

**A HISTORY OF THE LANDS IN THE NATIONAL AUDUBON SOCIETY'S
RESEARCH RANCH
NEAR ELGIN, IN SANTA CRUZ COUNTY, ARIZONA**

By

GLENDON E. COLLINS

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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 SE¼NW¼ of Section 23, and a 320 acre parcel, the E ½ 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 27 and 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, hasre-conveyed 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 Appleton 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 non-grazing 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

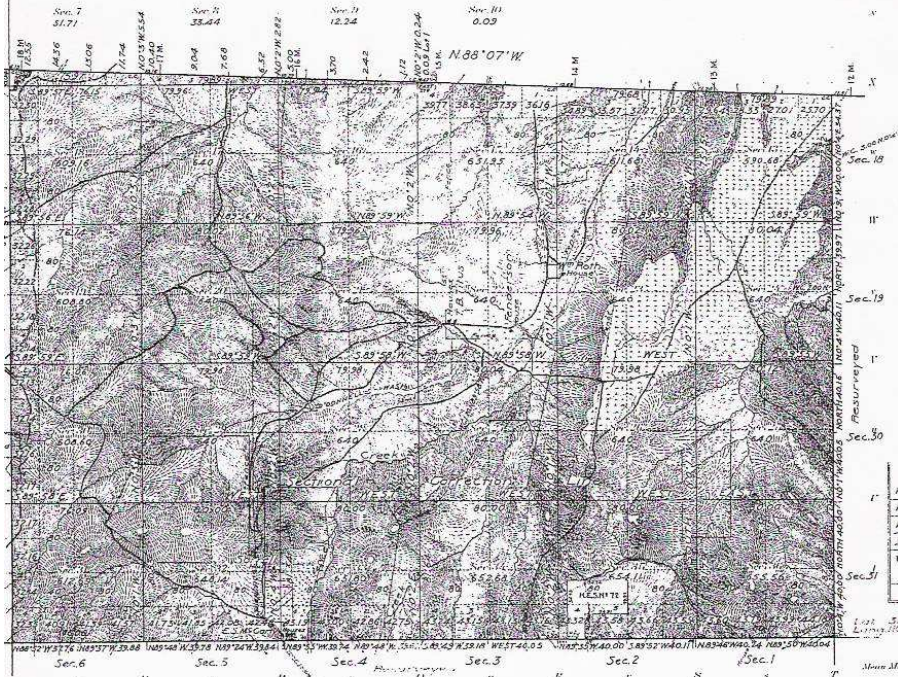
The Research Ranch provides a valuable ecosystem research component to the management of Las Cienegas National Conservation Area (NCA). The Research Ranch has nearly 40 years of research data and analyses of the impacts of livestock grazing on a 8000 acre block of private, BLM and National Forest lands 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

- Attachment 1** Survey Plat of Fractional Township 21 South, Range 18 East
- Attachment 2** Map Showing the Boundaries of the Appleton-Whittell
Research 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** Warranty 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

SAN IGNACIO DEL BABOCOMARI GRANT

OFFICIALLY FILED 7-30-1915



Areas in Acres	
Public Land	15,313.33
Indian Reservation	
Indian Allotments	
Mineral Claims	
Water Surface	
Total Area	15,313.33

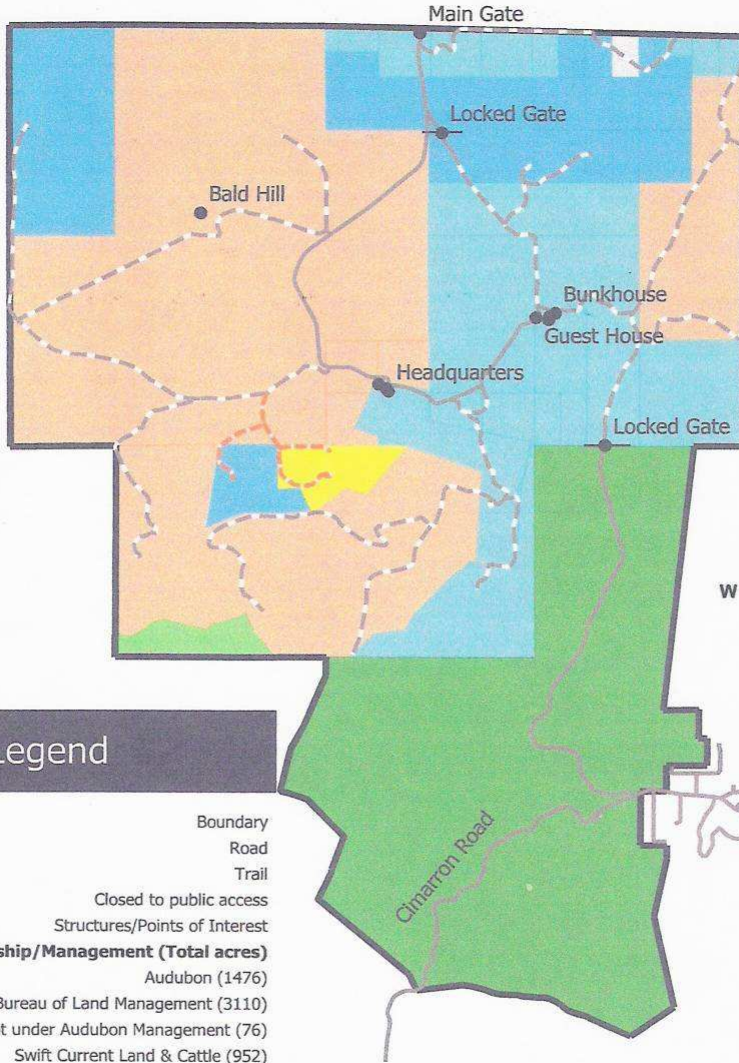
By Whom Surveyed	Group	Amount of Survey	When Surveyed
John F. Mease	5	South W 1/4 Sec. 100 by	December 19, 1912
		Complete	November 22-25, 1912
			Nov. 27, Dec. 13, 1912
Philip Conzen	22	12 M to 19 M	July 27, 28, 1902

Fractional
 The above map of Township No. 21 South Range No. 18 East of the Gila and Salt River Meridian Arizona is strictly conformable to the field notes of the survey thereof on file in this office, which have been examined and approved
 U.S. Surveyor General's Office.
 Phoenix, Arizona, November 14, 1914
 Surveyor General



Audubon

Appleton-Whittell Research Ranch Attachment 2



Legend

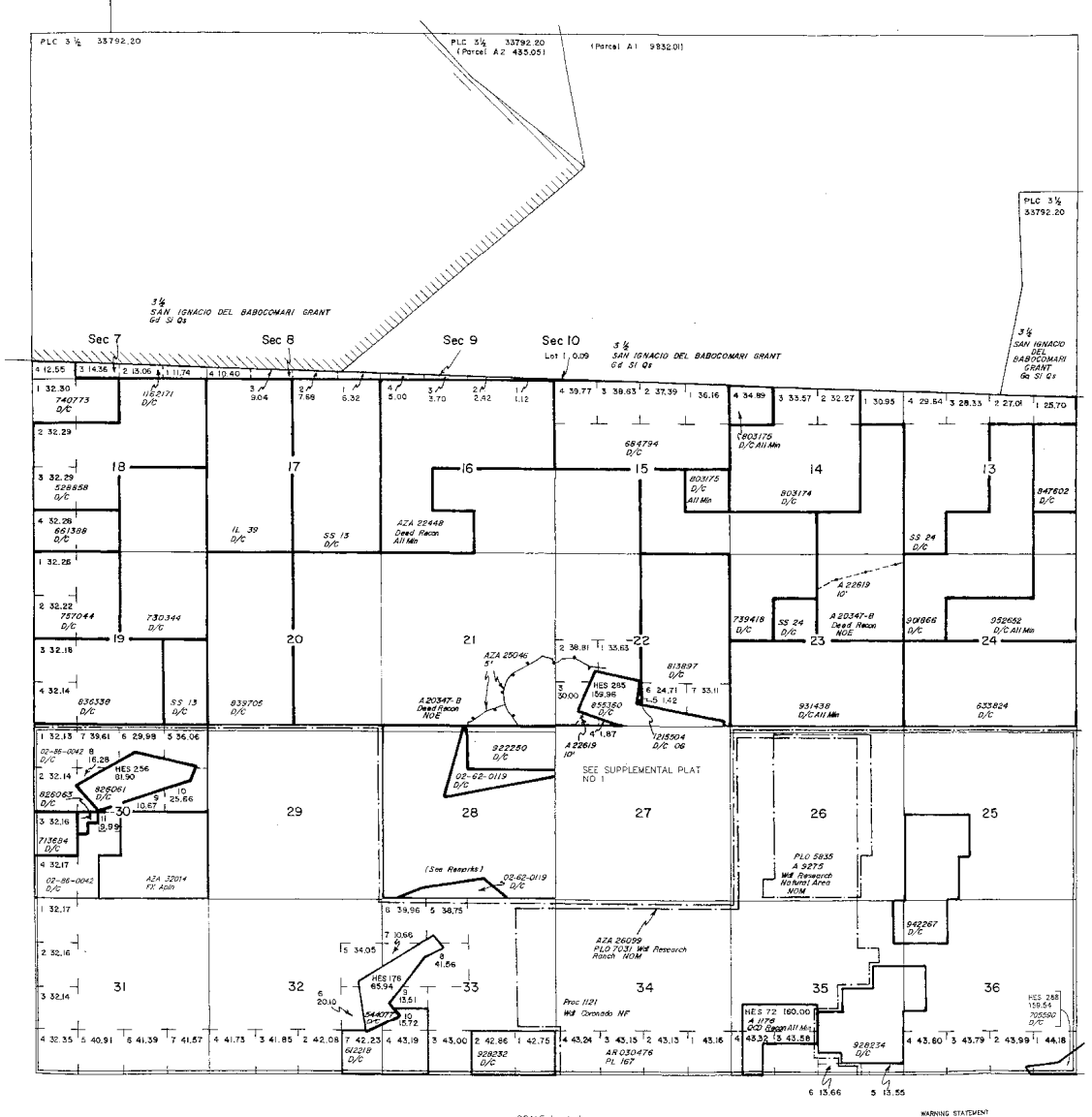
- Boundary
 - Road
 - Trail
 - Closed to public access
 - Structures/Points of Interest
- Land Ownership/Management (Total acres)**
- Audubon (1476)
 - Bureau of Land Management (3110)
 - Not under Audubon Management (76)
 - Swift Current Land & Cattle (952)
 - The Nature Conservancy (67)
 - The Research Ranch Foundation (17)
 - U.S. Forest Service (2130)

