III-23-73

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JAN 16 2002
DEPT OF WATER RESOURCES

For Departmental Use Only
File No. 39-(11) 10774
Date Filed: 1-16-2002
WFN

STATEMENT OF CLAIMANT FORM
FOR
OTHER USES[1]
AMENDMENT
SUPERIOR COURT OF MARICOPA COUNTY

1. Claimant Name: U.S. Army Intelligence Center and Fort Huachuca
Claimant Address: c/o Office of Staff Judge Advocate City Fort Huachuca
State: AZ Zip Code 85613 Telephone 520-533-5772

2. Basis of Claim:
A. ☐ Appropriation Right acquired prior to June 12, 1919. 1974 Water Rights Registration Act Registry No. _____
B. ☐ Appropriation Right acquired after June 12, 1919. Application No. _____, Permit No. _____, or Certificate of Water Right No. _____
C. ☐ Decreed water right. Principal litigants, court, date and case no. _____
D. ☐ Right to withdraw groundwater. Grandfathered Right No. _____
E. ☒ Other, describe: Federal Reserved Water Rights and see Item 15

3. Claimed Priority Date: ____/____/____ (month/day/year)

4. Use:
A. ☐ Municipal
B. ☐ Commerical or Industrial
C. ☐ Mining
D. ☐ Stockwatering other than from a stockpond
E. ☐ Recreation, Fish & Wildlife
F. ☒ Other, describe: Military Installation purposes

5. Source of Water:
A. ☐ Stream: name _____, tributary to _____
B. ☐ Spring: name _____, tributary to _____
C. ☐ Lake or Reservoir: name _____, tributary to _____
D. ☐ Groundwater.

6. Legal description of the Point of Diversion: (attach additional sheet if required)
____ 1/4, ____ 1/4, ____ 1/4, Section ____, Township ____ N/S, Range ____ E/W

7. If there are Irrigation, Domestic or Stockpond Uses also supplied from the Point of Diversion, describe: _____

8. Means of Diversion:
A. ☐ Instream pump.
B. ☐ Gravity flow into a ditch, canal or pipeline.
C. ☐ Well: Arizona Department of Water Resources Well Registration No. 55-____
D. ☐ Other, describe: _____

[1] See instructions for explanation of uses in this category

9. **Means of Conveyance:**

A. ☐ Ditch, canal or pipeline. If the means of conveyance is owned and/or operated by some other entity, please give name and address: _____

B. ☐ Other, describe: _____

10. **Place of Use, if other than point of diversion:** (attach additional sheet if required)

County _____

Legal Subdivision	Section	Township	Range
		____ N/S	____ E/W
		____ N/S	____ E/W

11. **Claimed Right:**

A. Maximum Flow Rate: _____ ☐ cubic-feet per second ☐ gallons per minute ☐ Arizona miner's inches

B. Annual Volume of Water Use: 7549 acre-feet

C. Storage Right: _____ acre-feet

12. **Attach** photographs, maps or sketches necessary to show the point of diversion, storage resevoir(s) place(s) of use and means of conveyance.

13. **It may** be necessary for a representative from the Department of Water Resources to inspect the diversion, conveyance and place of use. Your signature following will grant permission to enter your property for the purpose of inspection: Signature of Claimant _____

14. **Should** it be necessary for a representative of the Department to contact you as the claimant or your representative, are there any special instructions regarding time of day or address to aid in locating the specified person? Office of the Staff Judge Advocate (George W. Reyes) (520) 533-5772

15. **Additional comments:** See attached sheet

(attach additional sheet if required)

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16. **Mail form(s) to:** Department of Water Resources, Adjudications Division, 15 South 15th Avenue, Phoenix, Arizona 85007.

17. **Notarized Statement:**

I (We), Michael W. Boardman, Colonel, MI, Commander, U.S. Army Garrison the claimant(s) named in this claim, do hereby certify under penalty of perjury, that the information contained and statements made herein are to the best of my (our) knowledge and belief true, correct and complete.

OFFICIAL SEAL
DAVID L. MILLER
Notary Public
Cochise County, Arizona
My Commission Expires
November 4, 2002

(seal)

November 4, 2002
My Commission Expires

_____

_____

Notary Public

or, _____
Authorized Personnel of the Department of Water Resources

FMC002144

Block 15:

On January 4, 1982, the United States Army Intelligence Center and Fort Huachuca (the claimant) filed Claim No. 39-010774. On August 5, 1991, the claimant filed an amendment to such a claim.

In the Amendment filed today, the claimant incorporates all previous filings, and amends Claim No. 39-010774 solely for purposes of amending paragraph eleven above. Therefore, instead of claiming 10,087 acre-feet of groundwater per year, the claimant now claims 7,549 acre-feet of groundwater per year.

Michael W. Boardman
Colonel, MI
Commander, U.S. Army Garrison

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DEPARTMENT OF THE ARMY
UNITED STATES ARMY INTELLIGENCE CENTER AND FORT HUACHUCA
FORT HUACHUCA, ARIZONA 85613-6000

REPLY TO
ATTENTION OF

January 15, 2002

RECEIVED
JAN 16 2002
DEPT OF WATER RESOURCES

Department of Water Resources
Attn: Ms. Ana Marquez
500 North, 3rd Street
Phoenix, Arizona 85007

Dear Ms. Marquez:

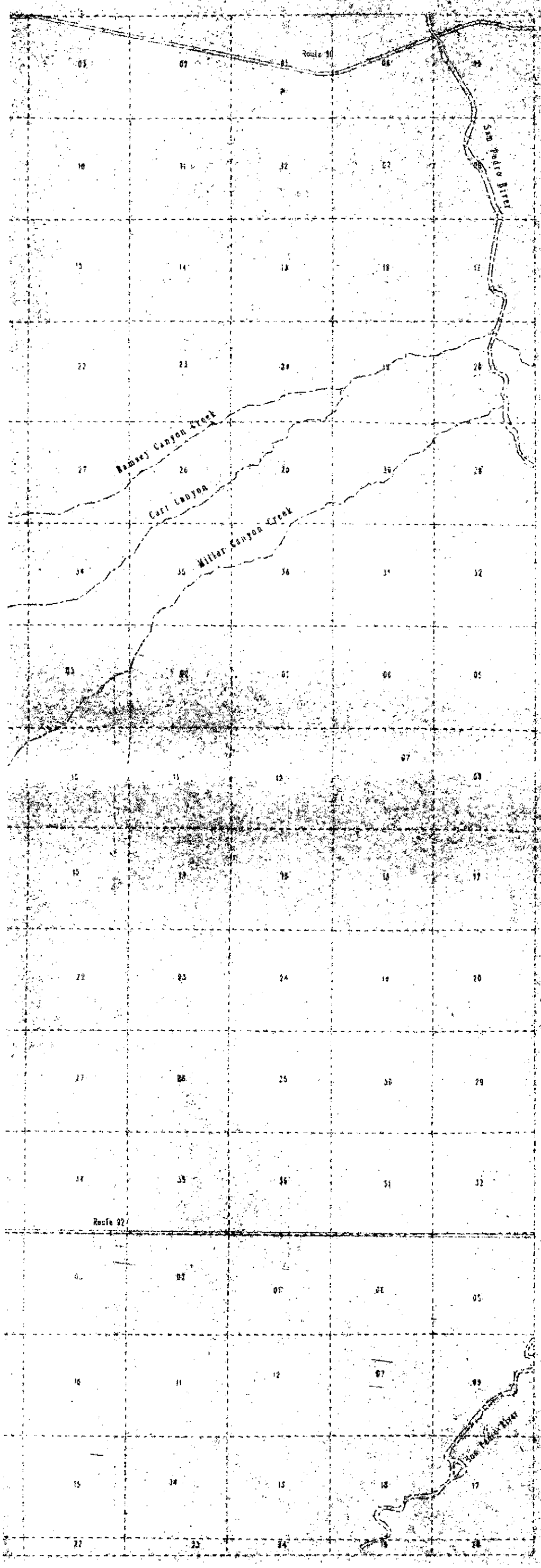
Enclosed please find the Federal Government's amended Statement of Claimant Form in In re Fort Huachuca. Please send me a copy showing a date stamp when the Form was docketed by ADWR. My address follows:

Mr. George W. Reyes
Office of the Staff Judge Advocate
ATZS-JA
Fort Huachuca, Arizona, 85613-6000

If you need additional information about this matter please call me at (520) 533-5772.

Sincerely yours

George W. Reyes
General Attorney



Region Map Legend

- Ownership Boundary
- Roads or Highways
- Section Boundary
- Canal
- Pipeline
- Water Serv. Service Area
- Diversion (D)
- Well (W)
- Instream Use
- Spring (S)
- Reservoir / Stockpond
- Mining Use
- Instream Pump (P)
- Industrial Use
- Effluent (E)

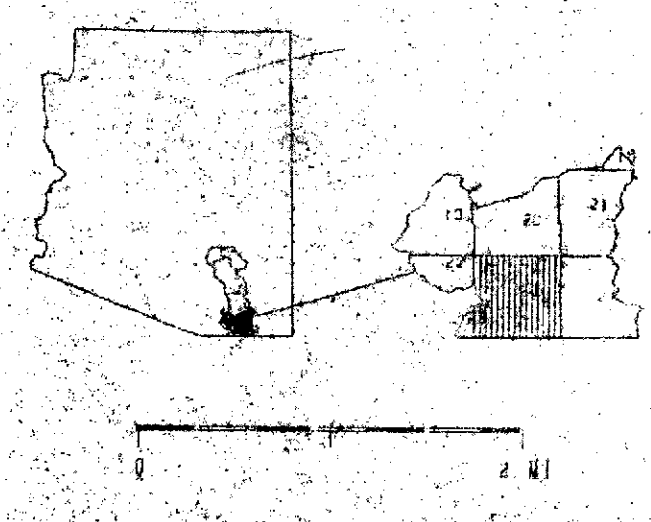
WATER USE CODES

ID	Industrial	SP	Stockpond
M	Mining Use	SR	Small Reservoir
PS	Primary Storage	SW	Stockwatering
R	Reservoir	WL	Wildlife Use

(10) - Provider Number (10) - Owner Number

* FILE NUMBER / NAME *

X AREAS WITHOUT MARPED FEDERAL RIGHT CLAIMS
F1 FORT HUACHUCA MILITARY RESERVATION / 111-23-F1
F2 CORONADO NATIONAL MEMORIAL / 111-23-F2

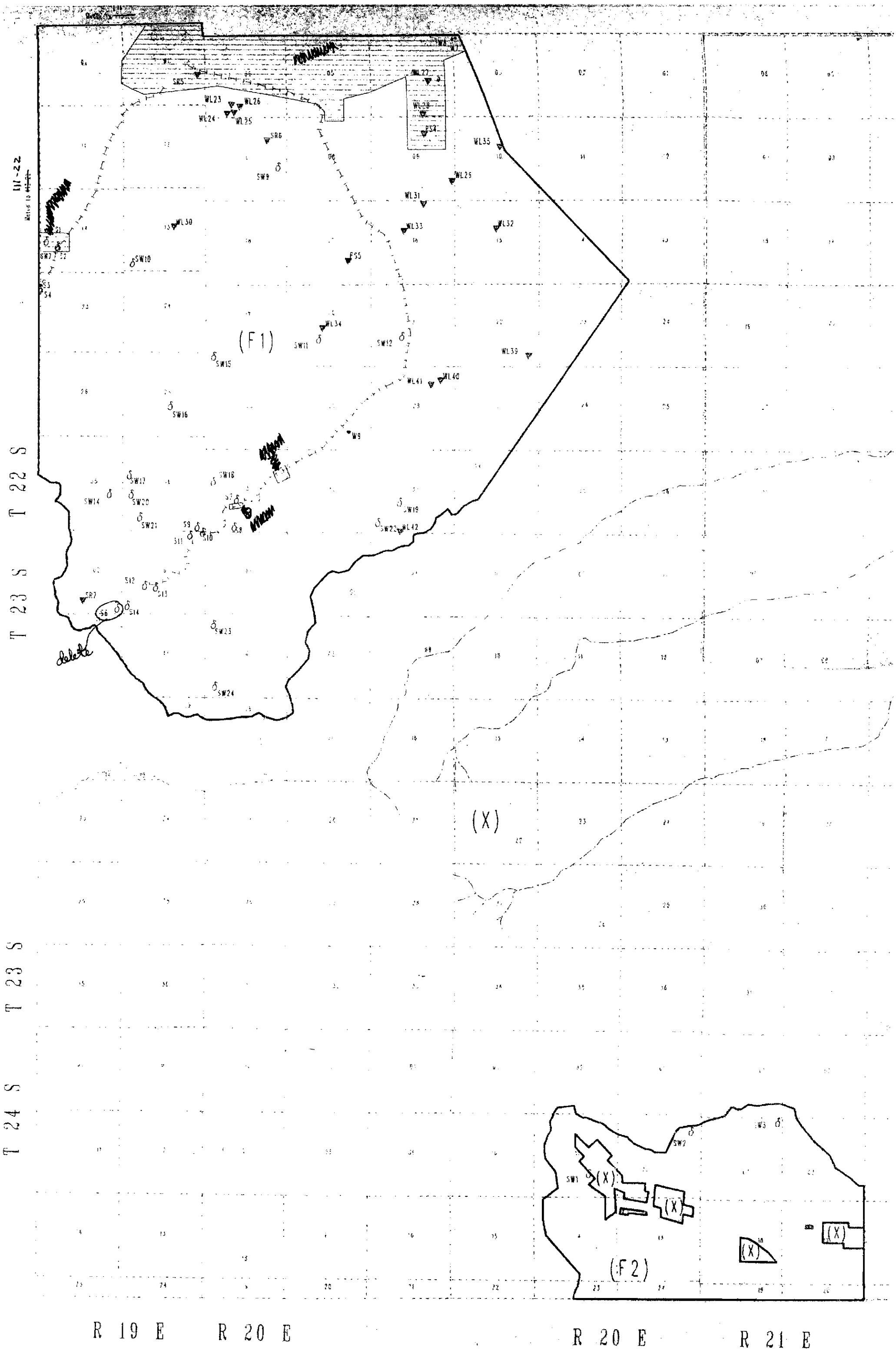


State of Arizona
Department of Water Resources
ADJUDICATIONS DIVISION

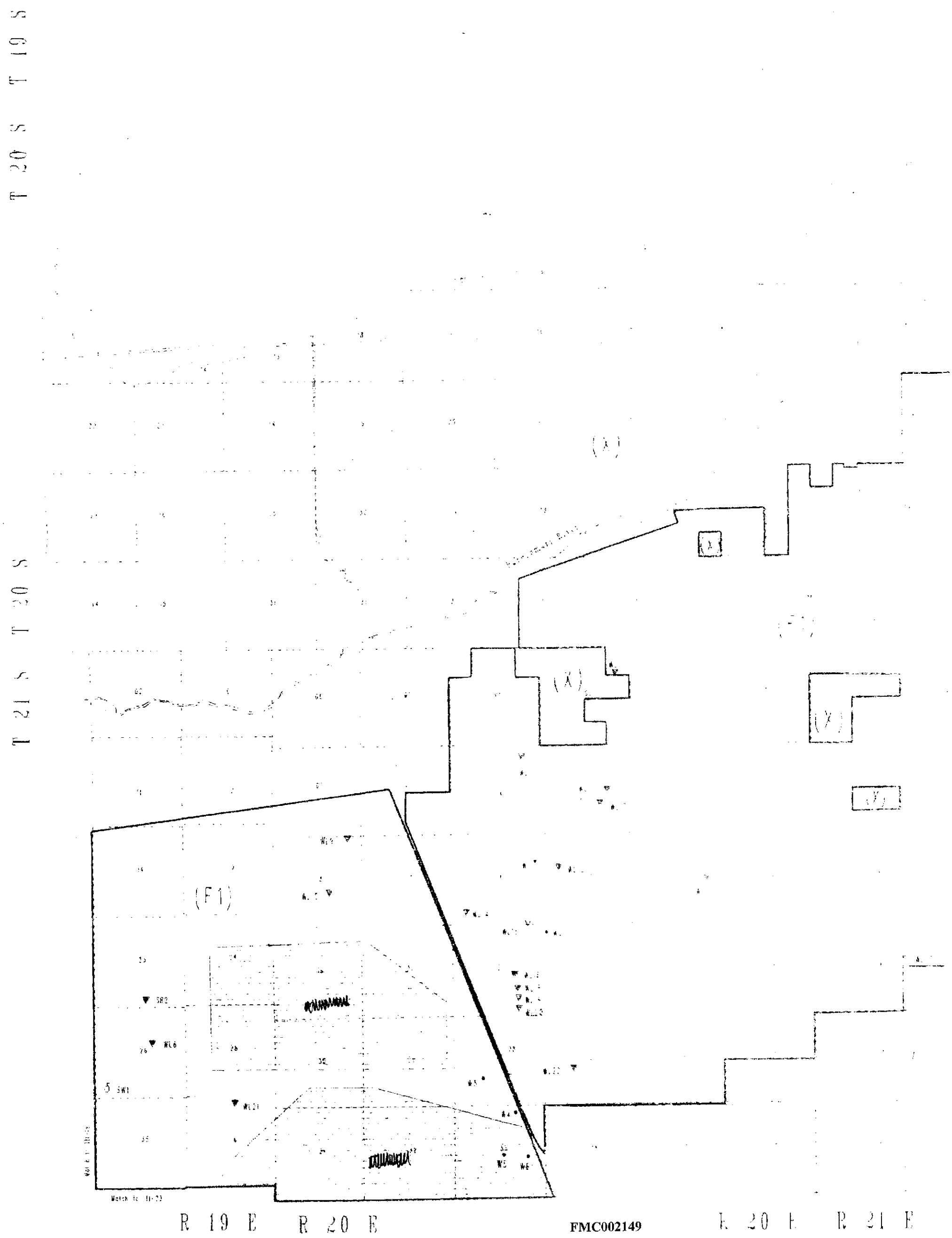
MAP OF WATER USES

FMC002147

Watershed: SAN PEDRO
Subwatershed: SIERRA VISTA
Region: 23


T 22 S
T 23 S
T 23 S
T 24 S
R 19 E
R 20 E
R 20 E
R 21 E
(F1)
(F2)
(X)
SR5
WL23
WL26
WL24
WL25
SR6
SW9
WL27
WL28
PS4
WL35
WL25
WL31
WL30
WL33
WL32
SW10
PS5
WL34
SW11
SW12
WL39
SW15
WL41
WL40
SW16
W9
SW17
SW18
SW14
SW20
SW21
SW19
SW22
WL42
SR7
S6
SW23
SW24
delete
SW1
SW2
SW3

