer of the Bureau of Land Management, in accordance with the provisions of the Act of June 17, 1948 (62 Stat., 476), has, in the name of the United States, caused these letters to be made Patent, and the Seal of the Bureau to be hereunto affixed.

GIVEN under my hand, in The limit of the series of the Lord one thousand nine hundred and SIXIV-TWO and of the Independence of the United States the one hundred and BIGHTY-SIXIE.

(SEAL)

For the Director, Bureau of Land Management.

Manager, Arisens Land Office

Patent Number 02-62-0119

revision to the SIP processing review tables was approved by the Acting Assistant Administrator for Office of Air and Radiation on October 4, 1993 (Michael Shapiro's memorandum to Regional Administrators). A future notice will inform the general public of these tables. Under the revised tables this action remains classified as a table 2. On January 6, 1989, the Office of Management and Budget (OMB) waived table 2 and table 3 SIP revisions (54 FR table 2 and table 3 SIP revisions (54 FK 2222) from the requirement of section 3 of Executive Order 12291 for two years. EPA has submitted a request for a permanent waiver for table 2 and table 3 SIP revisions. OMB has agreed to continue the waiver until such time as a submitted of the remaining the section of it rules on EPA's request. This request continues in effect under Executive Order 12886 which expenseded Executive Order 12201 on Septe 33 1003

Nothing in this action should be construed as permitting, or allowing or

establishing, a precedent for any future request for revision to any SIP. Each request for revision to the SIP shall be considered separately in light of specific technical, economic, and environmental factors, and in relation to relevant statutory and regulatory requirements.

Under section 307(b)(1) of the Act. petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by May 9, 1994. Filing a patition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review, ner does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule postpone the electron may not be or action. This action may not be challenged leter in process onforce its requireme mts. (See section 307(b)(2).1

List of Subjects in 40 CFR Part 81

Environmental protection. Air pollution control, National parks, Wilderness areas.

Dated: March 1, 1994.

Dennis Grane

Regional Administrator.

Part 81, chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 81-[AMPROEDS

1. The authority citation for part 61 continues to read as follows:

Authority: 42 U.S.C. 7401-757:a

2. Section 81.316 is amended by revising the "fows—\$0₂" table to read as follows:

601.316 town.

IONA-SO

Designated area	Does not make the contract of	Does not most too- ondary standards	Cannot be classified	Botter then national standards
Muncethro County: Are: within T 77 N, R 2 W, sections 26, 27, 34, 35: and T 76 N, R 2 W, sections 2, 3, 10, 11, 14, 15, 22, 27, 26, 33, 34 Remainder of county Remainder of state				

IFR Doc. 94-5626 Filed 3-0-94; # 15 aml BILLING CODE 0000-00-P

DEPARTMENT OF THE INTERIOR

Dureau of Land Management

43 CFR Public Land Order 7031

[AZ-039-0210-00; AZA-20000, AZA-2000 AZA-20000

Withdramal of National Forest Sys Lands for a Recreation Complex. o Site, and a Research Rench; AZ

ACCRECY: Bureau of Land Management, Interior

ACTION: Public land order.

summery: This order withdraws 3.117.77 acres of National Forest System lands from mining for 20 years to protect significant capital improvements protest significant captes improvements and recreational and research values associated with the Parker Canyon Lake Recreation Complex, the Cerr Rern. Administrative Site and the Research

Ranch. The lands have been and will remain open to mineral lessing and surface uses authorized by the Forest

EFFECTIVE DATE: March 10, 1994.

FOR FURTHER INFORMATION CONTACT: John Meses, BLM Arisons State Office, P.O. Box 16563, Phoenix, Arizone 85011, 602-650-0509

By virtue of the authority vested in the Secretary of the Interior by section 204 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1714 (1988), it is ordered as follows:

 Subject to velid existing rights, the following described National Porest System lands are hereby withdrawn from location and entry under the United States mining laws (30 U.S.C. Ch. 2 (1988)), but not from leasing und the mineral leasing laws, to protect the capital investments and the recreational and research values of the Parker Canyon Lake Recreation Complex, the Carr Barn Administrative Site, and the Research Runch:

Gila and Salt River Maridian

Coronado National Forest

Research Ronch

1. 21 S. R. 10 E. Sec. 28, WVs. and WVsEVs: Sec. 33, EVsNEW, and NEVsSEVs: Sec. 34; Sec. 35, let 6, WH. WHINEY.

NWW.SEWNEW WW.SWILSEWNEW. NWSWYST WSEY T. 22 S. IL 10 E.

Sec 2 lots 2, 3, and 4, NV2SWV. NWW.SEK, SWYLNEW, and SYLNWY Sec. 1. lots 1 to 4. inclusive, SVaNVa. NVINYISEN, and NVINEWSTAVE. Sec. 4, lot 5, and SEWNEWNEW.

The areas described aggregate 2,442.04 acres in Sente Cruz County.

Parker Canyon Lake Recreation Complex

T. 23 S. R. 19 E.

Sec. 18, lots 1, 2, and lots 4 to 7, inclusive and lot 9, SWANEY, EVANWY, WANEYASEY, WARY-NEWSEY, and that portion Iving within Homester Entry Survey 291;

Sec. 19, lots 1, 2, and 1, NEWNEW, and that portion lying within Homestead Entry Survey 291.

The area described contains 655.73 acres in Cochine County.

11196

Carr Barn Administrative Site T. 23 S., R. 21 E.

Sec. 7. SEV-NEV-NWV.

The area described contains 10 acres in Cochise County.

2. The withdrawal made by this order does not alter the applicability of those land laws governing the use of the National Forest System lands under lease, license, or permit, or governing the disposal of their mineral or vegetative resources other than under the mining laws.

3. This withdrawal will expire 20 years from the effective date of this order unless, as a result of a review conducted before the expiration date pursuant to section 204(f) of the Federal Lend Policy and Management Act of 1976, 43 U.S.C. 1714(f) (1988), the Secretary determines that the withdrawal shall be extended.

Dated: February 28, 1994.

3ob Armstrong.
Assistant Secretary of the Interior.

[FR Doc. 94-5467 Filed 3-9-94; 8:45 am]
BLUNG COSE 494-494.

43 CFR Public Land Order 7032 [AK-332-4210-06; F-60576]

Withdrawal of Public Land for Protection of the Paleoindlen Site Known as Mess Site; AK

AGENCY: Bureau of Land Management, Interior.

ACTION: Public land order.

SUMMARY: This order withdraws approximately 2,560 acres of public land from settlement, sale, location, or entry under the general land laws, and from location and entry under the United States mining laws, but not from mineral leasing, for a period of 20 years for the Bureau of Land Management to protect the archaeological, historical, and caltural resource integrity of the Paleoindian site known as Meas Site.

EFFECTIVE DATE: March 10, 1994.

FOR PURTNERS REPORTATION CONTACT: Sue A. Wolf, BLM Alaska State Office, 222 W. 7th Avenue, No. 13, Anchorage, Alaska 99513-7560, 807-271-5477.

By virtue of the authority vested in the Secretary of the Interior by section 204 of the Federal Lend Policy and Management Act of 1978, 43 U.S.C. 1714 (1988). It is ordered as follower.

1714 (1908), it is ordered as follows:

1. Subject to valid entering rights, the following described public land is hereby withdrawn from settlement, sale, location, or entry under the general land level, including the United States mining lews (30 U.S.C. Ch. 2 (1988)).

but not from leasing under the mineral leasing laws, to protect a Paleoindian site:

Umint Meridian

T. 12 S., R. 17 W., (Unsurveyed) Secs. 11 to 14, inclusive.

The area described contains approximately 2,560 acres.

2. The withdrawal made by this order does not after the applicability of those public land laws governing the use of the land inder lesse, license, or permit, or governing the disposal of their mineral or vegetative resources other than under the mining laws.

3. This withdrawal will expire 20 years from the effective date of this order unless, as a result of a review conducted before the expiration date pursuant to section 204(f) of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 2714(f) (1988), the Secretary determines that the withdrawal shall be extended.

Detod: February 28, 1994.
Beb Armstreag,
Assistant Secretary of the Interior.
[FR Doc. 94-5468 Filed 3-9-94; 8.45 am]
BILING COOR 410-34-38

43 CFR Public Land Order 7033 [AK-832-4218-86; F-939474]

Partial Revocation of Powersite Classification No. 443, as Modified, for Selection of Land by the State of Alaske; AK

AGENCY: Bureau of Land Management, Interior.

ACTION: Public land order.

summany: This order revokes a Powersite Cleasification, insofar as it effects approximately 25,834 acres of land withdrawn for power purposes at Teklanika River. The land is no longer needed for the purpose for which it was withdrawn. This action also opens approximately 19,734 acres of land for selection by the State of Alaska, if such land is otherwise available. Any land described herein that is not conveyed to the State will be subject to the terms and conditions of any withdrawal of record. The remaining approximate 5,900 acres of land will continue to be withdrawn as part of the Denail National Park and Pressave pursuant to the Alaska. National interest Lands Conservation.

SPECTIVE DATE: March 10, 1994.
FOR FURTHER INFORMATION CONTACT:
Sup A. Wolf, BLM Aleaks State Office,
222 W. 7th Avenue, No. 13, Anchorage
Alaska 99513-7599, 907-17-5477.

By virtue of the authority vested in the Secretary of the Interior by Section 204 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1714 (1988), and by section 17(d)(1) of the Alaska Native Claims Settlement Ac 43 U.S.C. 1616(d)(1)(1988), it is ordered as follows:

 Powersite Classification No. 443, a modified, which withdrew land for power purposes in the Teklanika River area, is hereby revoked insofar as it affects the following described land:

Fairbanks Meridian

Beginning at a point on the Teklanika Rive latitude 63°58'08" N., longitude 149°31'48" W. All lands upstream from this point below the 2,000 foot contour located in:

a. Those portions of Tps. 12 and 13 S., Rs. 9 and 10 W., (surveyed), which he outside of the Denali National Park and Preserve. The area described contains approximately 19.734 acres.

b. Those portions of Tps. 11 S., Rs. 9, 10, and 11 W.; and Tp. 13 S. R. 10 W., (partially surveyed), which lie within the Denali National Park and Preserve.

The area described contains approximately 5,900 acres.

The total area described contains approximately 25,634 acres.

- 2. Subject to valid existing rights, the land described in section 1(a) above is hereby opened for selection by the State of Alaska under the Alaska Statehood Act of July 7, 1938, 48 U.S.C. note prec. 21 (1988) or section 906(b) of the Alaska National Interest Lands Conservation Act, 43 U.S.C. 1633(b)(1988).
- 3. The State of Aleska applications for selection made under section 206(e) of the Aleska National Interest Lands Conservation Act, 43 U.S.C. 1633(e)(1988), for the land described in 1(a) above, become effective without further action by the State upon publication of the public land order in the Federal Register, if such land is otherwise available. Land not conveyed to the State will be subject to the terms and conditions of any withdrawal of record.
- 4. The land described in paragraph 1(b) shove will remain withdrawn as part of the Denali National Park and Preserve, pursuant to Section 206 of the Alaska National Interest Lands Conservation Act, 16 U.S.C. 410(hh-5)(1988).