Appleton-Whittell Research Ranch
 National Audubon Society
 HC 1 Box 44
 Elgin, AZ 85611
 520-455-5522
www.audubonresearchranch.org/

Land ownership as of February 1, 2008.

2/15/2008CH

Attachment 3
 PARTIALLY SURVEYED TOWNSHIP 21 SOUTH RANGE 18 EAST OF THE GILA AND SALT RIVERS
 SANTA CRUZ COUNTY



SCALE in inches
 10 5 0 10 20 30 40

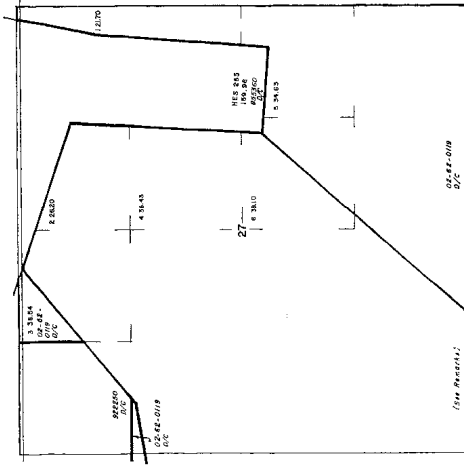
WARNING STATEMENT
 This plat is the Bureau's Form of Title, and should be used only as a graphic display of the township survey data. Records herein do not release the charges which may have been affected by lateral movements of rock or other bodies of water. Refer to the concrete drawings for official survey information.

TOWNSHIP 21 SOUTH RANGE 18 EAST OF THE GILA AND SALT RIVER MERIDIAN, ARIZONA

SANTA CRUZ COUNTY

STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES

MTP
SUPPL SEC 27



INDEX TO SEGREGATED TRACTS

TRACT NO.	T	R	S	SECTION
1	18	E	21	27
2	18	E	21	27
3	18	E	21	27
4	18	E	21	27
5	18	E	21	27
6	18	E	21	27
7	18	E	21	27
8	18	E	21	27
9	18	E	21	27
10	18	E	21	27
11	18	E	21	27
12	18	E	21	27
13	18	E	21	27
14	18	E	21	27
15	18	E	21	27
16	18	E	21	27
17	18	E	21	27
18	18	E	21	27
19	18	E	21	27
20	18	E	21	27
21	18	E	21	27
22	18	E	21	27
23	18	E	21	27
24	18	E	21	27
25	18	E	21	27
26	18	E	21	27
27	18	E	21	27

FOR ORDERS RELATING HERETO, OR FOR INFORMATION CONCERNING THE STATUS OF PUBLIC DOMAIN LAND AND MINERAL TITLES, REFER TO THE RECORDS OF THE COUNTY CLERK OF SANTA CRUZ COUNTY, ARIZONA, AT THE COUNTY CLERK'S OFFICE, 100 WEST WASHINGTON STREET, TUCSON, ARIZONA 85701.

PRODUCTION NUMBER: MTP SUPPL SEC 27

DATE: NOV 27 2018

BY: [Signature]

STATE OF ARIZONA: [Signature]

COUNTY CLERK: [Signature]

NO 7

CONSENT TO: _____

F. 21.5

R. 18

SCALE: 1" = 400'

1" = 400'

0 100 200 300 400 500

Survey accepted Dec 4, 1912

Plat of
**HOMESTEAD
ENTRY SURVEY**
No. 285
in the
**CORONADO
NATIONAL FOREST**

Section 22 surveyed T21S, R18E
Section 27 surveyed T21S, R18E
of the

**GILA AND SALT RIVER
BASE AND MERIDIAN
ARIZONA**

This plat of Homestead Entry Survey
No. 285 State of Arizona is
strictly conformable to the field notes
thereof on file in this office, which
have been examined and approved.

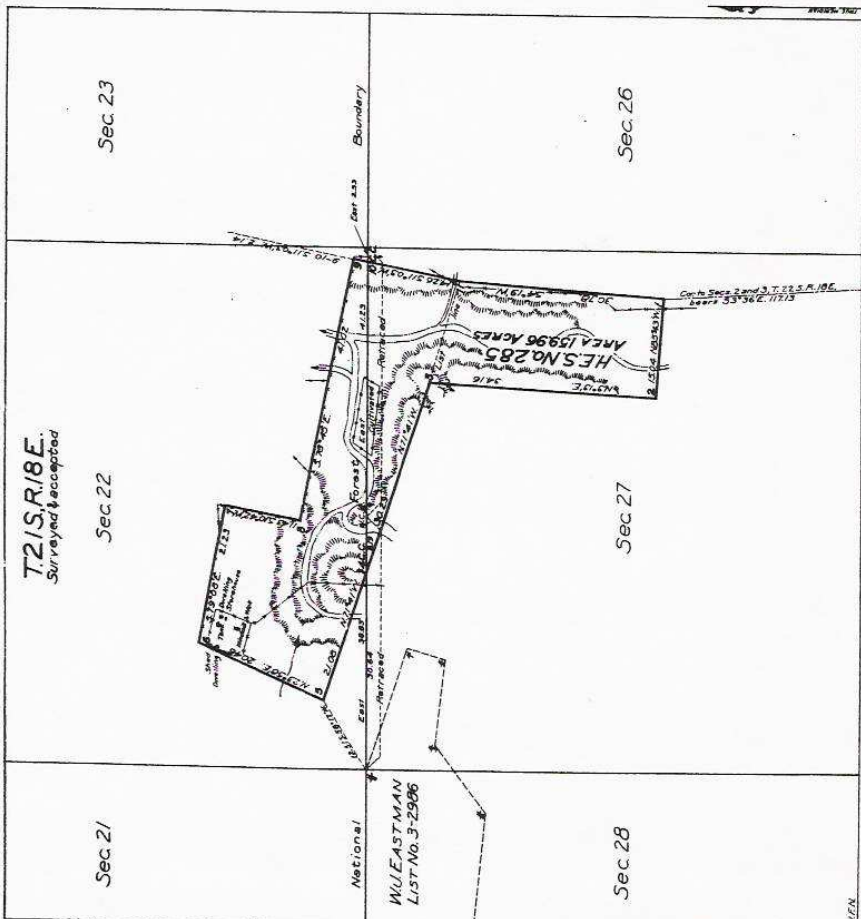
U.S. Surveyor General's Office

Phoenix Arizona

July 12, 1912

[Signature]
U.S. Surveyor General
for Arizona

Act of June 11, 1906	Act of June 30, 1914
List No. 12, 190	Revised List No. 1, 1908
Dist. No. 13, 1902	Dist. No. 1, 1902
Latitude 31° 54' 24" N.	Observations at
Longitude 109° 23' 44" W.	Corner No. 1
Mean Mag. Dev. 21' 30" E.	