FMC002148



FMC002149

Roads or Highways
Section Boundary
Canal
Pipeline
Water Co. Service Area
Diversion (D)
Well (W)
Instream Use
Spring (S)
Reservoir / Stockpond
Mining Use
Instream Pump (P)
Industrial Use
Effluent (E)

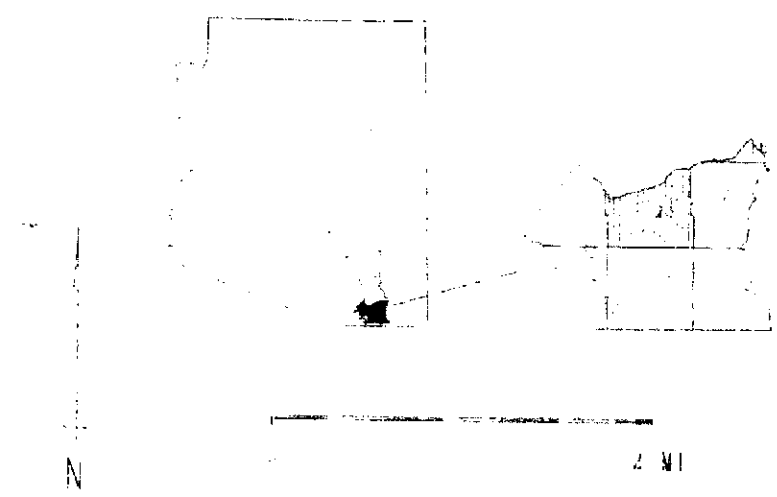
WATER USE CODES

I	Industrial	SP	Stockpond
M	Mining Use	SR	Small Reservoir
PS	Primary Storage	SW	Stockwatering
R	Reservoir	WL	Wildlife Use

(10) - Provider Number (10) - Owner Number

* FILE NUMBER / NAME *

[illegible] MAPPED FEDERAL STATE [illegible]
[illegible] MILITARY RESERVATION [illegible]



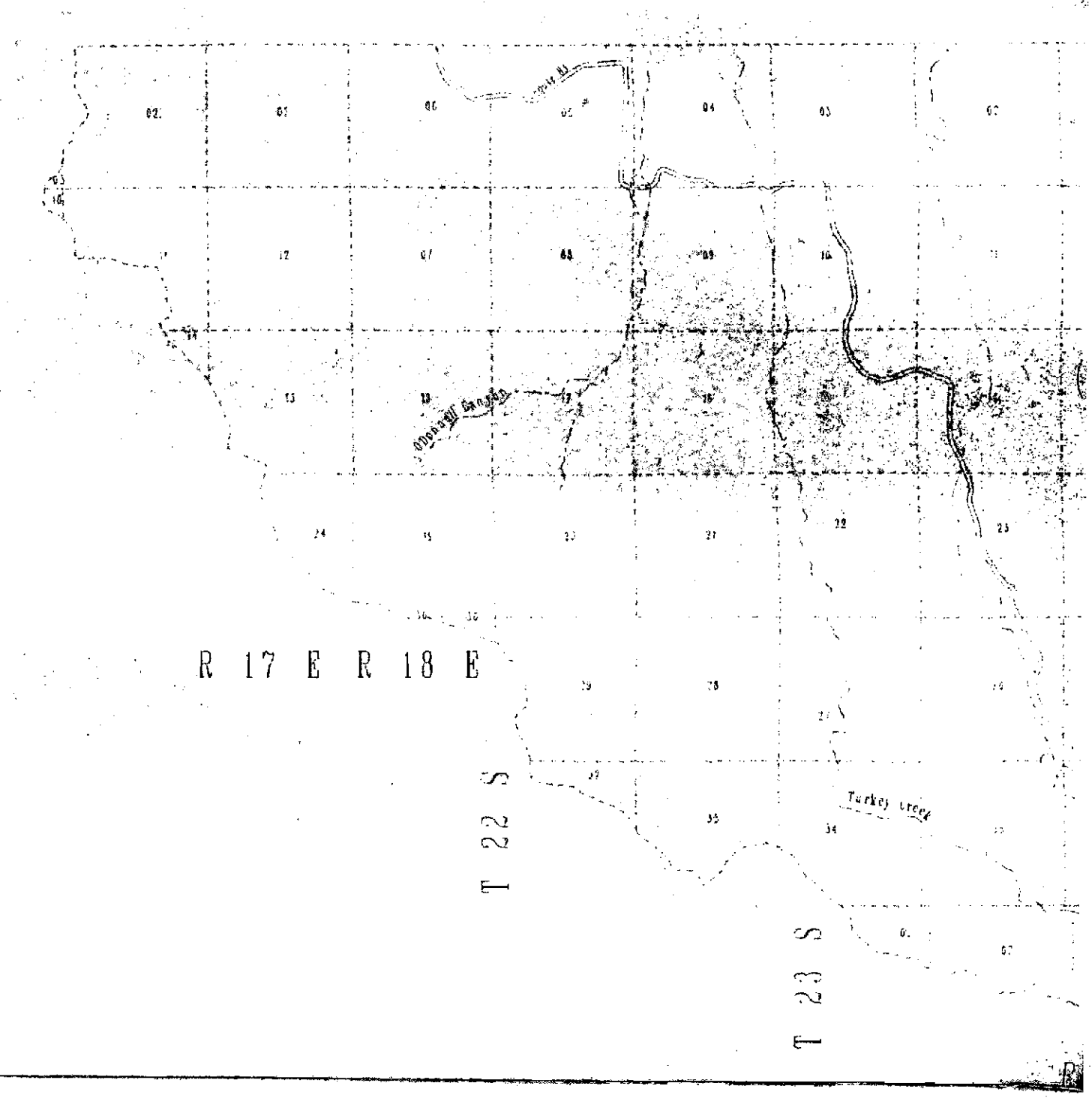
State of Arizona
Department of Water Resources
ADJUDICATIONS DIVISION

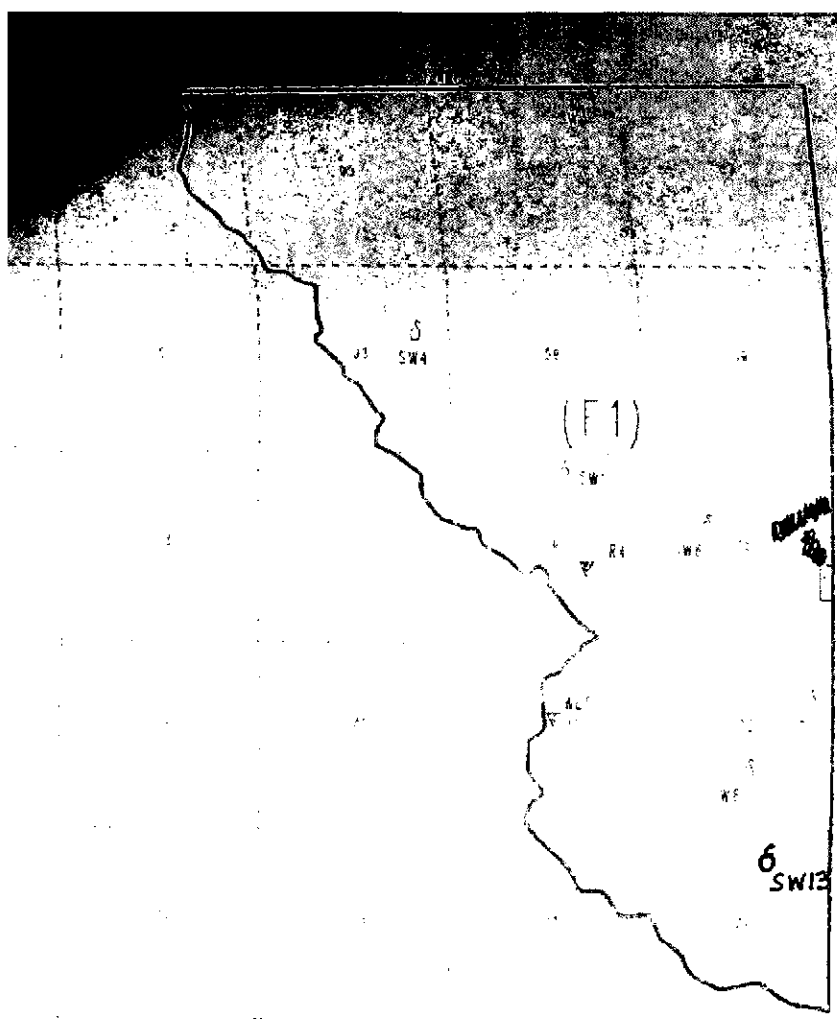
MAP OF WATER USES

Watershed: SAN PEDRO
Subwatershed: SIERRA VISTA
Region: 20
Date: July 1986
Revisions:

FMC002150

R 21 E R 22 E


R 17 E R 18 E
T 22 S
T 23 S
Turkey Creek



Ownership Boundary
Roads or Highways
Section Boundary
Canal
Pipeline
Water Co. Service Area
Diversion (D)
Well (W)
Instream Use
Spring (S)
Reservoir / Stockpond
Mining Use
Instream Pump (P)
Industrial Use
Effluent (E)

WATER USE CODES

ID	Industrial	SP	Stockpond
M	Mining Use	SR	Small Reservoir
PS	Primary Storage	SW	Stockwatering
R	Reservoir	WL	Wildlife Use

(10) - Provider Number (10) - Owner Number

* FILE NUMBER / NAME *

X AREAS WITHOUT MAPPED FEDERAL RIGHT CLAIMS
F1 FORT HUACHUCA MILITARY RESERVATION / 111-23-F1

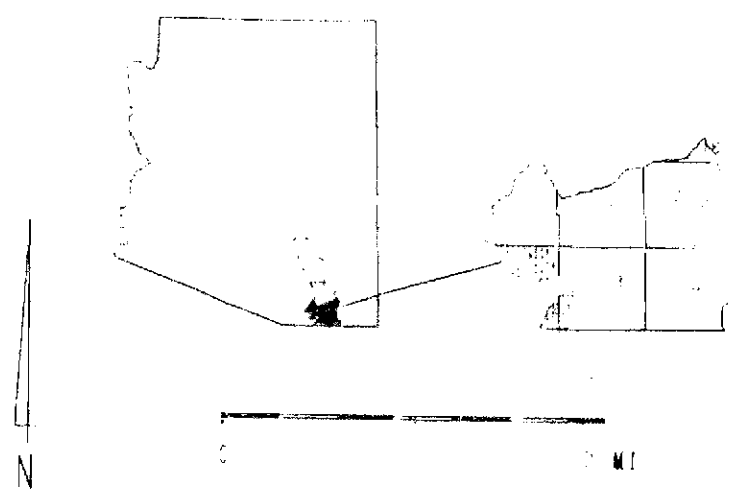
4
(F1)

E R 19 E

T 24 S T 23 S

(X)

R 19 E



State of Arizona
Department of Water Resources
ADJUDICATIONS DIVISION

MAP OF WATER USES

Watershed: SAN PEDRO
Subwatershed: SIERRA VISTA
Region: 22
Date: July 1986
Revisions:

FMC002152

AS OF 11/06/91

LAND OWNER	WATERSHED FILE REPORT NUMBER
FORT HUACHUCA U.S. ARMY INTELLIGENCE CENTER % OFFICE OF STAFF JUDGE	111-23-073

APPLICABLE FILINGS AND DECREES

CLEARLY STATED INFORMATION FROM FILINGS AND DECREES

FILING NUMBER	FILING STATUS	USES	QUANTITY IN AFA	USE LOCATION SECTION	USE LOCATION TWNP	USE LOCATION RNGE	CLAIM DATE	DIVERSION LOCATION SECTION	DIVERSION LOCATION TWNP	DIVERSION LOCATION RNGE
39-0010774	AMENDED	OTHER	10087.00				1881	SENWNW22	210S	200E
39-0010775	AMENDED	OTHER	435.00				1881	SWSENW16	210S	190E
								NENESW29	210S	190E
								SENWSE10	210S	200E

DWR ANALYSIS OF FILINGS AND DECREES

FILING NUMBER	USES CLAIMED OR REFERENCED	USES FOUND BY DWR	APPLIES TO DIVERSIONS	APPLIES TO PWR NUMBERS
39-0010774	OTHER	OTHER		
39-0010775	OTHER	OTHER		

PWR SUMMARY

PWR #	APPLICABLE ADJ FILINGS	APPLICABLE PRE FILINGS	*APPARENT FIRST USE DATE* DATE	BASIS FOR DATE	WATER SOURCES AND CLASSIFICATIONS
NONE	39-0010774 39-0010775	NONE			

EXPLANATION

FILINGS AND DECREES
FILINGS 39-10774 & 39-10775 - CLAIM FEDERAL RESERVED WATER RIGHTS FOR MILITARY INSTALLATION PURPOSES AT FORT HUACHUCA. FOR MORE INFORMATION ON THE CLAIMS MADE BY FORT HUACHUCA, SEE CHAPTER 5, SECTION 5.4 IN VOLUME 1.

The statement of claimant claims a total current annual use of 0.56 acre-feet. This total includes the claimed irrigation use. The irrigation was not field verified due to the inaccessibility of the area, and the aerial photographic evidence was inconclusive.

FORT HUACHUCA MILITARY RESERVATION (WFR #11-F1)

Location

Fort Huachuca, currently the United States Army Communications Command Headquarters, is located approximately sixty miles southeast of Tucson, and about fifteen miles north of the International Border with Mexico as shown in Figure 5-21. The installation is situated along the northern range of the Huachuca Mountains in Cochise County, just west of the City of Sierra Vista, and south of Huachuca City along state highway 90.

Climate

The climate in the vicinity of Fort Huachuca is characterized by mild temperatures and moderate amounts of rainfall. The average annual temperature is 61.7°F, although temperature extremes of 1°F to 105°F have been recorded. Rainfall from summer monsoon thunderstorms accounts for approximately fifty percent of the annual precipitation, with winter snows accounting for an additional ten percent. The mean annual precipitation is 16.45 inches at Fort Huachuca with a high of twenty-five inches in the Huachuca Mountains.

Geography

Fort Huachuca falls within Arizona's basin and range lowlands region. The Huachuca Mountains form the western geographical boundary of the Fort, with the Babocomari River providing the northern boundary (Figure 5-22). The Huachuca Mountains provide the most rugged terrain of the military reservation. However, the majority of the Fort lies in the gently sloping foothills of this range.