Dated: March 2, 1994.
Beb Assestings.
Assistant Secretary of the Interior:
IPR Doc. 94-8606 Piled 3-0-94; 8:46 amj
stume coor eyo-se-se



Arizona

State Land Bepartment



BRUCE BABBITT

1624 WEST ADAMS
PHOENIX, ARIZONA 85007

August 11, 1986

Dr. Mark R. Stromberg Resident Director/Manager - Research Ranch National Audubon Society P. O. Box 44 Elgin, Arizona 85611

Dear Dr. Stromberg:

I am pleased to inform you that on July 31st we conveyed to the Bureau of Land Management the title to the 2,342.44 acres of State Trust lands in the National Audubon Society's Research Ranch.

The land was transferred to BLM as part of our ongoing land exchange program with that agency. The transaction was part of a larger, environmentally-oriented exchange package that also included two other blocks of State Trust lands, one surrounding the Aravaipa Canyon Wilderness Area and a second within the Nature Conservancy's Mule Shoe Ranch.

In return the State Trust Fund has received BLM land parcels along the San Pedro Valley between Benson and Winkleman that have equal or better income potential from livestock grazing and development.

We are pleased to have been able to complete this exchange that has placed in public ownership, the Research Ranch lands that now can be managed by the Bureau of Land Management and the National Audubon Society in a manner to protect and utilize their public values. We appreciate the cooperation of both the National Audubon Society and the Bureau of Land Management in this effort.

Sincerely,

Robert K. Lane

State Land Commissioner

RKL:GEC:cb

ec: Governor Bruce Babbitt
Dean Bibles, BLM State Director
Les Rosenkrance, BLM Safford District Manager



DEED OF RECONVEYANCE

96-93821

For and in consideration of the granting of certain lands as authorized by the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1201 et. seq.) THE STATE OF ARIZONA does herewith remise; release, quitclaim, grant, convey and relinquish to the UNITED STATES OF AMERICA its interest in the lands described as follows:

TWP.	RGE.	SEC.	SUBDIVISION	ACRES
215	18E	14	SENE; NESE; S2SE	160.00
		15	SW	160,00
		16	ATT	640.00
		20	E2	320.00
		21	ATT	640.00
		22	Lots 1-3; NW	252.44
		23	NE	160.00

The above described parcels contain a total of 2,342.44 acres, more or less.

Subject to existing reservations, easements, or rights-of-way heretofore legally obtained and now in full force and effect.

IN WITNESS WHEREOF, I, Bruce Babbitt, Governor of the State of Arizona, have caused this DEED OF RECONVEYANCE to be executed and the GREAT SEAL of the State of Arizona to be attached hereto this 31st day of July, 1986.

GOVERNOR OF THE STATE OF ARIZON.

ECRETARY OF STATE

CERTIFICATE OF NONENCUMBRANCE

I, Robert K. Lane, State Land Commissioner, of the Arizona State Land Department do hereby certify that I am the official custodian of the records of the State of Arizona pertaining to the care and disposal of School, Grant and State lands in said State in accordance with Sections 37-102 and 37-132, Arizona Revised Statutes and that I have caused an examination of the records for which I am custodian with reference to instruments affecting the title of the State of Arizona to the land described in:

Deed of Reconveyance 96-93821

and that no instrument purporting to convey or in any way encumber the title of the State of Arizona to said land, or any portion thereof, nor any lien for taxes, costs, interest or judgements is on file or of record in the public record system of the Arizona State Land Department except for the stated encumbrances:

Right of Way 18-93087

Witness my hand and the official seal of the Arizona State Land Department this 31st day of July, 1986.

ROBERT K. LANE STATE LAND COMMISSIONER

Attachment 13

#40 - ·

When recorded return to: UNITED STATES OF AMERICA c/o William J. Ruddick United States of the Interior Bureau of Land Management 2015 W. Deer Valley Rd. Phoenix, Az.85027 75005746

Policy #287-00-010531

DOCK 462 PAGE 579

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS: that Talley Realty Development, Inc., a Delaware corporation, Grantor herein, for and in consideration of the exchange of certain land and interests as authorized by the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.), the receipt and sufficiency of which are hereby acknowledged, does hereby convey to the UNITED STATES OF AMERICA, its successors and assigns forever, Grantee herein, that certain real property located in the County of Santa Cruz, State of Arizona, described in Exhibit "A" attached hereto and incorporated herein by this reference together with all rights and privileges appurtenant thereto.

TO HAVE AND TO HOLD the same unto the Grantee, its successors and assigns to warrant and defend the title as against all persons whomsoever.

SUBJECT TO those items set forth in Exhibit "B" attached hereto and made a part hereof.

IN WITNESS WHEREOF, this Warranty Deed has been executed this day of Tomples. 1987 day of December, 1987.

> TALLEY REALTY DEVELOPMENT, INC., a Delaware corporation

EXEMPT PER ARS 42-1614 A3

STATE OF ARIZONA

County of Maricopa

This instrument was acknowledged before me this ZMD day of the LICE 1987, by YOU H CONNER , the VICE FREE IN A Of Talley Realty Development, Inc., a Delaware corporation.

Atal li Notary Public

My Commission Expires:

3

DEFICIAL DEAL LINDA S. LEROY Notary . "In — State of Angered MARIGOPA COUNTY My Comm. Expires May 19, 1991

Title Accepted:

EXHIBIT "A"

DOCK 462 PAGE 580

Township 21 S, Range 18 L, ALL of Section 27, EXCEPT those parcels described in Docket 122, Page 53, Docket 184, Page 98 and Docket 200, Page 110. Santa Cruz County, Arizona.

Township 21S, Range 18E, ALL of Section 28, EXCEPT those parcels described in Docket 55, Page 89 and Docket 184, page 98. Santa Cruz County, Arizona.

A-22792 Title Accepted: 03-25-88

EXHIBIT "B"

- DOCK 462 PAGE 581

Second installment of 1987 taxes a lien payable on or before March 1, 1988 and delinquent May 1, 1988.

Reservations contained in the Patent to said land as set forth in Clause No.
this page.

1 C shown on the reverse side of

2. Any loss, claim or damage by virtue of the failure of the public records to disclose that said land has any appurtenant means of ingress and egress or any frontage to and from a public highway or dedicated street.

3. Established and/or existing roads, roadways and highways.



INSTRUMENT # 877253 OFFICIAL RECORDS OF SANTA CRUZ COUNTY A MARY LOU G. SAINZ

REQUEST OF

FIRST AMERICAN TITLE DATE: 12/04/87 TIME: 11.00 FEE: 10.00

462 PAGE 579 PAGES: 3

16-22-52-0110

MEMORANDUM OF UNDERSTANDING AMONG
THE NATIONAL AUDUBON SOCIETY,
THE REGIONAL FORESTER: SOUTHWESTERN REGION,
AND THE
DIRECTOR, ROCKY MOUNTAIN FOREST AND RANGE EXPERIMENT STATION

This Memorandum of Understanding, made and entered into by and among the National Audubon Society Research Ranch, a monprofit, tax-exempt, charitable and scientific organization established as an Arizona corporation for ecological and environmental research, education and conservation, hereafter referred to as the SOCIETY; acting in behalf of and by agreement with the Research Ranch foundation, hereafter referred to as the FOUNDATION: and the forest Service, United States Department of Agriculture, through the Director of the Rocky Mountain Forest and Range Experiment Station, hereafter referred to as the STATION, and the Southwestern Region, which includes the Coronado National Forest, hereafter referred to as the REGION, acting under the authority established by the Agricultural Organic Act of May 15, 1862, and the Forest and Rangeland Resources Research Act of 1978, PL 95-307, 16 USC 1643.

The parties hareto are mutually interested and desire to cooperate in studies to encourage research on factors related to maintaining and improving management of Southwestern desert grasslands and to maintain the established Elgin Research Natural Area. This agreement supersedes the previous agreement with Research mange of December 16, 1970, covering management of National Forest System lands by the parties involved. In accordance with this Memorandum of Understanding, the parties hereto agree as follows:

A. That the SOCIETY SHALL:

- Submit project proposals and study plans affecting National Forest System (NFS) lands included in The Research Ranch for review and approval of the Forest Supervisor, Coronado National Forest.
- Acknowledge use of locations on the Coronado National Forest in publications resulting from studies conducted on The Research Rench, and provide copies of studies/research and resulting publications to REGION and \$14710A.
- 3. Provide for the protection, and use of an established Research Natural Area in 1, 21 5., R. 16 E., Santa Cruz County, Arizona. The Eigin Research Natural Area includes: about 140 acres of land belonging to the Floridate of Arizona' (NE2, Section 23), about 180 acres of land belonging to the Research Ranch (SE4, Section 23) and about 280 acres of NFS land (mainly in E4, Section 23). The area is bounded on the north by the north line of Section 23; on the south by the south line of Section 26; on the west by an undeveloped road, and on the east bire of Section 23 and (2) the existing allotment boundary fence in Section 26, as outlined on the attached map. Exhibit A.

- 4. Recognize and use in accord with Research Natural Area purposes land belonging to the SOLIETY that lies within the Elgin Research Natural Area during the corporate life of the Audubon Society Research Ranch, Inc., as limited by Arizona Statutes. Also, any land belonging to the State-of-Ranch Arizona that is dedicated by the Clate to be included in the Elgin Research Natural Area will be administered in the same manner as SOLIETY lands within the Elgin Research Natural Area so long as the State lands are controlled by or leased to the SOLIETY.
- 5. Initiate no experiments or demonstrations that involve grazing of adjacent lands unless the Elgin Research Natural Area is fenced to protect it from grazing. The expense of such fencing will be borne by the organization or individual responsible for the experiment.
- Assure that all research cooperators are provided with a copy of this agreement and that they comply with all provisions that apply to their activities.
- $\gamma_{\rm c}$. Maintain range improvements specified in map Exhibit D and identified on the following inventory:

Range Improvement Inventory and Meintenance Responsibility Research Ranch Coronaco National Poress

RAME	* * 1x=	IMP. NO.	UNITS	ASSIGNMENT
MESA TAKIN CARELO CHUNEY FEN FOREST TAKIN CHUNEY SFR ROADSJOE WELL SOUTH WELL SOUTH WELL SOUTH WELL SOUTH FEN DIN FEN DIN FEN DIN FEN CHUNEY MARNILA Z TRIANGLE CHUNEY MESA TAKIN FEN FOREST TANK FEN CHUNEY-Z TRIANGLE HARREY CHUNEY HARREY CHUNEY HARREY CHUNEY HARREY CHUNEY	DAY 6/0R RESVOR ALCT SDAY FENCE DAM 6/0R RESVOR BELVELOPED SPRING WELL, KINDMILL MELL, KINDMILL MIF BORY FENCE ALCT BORY FENCE ALCT BORY FENCE ALCT BORY FENCE ALCT BORY FENCE MATER OFF FENCE MATER OFF FENCE ALCT BORY FENCE MATER OFF FENCE ALCT BORY FENCE	050001 R20001 050002 000015 000003 000004 002005 003006 002007 000010 000011 000014 R00033	13 17 21 1.0 2.0 1.7 1.0 2.0 1.5	Research Ranch Canelo Fermittee Research Ranch

B. That the REGION shall:

 Include a portion of the Sierra Vista Ranger District, Coronado National Forest, known as the Chuney grazing allotment consisting of 2,275 acres. Inclusion of NFS lands will be subject to all provisions of this agreement.