SCALE 10 chains to 1 inch.

Areas in Acres	
H. S. Survey No. 285	
In Section 22	76.45
In Section 27	83.51
In Section	
Total area	159.96

Surveyor	By whom Surveyed	Inst. Cont. Camp	When Surveyed	When Completed	Date of Approval
T21S, R18E	W. F. Hester	No. 1	Nov. 23, 1912	Nov. 25, 1912	Nov. 14, 1914
Subdiv. T21S, R18E	W. F. Hester	No. 1	Nov. 23, 1912	Nov. 25, 1912	Nov. 14, 1914
H. S. Survey No. 285	W. F. Hester	No. 1	Nov. 23, 1912	Nov. 25, 1912	Nov. 14, 1914
	W. F. Hester	No. 1	Nov. 23, 1912	Nov. 25, 1912	Nov. 14, 1914
	W. F. Hester	No. 1	Nov. 23, 1912	Nov. 25, 1912	Nov. 14, 1914

M.F.N.

Phoenix 028542

4-1008-R.

The United States of America,

On all its future 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 Act 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 Guthbert Penderon 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, Arizona, containing two hundred ninety-seven and eighty-two-hundredths acres,

according to the Official Plat of the Survey of the said Land, returned to the GENERAL LAND OFFICE by the Surveyor-General:

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 appurtenances thereof, unto the said claimant and to the heirs 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.

This patent is issued in lieu of Patent No. 529791, dated May 19, 1916, which has been canceled.

IN TESTIMONY WHEREOF, I, Warren 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: Warren G. Harding

By: M. P. LeRoy, Secretary

J. P. Samsar, Recorder of the General Land Office.

RECORD OF PATENTS: Patent Number 813897

Phoenix 0279 and 014798

4-1047-R.

The United States of America,

To 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 Act of Congress of May 20, 1862, "To Secure homesteads to Actual Settlers on the Public Domain," and the acts supplemental thereto, the claim of Thaddeus B. Titus, has been established and duly consummated, in conformity to law, for the H. E. Survey No. 285, embracing a portion of, Sections twenty-two and twenty-seven in Township twenty-one south of Range eighteen east of the Gila and Salt River Meridian, Arizona, more particularly bounded 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 east thirty-four and sixteen-hundredths chains to corner No. 3; thence, north seventy-one degrees forty-one 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 eight minutes east twenty-one and twenty-three-hundredths chains to corner No. 7; thence, south ten degrees forty-two minutes west eleven and forty-three-hundredths chains to corner No. 8; thence, south seventy-eight degrees forty-five 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 Number855360

thence, south four degrees nineteen minutes west thirty and seventy-eight-hundredths chains to corner No. 1, the place of beginning, containing one hundred fifty-nine and ninety-six-hundredths acres, according to the Official Plat of the Survey of the said Land, returned to the General Land Office by the Surveyor General:

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 appurtenances thereof, unto the said claimant and to the heirs 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, Warren 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 TWENTIETH

(SEAL)

day of MARCH in the year of our Lord one thousand nine hundred and TWENTY-TWO and of the Independence of the United States the one hundred and FORTY-SIXTH.

By the President

By

Warren G. Harding
Uta P. Pugh
John O. Colwell

Secretary,

Acting

Recorder of the General Land Office.

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	
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	
Disabled Miners Trust	100,000
Normal Schools Trust	50,000
Charitable, Penal and	
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	<u>1,000,000</u>
Total	10,750,000

*Approximate

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.

1. 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.

3. Quantity Grant Selections - The State selected the specified acreage of Federal lands for the County bond and each of the individual institutional Trusts.

4. 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.

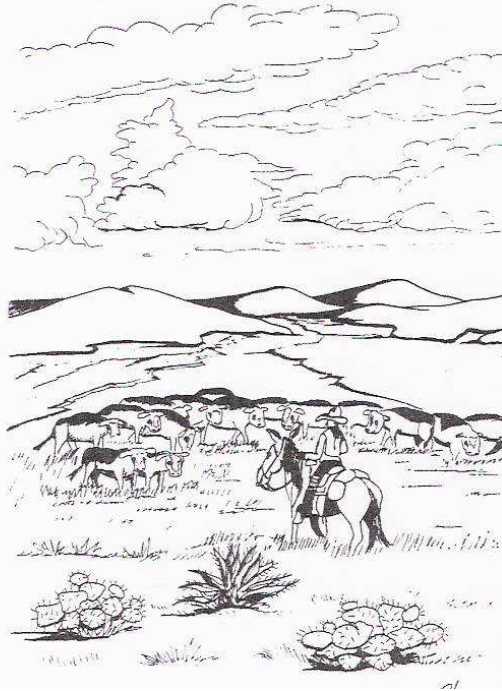
In the 78 years since Statehood, about 1.2 million acres of Trust lands have been disposed of, but a total Trust land acreage of 9,471,207 acres remain. Almost all of the lands are under one or more leases for natural resources uses and commercial

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.



State of Arizona



PATENT NO. 2688

For Lands (School, Institutional or University)

TO ALL UNTO WHOM THESE PRESENTS SHALL COME, GREETING:

Whereas WILLARD T. ROATH (a married man) of the County of SANTA CRUZ and State of ARIZONA in accordance with the provisions of the laws of the State of Arizona, approved and in force at the time of the purchase of the land herein designated and described, and at the time of the execution of this conveyance, has made full payment as appears from the records of the State Land Department of the State of Arizona of and for the following described real estate, lying and situate in the County of SANTA CRUZ and State of Arizona, to-wit:

THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER (SQUARED) SECTION 23 TOWNSHIP 21 SOUTH RANGE 18 EAST 1ST G. A. S. E. B. & M., EXCEPTING AND RESERVING INTO THE UNITED STATES RIGHTS OF WAY FOR DITCHES AND CANALS CONSTRUCTED BY THEIR AUTHORITY SUBJECT TO ALL VALID AND EXISTING RIGHTS, RIGHTS OF WAY OR OTHER EASEMENTS.

containing 40.00 acres, more or less, which said described land has been purchased by the said WILLARD T. ROATH he having made payment in full to the State of Arizona of all purchase money and such interest as may have been due therefor.

NOW, KNOW YE, That the State of Arizona in consideration of the premises, and in conformity with the laws of the State of Arizona, has sold and granted, and by these presents does sell and grant unto the said WILLARD T. ROATH and to HIS heirs and assigns the said land above described: TO HAVE AND TO HOLD the same as above specified, together with all the rights, privileges, immunities and appurtenances of whatsoever nature hereunto belonging unto the said WILLARD T. ROATH (a married man) and to HIS heirs and assigns forever.

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 Testimony Whereof, I, SIDNEY P. OSBORN 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 hereunto attached.

Given under my hand at the City of Phoenix, Arizona, this 17th day of FEBRUARY A. D. 1943

Sidney P. Osborn Governor of the State of Arizona
Attest: Secretary of State of the State of Arizona

Arizona 030255

4-1040
(October 1966)**The United States of America,**

To all to whom these presents shall come, Greeting:

WHEREAS, Frank Appleton, being the owner of a certain tract of land situated and included within the limits of the Kaibab National Forest, Arizona, has, under the provisions of the Act approved March 20, 1922 (42 Stat. 465), entitled "An Act to 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 lieu thereof the following described tract of land:

Gila and Salt River Meridian, Arizona.

T. 21 S., R. 18 E.,

Sec. 27, Lots 1, 2, 3, 4, 5, and 6,
S½NW¼, SW¼, S½SE¼;

Sec. 28, S½NE¼, NW¼, S½.

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:

NOW 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 heirs, the tract above described; TO HAVE AND TO HOLD the same, together with all the rights, privileges, immunities, and appurtenances, 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 District of Columbia~~ **PHOENIX, ARIZONA**, the **TWELFTH** day of **JUNE** in the year of our Lord one thousand nine hundred and **SIXTY-TWO** and of the Independence of the United States the one hundred and **EIGHTY-SIXTH**.

[SEAL]

For the Director, Bureau of Land Management.

By *Roy T. Helmsdeller*Special Agent in Charge
PHOENIX, ARIZONA Land OfficePatent 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 8, 1989, the Office of Management and Budget (OMB) waived table 2 and table 3 SIP revisions (54 FR 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 it rules on EPA's request. This request continues in effect under Executive Order 12866 which superseded Executive Order 12291 on September 30, 1993.

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 petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review, nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 81

Environmental protection, Air pollution control, National parks, Wilderness areas.

Dated: March 1, 1994.
Dennis Grams,
Regional Administrator.

Part 81, chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 81—[AMENDED]

1. The authority citation for part 81 continues to read as follows:

Authority: 42 U.S.C. 7601-7672q.