The Fort has claimed an on-post land area of 73,344 acres. When the post was established in 1881, the size of the Fort was 41,760 acres. On May 4, 1883, the Fort boundaries were expanded by Presidential Executive Order to 44,800 acres. In the 1940s, Fort Huachuca was expanded again to include

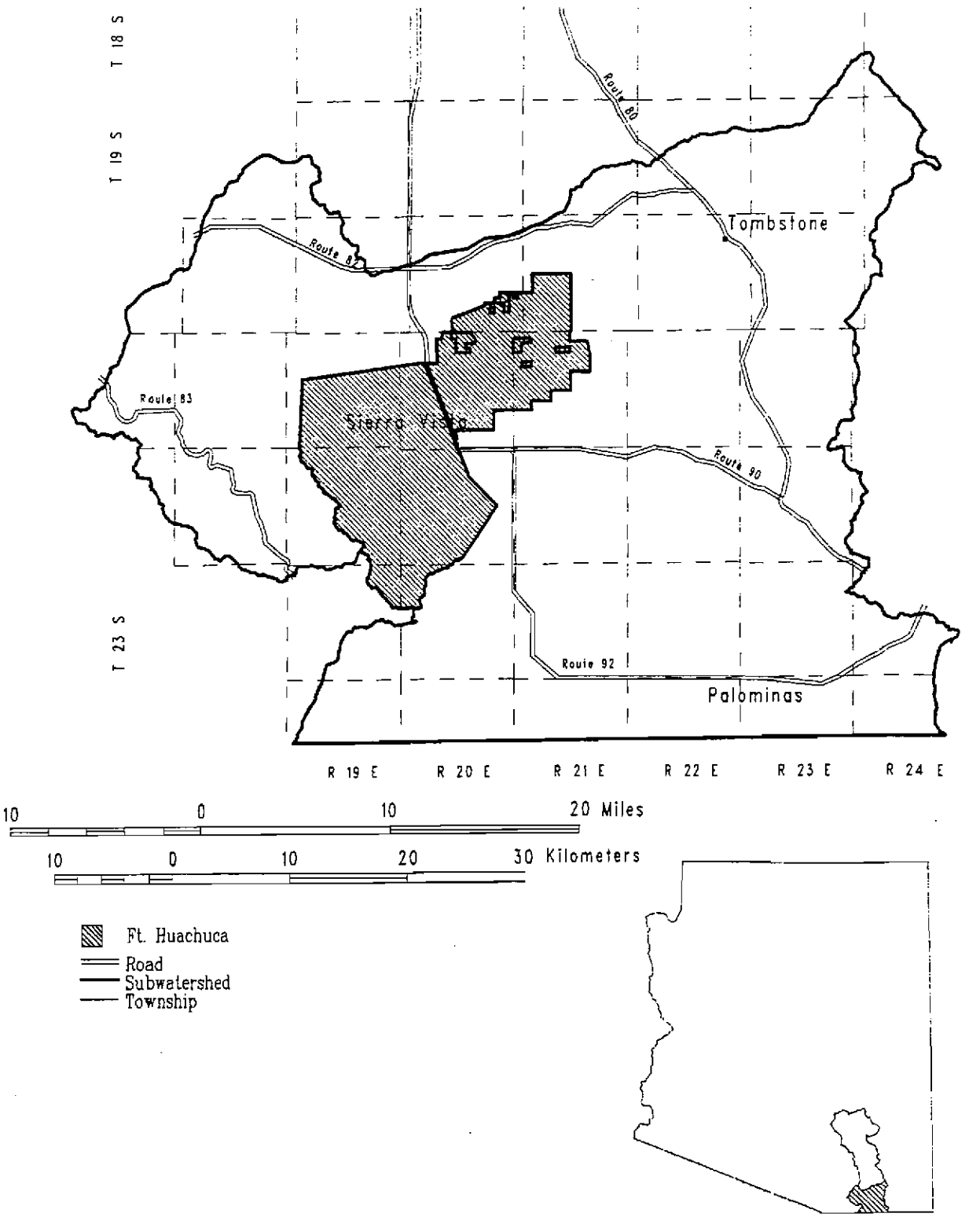


Figure 5-21. Location of Fort Huachuca within the San Pedro River watershed

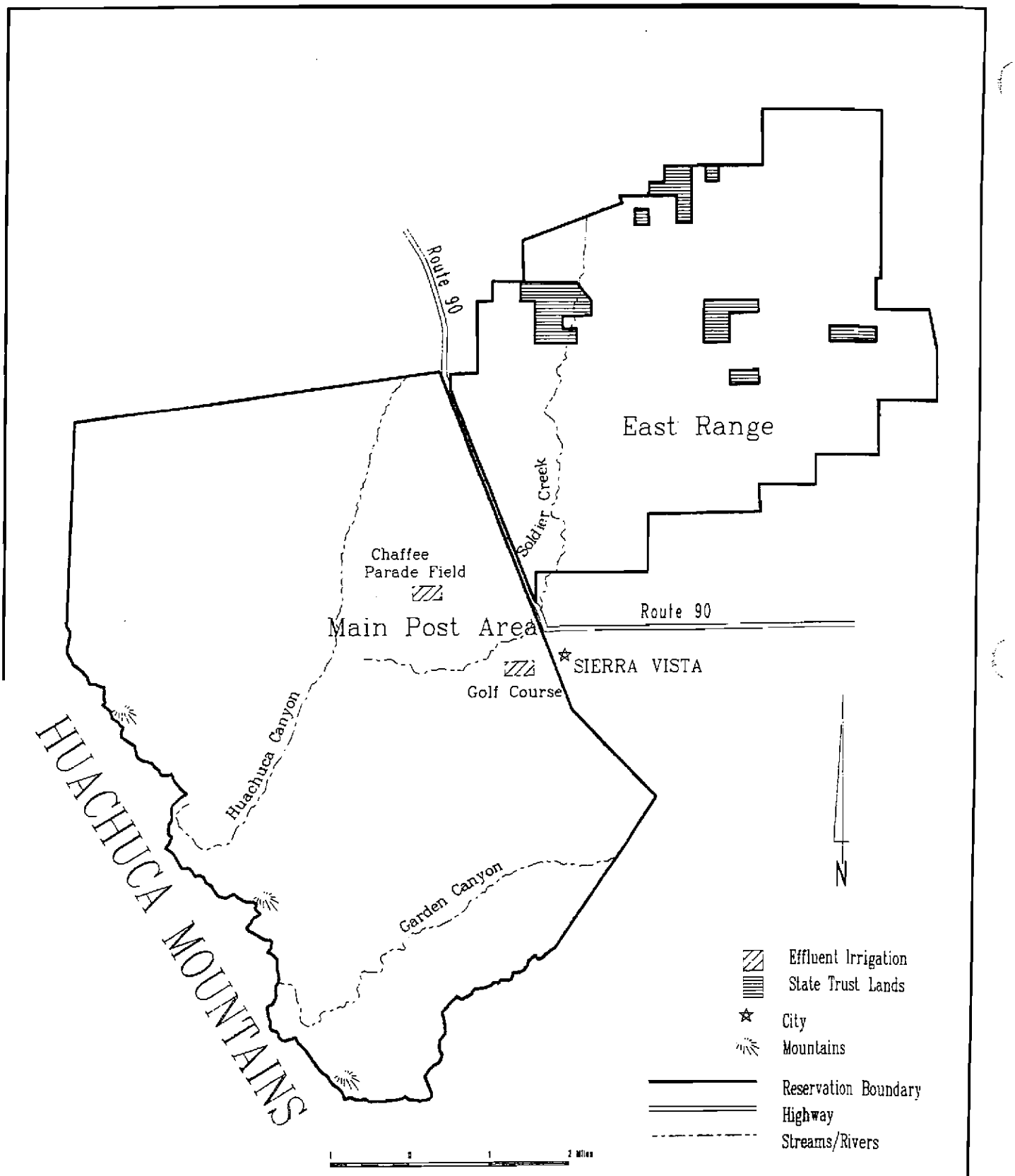


Figure 5-22. Boundary of Fort Huachuca, including state trust lands

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lands east of the original boundaries. This area is known as the East Range and encompasses approximately 13,545 acres. This brought the total area of Fort Huachuca to about 58,345 acres. In August 1957, 13,463 acres of BLM land were removed from the public domain and transferred to Fort Huachuca, bringing the Fort's total acreage to 71,808 acres. The remaining acreage claimed by the Fort (1,536 acres) is currently state trust land that is utilized by the Fort pending exchange between the State of Arizona and the United States Government.

Population

Fort Huachuca was incorporated into the city limits of Sierra Vista on February 17, 1971. In 1970, the post population was 6,659, and in 1980, the population was 9,301. Post population in the first quarter of 1990 is estimated at 11,000. Current population of Sierra Vista (excluding Fort Huachuca) is 35,000. It should be noted that the population growth in the Sierra Vista area has increased markedly in the last decade from 24,937 to 35,868, an increase of thirty-one percent. Table 5-50 shows the Fort's population during the 1980s.

TABLE 5-50

FORT HUACHUCA
MILITARY POPULATION

YEAR	POPULATION
1980	9,301
1981	8,602
1982	9,433
1983	9,996
1984	10,127
1985	10,502
1986	8,890
1987	9,667
1988	9,142

Source: Fort Huachuca

From a hydrologic standpoint, the population growth is important because Fort Huachuca and Sierra Vista utilize the same aquifer as their primary source of supply. There is a direct correlation between population growth and

water usage as seen by the declining groundwater levels in the Sierra Vista area. This situation is discussed in more detail later in this section.

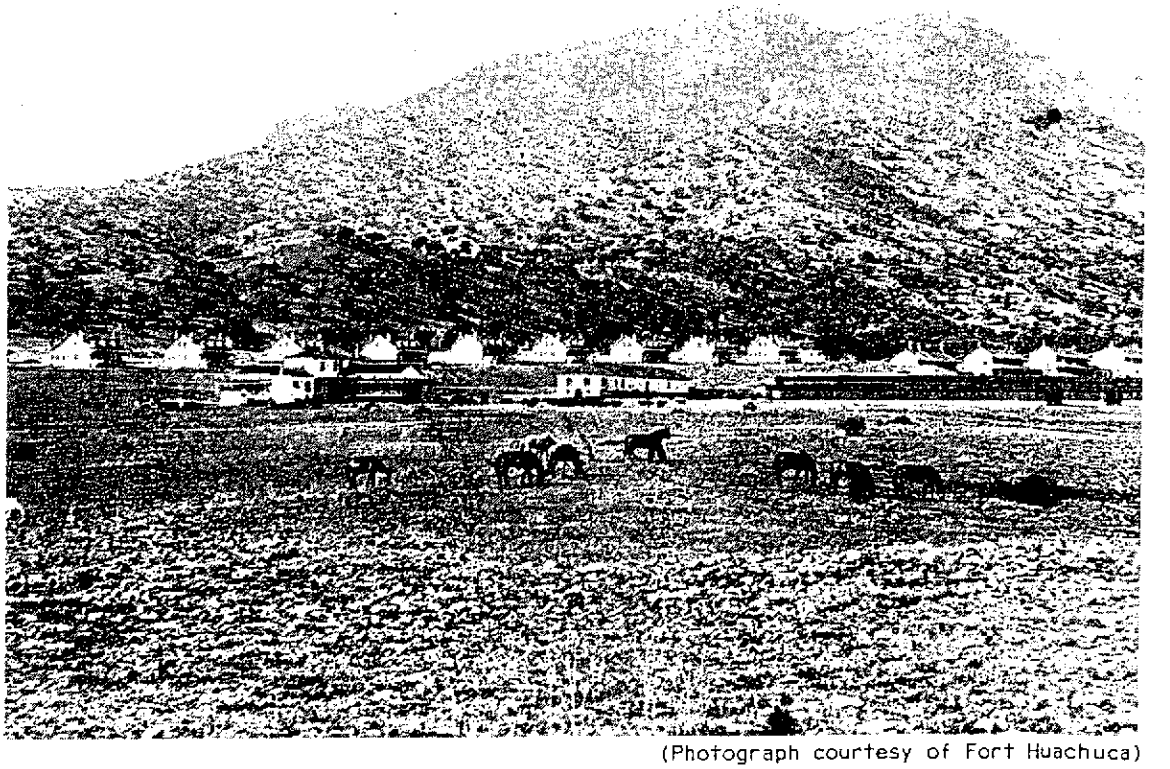
History

In the Treaty of Guadalupe Hidalgo (1848) Mexico ceded its northern provinces (present day New Mexico and Arizona) to the United States. Article XI of the treaty made the United States responsible for pursuing Apaches crossing the international border to raid in Mexico. Although the Mexican government rescinded Article XI in the Gadsden Purchase of 1853, they unofficially held the United States responsible for protecting them against Apache raids and war parties. The United States complied with Mexico's wishes by building eleven posts south of the Gila River from 1856 until 1876 to protect Anglo settlers from growing Apache unrest. Discontent among the Apache tribes had reached such proportions by 1877 that the Arizona Military Department ordered the Sixth Cavalry Regiment at Fort Grant to send a detachment into the vicinity of the Huachuca Mountains to establish a temporary camp. Captain Samuel Marmaduke Whitside headed the detachment and decided on a location at the mouth of Huachuca Canyon because of its commanding view of the San Pedro Valley and its abundant water supply from natural springs running through the canyon. Thus, on March 3, 1877, the Cavalry set up Camp Huachuca to protect the settlers residing in southeastern Arizona. (Whitside, Statement of Service; 31 March 1877) The U.S. War Department declared the camp a permanent installation on January 21, 1878. (Whitside; Letter to Adjutant General, U.S.A.; April 6, 1878).

Captain Whitside and his men were not the first to inhabit the area. Evidence found in a 1964 archeological dig sponsored by the University of Arizona concluded that a Hohokam village occupied the site between 1400 and 1450 A.D. Some speculate the Indians observed Coronado's 1540 expedition from the present Fort site.

Geronimo's surrender in 1886 brought an end to the Apache Wars which began in 1861. The Army decided to keep Fort Huachuca as a permanent post because of its close proximity to Mexico, the general good health enjoyed by those stationed at the Fort, and its abundant water supply. Fort Huachuca, the only permanent military post along the International Border west of El Paso, formed the nucleus of patrolling operations along the International Border from 1902 until 1917. During this time Pancho Villa began his attacks

FMC002158



(Photograph courtesy of Fort Huachuca)

Figure 5-23. A photograph of Fort Huachuca taken circa 1885. The site chosen for the Fort, located at the northeast flank of the Huachuca Mountains, utilized the springs in Garden and Huachuca Canyons to supply the main post, and for pasture of calvary horses.

on United States border towns in defiance of President Woodrow Wilson's recognition of Mexico's new government under General Venustiano Carranza. The United States responded with an extensive mounted expedition into Mexico to capture Villa. Within months, Carranza decided he no longer needed the help of this government to pursue Villa. President Wilson ordered the formal withdrawal of United States troops in 1917 as the country prepared to enter World War I against Germany. The American government perceived a threat of German espionage against this country via Mexico during this conflict. This threat proved to be more than mere perception and, because it is located twenty-five miles from the Mexico-United States border, troops at Fort Huachuca patrolled the border to assure national security.

During World War II (1941-1945), the Army utilized the Fort as an infantry training ground. This mission ended with the war and in 1947 the Army turned the post over to the Arizona Fish and Game Department. From that

FMC002159

date until 1951 the Game and Fish Department used the area as a buffalo preserve. The Defense Department reactivated the Fort to train Aviation Engineers in 1951 at the onset of the Korean War.

At the end of the Korean conflict, the Fort experienced a brief inactive period until 1954 when it became the United States Army Electronic Proving Ground. In 1967, the Strategic Communications Command (redesignated the United States Army Information Systems Command in 1984) moved to Fort Huachuca continuing a communications history which began in 1886 with the heliograph (a system of reflective mirrors using Morse code). At present, the post is home to these commands as well as the United States Army Intelligence Center and School, the Department of Defense Joint Test Element of the Joint Tactical Command, Control and Communications Agency, the 11th Signal Brigade, and the United States Army Communications Security Logistics Activity.

Applicable Filings and Decrees

Previous Filings

The claim filed by Fort Huachuca does not include previous water rights filings (33s, 36s, or 38s), in the form of applications, permits, or certificates.

Statement of Claimants

Fort Huachuca has filed two statements of claimant, 39-10774 and 39-10775, which claim 25 wells, 38 springs, and 71 ponds. These facilities are summarized in Table 5-51, and in Table 5-65 at the end of this section.

FMC002160

TABLE 5-51

FORT HUACHUCA
SUMMARY OF CLAIMED FACILITIES

FACILITIES	NUMBER CLAIMED	QUANTITY (ACRE-FEET PER YEAR)
Wells		
Potable (Domestic)	8	2,976.6
Non-potable	8	178.5
Test	9	----
TOTAL	25	3,146.1
Springs		
Potable	13	122.6
Non-potable	25	54.2
TOTAL	38	176.8
Ponds		
Effluent evaporation	7	25.7
Game management	5	3.3
Wildlife, recreation	17	91.9
Erosion control	42	65.0
TOTAL	71	185.9
Other Facilities		
Check Dams	200 each	8.0
Water Bars	1,200 each	24.0
Water Terraces	8.7 miles	17.4
	TOTAL	49.4

Total amount of potable water claimed by the Fort is 10,087 acre-feet (3,287 million gallons) per year by the year 2001. The Fort based these claims on federal water rights, and legitimate and authorized federal activities.

For the claimed facilities, the Fort has approximated dates of first use. These dates are shown in Table 5-52.

FMC002161

TABLE 5-52

FORT HUACHUCA
CLAIMED DATES OF FIRST USE

FACILITIES	LOCATION	FIRST USE
Wells		
#1	NW¼, NW¼, Sec. 03, T.22S., R.20E.	1940
#2	NW¼, NW¼, Sec. 03, T.22S., R.20E.	1941
#3	NE¼, SE¼, Sec. 33, T.21S., R.20E.	1943
#4	NW¼, NE¼, Sec. 33, T.21S., R.20E.	1943
#5	NE¼, SW¼, Sec. 28, T.21S., R.20E.	1943
#6	NW¼, SE¼, Sec. 33, T.21S., R.20E.	1959
#7	NW¼, NW¼, Sec. 22, T.21S., R.20E.	1982
#8	SE¼, NE¼, Sec. 16, T.21S., R.20E.	1982
East Rg. Bunker	SE¼, NW¼, Sec. 07, T.21S., R.20E.	1958
Garden Canyon	SE¼, SE¼, Sec. 29, T.22S., R.20E.	1930
Rembass #1	SW¼, NE¼, Sec. 26, T.21S., R.20E.	1978
Rembass #2	NW¼, NE¼, Sec. 23, T.21S., R.20E.	1978
Spatial Resolution	NW¼, NW¼, Sec. 22, T.21S., R.20E.	1964
Springs		
Potable	Various locations	1877
Non-potable	Various locations	1954
Ponds		
All, except as shown below		1954
Dam (SE NW 21 20S 21E)	SE¼, NW¼. Sec. 21, T.20S., R.21E.	1976
Dam (SW SE 18 21S 21E)	SW¼, SE¼, Sec. 18, T.21S., R.21E.	1976
Dam (NE SW 17 21S 21E)	NE¼, SW¼, Sec. 17, T.21S., R.21E.	1977
Dam (SW NW 20 21S 21E)	SW¼, NW¼, Sec. 20, T.21S., R.21E.	1977
Dam (NW NW 20 21S 21E)	NW¼, NW¼, Sec. 20, T.21S., R.21E.	1977
Dam (SE NE 19 21S 21E)	SE¼, NE¼, Sec. 19, T.21S., R.21E.	1977
Dam (SE SE 18 21S 21E)	SE¼, SE¼, Sec. 18, T.21S., R.21E.	1977
Dam (NE SW 10 21S 20E)	NE¼, SW¼, Sec. 10, T.21S., R.20E.	1977
Dam (SE NW 10 21S 20E)	SE¼, NW¼, Sec. 10, T.21S., R.20E.	1977
Dam (SE NE 10 21S 20E)	SE¼, NE¼, Sec. 10, T.21S., R.20E.	1977
Dam (SE SE 03 21S 20E)	SE¼, SE¼, Sec. 03, T.21S., R.20E.	1977
Dam (NE NE 09 21S 20E)	NE¼, NE¼, Sec. 09, T.21S., R.20E.	1977
Sediment (NE SE 22 21S 20E)	NE¼, SE¼, Sec. 22, T.21S., R.20E.	1978
Sediment (SE NE 21 21S 20E)	SE¼, NE¼, Sec. 21, T.21S., R.20E.	1978
Sediment (NE NE 21 21S 20E)	NE¼, NE¼, Sec. 21, T.21S., R.20E.	1978
Sediment (NW NW 15 21S 20E)	NW¼, NW¼, Sec. 15, T.21S., R.20E.	1978
Dam (NW NE 36 21S 19E)	NW¼, NE¼, Sec. 36, T.21S., R.19E.	1979
Dam (NE NE 28 22S 20E)	NE¼, NE¼, Sec. 28, T.22S., R.20E.	1979

FMC002162

Analysis of Claims

DWR staff visited Fort Huachuca on several occasions. The purpose of these field trips was to investigate claimed water uses by the Fort, determine points of diversion, and gather other pertinent data as necessary.