3

- Designate indefinitely the NFS land within the Elgin Research Natural Area and maintain the withdrawal of the affected lands from mineral
- 3. With delegated authority, assume responsibility for protection and management of the NFS lands involved.
- Review and take approval action as merited on project proposals and study plans affecting the NFS portion of The Research Ranch.
- Identify The Research Ranch and Elgin Research Natural Area as management units in the Coronado National Forest Land Management Plan and provide management emphasis on the overall research program of the SOCIETY.
- 6. Place public information signs on NFS land involved and do whatever alse may be deemed appropriate for interpretation of the area and its purposes to the public.
- 7. Authorize grazing of domestic livestock in connection with research projects on the NFS portion of The Research Ranch exclusive of the Eigin Research Natural Area in accordance with applicable Forest Service regulations and policies.
- $\ensuremath{\mathsf{E}}.$ Have complete responsibility for fire prevention and suppression of fires on or threatening NFS lands.

C. That the STATION shall:

- Submit Research proposals affecting the private and State portions
 of The Research Ranch for review and approval of the Board of Trustees.
 Retain authority to conduct research on the NFS portion of The Research Ranch.
- Provide copies of study plans and resulting publications from research activities on the Research Ranch to the SOCIETY and the REGION.
- 3. Lead the effort to provide a basic acological characterization of the Figin Research Natural Area.

D. The REGION, STATION, and SOCIETY, acting on behalf of the FOUNDATION, mutually agree to the following:

- 1. National Forest System status and public use of the Federal land will not be affected or altered by participation in the programs of the SOCIETY Research Ranch. The Forest Service will retain authority and responsibility for protection and management of the National Forest area involved.
- The agreement between The Research Ranch Foundation and the National Audubon Society executed on February 2, 1980, which authorizes the SOCIETY to act on behalf of the FOUNDATION, is attached hereto and hereby made a part of this agreement as Exhibit B.

- 3. A map (1½" = 1 mile scale) showing location and lands status of The Research Ranch and the Elgin Research Natural Area is attached and made part of this agreement. See Exhibit A.
- 4. The REGION and STATION will be represented on the FOUNDATION Board of Trustees by the Forest Supervisor, Coronado National Forest, and the STATION. Through its trusteeship, the REGION and STATION will approve or disapprove all projects and studies involving use of any NFS lands by The SOCIETY Research Ranch.
- 5. Public access to and use of the NFS lands within the Eigin Research Natural Area shall not be more restrictive than set forth in guidelines contained in the Forest Service Manual (copies of pertinent sections attached as Exhibit C), and that legitimate users will not be denied access to the area by agents of either the REGION or the SOCIETY.
- 6. Project proposals involving wildlife or introduction of wildlife species not now present will be coordinated with and approved by the REGION and the Arizona Department of Geme and Fish. Introduction of exotic wild animal species will not be undertaken or authorized on NFS lands without the approval of the Fish and Wildlife Sarvice, United States Department of the Interior.
- 7. No Number of, or Delegate to, Congress or Resident Commissioner shall be admitted to any share or part of this agreement, or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this agreement if made with a componation for its general benefit.
- E. Abthing in this agreement shall be construed as obligating the STATION or REGIO. In any contract or other obligation for the future payment of money in excess of appropriation authorized by law and administratively allocated for this work.
- 9. No agreements merein provided for shall entitle the SOCIETY to any share or interest in the land other than the right to use the same under the regulations of the Forest Service.
- The extension of benefits under the provisions of the Memorandum of Understanding shall be without discrimination as to race, color, creed, sex, or national origin.
- 11. This Memorandum of Understanding may be terminated at any time by mutual consent of all parties involved or within 90 days following written notice from either the SOCIETY, the STATION, or the REGION. Unless so terminated, this Memorandum of Understanding shall remain in force indefinitely.

IN WITNESS WHEREOF, the parties hereto have executed this Memorandum of Understanding as of the last date written below.

The Audybon Society Research Ranch
Case E. Bozz

By Janu & Rock

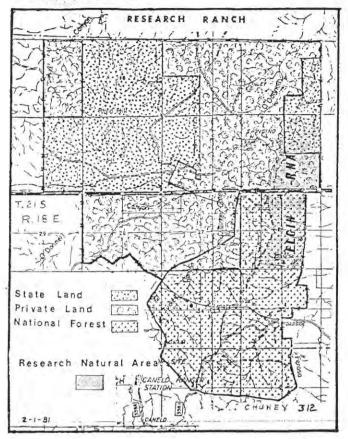
D

Regional Forester, Southwestern Region

11/1/harsell Date 7/25/82-

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4063.3

SERIES 4000 - RESEARCH

4053.3 - Projection and Management. A research natural area must be projected against activities which directly or indirectly modify acological processes. If the area is to be of value for observation and research on plant and animal succession, habital requirements of species. Insect and fungus depredations, soil microbiology, phenology and related phenomena. Logging activities are not perstitled, and grazing by livestock is restricted to those areas where their until a casental for the maintenance of a specific vegicative type. Discourage recreational uses. The criterion for management of research natural areas is fur protection against inappropriate entroachments on existing condutions.

Special plasures of research natural areas may be necessary to protect such areas from actural or potential harm resulting from public use. Closures must be done by an order issued under the provisions of 36 CFR 251.50. Such orders incorporate the special closure provisions of 36 CFR 261.53 which allow for criminal clisations to be issued whenever one or more of the listed resources are endangered (FSO:5353).

deed 13 of 53531.

Identification. Identify research natural areas in the administrative records as to location, purpose, and objectives. Mask their boundaries in the field, when appropriate, to ensure integrity of the area. As a minimum, all contacts or turning points should be monumented and the monumentation documented and recorded in the establishment report. Avoid signs that stend to without arghitects, recreationates, and casual visitors. However, if roads or trails pass along the boundary or through a research natural area, limited posting may be needed to protect the area (FSM 5351). An area may be closed pursuant to 36 CFR 251.50 and criminal action taken for windstined of 36 CFR 261.53 (FSM 5353).

40(3, 12 - Fences. Research usural area boundaries should not be fenced unless necessary for protection against livestick or excessive human use. When fencing is necessary to protect an area, however, it should be budgeted and constructed in management of the area.

40(3, 33 - Publicity. Publicity, generally to professional groups at titler National, State, or university levels, is mainly to inform scientists and educators of the location, natural features, and administering agency in order to make the fullest proper use of research natural areas. A news release upon initial designation of an area may be appropriate. Publication of research natural areas directories, including detailed descriptions of features within each area, is encouraged.

601.34 - Physical Improvements. As a general guide, physical improvements such as roads, fences, or buildings should not be permitted within a research satural area. However, in many instances, limited temporary improvements may be needed if these tracts are to fulfill their scientific potential.

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7

4063, 39

SERIES 4000 - RESEARCH

Normally, however, a cooperative agreement will be prepared that outlines the planned research agreement will be prepared that outlines the planned research removed the limitation therefore with the review and approval of the Work, and the limitation therefore with the review and approval of the Forest such of the present of District Ranger. Research projects inservice and outerview within wildernease must be submitted to the Regional Forester for approval (FSM 2)23, 00c). Forest Service actentists should cooperate in the research whenever possible to derive the greatest benefit from the work. Copies of all deta, reports, etc., resulting from research on an RNA shall be filed with the Station, Region, Forest, and Washington Office.

Collection of endangered, threatened, or rare plants must be carefully controlled. Permits must be issued by the U.S. Fish and Wildlife Service (50 CFR 17, 221. If permits are issued, a woncher sample should be deposited in the Forest Service Ferbarium at Fort Collins, Colorado. Collection of doplicate material of rare, endangered, or threatened species should be prevented once adequate material have been deposited in appropriate herbaria.

adequate material have been deposited in appropriate herbaria.

4061.18 - Verestion Management. The Station Director, with the approval of the Forest Supervisor, may authorize management practices, except within wildernesses, necessary to preserve the vegestion for which the research natural areas was created. These practices may include grazing, control of excessive animal population, or prescribed burning. Only tried and reliable techniques will be used, and then only where the vegetative type would other wise be less without management. The criterion here is that the management practice must provide a closer approximation of the vegetation and the processars powering in vegetation than woold be pustible without management. If doubt exacts about the need of nothing should be done. Generally, planned practices for vegetation management should be surgeried in the establishment report and documented in the management plan after establishment report and documented in the management plan after establishment report and documented in the management plan after establishment.

wocumented in the management plan after establishment.

405.1.3 • Mineral Enry.

Research mitural areas should be withdrawn from mineral entry after establishment in conformance to
Section 204 of the Federal Land Folley and Management Act of
1976 (PL 49-579). Mowever, the difficulty or resistance to eithdrawn to macral entry should not be a deterrent to selection and
catablishment of desirable areas. It is better to develop a network
of research natural areas and lose a few to mineral development
than out establish sufficient areas because of resistance to withdrawnle.

- FSM 3/79 AMEND 11+

4063.15

SERIES 4000 - RESEARCH

*- Trails frequently are needed for access to conduct research and for educational purposes. They actually may protect an area by concentrating impacts of human use. Roads often form good boundaries and may not be detirmental even if they go through a proposed area. Once an area is eastablished, construction of roads should not be permitted unless they contribute to the research natural area objectives. In rare instances, it may be desirable to establish temporary spain estaions and instrument shelters. Submit plans for improvements and/or temporary facilities the Station Director for approval and to the Forest Supervisor for concursence. These plans will apectifically far the tenure of the improvement or facility and list actions to be taken, time limits for completion, and parties responsible for returning disturbed areas to a natural condition.

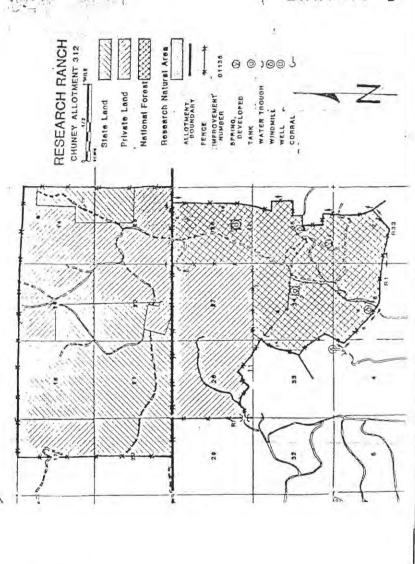
responsible for returning disturbed areas to a natural condition.

4583.35 - Protection. Specific management direction for each natural area will include protection from fires, insects, diseases, and animals. Maintenance of the natural processes within each area will be the prime consideration. Where cultural resources on, or eligible for, the National Register are likely to be involved, a memorandom of understanding or an interagency agreement with the Advisory Committee on Historic Preservation should be prepared (PSA 1810, FSH 1904, II). As a general guide, three sodauger-includes the status areas about the extinguished as quickly as unless they for the process or property over the boundary of the third of the process of the RNA. Debts resulting from fires should not be cleaned up nor should any fire shaard reduction or reforestation be understaken. Cenerally, he action should be taken against endertic innects, diseases, or wild a nimals. However, protection measures for research natural areas within Congressionally designated areas must be in accord with the management plan for this testinguisted area.