2. Section 81.316 is amended by revising the "low-SO₂" table to read as follows:

§ 81.316 low.
* * *

IOWA—SO

Designated area	Does not meet primary standards	Does not meet secondary standards	Cannot be classified	Better than national standards
Muscatine County: Area within T 77 N, R 2 W, sections 28, 27, 34, 35; and T 76 N, R 2 W, sections 2, 3, 10, 11, 14, 15, 22, 27, 28, 33, 34	x			
Remainder of county				x
Remainder of state				x

[FR Doc. 94-5626 Filed 3-9-94; 8 15 am]
BILLING CODE 4301-08-P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Public Land Order 7631

[AZ-803-4210-08; AZA-20000, AZA-30000, AZA-30000]

Withdrawal of National Forest System Lands for a Recreation Complex, an Administrative Site, and a Research Ranch; AZ

AGENCY: Bureau of Land Management, Interior.

ACTION: Public land order.

SUMMARY: This order withdraws 3,117.77 acres of National Forest System lands from mining for 20 years to protect significant capital improvements and recreational and research values associated with the Parker Canyon Lake Recreation Complex, the Carr Barn Administrative Site and the Research

Ranch. The lands have been and will remain open to mineral leasing and surface uses authorized by the Forest Service.

EFFECTIVE DATE: March 10, 1994.

FOR FURTHER INFORMATION CONTACT: John Mezes, BLM Arizona State Office, P.O. Box 16563, Phoenix, Arizona 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:

1. Subject to valid existing rights, the following described National Forest 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 under 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 Ranch:

Gila and Salt River Meridian

Coronado National Forest

Research Ranch

- T. 21 S., R. 18 E.,
Sec. 28, W $\frac{1}{2}$ W, and W $\frac{1}{2}$ E $\frac{1}{2}$ W;
Sec. 33, E $\frac{1}{2}$ N $\frac{1}{2}$ W, and NE $\frac{1}{4}$ SE $\frac{1}{4}$ W;
Sec. 34;
Sec. 35, lot 6, W $\frac{1}{2}$ W, W $\frac{1}{2}$ N $\frac{1}{2}$ W,
NW $\frac{1}{4}$ SE $\frac{1}{4}$ N $\frac{1}{2}$ W, W $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ N $\frac{1}{2}$ W,
NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ W, and
N $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ W.
- T. 22 S., R. 18 E.,
Sec. 2, lots 2, 3, and 4, N $\frac{1}{2}$ SW $\frac{1}{4}$ W,
NW $\frac{1}{4}$ SE $\frac{1}{4}$ W, SW $\frac{1}{4}$ N $\frac{1}{2}$ W, and S $\frac{1}{2}$ NW $\frac{1}{4}$ W;
Sec. 3, lots 1 to 4, inclusive, S $\frac{1}{2}$ N $\frac{1}{2}$ W,
N $\frac{1}{2}$ N $\frac{1}{2}$ SE $\frac{1}{4}$ W, and N $\frac{1}{2}$ N $\frac{1}{2}$ SW $\frac{1}{4}$ W;
Sec. 4, lot 5, and SE $\frac{1}{4}$ N $\frac{1}{2}$ W.

The areas described aggregate 2,442.04 acres in Santa 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, SW $\frac{1}{4}$ N $\frac{1}{2}$ W, E $\frac{1}{2}$ NW $\frac{1}{4}$ W,
W $\frac{1}{2}$ N $\frac{1}{2}$ SE $\frac{1}{4}$ W, W $\frac{1}{2}$ E $\frac{1}{2}$ N $\frac{1}{2}$ SE $\frac{1}{4}$ W, and that portion lying within Homestead Entry Survey 291;
Sec. 19, lots 1, 2, and 3, NE $\frac{1}{4}$ N $\frac{1}{2}$ W, and that portion lying within Homestead Entry Survey 291.

The area described contains 665.73 acres in Cochise County.

Carr Barn Administrative Site

T. 23 S., R. 21 E.,
Sec. 7, SE¼NE¼NW¼.

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 Land 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.

Bob Armstrong,

Assistant Secretary of the Interior.

[FR Doc. 94-5467 Filed 3-9-94; 8:45 am]

BILLING CODE 4310-25-P

43 CFR Public Land Order 7032

[AK-332-4210-00; F-00676]

Withdrawal of Public Land for Protection of the Paleolegion Site Known as Mesa 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 cultural resource integrity of the Paleolegion site known as Mesa Site.

EFFECTIVE DATE: March 10, 1994.

FOR FURTHER INFORMATION CONTACT:

Sue A. Wolf, BLM Alaska State Office, 222 W. 7th Avenue, No. 13, Anchorage, Alaska 99513-7500, 907-271-5477.

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), it is ordered as follows:

1. Subject to valid existing rights, the following described public land is hereby withdrawn from settlement, sale, location, or entry under the general land laws, including the United States mining laws (30 U.S.C. Ch. 2 (1988)),

but not from leasing under the mineral leasing laws, to protect a Paleolegion site:

Umial 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 alter the applicability of those public land laws governing the use of the land 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 Land 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.

Bob Armstrong,

Assistant Secretary of the Interior.

[FR Doc. 94-5466 Filed 3-9-94; 8:45 am]

BILLING CODE 4310-25-P

43 CFR Public Land Order 7033

[AK-032-4210-00; F-030474]

Partial Revocation of Powersite Classification No. 443, as Modified, for Selection of Land by the State of Alaska; AK

AGENCY: Bureau of Land Management, Interior.

ACTION: Public land order.

SUMMARY: This order revokes a Powersite Classification, insofar as it effects approximately 25,834 acres of land withdrawn for power purposes at Teklenika 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 Denali National Park and Preserve pursuant to the Alaska National Interest Lands Conservation Act.

EFFECTIVE DATE: March 10, 1994.

FOR FURTHER INFORMATION CONTACT:

Sue A. Wolf, BLM Alaska State Office, 222 W. 7th Avenue, No. 13, Anchorage, Alaska 99513-7500, 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 Act 43 U.S.C. 1616(d)(1)(1988), it is ordered as follows:

1. Powersite Classification No. 443, as modified, which withdrew land for power purposes in the Teklenika River area, is hereby revoked insofar as it affects the following described land:

Fairbanks Meridian

Beginning at a point on the Teklenika River 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 lie 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 25,834 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, 1958, 48 U.S.C. note prec. 21 (1988) or section 906(b) of the Alaska National Interest Lands Conservation Act, 43 U.S.C. 1635(b)(1988).

3. The State of Alaska applications for selection made under section 906(e) of the Alaska National Interest Lands Conservation Act, 43 U.S.C.

1635(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) above 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(bh-5)(1988).

Dated: March 2, 1994.

Bob Armstrong,

Assistant Secretary of the Interior.

[FR Doc. 94-5466 Filed 3-9-94; 8:45 am]

BILLING CODE 4310-25-P

Arizona
State Land Department

BRUCE BABBITT
GOVERNOR

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

cc: Governor Bruce Babbitt
Dean Bibles, BLM State Director
Les Rosenkrance, BLM Safford District Manager

Research Ranch

COPY
STATE OF ARIZONA

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:

<u>TWP.</u>	<u>RGE.</u>	<u>SEC.</u>	<u>SUBDIVISION</u>	<u>ACRES</u>
21S	18E	14	SENE; NESE; S2SE	160.00
		15	SW	160.00
		16	A11	640.00
		20	E2	320.00
		21	A11	640.00
		22	Lots 1-3; NW	262.44
		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 ARIZONA


SECRETARY 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

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)

MICROFILMED
 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 2nd day of December, 1987.

TALLEY REALTY DEVELOPMENT, INC.,
 a Delaware corporation

EXEMPT PER ARS 42-1614 A3

By [Signature]
 Its _____

STATE OF ARIZONA)
)
 County of Maricopa) ss.

This instrument was acknowledged before me this 2nd day of December, 1987, by JOHN H. O'CONNOR, the VICE PRESIDENT of Talley Realty Development, Inc., a Delaware corporation.

[Signature]
 Notary Public

My Commission Expires:
MAY 18, 1991



A-22792 Title Accepted: 03-25-88
 #10531

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.

1. Reservations contained in the Patent to said land as set forth in Clause No. 1 C shown on the reverse side of this page.
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
 BOOK 462 PAGE 579 PAGES: 3

A-22792
Title Accepted: 03-25-88

16-R3-52-0019

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 nonprofit, 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 1970, PL 95-307, 16 USC 1643.