DWR verified the use of wells #1 through #8 shown in Table 5-53, the spatial resolution well, East Range Bunker well, and the Garden Canyon well (non-potable). The Garden Canyon well (no number given in claim) can be connected into the potable system.

TABLE 5-53

FORT HUACHUCA
LOCATION OF THE EIGHT POTABLE WELLS

WELL NUMBERS	LOCATION
1	NW¼, NW¼, NW¼, Sec. 03, T.22S., R.20E.
2	NW¼, NW¼, NW¼, Sec. 03, T.22S., R.20E.
3	NW¼, NE¼, SE¼, Sec. 33, T.21S., R.20E.
4	NE¼, NW¼, NE¼, Sec. 33, T.21S., R.20E.
5	SW¼, NE¼, SW¼, Sec. 28, T.21S., R.20E.
6	NW¼, NW¼, SE¼, Sec. 33, T.21S., R.20E.
7	NW¼, NW¼, NW¼, Sec. 22, T.21S., R.20E.
8	NE¼, SE¼, NE¼, Sec. 16, T.21S., R.20E.

All potable springs were visited and are shown in Table 5-54. DWR staff did not visit any non-potable springs.

FMC002163

TABLE 5-54

FORT HUACHUCA
POTABLE SPRING LOCATIONS IN GARDEN AND HUACHUCA CANYONS

NAME	CLAIMED LOCATION	WATERCOURSE
Spring #1	NW¼, SW¼ Sec. 14, T.22S., R.19E.	Huachuca Canyon
Spring #2	NW¼, SW¼ Sec. 14, T.22S., R.19E.	Huachuca Canyon
Spring #3	NE¼, NE¼ Sec. 22, T.22S., R.19E.	Huachuca Canyon
Spring #3a	NE¼, NE¼ Sec. 22, T.22S., R.19E.	Huachuca Canyon
Spring #4	NE¼, NE¼ Sec. 22, T.22S., R.19E.	Huachuca Canyon
Picnic Spring	NE¼, SW¼ Sec. 31, T.22S., R.20E.	Garden Canyon
Chain Spring	SW¼, SW¼ Sec. 31, T.22S., R.20E.	Garden Canyon
Spring #1	SE¼, SE¼ Sec. 36, T.22S., R.19E.	Garden Canyon
Spring #1a	SE¼, SE¼ Sec. 36, T.22S., R.19E.	Garden Canyon
Spring #1b	NE¼, NE¼ Sec. 01, T.23S., R.19E.	Garden Canyon
Spring #2	NE¼, SW¼ Sec. 01, T.23S., R.19E.	Garden Canyon
Spring #3	NE¼, SW¼ Sec. 01, T.23S., R.19E.	Garden Canyon
Spring #4	SW¼, SW¼ Sec. 01, T.23S., R.19E.	Garden Canyon

As stated previously, Fort Huachuca claimed seventy-one ponds. DWR staff were able to verify all of these impoundments by aerial photography or field investigations. Of this total, sixteen impoundments were surveyed and are shown in Table 5-55.

TABLE 5-55

FORT HUACHUCA
SUMMARY OF SURVEYED IMPOUNDMENTS

NAME	NUMBER	LOCATION	AREA (ACRES)	CAPACITY (ACRE-FEET
Antelope	PS1	Sec. 16, T.21S., R.19E.	2.6	26.4
Sycamore	PS2	Sec. 20, T.21S., R.19E.	3.9	38.8
Hidden	PS3	Sec. 28, T.21S., R.19E.	2.1	22.5
Golf Course	PS4	Sec. 09, T.22S., R.20E.	7.6	59.7
Gravel Pit	PS5	Sec. 17, T.22S., R.20E.	7.0	57.4
Lower Antelope	SP4	Sec. 16, T.21S., R.19E.	2.2	14.9
Sycamore	SP5	Sec. 29, T.21S., R.19E.	1.5	10.5
Sediment (34d)	SP12	Sec. 15, T.21S., R.20E.	9.5	29.6
Sediment (34c)	SP15	Sec. 21, T.21S., R.20E.	2.5	6.0
#3 Sewage	SP16	Sec. 21, T.21S., R.20E.	3.5	11.0
Sediment (34a)	SP18	Sec. 21, T.21S., R.20E.	2.8	12.0
#2 Sewage	SP19	Sec. 21, T.21S., R.20E.	3.3	5.5
Lower Woodcutter	SP29	Sec. 09, T.21S., R.20E.	2.5	20.7
Woodcutter	SP31	Sec. 16, T.22S., R.20E.	1.8	8.4
(N)	SP40	Sec. 28, T.22S., R.20E.	2.4	16.9
M. Garden Canyon	SP41	Sec. 28, T.22S., R.20E.	4.1	27.1
		TOTAL	59.3	367.4

Water Resources

This section will discuss the water resources that are available to meet the current and projected water requirements of the Fort. The existing water resources are surface water, groundwater, and effluent.

Surface Water

Surface water on the Fort Huachuca military reservation occurs as storm runoff, snowmelt runoff, and discharge from springs into the stream channels of Garden and Huachuca Canyons (Brown, 1966). Other canyons located within the boundaries of the Fort yield little water except for short durations after precipitation events.

The primary source of surface water available to the Fort are springs, which can be classified as potable and non-potable. The non-potable springs are located in the many canyons of the Huachuca Mountains. These springs are used as water sources for wildlife and game. There are a total of twenty-four non-potable springs which are listed on Table 5-56. The potable springs are located in Garden and Huachuca Canyons and are summarized in Table 5-57.

TABLE 5-56

FORT HUACHUCA
NON-POTABLE SPRINGS

NAME	LOCATION	WATER COURSE
Spring #2	NE¼, SW¼, Sec. 33, T.22S., R.20E.	Tinker Canyon
Spring #3	SW¼, SW¼, Sec. 33, T.22S., R.20E.	Tinker Canyon
Spring #4	SW¼, SW¼, Sec. 07, T.23S., R.20E.	Sawmill Canyon
Spring #5	NE¼, SE¼, Sec. 35, T.22S., R.19E.	McClure Canyon
Spring #6	NW¼, SE¼, Sec. 36, T.22S., R.19E.	McClure Canyon
Spring #7	SW¼, NW¼, Sec. 36, T.22S., R.19E.	McClure Canyon
Spring #8	SW¼, NW¼, Sec. 31, T.22S., R.20E.	Garden Canyon
Spring #9	NW¼, SE¼, Sec. 25, T.22S., R.19E.	Woodcutters Canyon
Spring #10	SW¼, SW¼, Sec. 19, T.22S., R.20E.	Woodcutters Canyon
Spring #11	NE¼, SW¼, Sec. 20, T.22S., R.20E.	Soldier Creek
Spring #12	NE¼, SE¼, Sec. 07, T.22S., R.20E.	Soldier Creek
Spring #13	SW¼, SW¼, Sec. 07, T.22S., R.19E.	Huachuca Canyon
Spring #14	NW¼, NE¼, Sec. 27, T.22S., R.19E.	Huachuca Canyon
Spring #15	NW¼, SE¼, Sec. 22, T.22S., R.19E.	Huachuca Canyon
Spring #16	NW¼, SW¼, Sec. 14, T.22S., R.19E.	Huachuca Canyon
Spring #17	SE¼, NW¼, Sec. 15, T.22S., R.19E.	Huachuca Canyon
Spring #18	NW¼, NE¼, Sec. 16, T.22S., R.19E.	Blacktail Canyon
Spring #19	SE¼, NE¼, Sec. 08, T.22S., R.19E.	Blacktail Canyon
Spring #20	NW¼, NE¼, Sec. 04, T.22S., R.19E.	Slaughterhouse Canyon
Spring #21	SW¼, SW¼, Sec. 26, T.21S., R.19E.	Slaughterhouse Canyon
Spring #22	NW¼, SW¼, Sec. 32, T.21S., R.19E.	Sycamore Canyon
Spring #23	NE¼, SW¼, Sec. 32, T.21S., R.19E.	Tributary of Garden Wash
Spring #24	NW¼, NW¼, Sec. 07, T.23S., R.20E.	Schellote Canyon
Spring #25	SW¼, SW¼, Sec. 36, T.22S., R.19E.	Tributary of McClure Canyon

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TABLE 5-57

FORT HUACHUCA
SPRING FLOW MEASUREMENTS FOR GARDEN AND HUACHUCA CANYONS

SYSTEM	SPRING NUMBER	PERIOD	NUMBER OF MEASUREMENTS	AVERAGE DISCHARGE (GPM)
Garden Canyon	1	Jan. 1962-Jun. 1963	46	194
Garden Canyon	1a	Winter, 1960-1961	Not Listed	400 (1)
Garden Canyon	2	Jan. 1960-Aug. 1961	47	176
Garden Canyon	3	Mar. 1960-Nov. 1962	43	32.9
Garden Canyon	4	Mar. 1960-Nov. 1962	43	32.9
Garden Canyon	Cabin	Not Listed	Not Listed	15-25
Garden Canyon	Chain	Not Listed	Not Listed	150-250 (2)
Garden Canyon	Picnic	Not Listed	Not Listed	540 (1)
Huachuca Canyon	2	Feb. 1960-Sep. 1962	47	16.5
Huachuca Canyon	3	Apr. 1961-Jan. 1962	47	28.3

Source: USGS Report No. 1819-D.

(1) Maximum flow measured (data not listed).
(2) Based on flow during wet weather; does not flow during the remainder of the year.

These springs were at one time the sole source of water for the Fort. In 1939, the first well was drilled to provide a more reliable supply of water. In 1983, the Fort no longer used the springs as a source of potable water. In the early 1960s, the USGS undertook a survey of the water resources of the reservation. As part of the survey, the USGS measured spring flow from Garden and Huachuca Canyons. These measurements are shown in Table 5-57. During the years 1958 through 1963, springflow averaged 665 acre-feet per year in Garden Canyon and 171 acre-feet per year in Huachuca Canyon. Prior to 1983, Fort Huachuca used approximately 144 acre-feet of springflow as part of its water supply.

Groundwater

The main source of groundwater for Fort Huachuca is the regional aquifer of the Upper San Pedro River Basin. The regional aquifer consists of upper and lower basin fill deposits. The upper basin fill deposits consists of clays, gravels, sand, and silt; the lower basin fill consists of interbedded sand stones and gravels. Groundwater generally occurs under unconfined or

water table conditions in most of the regional aquifer. Groundwater may occur under confined (artesian) conditions where permeable and saturated material is overlain by impervious silt or clay lenses. No confined conditions exist in the regional aquifer in the vicinity of the Fort Huachuca aquifer.

Groundwater flow in the unconfined portion of the regional aquifer is generally from the valley margins near the mountains toward the San Pedro River. Centers of groundwater pumping and local flow barriers cause exceptions to the general flow regime. The flow direction is generally north eastward from the east face of the Huachuca Mountains toward the San Pedro River, except in the vicinity of the cone of depression in the Sierra Vista and Main Post area.

The sources of recharge for the regional aquifer are from mountain front recharge, streamflow infiltration, and direct infiltration of precipitation. Mountain front recharge to the regional aquifer occurs along the mountain fronts where surface runoff leaves the hard rock formations of the mountains and flows onto the permeable basin fill. Recharge occurs along the stream channels as filtration through the alluvial materials underlying the channel. Recharge also occurs as precipitation is directly infiltrated into the aquifer through the land surface. The water recharged to the regional aquifer is later discharged to the San Pedro River, withdrawn by pumping within the basin, or withdrawan by natural vegetation. Mountain front recharge occurs along the east face of the Huachuca Mountains; streamflow infiltration occurs along the many water courses that pass through the reservation boundaries, primarily from Garden and Huachuca Canyons.

The USGS has made a preliminary estimate of the water in storage of the regional aquifer along the westside of the San Pedro River from the International Boundary to the Babocomari River to a depth of 1,200 feet. The USGS estimated that 13,400,000 acre-feet of the water was in storage in this portion of the aquifer. DWR estimates that there is approximately 11,350,000 acre-feet in storage in this portion of the aquifer to a depth of 800 feet.

Although the amount of water in underground storage in the vicinity of Fort Huachuca is quite large, a problem in the water supply for the Fort may occur due to the creation of a cone of depression from pumpage by the Fort and Sierra Vista. The cone is expanding and deepening which is resulting in greater pump lifts and increased energy costs. This situation is discussed in

more detail in the "Quantification of Significant Diminishment to Fort Huachuca" section of this report.

A local "perched aquifer" is believed to exist along the pediment of the Huachuca Mountains, in a zone where the alluvium of the basin fill is underlain at shallow depths by bedrock. The perched aquifer extends from the area of Carr Canyon toward the Fort Huachuca military reservation boundary and extends northeasterly toward the San Pedro River (Harshbarger and Associates, 1974)

Well pumpage from 1963 to 1984 has averaged 2,762 acre-feet per fiscal year. From 1982 to 1989 well production has averaged 2,830 acre-feet per calendar year. Table 5-58 shows well production for fiscal years 1963 to 1984 and calendar year 1982 to 1989.

TABLE 5-58

FORT HUACHUCA
WELL PRODUCTION
(ACRE-FEET)

FISCAL YEAR		CALENDAR YEAR	
1963	2,887	1982	2,736
1964	2,471	1983	2,876
1965	2,636	1984	3,071
1966	2,703	1985	2,986
1967	3,021	1986	2,898
1968	2,909	1987	2,273 (excludes December)
1969	3,262	1988	3,021
1970	3,319	1989	2,601 (excludes October-December)
1971	3,174		
1972	3,148		
1973	2,781		
1974	3,351		
1975	2,597		
1976	2,766		
1977	2,871		
1978	2,327		
1979	2,624		
1980	2,836		
1981	2,996		
1982	2,597		
1983	2,928		
1984	3,105		

Source: Fort Huachuca letter concerning statements of claimant 39-10774 and 39-10775. October 17, 1989, enclosure 6, revised figures.

Currently, the Fort has eight production wells for the potable water supply. Table 5-59 lists these wells, their depth, and discharge capacity.

TABLE 5-59

FORT HUACHUCA
DEPTH AND DISCHARGE OF THE POTABLE EIGHT WELLS

WELL NUMBER	DEPTH (FEET)[1]	DISCHARGE (GALLONS PER MINUTE)[2]
1	701	500/500
2	710	700/900
3	802	700/700
4	912	700/700
5	800	700/700
6	1,230	700/310
7	762	800/ND
8	807	800/ND

[1] Figures from USGS Report (#1819-D).
[2] Figures shown are claimed data by Fort/data reported by USGS. ND means no data.

Potential Wells

The Fort undertook a test well drilling program in the early 1970s to identify areas for future production wells to meet projected water needs. The East Range area of the Fort was determined to have the most promising aquifer characteristics and location for the new wells. The East Range is an area of forty-four square miles, which is mostly isolated from private developments that might compete with the Fort for water. The areal extent of the East Range would also permit sufficient spacing between production wells to minimize interference between wells. Seven test wells were drilled in the East Range. Four of the test wells were determined to be good producers and three were determined to be poor to moderate producers based on an analysis of the specific capacity of the wells (specific capacity is a measure of well productivity expressed in gallons per minute per foot of drawdown).

Table 5-60 lists the test wells and their specific capacities. Specific capacities for the Fort's production wells are also shown for comparison purposes. The test wells that are good producers are generally located in the north and west portions of the East Range.

TABLE 5-60

FORT HUACHUCA
EAST RANGE TEST WELL SPECIFIC CAPACITIES

WELL DESIGNATION	SPECIFIC CAPACITY
Test Well 3	22 gpm/ft.
Test Well 4	7 gpm/ft.
Test Well 5	29 gpm/ft.
Test Well 6	21 gpm/ft.
Test Well 7	23 gpm/ft.
Test Well 8	10 gpm/ft.
Test Well 9	8.6 gpm/ft.
Spatial Resolution Well	16 gpm/ft.
Post Well 1	15.4 gpm/ft. at 593 gpm
Post Well 2	17.1 gpm/ft. at 615 gpm
Post Well 3	17.7 gpm/ft. at 760 gpm
Post Well 4	40.7 gpm/ft. at 611 gpm
Post Well 5	6.2 gpm/ft. at 450 gpm
Post Well 6	37.5 gpm/ft. at 601 gpm

Source: U.S. Army Corps of Engineers, 1974.