405.36 - Public Use. Picnicking, camping, collecting plants, Isthering nuts and berbs, picking berries, hunting, lishing, trapping, and other public uses which contribute to modification of a research natural area should be discouraged or expressly prohibited if such uses threaten serious impairment of research or educational values. Public use or access may be limited or prohibited under 36 CFR 261, 51 (FSM 5353).

4053.37 - Scientific and Educational Use. The Forest Service encourages use of natural areas by responsible scientists and educators. Generally, educational use should be at the college upper classman or graduate level. However, lower levels of educational institutions are not excluded. Any scientist interested in using a research natural area should contact the appropriate Station Director and outline the activity planned. In some instances, -*

-FSM 3/79 AMEND 31-



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COOPERATIVE AGREEMENT
between the
Bureau of Land Management
and the

National Audubon Society

Scanned on 3/17/08

1

I. PURPOSE

This agreement is designed to provide for cooperative the provide Sureau of Land Management, and the National Audubon Smith of public lands within the Appleton-Whittell Biologica. Terrail of the Research Ranch).

II. AUTHORITY

The Federal Land Policy and Management Act of 1976 (Public Lee approvides for cooperative agreements for the management of column and

III. DEFINITIONS

- A. BLM means the Bureau of Land Management, an agency if the state States Department of the Interior.
- NAS means the National Audubon Society, a national series : organization.
- C. Public lands means Federally-owned lands administrate: 52:

IV. BACKGROUND

Research and conservation on The Research Ranch goes back to the second family and their desire to protect the natural aspects of the sets the Appletons stopped livestock grazing and began encouraging their research. Active cooperation from the Forest Service and the allowed are search. Active cooperation from the Forest Service and the allowed Land Department has resulted in the current sanctuary being entering serve as a place for biological investigations. In 1980 the Value Society assumed management of the sanctuary through funds from the Value Society assumed management of the sanctuary through funds from the Value Society assumed management of the sanctuary through funds from the Value Society assumed management of the sanctuary through funds from the Value Society assumed management for surface of Land Management became in 1986 the Burezu of Land Management became in 1987 the Society acquisition came about due to BLM's greater flexibility and activity resource management to provide for long-term research than that if its late Land Department and their sole goal of revenue production.

A biological research station, The Research Ranch has been primately like in ecological studies. With the cessation of grazing in 1969, distinguished to study and describe the land and its life forms without the initial agrazing. An exclosure of this size offers an opportunity for inverse plant and animal life to be studied. The increase in diversity the first been significant and the long-term impacts of such an exclosure tests continued long-range study. Two Federally-endangered species could be sanctuary and two others are under consideration for such status. In addition, the sanctuary hosts over 300 species of plants, 225 first 103 butterflies and 74 mammals. Since 1980, over 40 scientific papers and documented past research. Over 20 research projects are currently status.

. OBJECTIVES

The BIM and NAS are in agreement on the following objectives relating to the management of public lands in the Appleton-Whittell Biological Research

- the continuation of on-going research the encouragement of future research the derivation of mutual benefits from the research the protection of the land and its ecological communities from disturbance

VI. CONDITIONS OF AGRE_MENT

- A. The Bureau of Land Management will:
- 1. Furnish the public land for research projects authorized by the National Audubon Society.
- 2. Develop a Resource Management Plan (RMP) in coordination with NAS within two years after the signing of this agreement. The RMP will determine actions permissible and those not allowed on the lands and will follow the BIM policy and regulations specified for resource management planning. Following completion of the RMP, this agreement may need to be modified for consistency.
- 3. Proceed through the planning process to designate the public land as a resusrch natural area (RNA) or other designation consistent with the objectives of this agreement.
- Close all roads and trails to vehicle traffic except as needed for administration of research projects and property management. BIM will provide appropriate off-road vehicle signs to NAS.
- 5. Provide law enforcement as necessary to carry out the objectives of this agreement.
- 6. Provide fencing material as appropriate to construct exterior boundary fences along the public land boundaries.
- 7. To ensure successful continuation of the research program, grazing will not be permitted.
- 8. Restrict mineral exploration and development.
- B. The National Audubon Society will:
- Be responsible for day-to-day management of the area within the guidelines provided by BLM.
- 2. Maintain personnel on the area on a year-round basis.
- 3. Meintain all facilities currently on public lands.
- 4. Direct and coordinate research projects authorized on the public lands.

- Provide signs necessary to mark the private property and control
 public use of the area.
- Furnish BLM with copies of research papers completed on the pub-
- Credit BLM in published research papers where public lands are used in the research.
- C. BLM and NAS will:
 - Jointly develop and install major signs identifying the Appleton-Whittell Biological Research Sanctuary.
 - 2. Jointly coordinate land management practices with the Coronado National Porest.

VII. COORDINATION

Formal and informal mentings between the designces of BLM and NAS shall be held as necessary or desirable to exchange information, coordinate activities and facilitate achieving the purpose and objectives of this agreement. As a minimum, en annual meeting will be held to discuss current and proposed research and any management problems requiring cooperative efforts.

VIII. EFFECTIVE DATE, TERMINATION AND AMENDMENTS

This cooperative agreement shall become effective when signed by the Fresident of the National Audubon Society and the Arizona State Director, Bureau of Land Management, and shall remain in effect until terminated by mutual agreement. This agreement may be terminated by either party after giving 90 day notice to the other party. Amendments or modifications to this agreement can be addressed at any time and must be approved by the designated representatives of ELM and NAS. The development and implementation of this cooperative agreement is contingent upon the availability of funding and personnel.

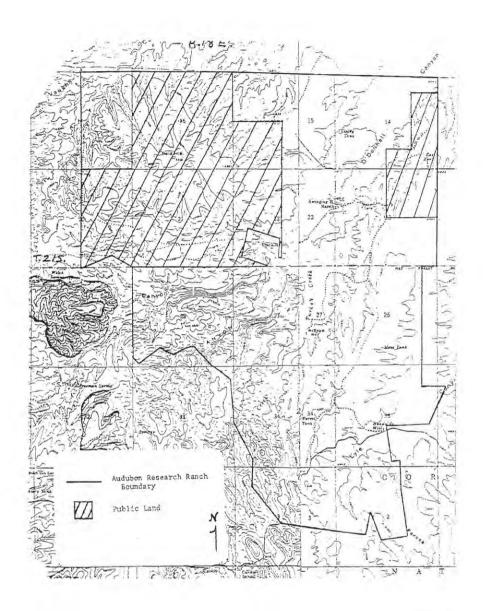
We hereby agree to the terms and conditions of this cooperative management agreement.

State Director Sureau of Land Management

President National Audubon Society

Aug 8, 1986

Ger 5, 1986



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STATE OF ARIZONA

DEED OF RECONVEYANCE

96-93821

For and in consideration of the granting of certain lands as authorized to the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1201 et. set. The STATE OF ARIZONA does herewith remise; release, outclaim, grant, conden and relinquish to the UNITED STATES OF AMERICA its interest in the lands described as follows:

TWP.	RGE.	SEC.	SUBDIVISION	20155
215	18E	14	SENE; NESE; SESE	341.55
		15	SW	250.00
		7.6	AUI	542,30
		20	E2	222,00
		21	ATI	540,50
		22	Lots 1-2; NW	252.44
		23	NE	150.00

The above described parcels contain a total of 2,342.44 acres, more or less.

Subject to existing reservations, easements, or rights-of-way heretofore legally obtained and now in full force and effect.

IN WITNESS WHEREOF, I. Bruce Babbitt, Governor of the State of Arizona, have caused this BSED OF RECONVEYANCE to be executed and the GREAT SEAL of the State of Arizona to be attached hereto this dist day of July, 1986.

GOVERNOR OF THE STATE OF AREZONA

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6

CERTIFICATE OF NONENCUMBRANCE

I, Robert K, Lane, State Land Commissioner, of the Arizona State Land Department do hereby certify that I am the official custodian of the records of the State of Arizona pertaining to the care and disposal of School, Grant and State lands in said State in accordance with Sections 37-102 and 37-132, Arizona Revised Statutes and that I have caused an examination of the records for which I am custodian with reference to instruments affecting the title of the State of Arizona to the land described in:

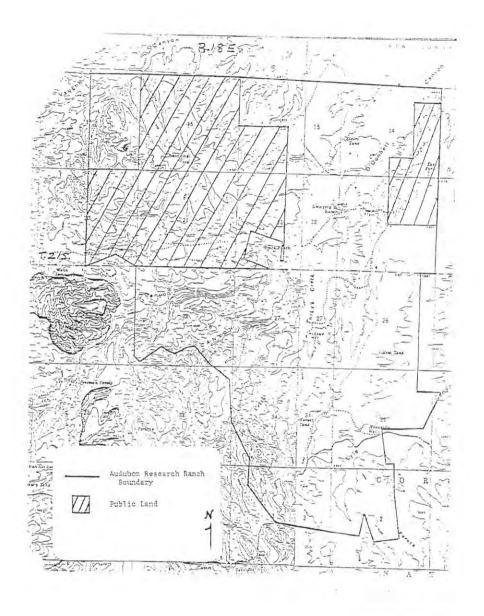
Deed of Reconveyance 95-93821

and that no instrument purporting to convey or in any way encumber the title of the State of Arizona to said land, or any portion thereof, nor any lien for taxes, costs, interest or judgements is on file or of record in the public encumbrances:

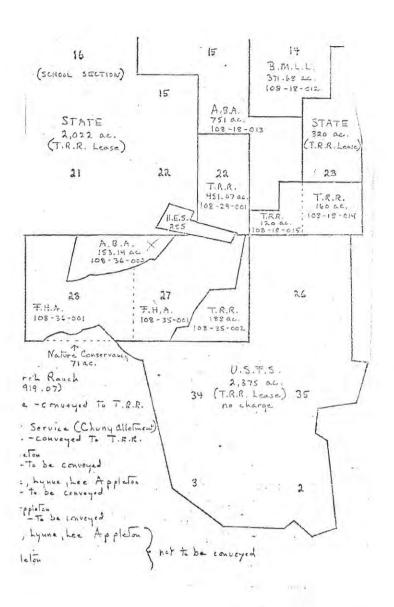
Right of Way 18-92087

Witness my hand and the official seal of the Arizona State Land Department this 31sr $\,$ day of July, 1985.

LEINE STATE LAND COMMISSIONER



Scanned on 3/17/08



Summary of Science Projects on Appleton-Whittell Research Ranch National Audubon Society Oct 1, 2006 - Sept 30, 2007*

Survey results for mule deer, javelina and whitetail deer on the Research Ranch

Arizona Game & Fish Department; John Millican

Project: Estimate populations

Application: Analyze impacts of hunting, climate on populations

Status: Ongoing, annual.

Endangered Pupfish in Finley Tank

Arizona Game & Fish Dept.

Subject: Monitor and protect population of pupfish introduced into ranch stockpond

Application. Conserve native species

Status: Tank reported dry in June 2006. Confirmed via fly-over, May 2007. See also Eschelle.

Survey of Gould's Turkeys near Huachuca Mountains

Arizona Game & Fish Department; John Millican;

Project: Estimate populations

Application: Track success of re-introduction effort

Status: Ongoing. Most recent survey - May, 2007. None seen. See also "Wild Turkeys at ARR, ARR staff projects."