The parties hereto 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 Ranch 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:

1. 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.
2. Acknowledge use of locations on the Coronado National Forest in publications resulting from studies conducted on The Research Ranch, and provide copies of studies/research and resulting publications to REGION and STATION.
3. Provide for the protection, and use of an established Research Natural Area in T. 21 S., R. 18 E., Santa Cruz County, Arizona. The Elgin Research Natural Area includes: about 140 acres of land belonging to the ~~FLM State of Arizona~~ (NE $\frac{1}{4}$, Section 23), about 180 acres of land belonging to the Research Ranch (SE $\frac{1}{4}$, Section 23) and about 280 acres of NFS land (mainly in E $\frac{1}{2}$, Section 26). 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 by: (1) the east line 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 SOCIETY 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 Arizona that is dedicated by the State to be included in the Elgin Research Natural Area will be administered in the same manner as SOCIETY lands within the Elgin Research Natural Area so long as the State lands are controlled by or leased to the SOCIETY.

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.

6. 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.

7. Maintain range improvements specified in map Exhibit D and identified on the following inventory:

Range Improvement Inventory and Maintenance Responsibility
Research Ranch
Coronado National Forest

NAME	KIND	IMP. NO.	UNITS	ASSIGNMENT
MESA TANK	DAM &/OR RESVOR	000001	12	Research Ranch
CANELO CHUNEY FEN	ALOT. BDY.FENCE	R00001	1.0	Canelo Permittee
FOREST TANK	DAM &/OR RESVOR	000002	13	Research Ranch
CHUNEY SPR	DEVELOPED SPRING	000015		Research Ranch
ROADSIDE WELL	WELL, WINDMILL	000003	17	Research Ranch
SOUTH WELL	WELL, WINDMILL	000004	21	Research Ranch
BOUNDARY FEN	N.F. BDY FENCE	000005	1.0	Research Ranch
WEST BDY	ALOT. BDY.FENCE	000006	2.0	Research Ranch
DIV FEN	ALOT. ENTR.FENCE	000007	1.7	Research Ranch
DIV FEN	ALOT. INTR.FENCE	000008	1.0	Research Ranch
CHUNEY MANILA	ALOT. BDY.FENCE	000010	2.0	Manila Permittee
Z TRIANGLE CHUNEY	ALOT. BDY.FENCE	000011	1.5	O'Donnell Permittee
MESA TANK FEN	WATER LOT FENCE	000012	.0	Research Ranch
FOREST TANK FEN	WATER LOT FENCE	000013	.0	Research Ranch
CHUNEY-Z TRIANGLE	ALOT. BDY.FENCE	000014	.5	Research Ranch
HARREY CHUNEY	ALOT. BDY.FENCE	R00033	.8	Sawtelle Permittee

B. That the REGION shall:

1. 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.

2. Designate indefinitely the NFS land within the Elgin Research Natural Area and maintain the withdrawal of the affected lands from mineral entry.
3. With delegated authority, assume responsibility for protection and management of the NFS lands involved.
4. Review and take approval action as merited on project proposals and study plans affecting the NFS portion of The Research Ranch.
5. 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 else 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 Elgin Research Natural Area in accordance with applicable Forest Service regulations and policies.
8. Have complete responsibility for fire prevention and suppression of fires on or threatening NFS lands.

C. That the STATION shall:

1. 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.
2. 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 ecological characterization of the Elgin 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.
2. 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 Elgin 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 Game 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 Service, United States Department of the Interior.

7. No Member 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 corporation for its general benefit.

8. Nothing in this agreement shall be construed as obligating the STATION or REGION 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 herein 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.

10. 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 Audubon Society Research Ranch

By Case E. Boer Date June 14, 1982
George H. Boer

Regional Forester, Southwestern Region

W. Maxwell Date 7/28/82

Director, Rocky Mountain Forest and Range
Experiment Station

Charles M. Loveless Date 7/13/82
CHARLES M. LOVELESS
Director

EXHIBIT A

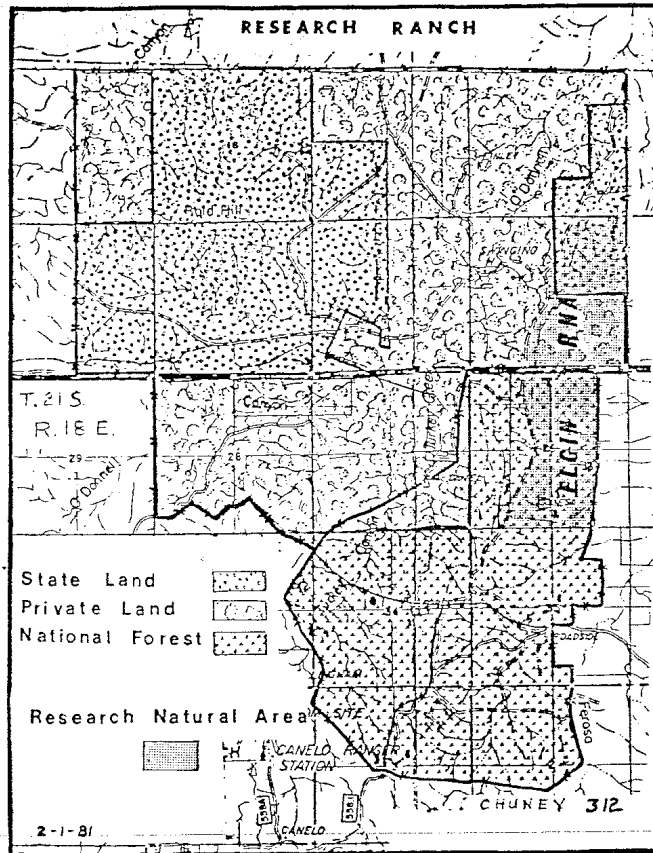


EXHIBIT C

4063.3

SERIES 4000 - RESEARCH

4063.3 - Protection and Management. A research natural area must be protected against activities which directly or indirectly modify ecological processes if the area is to be of value for observation and research on plant and animal succession, habitat requirements of species, insect and fungus depredations, soil microbiology, phenology and related phenomena. Logging activities are not permitted, and grazing by livestock is restricted to those areas where their use is essential for the maintenance of a specific vegetative type. Discourage recreational uses. The criterion for management of research natural areas is for protection against inappropriate encroachments on existing conditions.

Special closures of research natural areas may be necessary to protect such areas from actual or potential harm resulting from public use. Closures must be done by an order issued under the provisions of 36 CFR 261.50. Such orders incorporate the special closure provisions of 36 CFR 261.53 which allow for criminal citations to be issued whenever one or more of the listed resources are endangered (FSM 5353).

4063.31 - Identification. Identify research natural areas in the administrative records as to location, purpose, and objectives. Mark their boundaries in the field, when appropriate, to ensure integrity of the area. As a minimum, all corners or turning points should be monumented and the monumentation documented and recorded in the establishment report. Avoid sight that tend to attract sightseers, recreationists, 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 261.50 and criminal action taken for violation of 36 CFR 261.53 (FSM 5353).

4063.32 - Fences. Research natural area boundaries should not be fenced unless necessary for protection against livestock or excessive human use. When fencing is necessary to protect an area, however, it should be budgeted and constructed in management of the area.

4063.33 - Publicity. Publicity, generally to professional groups at either 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 area directories, including detailed descriptions of features within each area, is encouraged.

4063.34 - Physical Improvements. As a general guide, physical improvements such as roads, fences, or buildings should not be permitted within a research natural area. However, in many instances, limited temporary improvements may be needed if these tracts are to fulfill their scientific potential.

SERIES 4000 - RESEARCH

- a special use permit will be adequate to cover the planned activity. Normally, however, a cooperative agreement will be prepared that outlines the planned research, mechanics of field work, and the limitations thereto. This will be executed between the scientist and the Station Director with the review and approval of the Forest Supervisor and District Ranger. Research projects in service and outservice within wildernesses must be submitted to the Regional Forester for approval (FSM 2323.04c). Forest Service scientists should cooperate in the research whenever possible to derive the greatest benefit from the work. Copies of all data, 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 17.22). If permits are issued, a voucher sample should be deposited in the Forest Service Herbarium at Fort Collins, Colorado. Collection of duplicate material of rare, endangered, or threatened species should be prevented once adequate material have been deposited in appropriate herbaria.

4063.38 - Vegetation Management. The Station Director, with the approval of the Forest Supervisor, may authorize management practices, except within wildernesses, necessary to preserve the vegetation for which the research natural areas was created. These practices may include grazing, control of excessive animal populations, or prescribed burning. Only tried and reliable techniques will be used, and then only where the vegetative type would otherwise be lost without management. The criterion here is that the management practice must provide a closer approximation of the vegetation and the processes governing the vegetation than would be possible without management. If doubt exists about the need for vegetation management or the reliability of the techniques, then nothing should be done. Generally, planned practices for vegetation management should be suggested in the establishment report and documented in the management plan after establishment.