Effluent

Another source of water supply for Fort Huachuca is effluent. As stated earlier, the Fort uses some of the effluent to irrigate the Chaffee parade field and the Fort's golf course. The remaining effluent is placed in evaporation ponds. The Fort currently produces effluent at the rate of 1,500,000 gallons per day or 1,680 acre-feet per year.

DWR has made a projection of effluent production to the year 2025 based on a per capita production rate of 139 gallons per capita per day (gpcd) and for population increases on the Fort of zero, one, three, and six percent. This projection is displayed in Figure 5-24.

Table 5-61 shows the projected effluent production in acre-feet per year for selected years at zero, one, three, and six percent population growth rates.

FMC002171

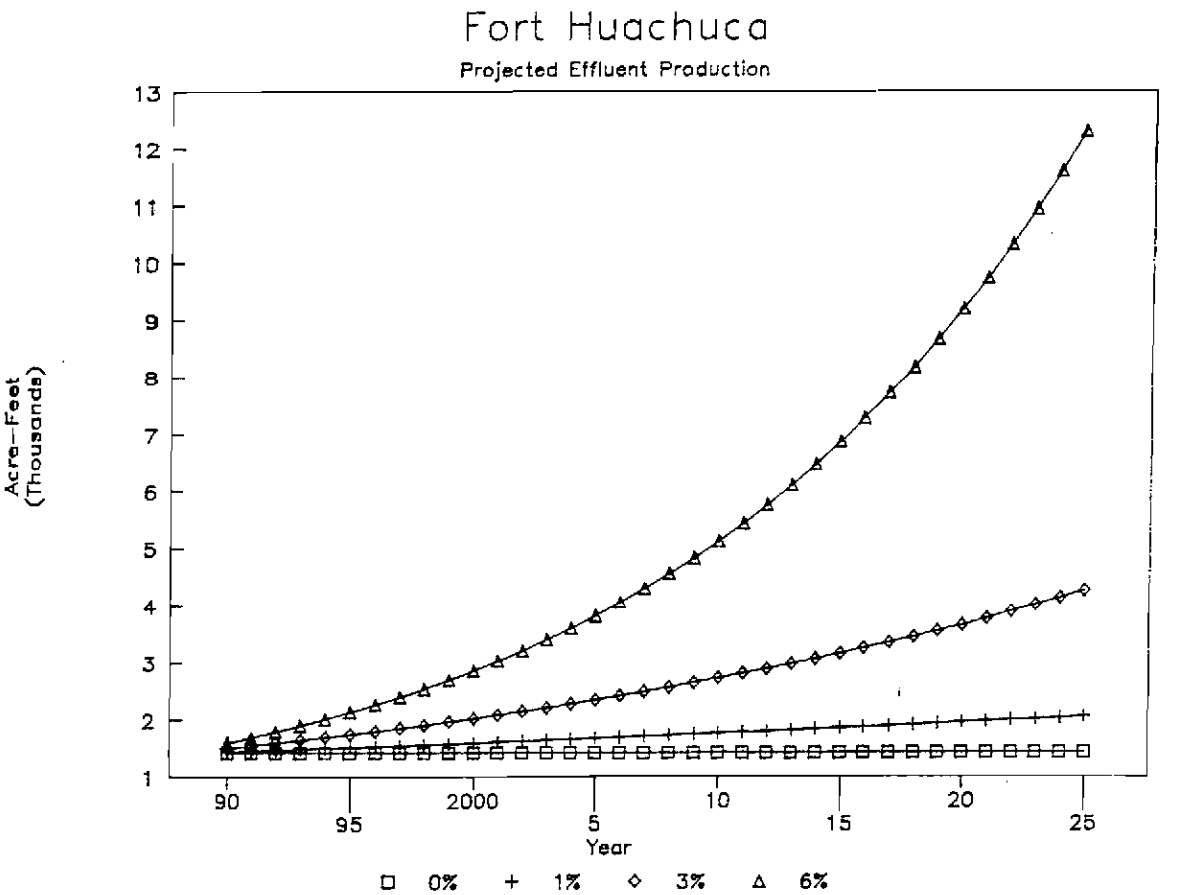

Figure 5-24. Fort Huachuca - projected effluent production using a 139 gpcd effluent production rate and for zero, one, three, and six percent rate of poulation increases

FMC002172

TABLE 5-61

FORT HUACHUCA
EFFLUENT PRODUCTION
(ACRE-FEET PER YEAR)

YEAR	0%	1%	3%	6%
1990	1,423	1,452	1,510	1,600
1995	1,423	1,526	1,751	2,140
2000	1,423	1,603	2,029	2,864
2005	1,423	1,685	2,353	3,833
2010	1,423	1,772	2,727	5,129
2015	1,423	1,862	3,162	6,864
2020	1,423	1,957	3,665	9,189

Water Uses

This section will discuss the historical water uses and sources as well as current water uses found at Fort Huachuca.

Historical Water Uses And Sources

Captain Whitside chose the Fort Huachuca site primarily for its abundant water supply, however, the area regularly experienced torrential rains followed by drought. Whitside reported on September 7, 1878, that there was "water, water everywhere from July to September and drought for the remainder of the year." All adobe buildings on post were either washed away or damaged beyond repair as a result of the continuous rain. In 1880, Whitside wrote to the Regional Commander that the reservation needed to be formally surveyed to discourage civilians from settling in Tanner's Canyon (now Garden Canyon) thereby depleting the post water supply. In 1883, the Secretary of War enlarged the Fort to include the area under dispute. (General Orders, No. 36; May 24, 1883).

Water came from two springs approximately three miles away from the post at an elevation of about 500 feet above the reservoirs which were 250 feet above the hospital, the lowest point in the camp. Iron pipes transported water from the springs to the reservoirs and then on to the points of distribution on post. Excavated in rock and cemented to inhibit seepage, each of the two reservoirs had a 220,000 gallon capacity. Overflow from these reservoirs watered the parade ground. Flood waters were carried away from post housing by deep open ditches; in front of the enlisted men's barracks and

behind officer's quarters. Huachuca Creek flowed at the bottom of the slope behind the barracks and reportedly became a raging river during rain storms.

As early as 1887, the post commander restricted garden irrigation. Post Surgeon Leonard Wood wrote to the Commanding Officer that while there was a plentiful supply of water, its quality was not good. Wood based his assumption on the large number of soldiers being treated in the post hospital for stomach malfunctions a few days after the heavy rains. Apparently the rains flooded the reservoir so that it became little more than a pool within the stream.

In 1906, plans were made to abandon Fort Huachuca due to acute water shortage. The proposed site in Garden Canyon, seven miles south of the Fort, turned out to have an even less reliable water source. Rather than relocate, post officials decided to construct a water supply line from Garden Canyon, however, the line was never completed. A permanent water supply system was constructed in 1911 consisting of seven miles of collecting pipe line to springs in the canyons and a 250,000 gallon masonry reservoir.

Shortages were severe during the summer of 1918. Beginning June 5, the Quartermaster began turning off the water supply during the night. One week later, water flow was restricted to six hours a day, with no water running in the irrigation ditches. By 1932, the Fort had insufficient water. All of it came from springs in Huachuca and Garden Canyons. A well was drilled in Garden Canyon to supplement the main Huachuca Canyon source, but it was never successful. Restrictions on water usage again plagued the Fort during the summers of 1934 and 1935.

In 1939, a large well was installed which tapped into the regional groundwater aquifer. This successfully supplemented the above-ground springs to insure an adequate future supply. Figures for 1940 indicate that the post population of 5,500 used 740 acre-feet of water from the well that year. The amount of water used fluctuated with Fort population. In 1942, it was utilized as a training ground and housed 40,500 troops. Water pumpage for that year reached a high of 5,400 acre-feet.

The post was deactivated from 1947 until 1951. During this four year period the reservation was turned into a buffalo preserve requiring little water. The Fort was reactiviated in 1951 for two years during the Korean War with a population of 10,300 and water use of 1,380 acre-feet. It was closed

FMC002174

again for a brief time from May 1953 until February 1954 at which time it was designated the U.S. Army Electronic Proving Ground. It has remained active since that date. Water use steadily increased from 2,580 acre-feet in 1954 to 3,300 acre-feet by 1973.

Current Water Use

1. Municipal Use

Potable water utilized in meeting the municipal demands of Fort Huachuca is supplied by eight production wells. Of this total, six are located in the main post area, the remaining two are located on the East Range. Total current water consumption, not including effluent use, is estimated at 3,000 acre-feet per year. The pumping capacity of six wells operating sixteen hours per day is 3,500,000 gallons a day or 4,000 acre-feet per year. Fort Huachuca has claimed a total water storage capacity of 5,630,000 gallons per day and a potable water distribution system totaling 1,246,148 lineal feet.

Potable water from springs in Garden and Huachuca Canyons is available to supplement the main municipal supply. At one time, both of these springs provided good quality water to the post but were disconnected from the main distribution system in 1983.

Water from the springs in Garden Canyon, while no longer part of the main municipal supply, is used for military training exercises, for providing lavatory facilities at Lower Garden Canyon picnic grounds, and for sustaining water levels at the golf course pond and gravel pit.

Currently unused, the Huachuca Canyon source consisted of a gravity feed through a pipeline from the spring. The pipeline is still in place, but the water is rerouted to Huachuca Canyon. As a result, a greater quantity of water is retained in the area for enhanced plant growth and wildlife usage.

Domestic use accounts for a significant amount of the total municipal water demand. An additional quantity of water is needed to maintain turf and landscaped areas. Turf areas currently watered by sprinkler irrigation include the Fort cemetery, Brown Parade field, Henry Circle, as well as turf areas surrounding base residences, Fort Headquarters and Greely Hall.

FMC002175

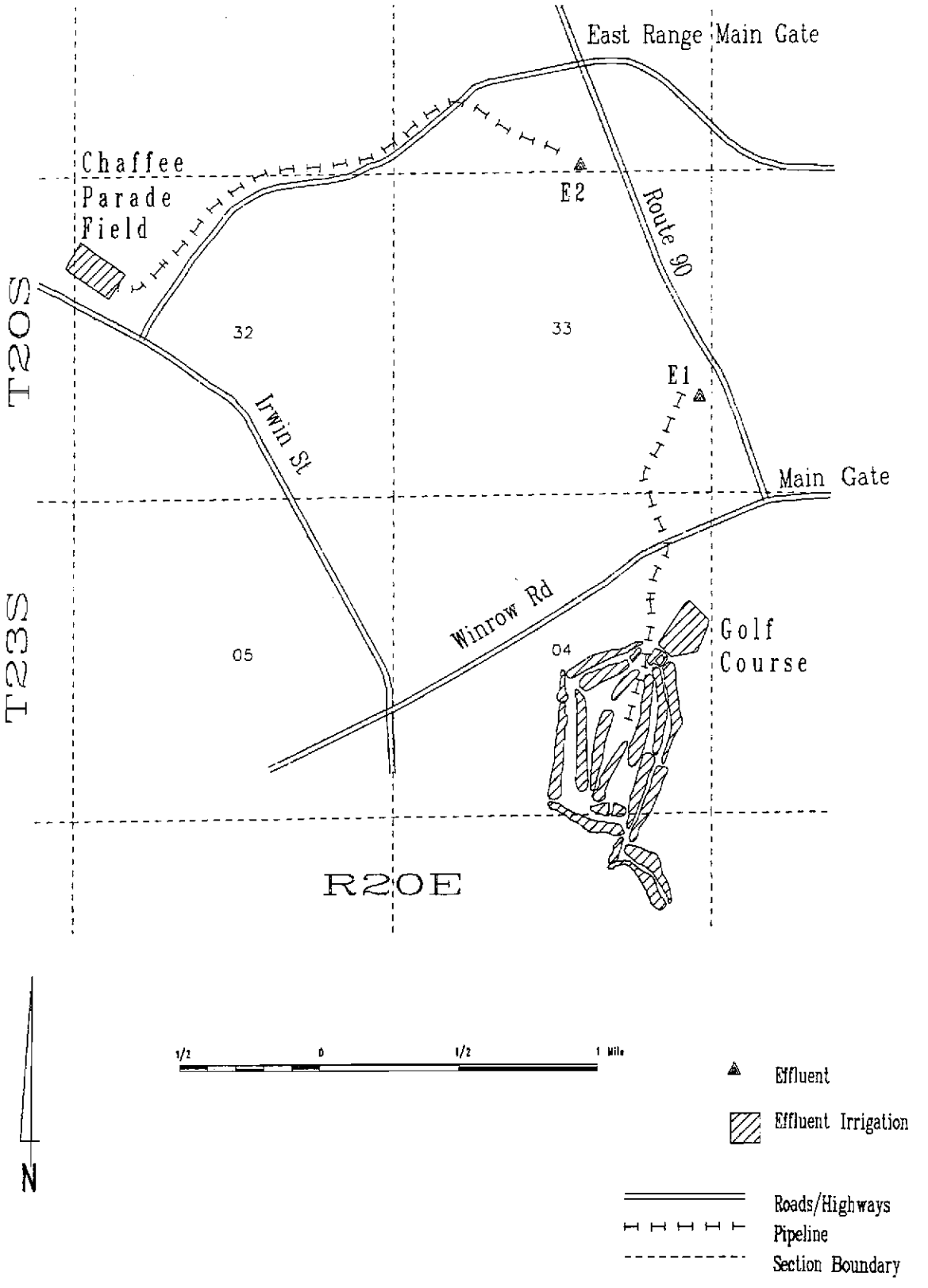

Figure 5-25. Effluent irrigation occurring at Fort Huachuca

FMC002176

irrigated. Any surplus effluent not used at these locations is disposed of in evaporation ponds. Fort Huachuca has claimed a total of 104,560 lineal feet of non-potable water lines.

TABLE 5-62

FORT HUACHUCA
IRRIGATION SUMMARY

USE	LOCATION	SOURCE	ACRES
Parade Field	Sec. 32, T.21S, R.20E	E2	10.25
Golf Course	Sec. 04, T.22S, R.20E	E1, E2	84.80

In 1986, Fort Huachuca was irrigating two additional areas (listening device-sensor fields) with non-potable water. These areas were sprinkler irrigated with groundwater from Rembass well #1 and 2. Claimed acreage for these two areas was 47.87 acres. As of March 1990, these locations have been allowed to revert back to natural vegetation.

5. Other Uses

Additional water uses claimed by the Fort include eight non-potable wells and nine test wells. The test wells, two windmills, and two wells (well #9 and Garden Canyon well) are currently capped. Fort Huachuca has stated that these sources have the potential for use during emergencies, mobilization, and to accomodate a change in mission. A majority of claimed non-potable water is used for general military purposes, washing of vehicles, and dust control during construction.

Other water uses on the Fort include those at Libby Army Airfield. This facility is located on property owned by the City of Sierra Vista, but is jointly utilized by the Army, Air National Guard, and the City of Sierra Vista. Water uses at the airbase consist of domestic use, washing of equipment, limited irrigation, and fire prevention.

Future Uses

1. Municipal Use

Figure 5-26 shows DWR's projected future municipal water requirements based on pumpage figures and population estimates for Fort Huachuca supplied

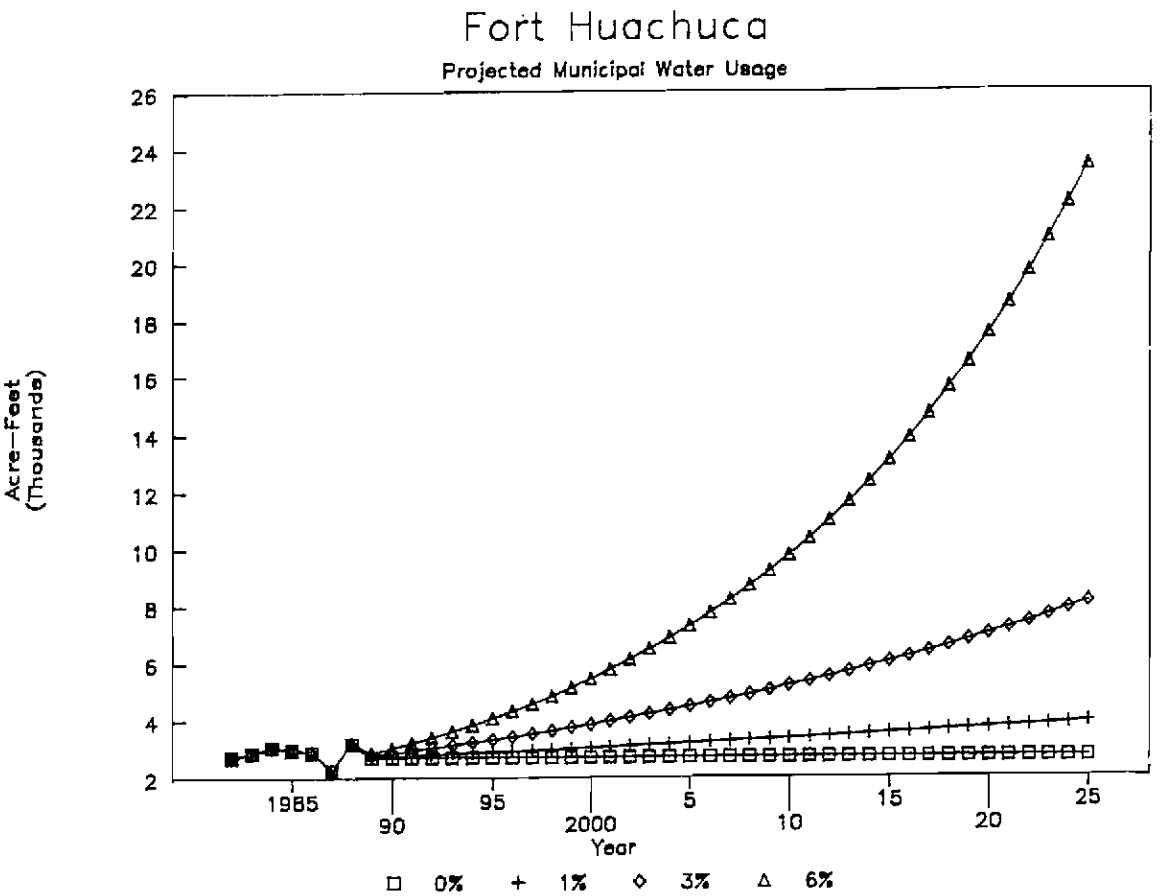

Figure 5-26. Fort Huachuca - projected municipal water use for zero, one, three, and six percent rates of population increases

FMC002178

by the Fort for the years 1982 to 1988. DWR projected the future municipal requirements based on annual population increases of zero, one, three, and six percent to provide a representative range of water requirements. Water usage rates were determined by averaging the reported information from the years 1982 to 1988. This rate was determined to be 265 gpcd. This rate is used in DWR's projection which was converted to acre-feet per year. Table 5-63 displays DWR's projection for selected years to the year 2025.