Avian Monitoring for ARR IBA

Audubon staff: Tice Supplee, Aud AZ Director of Bird Conservation, L Kennedy, Director, C. Hass, Assistant

Director.

Project: Establish transects to monitor bird species on ARR Application: Support IBA nomination, examine longterm trends Status: Established transect on East Mesa, conducted survey 3X

Christmas Bird Count - Appleton-Whittell Circle

Audubon staff and volunteers

Subject: Conduct bird count as per Audubon standards.

Application: Pooled data yield important information re avian populations, movement and trends.

Status: First Sanctioned CBC on 12 23 2006 - 129 species.

Depth to Groundwater

Audubon staff and volunteers

Project: Monitor the depth to groundwater of the wells on ARR.

Application: This study helps establish a water consumption baseline for the Sonoita Valley.

Status: Ongoing, 10 wells monitored quarterly by volunteers,

Ecological Site Monitoring (ESM)

Audubon Staff: Linda Kennedy, Director

Project: Establish permanent points to monitor vegetation change. Based on Ecological Site Map (Robinett &

Breckenfeld)

Application: Identify trends in vegetation change

Status: 10 transects sampled in fall 2006. Currently ongoing for 2007.

Gould's Turkeys at ARR

Audubon Staff: Linda Kennedy, Director

Project: Record sightings of wild turkeys on AWRR.

Application: Document spread of sub-species reintroduced in Huachuca Mtsn.

Status: Ongoing. Two toms, at least 3 hens - late May, 2007. Participated in AZG&F field survey.

Inventory of Small Mammals on AWRR

Audubon Staff: Christine Hass, Assistant Director and volunteers.

Project: Document species of small mammals on AWRR

Application: Determine presence/absence of rodents, photos as vouchers.

Status: Periodic live-trapping, summer and fall, 2007.

Photo-herbarium

Audubon Staff: Linda Kennedy, Director

Project: Document life stages of plant species found on the Research Ranch. Application: Baseline information for future research; Aids identification.

Status: Ongoing, Potential to expand project into related area via outside funding source.

MAPS (Mapping Avian Productivity and Survivorship)

Audubon Staff: Christine Hass, Assistant Director

Project: MAPS station established under guidelines of continent-wide program to provide critical conservation and management information for populations of landbirds breeding within the United States and Canada. Post Canyon is one of over 500 stations. Birds are mist-netted, recorded, banded and released.

Application: Increases knowledge of landbirds breeding within the US and Canada

Status: Started fieldwork in May, 2007.

Tracking Carnivores with Remote Sensing Cameras

Audubon Staff: Christine Hass, Assistant Director Project: Detect and document species on Research Ranch.

Application: Determine patterns of movement, presence, identify individuals

Status: 2007: Camerus on site in O'Donnell, Clark (2), Post. Documented Ringtails for first time on ARR!

Do Exotic Invasive Plants Have Higher Productivity Than Natives?

Baker, Priscilla (Field leader), Alan Knapp (PI). Colorado State University. Project: Elucidate trends in relationship of native and invasive NPP and litter quality over range of herbaceous communities and ecosystems in West & Mid-west US.

Application: Predict which habitat types at risk of invasion.

Status: Ongoing. Plots established in July/August 2005. Conducted research in summer & fall 2006.

Response of rodents, birds, and vegetation to the Ryan Fire, Sonoita Valley, AZ -a unique opportunity to examine the ecological consequences of fire in grassland/savannas of the Arizona Borderlands

Bock, Carl, E., (University of Colorado), Linda J. Kennedy (Audubon)

Keywords: wildfire, Mearn's quail, grazing, biodiversity, exotic grasses

Application: Help land managers predict response of species to large scale rangeland fire

Status: 2007: Field work complete as per grant agreement, but Jones/Kennedy continuing to trap small mammals as populations have not stabilized (Fall 2006, Summer 2007). Several publications in print.

Distribution and Genetic Status of Slevin's Bunchgrass Lizard at the Appleton-Whittell Research Ranch

Bridgers, Nakiesha; Dr. Christian d'Orgeix. Virginia State University.

Project: Resurvey census area of Scoloporus slevini to determine rate of population recover at ARR. Obtain S. slevini tail tips to examine genetic material.

Application: Determine current status of bunchgrass lizards on Research Ranch. Status: Field work June-July 2007.

Assessing indicators of rangeland health with remote sensing

Buono, Jared L., Dr. Phil Heilman; USDA-ARS

Project: Quantify Lehmanns (Eragrostis lehmanniana) cover with remote sensing.

Application: "use remote sensing to perform landscape scale assessments of rangeland health with minimum amount of field data collection"

Keywords: Soil and site stability, hydrologic function, biotic integrity

Status: Field trip 4 15 2007 Using Sandy Loam Upland as reference area.

Using soil moisture to assess ecosystem function following exotic lovegrass invasion in semiarid grasslands of southeastern Arizona

Cross Anne F., Ph.D.; Alexander G. Fernald, Ph.D.

Project: Measure soil moisture under Plains lovegrass (Eragrostis intermedia), a native species, and Lehmann lovegrass (E. lehmanniana), an exotic species.

Application: Determine whether a semiarid grassland retains its functional integrity following the invasion of an introduced, exotic grass.

Status: Fernald has taken charge of project. Field work ongoing - Fall 2006.

Current Distribution and Status of Slevin's Bunchgrass Lizard, Sceloporus slevini, in southeastern Arizona d'Orgeix, Christian, Ph.D.; Virginia State University; Nakiesha D. Bridgers, Virginia State University

Project: Survey for bunchgrass lizard. Collect tissue for DNA analysis (tip of tail - no take) to compare intrapopulation and interpopulation genetic variance.

Application: foundation for determining genetic relatedness of different populations and effects of bottlenecks on populatio

Status: Field work June-July, 2007.

Survey of Appleton-Whittell Research Ranch Drainages and Ponds for the Mexican Garter Snake

d'Orgeix, Christian, Ph.D., Virginia State University

Project: Survey for presence of Mexican garter snakes on ARR (Telles tank, O'Donnell Canyon, Post Canyon), and conduct long-term study of population at Finley tank.

Application: Management implications for species of special concern (AZGF)

Status: Field work commenced, June-July 2007.

Microsatellite DNA survey of desert pupfish

Echelle, Anthony A., Oklahoma State University

Project: Assess genetic status of desert pupfish refugium populations and develop management protocols for exchange of genetic material among populations.

Application: A conservation genetics protocol will be developed for long-term maintenance of desert pupfish populations.

Status: Report/publications to come. Verbal communication from USFWS (April 2007): 1.D.d as Quitobaquito.

Finding effective strategies for adding native diversity into heavily invaded grasslands

Fehmi, J.S., Ph.D., University of Arizona

Project: Re-introduce native plants into areas dominated by naturalized, non-native plants

Application: Increase proportion of palatable native plants Status: Research ongoing. Periodic field assessments.

Introduction of Species Diversity into Boer Lovegrass Monocultures

Hershdorfer, Mary and Ramona Gardner, Ph.D., USDA-NRCS

Project: Determine effectiveness of various methods to increase native biodiversity into monoculture created by non-native loveerass.

Application: Protect native grasslands

Status: Established summer 2006, results monitored regularly.

Native Fish Restoration at O'Donnell Creek

Jakle, Marty, U.S. Fish and Wildlife Service

Project: Remove non-native, aggressive green sunfish from O'Donnell Creek to protect native species: Gila chub, Sonora (Gila) sucker, long-fin dace and Chiricahua leopard frog.

Application: Protect native species (listed, or of special concern)

Status: Reports from AZGF indicate a successful effort. Periodic Site surveys.

Meteorological Station

Keefer Tim, Hydrologist, USDA-ARS

Project: Station jointly owned by ARR & USDA

Application: Baseline information on climate available to researchers and land managers of reion

Status: Radio-linked to USDA computer in Tucson (see also Cross/Fernald).

DOE-Ameriflux QA/QC Site Comparison

Loescher, Oregon State University

Project: Enhance data quality and assurange of site instrumentation. Provide national standard toward existing measurements.

Application: Enhance long-term monitoring of climate and abiotic variables that may affect future populations. Status: On site, summer of 2007. Publication will be submitted to Nature.

RANGES

Marsett Robin, Dr. Sharon Biedenbender, Dr. Phil Heilman; USDA-ARS; Dr. Jaiguo Qi, Michigan State University.

Project: Developing the means to use remote sensing products using the Landsat TM imagery to assess production and degradation issues on rangeland.

Application: Land management, promotes pro-active measures to sustain rangeland health

Status: Initial project completed; Marsett continues to collect field data, as does Heilmann and Jerod Buono.

Species richness of southeastern Arizona grasslands and oak savannas at different scales

McLaughlin Steven P., Ph.D., University of Arizona, Janice E. Bowers.

Keywords: grassland, savanna, spatial scale, species richness

Project: Describe and evaluate patterns of species richness in grassland and oak savanna in southeastern Arizona

Application: Baseline information. comparison to other habitats

Status: Field trip, fall 2006. Report (AZ G & F) on file. Publication (Western North American Naturalist received) 2006.

Long-term meteorological, evaporation and carbon flux measurements

National Oceanic & Atmospheric Administration (NOAA); Tilden P. Meyers. Ph.D.,; John Hughes.

Subject: "Establish a Climate Reference Network site – to characterize the water and carbon balance for typical ecosystem for arid southwest grasslands.

Application: These data will be used to improve the current land use models for climate change."

Status: Site commissioned in 2004 and active. Data available at: http://www.ncdc.noaa.gov/oa/climate/uscrn (data/observation)

Pre-monsoon post-fire sediment survey

Nichols Mary, Ph.D., Hydraulic Engineer, USDA-ARS,

Subject: Survey several stock tanks on ARR to determine level of sediment movement after monsoon. Ground cover lost due to Ryan Wildfire.

Application: Predict one factor in rangeland health post fires.

Status: Surveyed, summer 2007.

Long-term wildlife monitoring using trained volunteers and track transects

Sky Island Alliance. Skroch Matt, Janice Przbyl;

Project: Identify at-risk landscape linkages and conduct long-term wildlife monitoring and data collection. Application: Guide local and international management decisions for linkage, core area, and species protection. Status: Field trips w/volunteers.

Long-term effects of fire on Cacti

Thomas, Peter, Keele University.

Project: Monitor the effect of fire on long-term population dynamics of small species of cacti.

Application: Explain irregular distribution of cacti in Arizona

Status: Resurveyed sites, October 2006.

Research and reintroduction effort for Huachuca Water Umbel Titus, Jonathan H., Ph.D., SUNY-Fredonia, Priscilla Titus.

Project: Transplant plugs and monitor success

Application: Protect listed species, aid in development of recovery plan for species.

Status: Monitored in 2006. Publication accepted. Expanded survey to include Babacomari Ranch.

Inventory of Native Plant-Feeding Insects that have Colonized Introduced African Lovegrasses (Eragrostis spp.) in Arizona

Wheeler, Alfred G, Ph.D., Clemson University, Clemson.

Project: Collect insects that feed on Eragrostis spp. and other grasses to identify species, and compare species composition with collections from NM, OK and TX.

Application: Baseline information on species occurrence and host plants

Status: Project expanded to cover additional plant taxa. Publications received & in prep; 3-4 species new to science. Plans annual trips. May & August 2007.