4063.39 - Mineral Entry. Research natural areas should be withdrawn from mineral entry after establishment in conformance to Section 204 of the Federal Land Policy and Management Act of 1976 (PL 94-579). However, the difficulty or resistance to withdrawal to mineral entry should not be a deterrent to selection and establishment of desirable areas. It is better to develop a network of research natural areas and lose a few to mineral development than not establish sufficient areas because of resistance to withdrawal.

4063.35

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 detrimental even if they go through a proposed area. Once an area is established, 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 gaging stations and instrument shelters. Submit plans for improvements and/or temporary facilities the Station Director for approval and to the Forest Supervisor for concurrence. These plans will specifically fix 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.

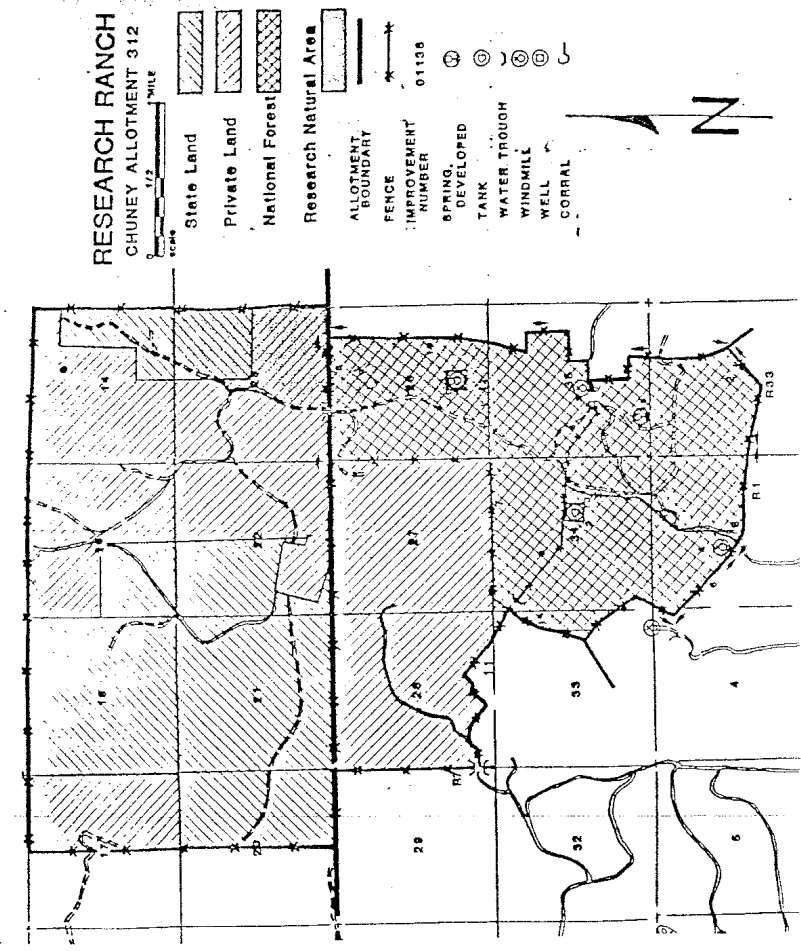
4063.35 - Protection. Specific management direction for each natural area will include protection from fires, insects, diseases, and animals. Maintenance of the natural processes within each area will be the prime consideration. Where cultural resources on, or eligible for, the National Register are likely to be involved, a memorandum of understanding or an interagency agreement with the Advisory Committee on Historic Preservation should be prepared (FSM 2360, FSR 1509.11). As a general guide, fires endangering research natural areas should be extinguished as quickly as possible. Fires within the area will be allowed to burn undisturbed, unless they threaten persons or property outside of the area, or the uniqueness of the RNA. Debris resulting from fires should not be cleaned up nor should any fire hazard reduction or reforestation be undertaken. Generally, no action should be taken against endemic insects, diseases, or wild animals. However, protection measures for research natural areas within Congressionally-designated areas must be in accord with the management plan for that designated area.

4063.36 - Public Use. Picnicking, camping, collecting plants, gathering nuts and herbs, picking berries, hunting, fishing, 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 261.53 (FSM 5353).

4063.37 - 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•

EXHIBIT D



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COOPERATIVE AGREEMENT
between the
Bureau of Land Management
and the
National Audubon Society

I. PURPOSE

This agreement is designed 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).

II. AUTHORITY

The Federal Land Policy and Management Act of 1976 (Public Law 94-203) provides for cooperative agreements for the management of public lands.

III. DEFINITIONS

- A. BLM means the Bureau of Land Management, an agency of the United States Department of the Interior.
- B. NAS means the National Audubon Society, a national conservation organization.
- C. Public lands means Federally-owned lands administered by BLM.

IV. BACKGROUND

Research and conservation on The Research Ranch goes back to the Appleton family and their desire to protect the natural aspects of the area. In 1934 the Appletons stopped livestock grazing and began encouraging biological research. Active cooperation from the Forest Service and the United States Land Department has resulted in the current sanctuary being established to serve as a place for biological investigations. In 1980 the National Audubon Society assumed management of the sanctuary through funds from the Appleton Trust. The Research Ranch Foundation, former manager, continues to an advisory role. In 1986 the Bureau of Land Management became involved in The Research Ranch when the agency acquired the state land in the sanctuary. This acquisition came about due to BLM's greater flexibility and authority in resource management to provide for long-term research than that of the United States Land Department and their sole goal of revenue production.

A biological research station, The Research Ranch has been primarily used for ecological studies. With the cessation of grazing in 1969, biologists began to study and describe the land and its life forms without the impacts of grazing. An enclosure of this size offers an opportunity for diversity of plant and animal life to be studied. The increase in diversity that has been significant and the long-term impacts of such an enclosure basis continued long-range study. Two Federally-endangered species occur in the sanctuary and two others are under consideration for such status. In addition, the sanctuary hosts over 300 species of plants, 225 birds, 103 butterflies and 74 mammals. Since 1980, over 40 scientific papers have documented past research. Over 20 research projects are currently underway.

OBJECTIVES

The BLM and NAS are in agreement on the following objectives relating to the management of public lands in the Appleton-Whittell Biological Research Sanctuary:

- 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 AGREEMENT

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 BLM 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 research natural area (RNA) or other designation consistent with the objectives of this agreement.
4. Close all roads and trails to vehicle traffic except as needed for administration of research projects and property management. BLM 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:

1. 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. Maintain all facilities currently on public lands.
4. Direct and coordinate research projects authorized on the public lands.

5. Provide signs necessary to mark the private property and control public use of the area.

6. Furnish BLM with copies of research papers completed on the public lands.

7. Credit BLM in published research papers where public lands are used in the research.

C. BLM and NAS will:

1. Jointly develop and install major signs identifying the Appleton-Whittell Biological Research Sanctuary.

2. Jointly coordinate land management practices with the Coronado National Forest.


VII. COORDINATION

Formal and informal meetings between the designees 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, an annual meeting will be held to discuss current and proposed research and any management problems requiring cooperative efforts.

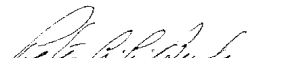
VIII. EFFECTIVE DATE, TERMINATION AND AMENDMENTS

This cooperative agreement shall become effective when signed by the President 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 BLM and NAS. The development and implementation of this cooperative agreement is contingent upon the availability of funding and personnel.