TABLE 5-63

FORT HUACHUCA
PROJECTED MUNICIPAL USE
(ACRE-FEET PER YEAR)

YEAR	0%	1%	3%	6%
1990	2,712	2,767	2,877	3,047
1995	2,712	2,908	3,335	4,078
2000	2,712	3,056	3,867	5,457
2005	2,712	3,212	4,483	7,303
2010	2,712	3,376	5,197	9,773
2015	2,712	3,548	6,042	13,078
2020	2,712	3,729	6,984	17,502
2025	2,712	3,919	8,096	23,421

2. Irrigation

Effluent is used on the Fort's golf course and Chaffee Field. The water requirements of these areas is estimated as follows:

A. Chaffee Field

The parade field consists primarily of pasture grasses and is irrigated by a sprinkler system. Consumptive use for pasture grasses is estimated at 2.8 acre-feet per acre. Total acres irrigated equals 10.25 acres. The sprinkler system was assigned an efficiency of seventy-two percent. An estimate of water required to meet these needs is calculated as shown in the following equation.

$$\frac{\text{2.8 acre-feet per acre x 10.25 acres}}{\text{72 percent}} = \text{39.9 acre-feet}$$

FMC002179

B. Golf Course

The turf irrigated at the post golf course has a consumptive use value of 1.9 acre-feet per acre. The golf course is sprinkler irrigated. This irrigation system was also assigned an efficiency of seventy-two percent. Total irrigated area equals 84.8 acres.

$$\frac{\text{1.9 acre-feet per acre x 84.8 acres}}{\text{72 percent}} = \text{223.8 acre-feet}$$

The total quantity of effluent needed to satisfy the irrigation needs of the parade field and golf course is equal to 263.7 acre-feet.

3. Other Irrigation

Two sensor fields are categorized as other irrigation. They were irrigated by Rembass wells #1 and #2. The sensor field combined acreage was 47.87 acres. The fields were irrigated by portable sprinkler. This system was assigned an efficiency of seventy-two percent. The area is not currently being used and is not being irrigated.

The sensor field acreage was classified as pasture grass which has a consumptive use of 2.8 acre-feet per acre. The water requirements for the sensor fields is estimated as follows:

$$\frac{\text{2.8 feet x 47.87 acres}}{\text{72 percent}} = \text{186.2 acre-feet}$$

4. Wildlife

The Fort does not have wildlife water use estimates, therefore, an estimate of future water needs for wildlife was not calculated. The Fort has claimed a total of 51.6 acre-feet of water in the form of wildlife springs.

Summary of Total Projected Water Requirements

Table 5-64 shows DWR's estimate of total projected water requirements for Fort Huachuca. The projection is shown for Fort population increases of zero, one, three, and six percent. The projection includes future municipal water requirements and total fixed water requirements of 683 acre-feet per year broken down into irrigation uses, impoundments, and wildlife usage equalling 264, 367, and 52 acre-feet per year, respectively.

Based on these estimates, DWR projects for the year 2001 that the Fort's water requirements will be 3,395 acre-feet at zero percent population increase, 3,683 acre-feet at a one percent, 4,583 acre-feet at three percent, and 6,183 acre-feet at six percent. These estimates are lower than the claimed amount by the Fort of 10,087 acre-feet for the year 2001. This difference can be attributed to the fact that the Fort used 1979 to 1981 average pumping figures and projected these rates to the year 2001 using a six percent per year population increase. DWR's projection utilizes pumpage rates and population data reported by the Fort for the years 1982 to 1988.

TABLE 5-64

FORT HUACHUCA
PROJECTED WATER REQUIREMENTS
(ACRE-FEET PER YEAR)

YEAR	0%	1%	3%	6%
1990*	3,395	3,450	3,560	3,730
1995	3,395	3,591	4,018	4,761
2000	3,395	3,739	4,550	6,140
2005	3,395	3,895	5,166	7,986
2010	3,395	4,059	5,880	10,456
2015	3,395	4,231	6,707	13,761
2020	3,395	4,412	7,667	18,185
2025	3,395	4,602	8,779	24,104

*Estimated current use is 3,000 acre-feet. The projection is based on the average Fort population for the years 1982 to 1988 and a 265 gpcd rate.

Quantification of Significant Diminishment to Fort Huachuca

The problem of special interest is, per the instructions of the Court's Order of September 9, 1988, to: "...determine all stream users or diversions of either surface water or groundwater which significantly affect those sources reasonably available on, at, or near the federal parcel..." (emphasis added).

The quantification of significant diminishment to Fort Huachuca was conducted with the use of a numerical groundwater flow model developed by the USGS. APPENDIX G provides a detailed description of the methodology that was used to conduct this analysis.

The USGS Modflow model (Freethey, 1982) defined the hydrologic system of the Upper San Pedro Basin. Freethey developed a numerical model based on a conceptualization of the hydrologic system within the basin. The numerical model employed a three-dimensional, block centered, finite-difference grid to simulate groundwater flow, stream-aquifer connection, and evapotranspiration. Information on hydraulic properties of the basin fill, recharge from bordering mountain ranges, discharge from evapotranspiration and exchange of water between aquifer and stream was available from previous work or estimates. The advantages of using the model were that: 1) it is well documented, 2) it can be used to solve complex spatial and temporal relationships in a dynamic hydrologic system, and 3) the model can simulate different scenarios by changing input parameters.

In order to isolate the impacts that off-reservation pumpage has on the Fort's groundwater supply, the model compared two scenarios. The first incorporated groundwater withdrawals due only to the Fort's pumpage. The second incorporated groundwater pumpage for Fort Huachuca and the eight surrounding municipal water companies (including Huachuca City and Sierra Vista). Water level drawdown maps were constructed for the time periods 1940 through 1988 and for 1940 through 2038. These are shown in Figures 5-27 and 5-28. These drawdown maps illustrate the additional lowering of water levels solely from the municipal pumpage over the noted time periods. These drawdown maps do <u>not</u> reflect the total drawdown in the vicinity due to the municipal pumpage <u>and</u> Fort Huachuca pumpage.

The results of the model runs demonstrate that the additional drawdown to Fort Huachuca's wells because of the additional pumpage from the eight surrounding water companies from 1940 through 1988 ranges from thirteen feet at Fort Huachuca well No. 8 in the East Range, which is furthest from the pumping center, to forty-one feet at wells No. 1 and No. 2 nearest to the pumping center. The projected cost to the Fort over the forty-eight year period (1940-1988) could be between $75,000 to $125,000. Table G-4 in APPENDIX G shows this analysis. An explanation and description of the calculations used to derive these numbers are included in the table. The table is an attempt to quantify the economic impact that surrounding pumpage has had and might possibly have on Fort Huachuca's water supply costs. Table

FMC002182

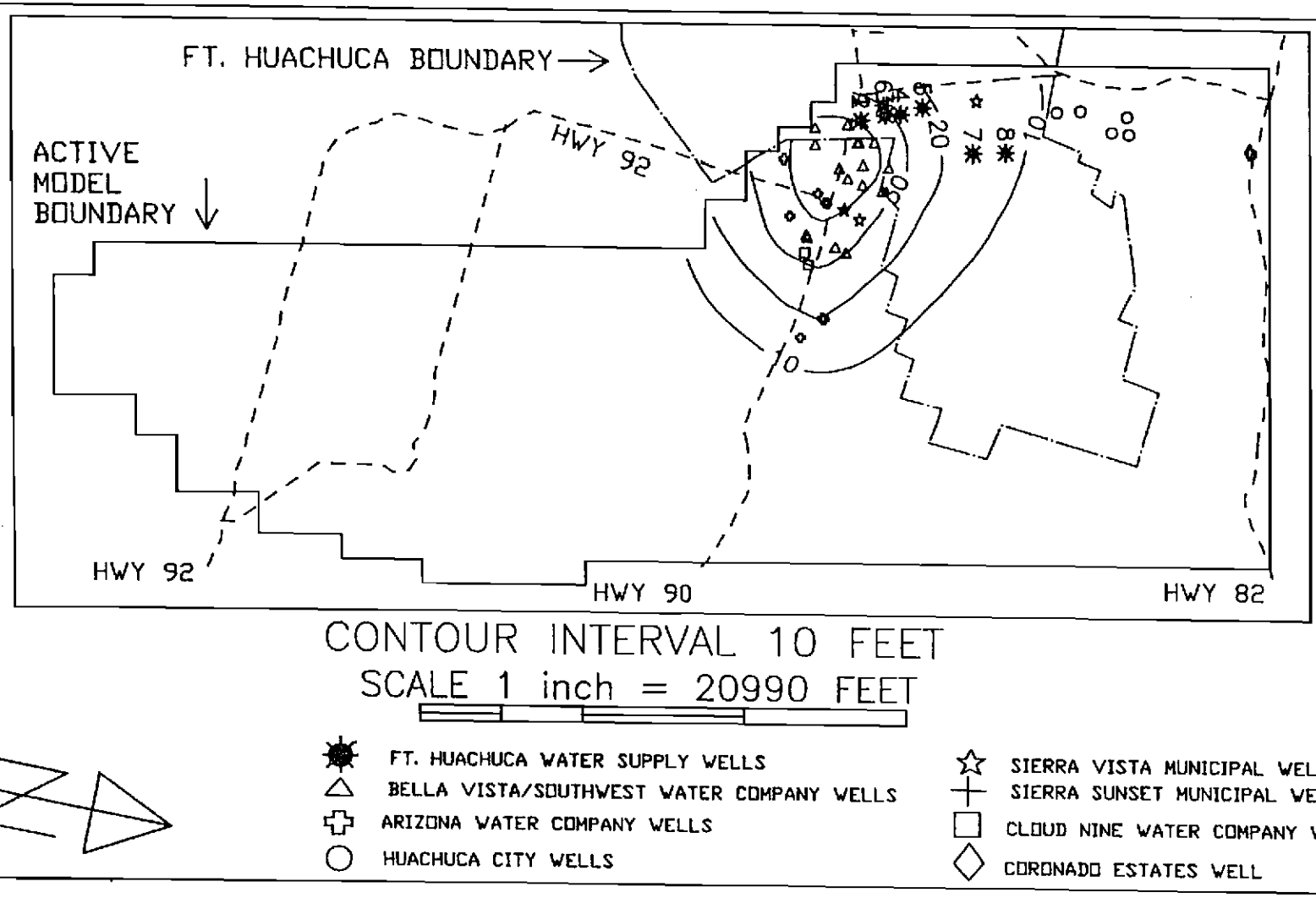

Figure 5-27. Upper San Pedro River basin drawdown map due to municipal pumpage through 1988

FMC002183

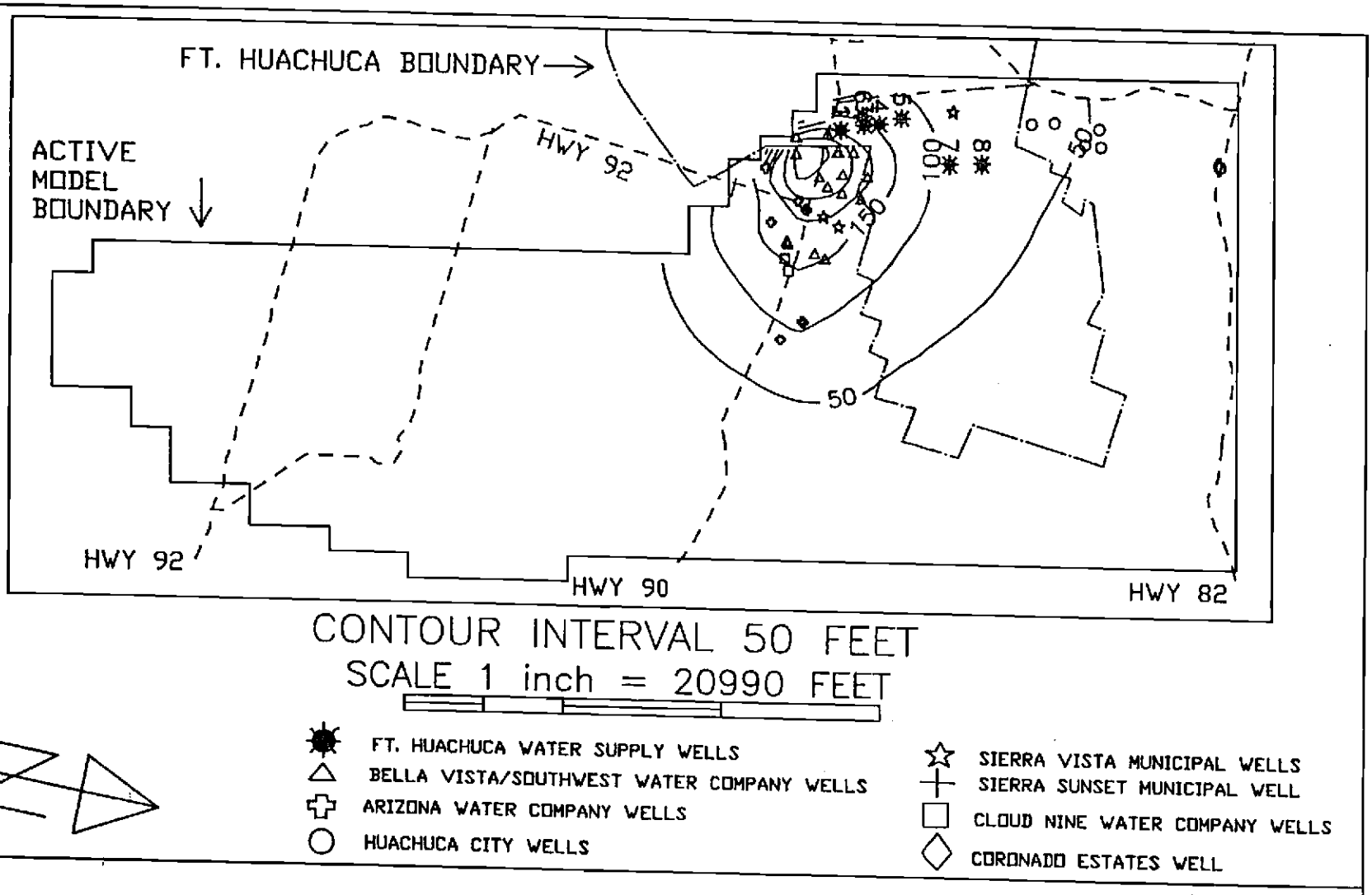

Figure 5-28. Upper San Pedro River basin drawdown map due to municipal pumpage through 2038

G-4 does not reflect actual costs incurred to the Fort by surrounding municipal pumpage. It is only an estimate, using data available to DWR at the time of the analysis.

A pumpage scenario (see Tables G-2 and G-3 in APPENDIX G for details) based on projected increases in population from 1989 through 2038 resulted in additional drawdown of seventy-two feet at well No. 8 to 223 feet at well Nos. 1 and 2. The projected cost from 1989-2038 could be between $500,000 and $1,880,000 over the next fifty years. This calculation was made in present dollars; energy, well deepening, and maintenance costs are not adjusted for inflation, as illustrated in Table G-4 in the APPENDIX G. It can not be overstated that such a fifty year prediction into the future is only one simulation scenario and only one approximation of many possible future growth projections. This particular scenario assumed that the pumpage rates fifty years from now would be 2.2 times the current rates. Such rates may or may not be reached by the year 2038. Future population growth might demand better water conservation techniques that would reflect in less per capita pumpage and subsequently less drawdown than the model results reflect in the Sierra Vista-Fort Huachuca area. Fort Huachuca's response to a lowering of water levels might also result in more pumpage being shifted away from the pumping center to the East Range wells (United States Army Corps of Engineers, 1987). This would result in fewer well deepening costs, repair costs and a reduction in lift costs.