^{*} Does not include long-term or repeat projects unless field work was conducted within this time frame.

Publications Received Oct 1 2006 through Sept 30, 2007 Associated with the Appleton-Whittell Research Ranch National Audubon Society

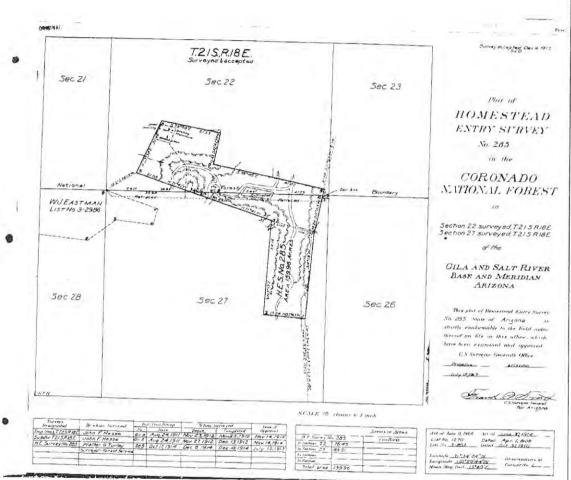
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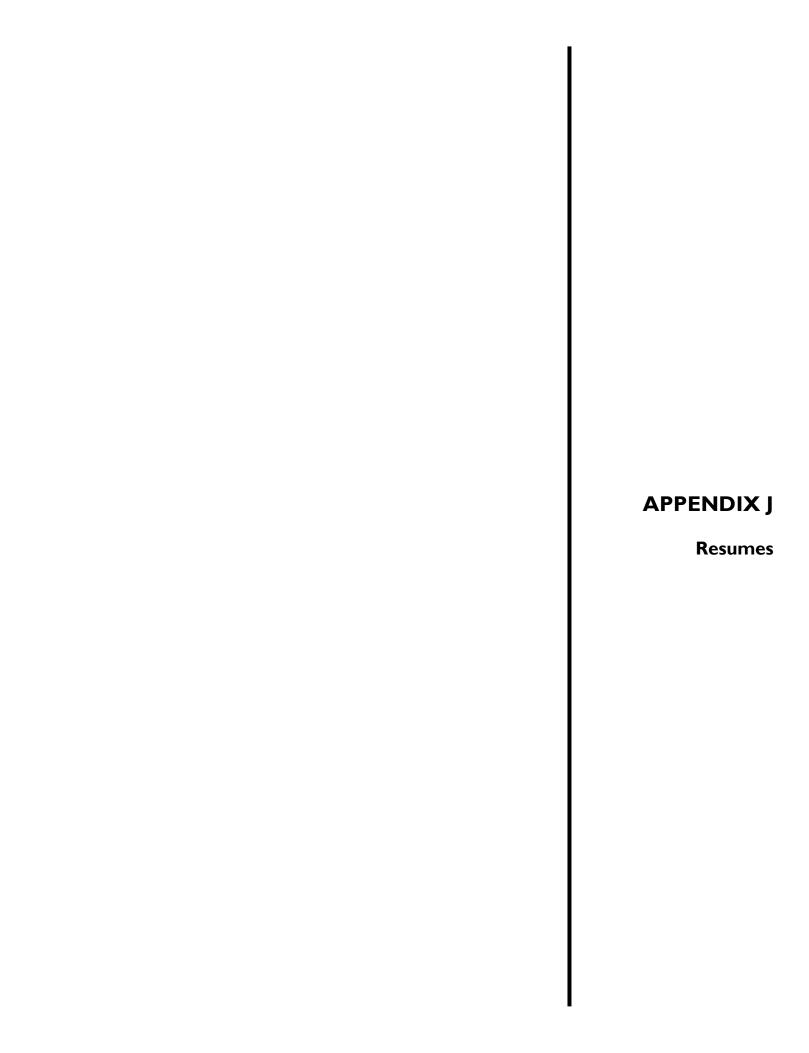
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Education:

- MBA, University of Arizona
- BS, Civil Engineering, University of Arizona

Special Expertise:

- Environmental Site Assessments
- Energy Efficiency Analysis
- Water System Modeling and Pipe Network Analysis
- Large Water System Master Planning
- Water Pumping Facility Design and Permitting
- Site Civil Engineering
- Well Design and Permitting
- Reservoir Design and Analysis
- Infrastructure Route Studies
- Potable/Reclaimed Water Main Extensions
- Water and Wastewater Treatment Design
- Reclaimed/Sewer System Planning
- Contract Preparation and Bidding Services
- Construction Administration
- Water System Training
- Loan and Grant Application Preparation

Registration / Certification:

- Arizona #22999, 1989
- California #44219, 1989
- Nevada #09281, 1991
- New Mexico #14546, 1999

Professional Affiliations:

- Board Member Citizen's Water Advisory Committee to the City of Tucson
- Finance Subcommittee Member Citizen's Water Advisory Committee to the City of Tucson

Background:



Mark Taylor is an engineering Principal and one of WestLand's founders. He has over 30 years of experience in water resources and wastewater systems engineering, including the design of water and wastewater systems for large, multi-disciplinary public works projects, master-planned communities, private water company master planning/energy efficiency evaluation, and the mining industry. Mark is responsible for the development of water system master plans; water policy, energy efficiency studies, well, reservoir, booster station, and transmission main design; water treatment design; and the assessment of rates and development impact fees for private and municipal clients. He is also experienced with wastewater master plan preparation, energy efficiency and feasibility studies, system modeling and simulation, and capacity analyses. Mark has

provided training and presentations on water and wastewater system and energy efficiency topics in numerous forums. Mark acts as the Environmental Professional in overseeing and certifying Phase I Environmental Site Assessments (ESAs) for WestLand. He meets the education, training, and experience requirements as set forth in the All Appropriate Inquiry Rule (40 CFR §312.10(b)).

Mr. Taylor has conducted and certified numerous Phase I Environmental Site Assessments at various locations in Arizona for the past 12 years. Sites have included rural ranchlands, neighborhood areas, health centers, automotive and other commercial sites, transportation corridors, and industrial and mine properties. Experience includes site reconnaissance and characterization, environmental record sources review, personal interviews, identification of potential contaminate migration, and historical review in determination of potential recognized environmental conditions. Mr. Taylor has acted as the principal reviewer for technical reports.



Selected Experience:

Sahuarita Water Arsenic Treatment. *Principle in Charge* of the design and project coordination to construct an arsenic treatment facility for Sahuarita Water Company. The new 2,000 gpm adsorption arsenic treatment facility utilized a newly manufactured regenerable adsorptive media which meets both NSF and ADEQ requirements. Extensive coordination was required with many design professionals, water company staff, vendors, contractors, and regulators to accomplish this task. This facility will be the first adsorptive plant to implement the regenerable media and pilot testing was conducted to verify the overall performance against existing disposable media. Deliverables included a treatment system option evaluation, design report, an opinion of probable construction cost, and final plans and specifications. The facility was designed to be expandable for future needs. WestLand also provided construction bidding services for this project.

Las Quintas Serenas Water Company Arsenic Treatment and Well Site Upgrades; Green Valley, Arizona; Las Quintas Serenas Water Company. *Principal in Charge* of the design of arsenic treatment and water plant upgrades for Well Nos. 6 and 7. These included an iron media adsorption arsenic treatment system, a 400,000-gallon storage tank, and a 1,250-gpm variable-frequency-drive (VFD) transfer booster station. A new 2,500-lineal foot, 8-inch dedicated transmission water main was designed to connect Well No. 7 to the Well No. 6 site. Raw water from either or both wells is treated through the arsenic system at the Well No. 6 site, sent to fill the new tank, and pumped via the transfer booster station into the distribution system. Services provided by WestLand included site layout and grading; site piping and valving layout and sizing; preparation of booster pump and motor design specifications; and hydropneumatic tank design and associated equipment. WestLand prepared the design report, final plans and specifications, and engineer's opinion of probable construction cost.

Town of Oro Valley Potable Water Master Plan; Oro Valley, Arizona; Town of Oro Valley Water Utility. *Principal in Charge* of the development of a water system master plan whose scope was divided into four tasks. Task 1 consisted of public outreach and coordination with the Town, during which WestLand maintained a complete file of all correspondence, agendas, meeting minutes, memoranda, and data throughout the duration of the project. Task 2 involved the development of a project scope and approach, including the definition of key issues such as the geographic boundaries of the service area, the planning horizon, and the long-term goals of the water utility. Task 3 was the synthesis of the regulatory requirements and restraints, and the incorporation of these regulatory components into the design approach for the master plan. Task 4 consisted of the identification of the infrastructure required to correct existing system deficiencies and a determination of the future infrastructure required to support development within the ultimate Town service area.

City of Nogales Arsenic Treatment City of Nogales Utilities Department. *Principal in Charge* of the development of design criteria for arsenic treatment at the Meadow Hills Wells Nos. 1 and 3 and Coronado Well No. 1. The Meadow Hills wells pump directly into the water distribution system and fill the existing City of Nogales North Zone storage tank, while the Coronado well pumps to the existing High School storage tank located in the City of Nogales Downtown Pressure Zone. All three wells required arsenic treatment in order to meet the new EPA arsenic standard. Arsenic treatment consisted of a dual-vessel iron-media adsorption system located at each well site.

Northwest CAP Delivery System Preliminary Route Evaluation and Analysis; Northwestern Pima County; Northwest Water Providers. *Principal in Charge*. For over a decade, the Flowing Wells Irrigation District, Metropolitan Domestic Water Improvement District, Town of Marana, and Town of Oro Valley have worked collaboratively to develop a sustainable water supply for their customers. This effort has evolved over time to focus on the establishment of a water delivery system to deliver Central Arizona Project water to northwestern Pima County. As part of this effort, Mr. Taylor served as Principal-in-Charge of the development of a route analysis for the delivery system that would allow for the direct use of CAP water by each partner. The project consisted of three planning/engineering tasks: Task 1 – preliminary route evaluation, screening, and route evaluation matrix preparation; Task 2 – technical evaluation of alternative routes; and Task 3 – final route evaluation. Five potentially feasible routes were reviewed during the preliminary evaluation and screening process, two of which were identified for more detailed study.



Community Water Wells Nos. 10 and 11 Reservoir, Arsenic Treatment, Booster Station, and Transmission Main; Green Valley, Arizona; Community Water of Green Valley. *Principal in Charge* of the design of Community Water Well Nos. 10 and 11 sites, including arsenic treatment facilities, new 300,000-gallon forebay reservoirs, and booster pump stations. The new wells were designed to pump through a Layne Christensen coagulation filtration arsenic treatment process into onsite forebay reservoir. The reservoirs provide treated source water to booster stations that pump through dedicated well transmission mains to fill the Community Water Reservoirs No. 2 and No. 3. WestLand prepared the design report, final plans and specifications, and engineer's opinion of probable construction cost. Services provided by WestLand included site layout and grading; site piping and valving layout and sizing; preparation of well pump, column, and motor design specifications; and hydropneumatic tank design and associated equipment. In addition, several miles of 16-inch water main were designed to transport treated potable water to the Community Water reservoirs.