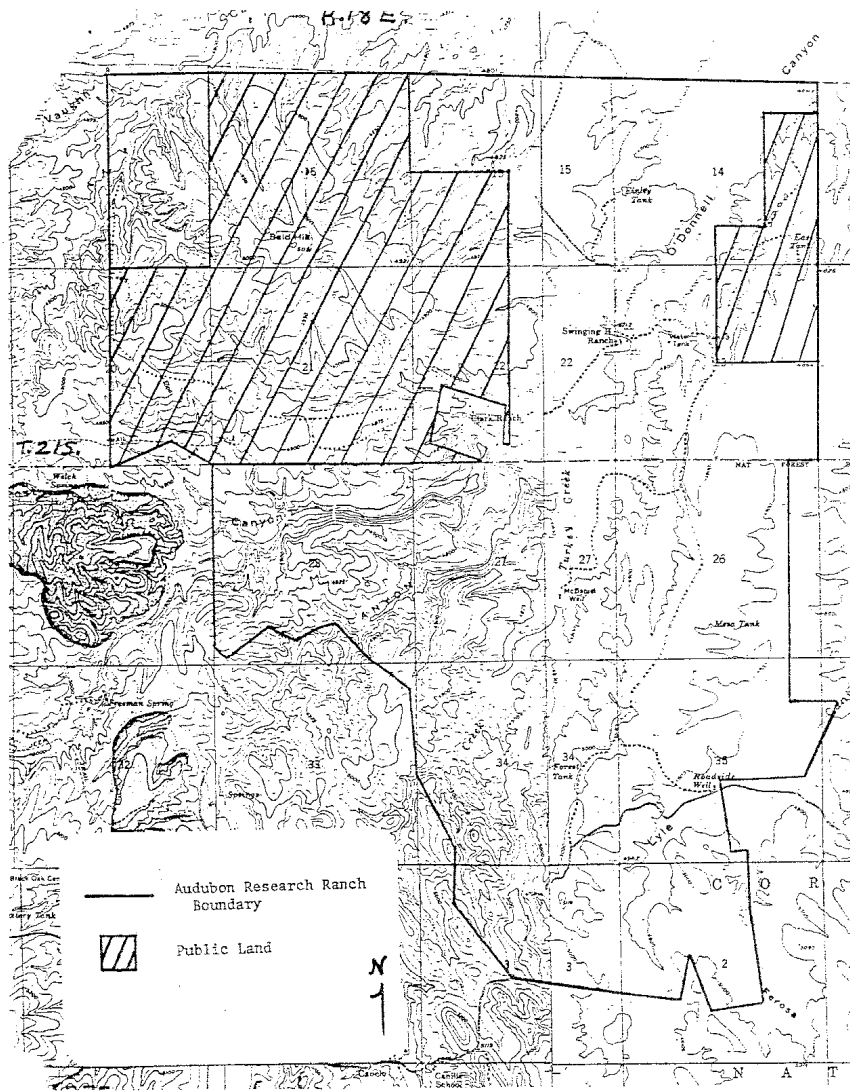
We hereby agree to the terms and conditions of this cooperative management agreement.


State Director
Bureau of Land Management

Aug 8, 1986
Date


President
National Audubon Society

Aug 8, 1986
Date



STATE OF ARIZONA
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:

<u>TWP.</u>	<u>RGE.</u>	<u>SEC.</u>	<u>SUBDIVISION</u>	<u>ACRES</u>
21S	18E	14	SENE; NESE; S2SE	190.00
		15	SW	160.00
		16	A11	640.00
		20	E2	320.00
		21	A11	640.00
		22	Lots 1-3; NW	262.44
		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 ARIZONA


SECRETARY 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:

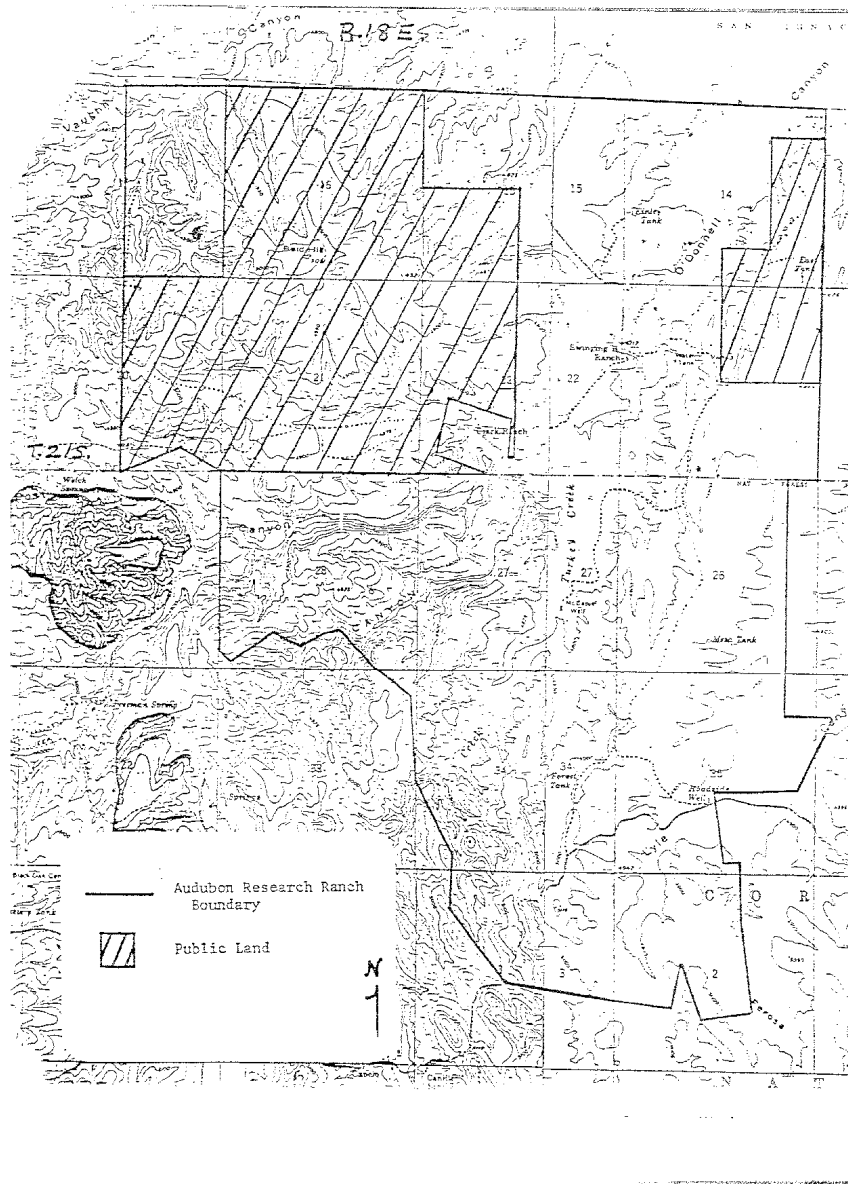
Deed of Reconveyance 96-93821

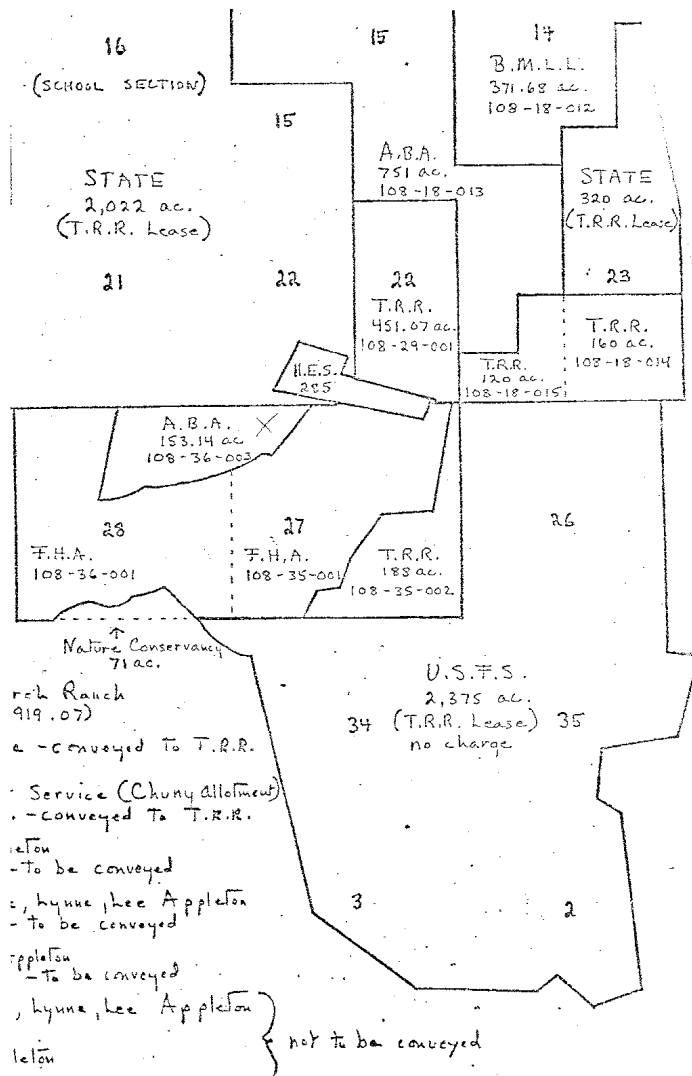
and that no instrument purporting to convey or in any way encumber the title of the State of Arizona to said land, or any portion thereof, nor any lien for taxes, costs, interest or judgements is on file or of record in the public record system of the Arizona State Land Department except for the stated encumbrances:

Right of Way 18-93037

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





**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 Mtns.
Status: Ongoing. Two toms, at least 3 hens – late May, 2007. Participated in AZ G&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: Cameras 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 (Teiles 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): I.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 lovegrass.