TABLE 5-65

UNITED STATES ARMY COMMUNICATIONS COMMAND
FORT HUACHUCA
11-F1
COMPARISON OF CLAIMANT INFORMATION WITH DWR FINDINGS

CLAIMED INFORMATION							DWR FINDINGS							
STATEMENT OF CLAIMANT	SOURCE	LOCATION	CLAIMED USE	NAME	WATERCOURSE	1988 ANNUAL USE #	WATER USE #	POD #	WATER USE TYPE	USE STATUS	USE LOCATION	POD LOCATION	ACREAGE OR CAPACITY (AC-FT)	MAP
39-10774	* Well	NWSESE 29 22S 20E	ML	GW	Garden Canyon	108		W09	Capped	Unused		NWSESE 29 22S 20E		
	Well	NWSWSE 20 21S 20E	Test	Test #1				W12	Capped	Unused		NWSWSE 20 21S 20E		
	Well	SESWNW 30 21S 20E	Test	Test #2				W13	Capped	Unused		SESWNW 30 21S 20E		
	Well	NENENE 16 21S 20E	Test	Test #3				W14	Capped	Unused		NENENE 16 21S 20E		
	Well	SWSENE 15 21S 20E	Test	Test #4				W15	Capped	Unused		SWSENE 15 21S 20E		
	Well	SESWSW 35 20S 20E	Test	Test #6				W16	Capped	Unused		SESWSW 35 20S 20E		
	Well	SESWNW 11 21S 20E	Test	Test #7				W17	Capped	Unused		SESWNW 11 21S 20E		
	Well	NWNWSW 13 21S 20E	Test	Test #8				W18	Capped	Unused		NWNWSW 13 21S 20E		
	Well	SWSWNW 17 21S 21E	Test	Test #9				W19	Capped	Unused		SWSWNW 17 21S 21E		
	* Well	NWSENW 07 21S 21E	ML	Erb	Graveyard Gulch	1		W20	ML	Source A Well		NWSENW 07 21S 21E		
	Well	SWNWNW 10 21S 20E	ML	Well #9	Soldier Creek			W21	Capped	Unused		SWNWNW 10 21S 20E		
	Well	SWNWNW 22 21S 20E	ML	SP	Soldier Creek	67		W22	ML	Source A Well		SENWNW 22 21S 20E		
	Well	NESWNE 26 21S 20E	ML	WR1	Graveyard Gulch	1	IR02	W10	ML,IR	Verified	See Text/Map	NESWNE 26 21S 20E	47.9	111-20-CDD
	Well	NENWNE 23 21S 20E	ML,IR	WR2	Graveyard Gulch	1		W11	ML,IR	Verified	See Text/Map	NWNENE 23 21S 20E		111-20-CDA
	SPR	NWSW 14 22S 19E	MU	Spring #1	Huachuca Canyon		MU01	S01	MU	Verified		NWSW 14 22S 19E		111-23
	SPR	NWSW 14 22S 19E	MU	Spring #2	Huachuca Canyon			S02	MU	Verified		NWSW 14 22S 19E		111-23
	SPR	NENE 22 22S 19E	MU	Spring #3	Huachuca Canyon			S03	MU	Verified		NENE 22 22S 19E		111-22
	SPR	NENE 22 22S 19E	MU	Spring #3a	Huachuca Canyon			S04	MU	Verified		NENE 22 22S 19E		111-22
	SPR	NENE 22 22S 19E	MU	Spring #4	Huachuca Canyon			S05	MU	Verified		NENE 22 22S 19E		111-22
	SPR	NESW 31 22S 20E	MU	Picnic Spring	Garden Canyon			S07	MU	Verified		NESW 31 22S 20E		111-23
	SPR	SWSW 31 22S 20E	MU	Chain Spring	Garden Canyon			S08	MU	Verified		NWSW 31 22S 20E		111-23
	SPR	SESE 36 22S 19E	MU	Spring #1	Garden Canyon			S09	MU	Verified		SESE 36 22S 19E		111-23
	* SPR	SESE 36 22S 19E	MU	Spring #1b	Garden Canyon			S10	MU	Verified		NENE 01 23S 19E		111-23
	* SPR	NENE 01 23S 19E	MU	Spring #1a	Garden Canyon		MU01	S11	MU	Verified		NENE 01 23S 20E		111-23
	* SPR	NESW 01 23S 19E	MU	Spring #3	Garden Canyon			S12	MU	Verified		NESW 01 23S 19E		111-23
	* SPR	NESW 01 23S 19E	MU	Spring #2	Garden Canyon			S13	MU	Verified		NESW 01 23S 19E		111-23
	SPR	SWSW 01 23S 19E	MU	Spring #4	Garden Canyon			S14	MU	Verified		SWSW 01 23S 19E		111-23
	* Well	NESENE 16 21S 20E	DM,ML	Well #8	Soldier Creek	486		W01	MU	Verified		NESENE 16 21S 20E		111-20
	* Well	NWNWNW 22 21S 20E	DM,ML	Well #7	Soldier Creek	486		W02	MU	Verified		NWNWNW 22 21S 20E		111-20
	Well	SWNESW 28 21S 20E	DM,ML	Well #5	Soldier Creek	43		W03	MU,ML	Verified		SWNESW 28 21S 20E		111-20
	Well	NENWNE 33 21S 20E	DM,ML	Well #4	Soldier Creek	546		W04	MU,ML	Verified		NENWNE 33 21S 20E		111-20
	Well	NWNWSE 33 21S 20E	DM,ML	Well #6	Soldier Creek	754		W05	MU,ML	Verified		NWNWSE 33 21S 20E		111-20
	Well	NWNESE 33 21S 20E	DM,ML	Well #3	Soldier Creek	238		W06	MU,ML	Verified		NWNESE 33 21S 20E		111-20
	Well	NWNWNW 03 22S 20E	DM,ML	Well #1	Soldier Creek	276		W07	MU,ML	Verified		NWNWNW 03 22S 20E		111-23
	Well	NWNWNW 03 22S 20E	DM,ML	Well #2	Soldier Creek	368		W08	MU,ML	Verified		NWNWNW 03 22S 20E		111-23
39-10775	* EFF		IR	Golf Course	Z1			E01	RC	Verified	See Text	SENESE 33 21S 20E	84.8	
	* EFF		IR	Chaffee Field	Z2			E02	IR	Verified	See Text	SWSWSE 28 21S 20E	10.3	
	Well	NESESW 34 20S 20E	ML	WM1	Soldier Creek			W23	Capped	Unused		NESESW 34 20S 20E		
	Well	SWSESW 27 20S 20E	ML	WM2	Soldier Creek			W24	Capped	Unused		SWSESW 27 20S 20E		
	Well	NENENW 32 22S 20E	WL	GWM	Garden Canyon			W25	WL	Source A Well		SWNENW 32 22S 20E		
	Dam	NWSW 16 21S 19E	RC,WL	Antelope (19)	Babocomari	4.8	PS01		RC,WL	Verified	NWSW 16 21S 19E		26.4	111-19
	Dam	SESW 20 21S 19E	RC,WL	Sycamore (9)	Sycamore Canyon	6	PS02		RC,WL	Verified	SESW 20 21S 19E		38.8	111-19
	Dam	SENW 28 21S 19E	RC,WL	Hidden (5)	Blacktail Canyon	5.6	PS03		RC,WL	Verified	SENW 28 21S 19E		22.5	111-19
	Dam	NWNE 09 22S 20E	RC,WL	Golf Course (2)	Soldier Creek	14.4	PS04		RC,WL	Verified	NWNE 09 22S 20E		59.7	111-23
	Dam	NESE 17 22S 20E	RC,WL	Gravel Pit (1)	Woodcutter Canyon	11.5	PS05		RC,WL	Verified	NESE 17 22S 20E		57.4	111-23
	* Dam	NENE 03 21S 20E	EC,FC	(k)	Soldier Creek	0.5	SP01		WL,EC,FC	Verified	NENE 03 21S 20E			111-20
	Dam	NENE 09 21S 20E	EC,FC	(l)	Soldier Creek	0.5	SP02		WL,EC,FC	Verified	NENE 09 21S 20E			111-20
	Dam	SENW 21 20S 21E	WL	(r)	San Pedro	0.3	SP03		WL	Verified	NENW 21 20S 21E			111-20
	* Dam	SWNW 16 21S 19E	WL	Lower Antelope (41)	Babocomari		SP04		WL	Verified	SWNW 16 21S 19E		14.9	111-19
	* Dam	NESW 29 21S 19E	WL	Sycamore II (42)	Sycamore		SP05		WL	Verified	NESW 29 21S 19E		10.5	111-19
	Dam	SWNE 26 21S 19E	EC,FC	Buffalo Corral (12)	Coyote Canyon	1.5	SP06		WL	Verified	SWNE 26 21S 19E			111-20
	* Dam	SWNE 31 21S 19E	EC,FC	(39a)	Sycamore	0.5	SP07		WL,EC,FC	Verified	SWNE 31 21S 19E			111-19
	* Dam	NWSE 21 22S 19E	RC,WL	West Huachuca (14)	Huachuca Canyon	0.7	SP08		WL	Verified	SWNE 21 22S 19E			111-22
	Dam	SESE 07 21S 20E	EC,FC	Lower Huachuca (23)	Huachuca Canyon	4.8	SP09		WL,EC,FC	Verified	SESE 07 21S 20E			111-20

TABLE 5-65 (cont'd)

CLAIMED INFORMATION								DWR FINDINGS							
STATEMENT OF CLAIMANT	SOURCE	LOCATION	CLAIMED USE	NAME	WATERCOURSE	19BB ANNUAL USE #	WATER USE #	POD #	WATER USE TYPE	USE STATUS	USE LOCATION	POD LOCATION	ACREAGE OR CAPACITY (AC-FT)	MAP
	Dam	NWSE 18 21S 20E	WL	(q)	Huachuca Canyon	0.5	SP10		WL	Verified	NWSE 18 21S 20E			111-20
	Dam	SENE 10 21S 20E	EC,FC	(j)	Soldier Creek	0.5	SP11		WL,EC,FC	Verified	SWNE 10 21S 20E			111-20
	* Dam	SWNW 15 21S 20E	SE	Sediment (34d)	Soldier Creek	4	SP12		WL,EC,FC,S	Verified	SWNW 15 21S 20E		29.6	111-20
	Dam	SENE 14 21S 20E	EC,FC	East #3 (37)	San Pedro	3.2	SP13		WL,EC,FC	Verified	SENE 14 21S 20E			111-20
	* Dam	SWSW 16 21S 20E	WL	Gate #5 (44)	Soldier Creek		SP14		WL	Verified	SWSW 16 21S 20E			111-20
	* Dam	NENE 21 21S 20E	SE	Sediment (34c)	Soldier Creek	1	SP15		WL,EC,FC	Verified	SESE 16 21S 20E		6.0	111-20
	Dam	SENE 21 21S 20E	SE	#3 Sewage (46)	Soldier Creek	2.5	SP16		SE	Verified	NWSE 21 21S 20E		11.0	111-20
	* Dam	NWSE 10 21S 20E	WL	Pond (45)	Soldier Creek		SP17		WL	Verified	NWSE 10 21S 20E			111-20
	* Dam	NWSE 21 21S 20E	SE	Sediment (34a)	Soldier Creek	1.7	SP18		WL,SE	Verified	NWSE 21 21S 20E			111-20
	* Dam	SESE 21 21S 20E	WL	#2 Sewage (47)	Soldier Creek		SP19		WL	Verified	SWSE 21 21S 20E		5.5	111-20
	Dam	SESE 21 21S 20E	SE	Sediment #3 (34)	Soldier Creek	16.5	SP20		SE,WL	Verified	SWSE 21 21S 20E			111-20
	Dam	NWNE 36 21S 19E	EC,FC,RC	(m)	Huachuca Wash	2.8	SP21		WL,EC,FC	Verified	NWNE 36 21S 19E			111-20
	* Dam	NESW 27 21S 20E	EC,FC	East #4 (38)	Soldier Creek	4.1	SP22		WL,EC,FC	Verified	NESW 27 21S 20E			111-20
	* Dam	SWSW 06 22S 20E	EC,FC	Lower Fly (27)	Soldier Creek	0.8	SP23		WL,EC,FC	Verified	SESW 06 22S 20E			111-23
	* Dam	SESW 06 22S 20E	RC,WL	Fly (8)	Soldier Creek	0.9	SP24		WL,EC,FC	Verified	SESW 06 22S 20E			111-23
	* Dam	SESW 06 22S 20E	WL	Horse Pasture (48)	Soldier Creek		SP25		WL	Verified	SESW 06 22S 20E			111-23
	* Dam	SESW 06 22S 20E	WL	L Horse Pasture (29)	Soldier Creek		SP26		WL	Verified	SESW 06 22S 20E			111-23
	Dam	SWNW 10 22S 20E	EC,FC	Lower Woodcutter (18)	Woodcutter Canyon	2	SP29		WL,EC,FC	Verified	SWNW 10 22S 20E		20.7	111-23
	* Dam	SENE 13 22S 19E	EC,FC	Upper Soldier (7)	Rock Spring Creek	1.6	SP30		WL,EC,FC	Verified	SENE 13 22S 19E			111-23
	Dam	NWSW 16 22S 20E	EC,FC	Woodcutter (1b)	Woodcutter Canyon	2	SP31		WL,EC,FC	Verified	NWNE 16 22S 20E		8.4	111-23
	Dam	NWNE 15 22S 20E	EC,FC	(p)	Garden Canyon	0.5	SP32		WL,EC,FC	Verified	NWNE 15 22S 20E			111-23
	Dam	NWNE 16 22S 20E	EC,FC	Woodcutter (1a)	Woodcutter Canyon	2	SP33		WL,EC,FC	Verified	SENW 16 22S 20E			111-23
	Dam	NESW 20 22S 20E	EC,FC	Upper Woodcutter (17)	Woodcutter Canyon	7	SP34		WL,EC,FC	Verified	NESW 20 22S 20E			111-23
	* Dam	SWNE 10 22S 20E	EC,FC	Woodcutter (1c)	Woodcutter Canyon	4.5	SP35		WL,EC,FC	Verified	SWNE 10 22S 20E			111-23
	* Dam	SESE 10 21S 21E	WL	Ponds (51)	San Pedro		SP36		WL	Verified	SESE 10 21S 21E			111-20
	Dam	NWNW 20 21S 21E	EC,FC	(e)	Graveyard Gulch	0.5	SP37		WL,EC,FC	Verified	NWNE 20 21S 21E			111-20
	* Dam	SWNW 20 21S 21E	EC,FC	(f)	Graveyard Gulch	0.5	SP38		WL,EC,FC	Verified	SWNW 20 21S 21E			111-20
	Dam	SWSW 23 22S 20E	EC,FC	Lower Garden (26)	Garden Canyon	3	SP39		WL,EC,FC	Verified	SESE 22 22S 20E			111-23
	Dam	NENE 28 22S 20E	EC,FC,RC	(n)	Garden Wash	5.2	SP40		WL,EC,FC	Verified	NENE 28 22S 20E		16.9	111-23
	* Dam	NWNE 28 22E 20E	WL	M Garden Canyon (52)	Garden Wash		SP41		WL	Verified	NWNE 28 22S 20E		27.1	111-23
	* Dam	SESW 33 22S 20E	WL	Tinker (a)	Garden Canyon	0.5	SP42		WL	Verified	SESW 33 22S 20E			111-23
	* Dam	NESW 21 22S 19E	WL	W Huachuca #2 (43)	Rough Canyon		SP43		WL	Verified	NESW 21 22S 19E			111-23
	* Dam	SESE 02 23S 19E	EC,FC	Boy Scout (16)	Garden Canyon	0.5	SP44		WL,EC,FC	Verified	SESE 02 23S 19E			111-23
	* Dam	SESE 31 21S 19E	WL,EC,FC	(o)	Sycamore Wash	0.5	SP45		WL,EC,FC	Verified	SESE 31 21S 19E			111-19
	* Dam	SWNE 15 21S 19E	WL	North (21)	Babocomari	0.3	SP46		WL	Verified	SWNE 15 21S 19E			111-19
	* Dam	NESE 14 21S 19E	RC,WL	Unknown West (25)	Slaughterhouse Wash	0.2	SP47		WL,EC	Verified	NESE 14 21S 19E			111-20
	* Dam	NWSE 27 21S 19E	WL	Power Line (20)	Blacktail Canyon	1.3	SP48		WL	Verified	NWSE 27 21S 19E			111-19
	* Dam	NWNW 35 21S 19E	EC,FC	Landing Strip (11)	Coyote Canyon	0.9	SP49		WL,EC,FC	Verified	NWNW 35 21S 19E			111-20
	* Dam	NWSW 14 22S 19E	EC,FC	Huachuca Canyon (22)	Huachuca Canyon	0.2	SP50		WL,EC,FC	Verified	NWSW 14 22S 19E			111-23
	* Dam	NWSE 22 22S 19E	EC,FC	Huachuca Corral (15)	Huachuca Canyon	0.4	SP51		WL,EC,FC	Verified	NWSE 22 22S 19E			111-22
	* Dam	SENE 10 21S 20E	EC,FC	(h)	Soldier Creek	0.5	SP52		WL,EC,FC	Verified	SENE 10 21S 20E			111-20
	* Dam	SENW 10 21S 20E	EC,FC	(i)	Soldier Creek	0.5	SP53		WL,EC,FC	Verified	SENW 10 21S 20E			111-20
	* Dam	SENE 16 21S 20E	SE	East #1 (35)	Soldier Creek	3.6	SP54		WL,SE	Verified	SENE 16 21S 20E			111-20
	* Dam	SENE 21 21S 20E	SE	Sediment (34b)	Soldier Creek		SP55		SE	Verified	SENE 21 21S 20E			111-20
	* Dam	NESE 18 21S 21E	EC,FC	(b)	Graveyard Gulch	0.5	SP56		WL,EC,FC	Verified	NESE 18 21S 21E			111-20
	* Dam	NWSW 17 21S 21E	EC,FC	(g)	Graveyard Gulch	0.5	SP57		WL,EC,FC	Verified	NWSW 17 21S 21E			111-20
	* Dam	NWSW 17 21S 21E	EC,FC	(c)	Graveyard Gulch	0.5	SP58		WL,EC,FC	Verified	NWSW 17 21S 21E			111-20
	* Dam	SWNE 20 21S 21E	EC,FC	(d)	Graveyard Gulch		SP59		WL,EC,FC	Verified	SWNE 20 21S 21E			111-20
	Dam	NWNE 22 21S 19E	RC,WL	Lower Blacktail (24)	Blacktail Canyon	0.5	SR01		RC,WL	Verified	NWNE 22 21S 19E			111-19
	Dam	SWSE 23 21S 19E	RC,WL, EC,FC	Slaughterhouse (10)	Slaughterhouse Canyon	8.4	SR02		RC,WL,EC,F	Verified	SWSE 23 21S 19E			111-20
	Dam	NWSW 32 21S 19E	RC	Kino (39)	Sycamore	1.4	SR03		RC	Verified	NWSW 32 21S 19E			111-19
	Dam	SENE 16 22S 19E	RC,WL	Blacktail (13)	Blacktail Canyon	0.8	SR04		RC,WL,EC,F	Verified	NWSE 16 22S 19E			111-22
	Dam	NESE 01 22S 19E	RC,WL	Officers Club (3)	Soldier Creek	12.2	SR05		RC,WL	Verified	NESE 01 22S 19E			111-23
	Dam	NENE 07 22S 20E	RC,WL EC,FC	Lower Soldier (6)	Rock Spring Creek	0.6	SR06		RC,WL,EC,F	Verified	NENE 07 22S 20E			111-23
	* Dam	SWSE 02 23S 19E	RC,WL	Upper Garden (30)	Garden Canyon	0.4	SR07		RC,WL	Verified	SWSE 02 23S 19E			111-23
	* Dam	NWSE 04 22S 20E	EC,FC	Fairway (31)	Soldier Creek	0.4	SR09		RC,WL	Verified	NWSE 04 22S 20E			111-23
	* Dam	SWSE 04 22S 20E	RC	Fairway (50)	Soldier Creek		SR10		RC,WL	Verified	SWSE 04 22S 20E			111-23
	SPR	SWSW 26 21S 19E	WL	Spring #21	Slaughterhouse Canyon	1	WL01		WL	Spring	SWSW 26 21S 19E			111-20
	SPR	NWSW 32 21S 19E	WL	Spring #22	Sycamore Canyon	2.6	WL02		WL	Spring	NWSW 32 21S 19E			111-19
	SPR	NWNE 04 22S 19E	WL	Spring #20	Slaughterhouse Canyon	1	WL03		WL	Spring	NWNE 04 22S 19E			111-22
	SPR	SENE 08 22S 19E	WL	Spring #19	Blacktail Canyon	2.6	WL04		WL	Spring	SENE 08 22S 19E			111-22
	SPR	NWNE 16 22S 19E	WL	Spring #18	Blacktail Canyon	2.6	WL05		WL	Spring	NWNE 16 22S 19E			111-22
	SPR	SENW 15 22S 19E	WL	Spring #17	Huachuca Canyon	2.6	WL06		WL	Spring	SENW 15 22S 19E			111-22
	SPR	NWSW 14 22S 19E	WL	Spring #16	Huachuca Canyon	1	WL07		WL	Spring	NWSW 14 22S 19E			111-23