Red Rock Water Plant No. 1 Nitrate Treatment Plant; Pinal County, Arizona; Red Rock Utilities, LLC. Principal in Charge of the design of a nitrate treatment facility to mitigate the tested nitrate concentration of 10 to 12 parts per million at Water Plant No. 1. (The current primary maximum nitrate concentration limit is 10 ppm.) The treatment facility was installed at the discharge of the existing wellhead to treat half the full flow of 800 gpm to an approximate final mixed (half treated, half bypassed) nitrate concentration of 8 ppm. The facility consists of four steel filtration vessels that contain a chloride form of anion exchange resin media. Nitrate ions are exchanged onto the media releasing chloride ions resulting in a reduced nitrate concentration in the treated water. The media is then backwashed with a sodium chloride brine solution to remove the nitrate ions and replace them with fresh chloride ions. The spent brine backwash water is sent to a holding tank for continuous low-flow disposal to the public sewer system. The treated water is sent to an existing onsite forebay reservoir.

Freeport-McMoRan Sierrita, Groundwater Mitigation Project. *Principal in Charge*. WestLand prepared design plans and specifications for a groundwater mitigation project to intercept groundwater from the mine site and deliver it back to the plant site to implement best environmental management practices. The project consisted of the site and equipping design for 19 new groundwater wells, a 350,000-gallon open-top welded steel reservoir, a 10,500 gpm booster station, and 13.2 miles of 8- to 36-inch HDPE pipeline. The project also included medium voltage transmission, distribution, and switchgear design, instrumentation and control for wells and booster station sites, Operation and Maintenance Manual, surge analysis, detailed cost estimates, and environmental permitting. WestLand is providing bidding assistance and construction period services for shop drawing reviews.

Freeport-McMoRan Sierrita – SXEW Facility Filtration Plant. *Principal in Charge* of the design and project coordination to construct a filtration facility for the Freeport McMoran (FMI) solvent extraction and electro winning (SXEW) processing plant. The new filtration system consisted of two 10,000 gallon stainless steel filters to remove organics from the SXEW process effluent prior to further processing at the crystal plant. The process included a 290 gallons per minute (gpm) variable frequency drive (VFD) pump station pumping the pregnant liquor through the filtration plant to remove the organics from the system and backwash the organics to waste. The project included design of the pumping system, piping, valving, backwash system, control system, air-blower/scour system and structural design of slab and tanks.

Freeport-McMoRan Sierrita. Potable Water Wells, Booster Station, Reservoir and Arsenic Treatment Systems. *Principal in Charge* for scope of services included preparation of design documents and bidding and construction period services for the design of two new water plant sites, each of which included a new 2,500 gpm variable frequency drive, potable water wells, a coagulation-filtration arsenic treatment plant, 300,000-gallon forebay reservoir, and 2,500 gpm booster station. This project also included two miles of 16-inch transmission pipeline, including borings for interstate and wash crossings. WestLand also provided cultural resource surveys, native plant and environmental surveys, and mitigation.

Tonopah Desert Recharge Project – Recovery Wellfield and Treatment Plant. *Principal in Charge*. The Tonopah Desert Recharge Project (TDRP) is a facility owned by the Central Arizona Project (CAP) to recharge and bank Colorado River water into the west Salt River Valley Groundwater Basin. WestLand developed conceptual designs for a recovery



wellfield and arsenic/fluoride treatment plant to recover banked water from the aquifer and return it to the CAP canal. The project included the design of 9 wells with 2,750 gpm of flow each, which are to be constructed in 3 phases over 20 years as the project's recovery requirements increase. The arsenic/flouride treatment plant is also designed to ramp up its treatment capacity in phases as both the volume of water treated and the concentration of contaminants increase. Ultimately the wellfield is designed to recover 480,000 acre-feet of water over the life of the project. These designs, as well as capital costs and operations and maintenance costs, were presented in a report prepared for CAP. This project was completed in cooperation with CAP and Montgomery and Associates.

Red Rock Nitrate Treatment. *Principal in Charge* of the design and project coordination to construct an 800 gpm nitrate treatment plant. The nitrate treatment facility consists of steel filtration vessels which contain a chloride form of anion exchange resin media. The system is designed so that only enough of the stream is treated to meet the 8 mg/l nitrate goal by continuously testing the nitrate level in the blended water. The treated water is sent to an existing storage reservoir for distribution. Extensive coordination was required with many design professionals, water company staff, vendors, contractors, and regulators to accomplish this task.

University of Arizona Tech Park - Independent Audit of Drinking Water System 20-567. *Principal in Charge.* WestLand provided an audit/evaluation of the drinking water sampling plan and locations currently used by the Project. Recommendations for testing were made and new locations were suggested for some of the current sampling I.D. points to prevent any false readings or sampling of water that is outside of the responsibility of the Project facilities management.

Red Rock Utilities 208 Plan Amendment; Pinal County, Arizona; Red Rock Utilities, LLC. *Principal in Charge* of the development of a 208 Plan Amendment that addresses the sanitary sewage collection, treatment, and disposal needs of a 1,300-acre residential, commercial, and industrial-use project in southern Pinal County. The plan amendment describes the 20-year needs of the development, including existing water reclamation facilities and planned expansions and improvements; the types of permits needed, including NPDES, APP, and reuse; construction priorities and schedules for completion; implementability; financing measures; and public participation. Total buildout capacity for the planning area is estimated to be 7.35 million gpd, and to meet the growing needs of the development, a 1.5-million-gpd expansion is required to the current sequencing batch reactor water reclamation facility, followed by an additional 1.5-million-gpd expansion and the construction of at least one additional water reclamation facility. Generally, onsite gravity sewers will collect the sanitary sewage and convey that flow to an existing or proposed wastewater reclamation facility, although sewage lift stations and force mains may be necessary.

Town of Patagonia Wastewater Treatment Facility; Patagonia, Arizona; Town of Patagonia. *Principal in Charge* of assisting the Town of Patagonia in the replacement of its aging wastewater treatment plant with an extended aeration plant with a capacity of 120,000 gpd. The replacement plant was designed to handle anticipated growth within the service area and was constructed to treat an average of 110,000 gpd of effluent. Other facilities constructed as part of the design included an anoxic basin, two aeration basins, a new blower, a belt press for sludge processing, a new sewer lift station, and a new headworks with flow meter and screenings removal.



CHRISTOPHER E. RIFE, MS



Phase 1 ESA Specialist

Experience: 12+ Years

Education:

- MS, Environmental Policy and Management/University of Denver
- BA, Philosophy/Humboldt State University
- Additional Coursework in Hazardous Materials Management and Wetlands
 Science

BACKGROUND:

Mr. Rife is a Senior Project Manager in the Environmental Services Group. He specializes in regulatory compliance for environmental and engineering projects at industrial, commercial, residential, and transportation sites. His areas of expertise include water resources permitting, environmental resources plans and studies, and environmental site assessments. He has over 20 years of experience in federal and state environmental regulatory programs covering a broad range of business sectors. His Phase I Environmental Site Assessment (ESA) experience includes underground storage tank (UST) investigations, solid and hazardous waste, and health and safety audit services. He has over 12 years of experience conducting ESAs and has been responsible for ESA projects for more than 350 broad-ranging sites, including public, private, and industrial properties; solid waste facilities; mines; and he has conducted pilot-scale testing of remedial systems.

SELECTED EXPERIENCE:

Resolution Copper Mine Site; Superior, Arizona. Task Manager. Mr. Rife conducted Environmental Site Assessments and Ecological Overview studies for a set of private properties contemplated for purchase by the client in anticipation of a land exchange for targeted public lands. He visited the remote, rural sites to assess potential for environmental liabilities, compiled environmental setting information to combine with biological data from technical specialists, and authored reports. The land exchange was recently approved, and Mr. Rife provided technical review of updates to the original reports.

Vigneto Development; Benson, Arizona. Senior Technical Reviewer. Mr. Rife participated in site visits and provided senior technical review of a Phase I Environmental Site Assessment of 12,500 acres proposed for residential development in southern Arizona. The property is largely undeveloped, although portions are used for cattle ranching and it is crossed by electrical transmission lines and a buried natural gas pipeline, a highway, and an abandoned railroad line. No recognized environmental conditions were identified during the assessment.

Miami Mine; Miami, Arizona. Project Manager. Mr. Rife has completed several projects at this legacy copper mine in southern Arizona. He recently managed Phase I Environmental Site Assessments for two properties owned by the client and intended for divestment. One of the properties had been used by the Arizona National Guard as an armory administrative center, whereas the other was a company recreation site, including a drive-in movie theater. No recognized environmental conditions were identified at either property.

Hazardous Waste Sites; Confidential Client, United States. Task Manager. Mr. Rife was the principal internal reviewer of Phase I Environmental Site Assessment reports for 60 hazardous waste collection sites, transfer facilities, incinerators, and landfills on behalf of client bidding to purchase portfolio. The work included fast-track mobilization of field investigators from offices across the country; coordination of document review, reporting, and responding to client inquires; and strict confidentiality protocols. (Services provided at previous firm.)



Christopher E. Rife, page -2-

Newmire Smelter Site; Telluride, Colorado. Project Manager. Mr. Rife managed a permitting project for site remediation activities required under an agreement with the State of Colorado. Technical work included a biological evaluation, archaeological studies, jurisdictional delineation, and site revegetation design after closure. Mr. Rife was instrumental in redesigning engineering plans for the remediation effort to avoid impacts to Waters of the United States, thereby avoiding a requirement for authorization under the Clean Water Act Section 404 program.

Former Satralloy Site; Steubenville, Ohio. Project Manager. Mr. Rife is currently serving as permitting manager for a team conducting interim actions for a remedial investigation/feasibility study (RI/FS) of an abandoned chromium smelter site in eastern Ohio. Assignments have included environmental permitting support in regard to state and federal wetlands and waterways programs, and engineering support for infrastructure improvements to facilitate transportation to the site. Mr. Rife was responsible for environmental support activities, including compliance with the federal Clean Water Act Section 404 program and state isolated wetlands permit program. Federal- and state-jurisdictional wetlands and waterbodies are present and may be filled by future project actions. A preconstruction notification under the Section 404 Nationwide Permit 38, Cleanup of Toxic and Hazardous Waste, has been prepared and submitted to the U.S. Army Corps of Engineers to authorize placement of fill in waters of the United States for the remedial actions. The documentation included a jurisdictional delineation, biological evaluation, and cultural resources review. Mr. Rife's work has also supported an Ecological Risk Assessment conducted by others on the project team. Mr. Rife also oversaw transportation-engineering assignments, including railroad and bridge design, to allow heavy equipment and materials to be transported to and from the site for the RI/FS. (Transportation services provided at previous firm.)

Industrial Site Expansion; Cochise County, Arizona. Project Manager. Mr. Rife was responsible for preparing an Environmental and Social Impact Assessment for a substantive expansion of an industrial site in southeastern Arizona. The document allowed project reviewers—corporate decision-makers and financiers—to understand the potential impacts to environmental and social resources that may result from the project. The assessment was modeled after a National Environmental Policy Act Environmental Assessment, but was for internal use only. It relied upon existing environmental permitting and planning documents, supplemented by WestLand's research and site-specific studies of resources not previously addressed, such as traffic and visual impacts. Mr. Rife was responsible for scoping the assessment, conducting the existing report review, researching additional information, and writing the report.