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 region

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 assurance 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

Marssett 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; Marssett 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://gewex.atdd.noaa.gov/> and <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

2006

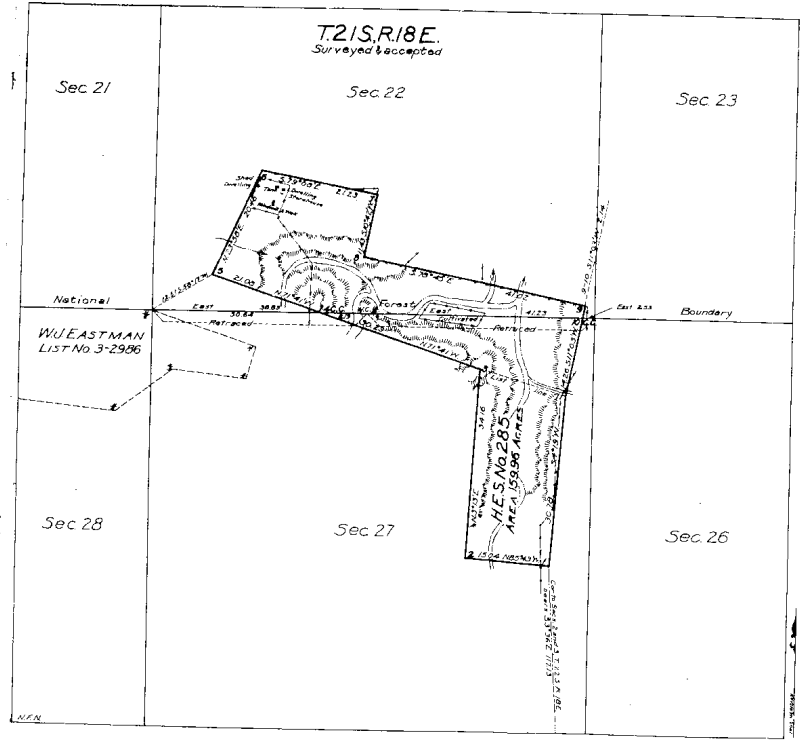
- Bock, C. E., Z.F. Jones, and J.H. Bock (2006). "Grasshopper Abundance in an Arizona Rangeland Undergoing Exurban Development." Rangeland Ecology & Management **59**(6): 640-647.
- Bock, C. E., Z.F. Jones and J.H. Bock (2006). "Abundance of Cottontails (*Sylvilagus*) in an Exurbanizing Southwestern Savanna." The Southwestern Naturalist **51**(3): 352-357.
- Bock, C. E., R. A. Bailowitz, D.W. Danforth, Z.F. Jones; J.H. Bock (2006). "Butterflies and exurban development in southeastern Arizona." Landscape and Urban Planning (1377): 1-11.
- Bock, C. E. Z. F. Jones and J. H. Bock. (2006). "Rodent Communities in an Exurbanizing Southwestern Landscape (U.S.A.)." Conservation Biology **20** (4): 1242-1250.
- DeBano, S. J. (2006). "Effects of livestock grazing on aboveground insect communities in semi-arid grasslands of southeastern Arizona." Biodiversity and Conservation (2006) **15** (Spring): 2547-2564.
- Dreiling, L. (2006). "Grasslands aren't just for raising cattle, researcher says." High Plains Journal **123** (44): 2B-3B.
- Hass, C.C. and J.W. Dragoo. (2006). Rabies in hooded and striped skunks in Arizona. Journal of Wildlife Disease **42**(4):825-829.
- Marsett, R. C., J. Qi, P. Heilman, S.H. Biedenbender, M.C. Watson, S. Amer, M. Weltz, D. Goodrich, and R. Marsett (2006). "Remote Sensing for Grassland Management in the Arid Southwest." Rangeland Ecology & Management **59**(5): 530-540.
- McLaughlin, S. P. and J. E. Bowers (2006). "Plant Species Richness at Different Scales in Native and Exotic Grasslands in Southeastern Arizona." Western North American Naturalist **66**(2): 209-221.
- Ruth, J. M. (2006). Abstract & Presentation: Abundance and Distribution of Arizona Grasshopper Sparrow (*Ammodramus savannarum amolegus*): current and historical surveys. NOAC Conference. Vera Cruz, Mexico
- Supplee, T. (2006). Identifying Arizona's Important Bird Areas. Arizona Wildlife News: 29-31.
- Thomas, P. A. (2006). "Mortality over 16 years of cacti in a burnt desert grassland." Plant Ecology **183**: 9-17.
- Titus, P. (2006). "Umbeling Onward." Clintonia **21**(2): 10-11.
- Wheeler, J., A.G. (2006). "Prairiana Orizaba Ball and Reeves (Hemiptera: Cicadomorpha: Cicadellidae), Colonist of the Introduced African Bunchgrass *Eragrostis curvula* (Poaceae), with notes on the use of Little Bluestem, *Schizachyrium scoparium* (Poaceae). By P. Kansana (Ball)." Proceedings of the Entomological Society of Washington **108**(4): 868-877.

2007

- Bock, C. E., Z.F. Jones, and J.H. Bock (2007). "Relationships between species richness, evenness, and abundance in a Southwestern Savanna." Ecology **88** (5): 1322-1327.
- Bock, C. E., L. Kennedy, J.H. Bock, and Z.F. Jones (2007). "Effects of fire frequency and intensity on velvet mesquite in an Arizona grassland." Rangeland Ecology and Management **60**: 508-514.

- Bock, C. E., L. Kennedy, J.H. Bock, and Z.F. Jones (2007). "Spread of non-native grasses into grazed vs ungrazed desert grasslands. *Journal of Arid Environments* 71: 229-235.
- Bock, C. E., J. H. Bock, L. Kennedy, and Z.F. Jones (2007). "Response of summer birds to wildfire in grazed vs ungrazed grasslands in southeastern Arizona." Abstract & Presentation. Annual Meeting of the American Ornithologists Meeting. Laramie, WY. August.
- Hass, C. C. and J. W. Dragoo. (2007). Abstract & Poster: "Distribution and habitat affiliations of 4 species of skunks (Mephitidae) in Arizona and New Mexico." 87th meeting of the American Society of Mammalogists, Albuquerque, NM., Albuquerque, NM.
- McGee, R. (2007). Abstract & Poster for the 60th Annual Meeting of the Society for Range Management: Validating Three Monitoring Methods as Indicators of Runoff and Erosion. Society for Range Management Managed Rangelands: Traditions & Transitions. Reno/Sparks, NV, SRM: #282 (Pg 53).
- McLaughlin, S.P. and J. E. Bowers. (2007). Effects of exotic grasses on soil seed banks in southeastern Arizona grasslands. *Western North American Naturalist*. 67:2006-218.
- Ruth, J.M., C.E. Gordon and T.R. Stanley (2007). Abstract & Presentation: "Wintering bird-habitat associations and responses to grazing in Arizona semidesert grasslands." American Ornithologists' Union annual meeting, Laramie, WY, 11 August 2007.
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ORIGINAL



Survey accepted Dec 4, 1912

Plot of
**HOMESTEAD
 ENTRY SURVEY**
 No. 285
 in the
**CORONADO
 NATIONAL FOREST**
 of the
**GILA AND SALT RIVER
 BASE AND MERIDIAN
 ARIZONA**

Section 22 surveyed, T.21S.R.18E.
 Section 27 surveyed, T.21S.R.18E.

This plot of Homestead Entry Survey
 No. 285 State of Arizona is
 strictly conformable to the field notes
 thereon on file in this office, which
 have been examined and approved.
 U.S. Surveyor General's Office
 Phoenix, Arizona
 July 12, 1912

Frank P. Peterson
 U.S. Surveyor General
 for Arizona

SCALE 10 chains to 1 inch

Survey Designated	By whom Surveyed	Date		When Surveyed		Date of Approval
		Subd.	Group	Began	Completed	
Trp. 1002 T.22S.R.18E.	John F. Hesse	6-8	Aug. 24, 1911	Nov. 23, 1912	Nov. 25, 1912	Mar. 14, 1914
Subd. T.21S.R.18E.	John F. Hesse	6-8	Aug. 24, 1911	Nov. 23, 1912	Dec. 13, 1912	Mar. 14, 1914
H.E. Survey No. 285	Walter G. Turley	285	Oct. 17, 1914	Dec. 6, 1914	Dec. 10, 1914	July 12, 1917
	Surveyor-General Service					

Areas in Acres	
In Section 22	176.45
In Section 27	93.2
In Section	
In Section	
Total area	159.96

Act of June 11, 1906	Act of March 30, 1910
List No. 1270	Date Apr. 1, 1908
List No. 13002	Date Oct. 31, 1910
Latitude 31° 34' 28" N	Observations at
Longitude 112° 23' 34" W	Corner No. 1
Mean Mag. Incl. 11° 53' 12"	