DIANA L. SANDOVAL, MA



Senior Environmental Project Manager

Experience: 12+ Years

Education:

- MA, Land Use and Community Planning/Northern Arizona University With Distinction
- BSc, Regional Development/University of Arizona CumLaude
- ATSM Phase I and Phase II Environmental Site Assessments for Commercial Real Estate Workshop

Registration / Certification:

- Mine Safety and Health Administration Certification
- 90-hour Real Estate Pre-licensing

BACKGROUND:

Diana Sandoval is a senior environmental project manager with a master's degree in land use and community planning and 12 years of regulatory compliance and permitting services related to land use and transportation planning, distribution/ transmission power planning, renewable energy projects, mining expansions, and residential and commercial development. She offers clients coordinated and collaborative project leadership required to address multiple stakeholders. She has experience with both small- and large-scale projects involving federal, state and local requirements. Her expertise is in Phase I Environmental Site Assessments, Clean Water Act Permitting, Endangered Species Act compliance, National Environmental Policy Act documentation, Arizona State Land Department authorization and local riparian and zoning processes.

Ms. Sandoval has prepared numerous Phase I Environmental Site Assessments (ESAs) for various property types pursuant to American Society for Testing and Materials (ASTM) standards E1527-05, 1527-13 and E2247-08. She has also completed Preliminary Initial Site Assessments (PISAs) for public roadway projects prepared in accordance with Arizona Department of Transportation/Federal Highway Administration requirements and Environmental Assessment and Mitigation Reports (EAMRs). Ms. Sandoval has completed ASTM technical and professional training for Phase I and ILESAs.

SELECTED EXPERIENCE:

Environmental Compliance for University of Arizona Science and Technology Park (UA Tech Park), Pima County, Arizona. Provides on-call services for UA Tech Park addressing federal, state and local development project environmental clearances and risk reduction. Ms. Sandoval has documented compliance with CWA Section 404 under preliminary JD; obtained concurrence from the Corps of no-jurisdictional waters for the UA Tech Park property; oversaw cultural resource survey and data recovery in accordance with current archaeological standards in a manner that would conform to National Historic Preservation Act (NHPA) standards; completed biological evaluations, including surveys for listed plant species and surveys for the western burrowing owl; and prepared Phase I ESAs for prospective tenants within the Solar Zone. Ms. Sandoval has also assisted with development of formal environmental planning protocols and guidance for the UA Tech Park Master Plan. She has provided environmental documentation to support demonstration of NEPA project readiness for Department of Transportation grant applications.



UA Tech Park at Rita Road Phase I ESA. Conducted a Phase I ESA for approximately 780 acres including a former industrial manufacturing facility and recently a multi-tenant commercial office and limited production technology research facility, office spaces, laboratory spaces, undeveloped open space, and recreational facilities. Assessment included review of prior complex prior site assessments, tank farms, chemical storage and distribution areas, railroad spur, closed industrial wastewater system and monitoring wells.

Pinal Central Substation to the Tortolita Substation Transmission Line Project, Tucson Electric Power (TEP), Pinal County, Arizona. Project Manager. Managed environmental regulatory compliance for TEP transmission line project, which runs approximately 41 linear miles in Pinal County. Assisted TEP in addressing NEPA, National Historic Preservation Act, CWA, Endangered Species Act (ESA), migratory bird protection, Arizona Pollutant Discharge Elimination System, State Native Plant Preservation and more. Coordinated with various federal entities and land management agencies to obtain all agreements, required permits and compliance documentation; the transmission line will cross privately-owned lands, lands owned by the State of Arizona and managed by the Arizona State Land Department, federally owned lands managed by the Bureau of Reclamation and the San Carlos Irrigation Project, an agency of the Bureau of Indian Affairs. Ms. Sandoval obtained an Approved JD from the Corps regarding the absence of jurisdictional waters for the project, documented that project was not likely to not adversely impact federally protected species, coordinated with AGFD to conduct surveys for candidate species in anticipation of potential federal listing, addressed plant salvage considerations for protected native species including vegetation clearing projections, and addressed state and federal archeological clearance requirements. Presented methods and results at the Society for Ecological Restoration November 2014 annual conference for a project study that used remote sensing and predicted growth rates to assess saquaro conflict with the transmission lines over the next 20 years.

ADDITIONAL EXPERIENCE:

- Completed Phase I ESA for Pima County Community Development and Neighborhood Conservation Department for the Copper Vista I and II subdivisions to support compliance with the U.S. Department of Housing and Urban Development (HUD) Neighborhood Stabilization Program 2 requirements. Numerous environmental records were assessed pursuant to the findings of the government database records review including the Tucson International Airport Area (TIAA) superfund site.
- Prepared numerous Phase I ESA reports for the Pima County Department of Environmental Quality also
 considering non-scope items, classified as outside the standard practice including: potential asbestos-containing
 building materials, potential lead-based paint, health and safety concerns, high-voltage power lines, and
 ecological resources.
- Completed Phase I ESAs for linear transportation projects involving potential real estate transactions including the Town of Marana's project replacing the Ina Road bridge crossing over the Santa Cruz River and the Pima County's Department of Transportation's roadway improvement project along Tanque Verde Road between Catalina Highway and Houghton Road.
- Completed several PISAs in anticipation of ADOT funding including the Town of Marana's project to improve
 Tangerine Road between Interstate-10 and La Canada, a project crossing into multiple jurisdictions including
 Pima County and the Town of Oro Valley; and the Town of Sahuarita's project replacing the Pima Mine Road
 bridge crossing over the Santa Cruz River.
- Prepared Environmental Information Documentation (EID) and facilitated Environmental Protection Agency (EPA) review in accordance with Environmental Review Guide for Special Appropriations Grants for Pomerene Domestic Water Improvement District Drinking Water Quality Improvement Project.

Patrick A. Mette, PE Phase I ESA Specialist

Education:	Registration / Certification:		
MS, Environmental Engineering, University of Arizona	• Arizona #66736, 2018		
BS, Civil Engineering, University of Arizona			
Special Expertise:			
Water System Hydraulic Modeling	Preliminary Engineering Report & Grant Application		
Water Pumping Facility Design and Permitting	Preparation		
Well Design and Permitting	 Phase I Environmental Site Assessments (ESAs) 		
Water and Wastewater Treatment	Bentley WaterCAD		
Hazardous Wastes	AutoCAD Civil 3D		

Background:

Mr. Patrick Mette is a Civil and Environmental Engineer with experience in water system design, research, water treatment, construction inspections, Phase I ESAs, and non-profit engineering in developing communities. Mr. Mette performed as a field inspector for the Arizona Department of Transportation on several construction projects as an intern. He also worked as an undergraduate and graduate researcher at the University of Arizona for three years working on reverse osmosis, ion exchange, and solar membrane distillation projects in the lab and in the field, providing operation, analysis, design, and construction services. Mr. Mette spent nearly a year in the Andes Mountains of Bolivia working on rural water projects and providing training to Bolivian engineers on surveying, AutoCAD, and hydraulic modeling. While in school, Mr. Mette's coursework included water treatment, wastewater treatment, and hazardous waste management.

Since joining WestLand, Mr. Mette has worked on numerous projects designing booster stations and wells, analyzing water systems, developing hydraulic models, preparing preliminary engineering reports (PER), and developing cost estimates. He has also prepared technical memorandums on subjects ranging from "sewer pipe product comparisons" to "water system project prioritization". Mr. Mette has been working on Phase I ESAs with WestLand since 2016.

Selected Experience:

Phase I Environmental Site Assessment's in Cochise County; El Dorado Benson, LLC. *Engineering Technician*. WestLand assessed 4 properties and prepared 3 Phase I Environmental Site Assessments (ESA's) for El Dorado Benson, LLC.

Phase I Environmental Site Assessment for Montanas del Sol Property; Freeport McMoRan Sierrita Inc. *Engineering Technician.* WestLand assessed and prepared a Phase I Environmental Site Assessment (ESA) for FMI.

Phase I Environmental Site Assessment for Superior Airport Contiguous Parcels; Resolution Copper. *Engineering Technician.* WestLand assessed and prepared a Phase I Environmental Site Assessment (ESA) for Resolution Copper for a series of properties in Superior, Arizona.

Phase I Environmental Site Assessment for the Fairview Cemetery; Resolution Copper. *Engineering Technician*. WestLand assessed and prepared a Phase I Environmental Site Assessment (ESA) for Resolution Copper for a cemetery property in Superior, Arizona.

New Well and Water Main, BECC Funded Project; Whetstone Water Improvement District. *Project Manager.* WestLand is working with the Whetstone Water Improvement District (WWID) and the Border Environment Cooperation Commission (BECC) to fund four projects within the WWID water system that WestLand designed in order to address problems of insufficient system redundancy, declining well capacity, and aging infrastructure. WestLand coordinated with BECC to obtain funding for the design of the previously mentioned projects and is now working to obtain funding for their construction.



SAMANTHA BLONDER, MS



Environmental Specialist

Experience: 4 Years **Education:**

- MS, Environmental Science/Florida Gulf CoastUniversity
- BS, Biology/University of South Florida

Registration / Certification:

MSHA Certification

BACKGROUND:

Samantha Blonder is an Environmental Specialist with 4 years of experience gained while serving as a Research Assistant on projects for the Coastal Watershed Institute in Fort Myers, Florida, as an Argo Research Scientist for Heliae in Phoenix, Arizona, and as a Research Assistant-Team Lead while employed at Arizona State University. In 2016, Ms. Blonder served as a volunteer for Lead Adventures South America Galapagos Islands where she assisted in invasive species removal, cultural and environmental education outreach, and sustainable farming. In her role as an Environmental Specialist at WestLand, Ms. Blonder supports the environmental team working a wide variety of water focused projects with special expertise in: Endangered Species Act (ESA); National Environmental Policy Act (NEPA); Clean Water Act (CWA); Conservation Plans; Field Work; Data Collection and Data Entry; and Water Quality Collection and Analysis.

SELECTED EXPERIENCE:

Harquahala Valley Water Project Environmental Assessment. Environmental Specialist. WestLand Resources was hired by HVWP Management LLC to prepare an Environmental Assessment (EA) for the Harquahala Valley Water Project. The HVWP proposes to develop infrastructure required to pump groundwater from the Harquahala Irrigation Non-Expansion Area and to convey the pumped groundwater to the Central Arizona Project (CAP Canal). This project includes public scoping, an administrative draft of the EA, a draft EA for public comment, and a final EA.

Oro Valley Water Utility Northwest Recharge, Recovery and Delivery System (NWRRDS) Design. Environmental Specialist. The WestLand Resources and Carollo Engineering team was hired by the Town of Oro Valley for the design of the NWRRDS project. The team is providing design services for approximately 6-miles of transmission pipeline. Additionally, the team is designing the distribution main connections downstream of the proposed booster at Shannon into existing Oro Valley Water Utility distribution mains at Naranja and Tangerine Road.

Resolution Copper, LEX Phase I ESA Updates. Environmental Specialist. WestLand was contracted to conducted Phase I Environmental Site Assessments (ESAs) for a set of properties considered in the Resolution Project Land Exchange between Resolution Copper and two federal land management agencies. Work on this project includes environmental agency records review, interviews with persons familiar with the sites, site reconnaissance, and report preparation.