FMC002187

TABLE 5-65 (cont'd)

	CLAIMED INFORMATION						DWR FINDINGS							
STATEMENT OF CLAIMANT	SOURCE	LOCATION	CLAIMED USE	NAME	WATERCOURSE	1988 ANNUAL USE #	WATER USE #	POD #	WATER USE TYPE	USE STATUS	USE LOCATION	POD LOCATION	ACREAGE OR CAPACITY (AC-FT)	MAP
	SPR	NWSE 22 22S 19E	WL	Spring #15	Huachuca Canyon	1	WL08		WL	Spring	NWSE 22 22S 19E			111-22
	SPR	NESE 07 22S 20E	WL	Spring #12	Soldier Creek	1	WL09		WL	Spring	NESE 07 22S 20E			111-23
	SPR	SWSW 13 22S 19E	WL	Spring #13	Soldier Creek	2.6	WL10		WL	Spring	SWSW 13 22S 19E			111-23
	SPR	NESW 20 22S 20E	WL	Spring #11	Woodcutters Canyon	1	WL11		WL	Spring	NESW 20 22S 20E			111-23
*	SPR	SENW 21 22S 20E	WL	Spring #23	Garden Wash	1	WL12		WL	Spring	SENW 21 22S 20E			111-23
*	SPR	SWNE 27 22S 19E	WL	Spring #14	Huachuca Canyon	2.6	WL13		WL	Spring	SWNE 27 22S 19E			111-23
	SPR	NESE 35 22S 19E	WL	Spring #5	McClure Canyon	4.2	WL14		WL	Spring	NESE 35 22S 19E			111-22
	SPR	SWSW 19 22S 20E	WL	Spring #10	Woodcutters Canyon	2.6	WL15		WL	Spring	SWSW 19 22S 20E			111-23
	SPR	NWSE 25 22S 19E	WL	Spring #9	Woodcutters Canyon	4.2	WL16		WL	Spring	NWSE 25 22S 19E			111-23
	SPR	SWNW 36 22S 19E	WL	Spring #7	McClure Canyon	2.6	WL17		WL	Spring	SWNW 36 22S 19E			111-23
*	SPR	NWSE 25 22S 19E	WL	Spring #8	Garden Canyon	2.6	WL18		WL	Spring	SWSE 25 22S 19E			111-23
*	SPR	NESE 33 22S 20E	WL	Spring #2	Tinker Canyon	2.6	WL19		WL	Spring	NESE 33 22S 20E			111-23
*	SPR	SESW 36 22S 19E	WL	Spring #6	McClure Canyon	2.6	WL20		WL	Spring	SESW 36 22S 19E			111-23
*	SPR	SESW 36 22S 19E	WL	Spring #25	McClure Canyon	1.4	WL21		WL	Spring	SESW 36 22S 19E			111-23
*	SPR	NESE 33 22S 20E	WL	Spring #3	Tinker Canyon	1	WL22		WL	Spring	NESE 33 22S 20E			111-23
	SPR	NWNW 07 23S 20E	WL	Spring #24	Schellote Canyon	1	WL23		WL	Spring	NWNW 07 23S 20E			111-23
	SPR	SWSW 07 23S 20E	WL	Spring #4	Sawmill Canyon	4.2	WL24		WL	Spring	SWSW 07 23S 20E			111-23
*	SPR	SWSW 01 23S 19E	WL	Cabin Spring	Garden Canyon		WL25		WL	Spring	SWSW 01 23S 19E			111-23

KEY: DM = Domestic; E = Effluent (POD); EC = Erosion Controal; IR - Irrigation; ML = Miliatary; MU = Municipal; POD = Point of Diversion; PS = Primary Storage Reservoir; RC = Recreation; S = Spring (POD); SE = Sewage Evaporation; SP = Wildlife Pond; SPR = Spring (Source); SR = Small Reservoir; W = Well (POD); WL = Wildlife;
* = Use Change Due to Amended Statement of Claimant

FMC002188

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF MARICOPA

IN RE THE GENERAL ADJUDICATION OF ALL RIGHTS TO USE WATER IN THE GILA RIVER SYSTEM AND SOURCE

No. W1,W2,W3 & W4
W1-11-605
Major User No. 1283

MANDATORY FORM FOR OBJECTIONS TO The Hydrographic Survey Report for The San Pedro River Watershed

Please file a separate objection for each Watershed File Report, Zone 2 Well Report or Catalogued Well Report. Objections to information contained in Volume 1 of the HSR can be stated on one objection form. Objections must be written. Use of this form, or a computer facsimile, is required. Objections must be received on or before May 18, 1992.

This objection is directed to Watershed File Report or Zone 2 Well Report No. 111-23-073 or Catalogued Well No.

OBJECTOR INFORMATION

Objector's Name: Bella Vista Ltd. Partnership; Nicksville Water Company; Bella Vista Water Company; Bella Vista Ranches Ltd. Partnership; Dan Cracchiolo; Pueblo Del Sol Water Company c/o William P. Sullivan, Martinez & Curtis, P.C.

Objector's Address: 2712 North Seventh Street
Phoenix, Arizona 85006-1003

Objector's Telephone No.: (602) 248-0372

Objector's Watershed File Report or Zone 2 Well Report No. (if the Objector's claimed water rights are within the San Pedro River Watershed):

112-16-002; 111-20-007; 111-23-030; 111-20-062; 111-20-030; 111-23-017; 111-23-064; 111-23-017; 111-23-034

Or Objector's Cataloged Well Number (if the Objector's claimed water rights appear only in Volume 8 of the HSR):

Or Objector's Statement of Claimant No. (if the Objector's claimed water rights are located outside the San Pedro River Watershed):

STATE OF ARIZONA

COUNTY OF MARICOPA

VERIFICATION (must be completed by objector)

I hereby make this Objection. I certify that, if required, a copy of the forgoing Objection was served upon the following Claimant(s) by mailing true and correct copies thereof on the 14th day of May, 1992, postage prepaid and addressed as follows:

Name: FT HUACHUCA & U.S. ARMY INTELLIGENCE & CTR

Address: C/O OFFICE OF STAFF JUDGE FT HUACHUCA
FT HUACHUCA AZ 856135

(The above section must be completed if you object to another claimant's Watershed File Report, Zone 2 Well Report, or Catalogued Well Report. It does not need to be completed if you file an objection to your own Watershed File Report, Zone 2 Well Report, Catalogued Well Report; or to information contained in Volume 1 of the Hydrographic Survey Report.)

I declare under penalty of perjury that I am a claimant in this proceeding or the duly-authorized representative of a claimant; that I have read the contents of this Objection (both sides and any attachments) and know the contents thereof; and that the information contained in the Objection is true based on my own personal knowledge, except those portions of the Objection which are indicated as being known to me on information and belief and, as to those portions, I believe them to be true.

Signature of Objector or Objector's Representative

SUBSCRIBED AND SWORN to before me this 14th day of May, 1992.

Kathleen M. Carey

Notary Public for the State of Arizona

Residing at Phoenix, Maricopa County, Arizona.

My commission expires January 16, 1996.

Objections must be filed with the Clerk of the Superior Court in and for Maricopa County, Maricopa County Courthouse Annex, 3345 W. Durango Street, Phoenix, AZ 85009, on or before May 18, 1991.

STATEMENT OF THE OBJECTION

The following are main categories of the typical Watershed File Report (Zone 2 Well Reports and some Watershed File Reports lack certain categories). Please check the category(ies) to which you object, and state the reason for the objection on the back of this form.

___ 1. I object to the description of **Land Ownership**

___ 2. I object to the description of **Applicable Filings and Decrees**

X 3. I object to the description of **DWR's Analysis of Filings and Decrees**

___ 4. I object to the description of **Diversions** for the claimed water right(s)

X 5. I object to the description of **Uses** for the claimed water right(s)

___ 6. I object to the description of **Reservoirs** used for the claimed water right(s)

___ 7. I object to the description of **Shared Uses & Diversions** for the claimed water right(s)

X 8. I object to the **PWR (Potential Water Right) Summary** of the claimed water right(s)

___ 9. I object to the description of **Quantities of Use** for the claimed water right(s)

___ 10. I object to the **Explanation** provided for the claimed water right(s)

X 11. Other Objections (please state volume, page and line number for each objection)

REASON FOR OBJECTION

The reason for my objection is as follows (please number your objections to correspond to the boxes checked above; please attach supporting information and additional pages as necessary):

CATEGORY
NUMBER

___ SEE ATTACHED

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W1-11-605
111-23-073
FT HUACHUCA & U.S. ARMY INTELLIGENCE & CTR
C/O OFFICE OF STAFF JUDGE FT HUACHUCA
FT HUACHUCA AZ 856135

Category
Number

The objectors protest the WFR for the following reasons:

11 Pursuant to Section 6.08 of the Rules for Proceedings before the Special Master, Objectors wish to preserve all objections which may arise from or otherwise are related to the five remaining issues on Interlocutory Appeal before the Arizona Supreme Court and in particular the following:

(a) Whether the trial court erred in adopting its 50/90-day test for determining whether underground water is "appropriable" under § 45-141, Arizona Revised Statutes (1132);

(b) What is the appropriate standard to be applied determining the amount of water reserved for federal land (1133);

(c) Whether nonappropriable groundwater is subject to federal reserved rights (1134);

(d) Whether federal reserve water right holders enjoy greater protection from groundwater pumping than holders of state law rights (1135); and

(e) Whether claims conflicting with use or interference with water rights must be resolved as part of the general adjudication (1136).

11 Objectors reserve the right to amend or supplement this objection following the issuance of an opinion and mandate by the Supreme Court dealing with any of the issues pending before it (1130, 1132, 1133, 1134, 1135, and 1136).

11 The procedures imposed by the trial court and Master to preserve an objection to this claim are inconsistent with A.R.S. § 45-256(B). The Legislature did not intend each party to be required to review each and every claim and file all potential objections within the 180 day period or be foreclosed from participating in a contested case. The Statute clearly permits a party who has filed an objection "to make objections to any other claims" (100).

11 Zone 1 and Zone 2 wells, and the uses related thereto, are beyond the jurisdiction of the general adjudication and should not be included in the WFR. (510, 520, 1121)

11 The ADWR failed to distinguish between primary and secondary purposes for Ft. Huachuca in quantifying water rights for Ft. Huachuca. (560, 810; 1010)

11 The ADWR failed to analyze whether the claimed use or method of diversion is consistent with the limited purposes for which Ft. Huachuca was created and whether the claimed use represented the minimum amount of water necessary to effectuate its primary purpose. (562, 810, 1010)

11 The ADWR failed to determine whether water use of third parties significantly diminish the claimed federally reserved right. The ADWR's analysis, in examining significant diminishment, is contrary to law and utilizes a model which was not designed to analyze site-specific groundwater conditions or to predict water level changes in individual wells. (562, 810, 1010)

11 The ADWR failed to analyze whether the claimed uses result in a significant diminishment of other claimed federal reserved rights (e.g. Fort Huachuca). (562, 810, 1010)

11 The ADWR failed to analyze the extent to which the existence of appropriations, prior to the creation of the federal reservation, limit the amount of water subject to the federal reserve water right doctrine. (562, 810, 1010)

11 The ADWR failed to analyze the extent to which the existence of uses and the doctrine of reasonable use, prior to the creation of the federal reservation, limit the amount of water subject to the federal reserve water right doctrine. (562, 810, 1010)

11 The Claimant had a statutory obligation to accurately identify claimed water rights in the Statement of Claimant. To the extent ADWR's investigation has determined the Statement of Claimant contained inaccurate, misleading or false information, no PWR should be assigned. (471, 478, 1140)

The ADWR's assessment of significant diminishment is inaccurate, incomplete and erroneous because:

a) the ADWR failed to define "significant diminishment";

b) the standard of significant diminishment is not recognized at law;

c) the ADWR failed to limit its analysis to the significant diminishment of surface water sources historically available to the post;

d) the model used to perform the analysis was not intended to be used for this purpose, was incomplete, and contained inaccurate information; and

e) the ADWR's failed to analyze the impact of other federal reserved rights on the post's claimed federal reserved rights. (562, 810, 1010)

8 The ADWR failed to assign an apparent priority date or a quantity and thus the PWR is incomplete. (920, 1010)

3,8 The ADWR failed to limit its analysis of the claimed federal reserve water right to an examination of surface water available at the time the reservation was created. (1010, 1134)

5 The ADWR improperly included estimates of potential future uses premised upon inaccurate and speculative assumptions and contrary to the burden resting with the Claimant to demonstrate the minimum quantity of water necessary to meet its primary purpose. (1010, 1140)

3 Claimant failed to file for a state appropriative right for waters subject to appropriation (including, but not limited to, the springs listed on Tables 5-57 and 5-59, and the impoundments listed on Table 5-58). No PWR should reflect these sources, points of diversion or uses as they no longer are related to meeting the primary purpose of the reservation. (832, 1010, 1133)

8 The ADWR failed to consider the impact of the date of acquisition of land and incorporation into the reservation on the priority date. (910)

8 The ADWR failed to consider the impact of the closure of the post in 1947 and in 1953 has on the priority date. (910)

11 The ADWR failed to address how the federal reserve right should be satisfied as between groundwater and surface water. (1010)

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF MARICOPA

IN RE THE GENERAL ADJUDICATION OF ALL RIGHTS TO USE
WATER IN THE GILA RIVER SYSTEM AND SOURCE

MANDATORY FORM FOR OBJECTIONS TO

No. W111000605

The Hydrographic Survey Report for
The San Pedro River Watershed

Please file a separate objection for **each** Watershed File Report, Zone 2 Well Report or Catalogued Well Report. Objections to information contained in Volume 1 of the HSR can be stated on one objection form. Objections must be written. Use of this form, or a computer facsimile, is required. Objections must be **received** on or before May 18, 1992.

This objection is directed to Watershed File Report or Zone 2 Well Report No. 11123 073 (please insert no.) or Catalogued Well No. (please insert no.)

OBJECTOR INFORMATION

Objector's Name:	Gila River Indian Community C/O Cox & Cox	San Carlos Apache Tribe; Tonto Apache Tribe; Yavapai-Apache Indian Community, Camp Verde Reservation C/O Sparks & Siler, P.C.
Objector's Address:	Suite 300 Luhrs Tower, P.O. Box 4245 Phoenix, AZ 85030	7503 First Street Scottsdale, AZ 85251
Objector's Telephone:	(602) 254-7207	(602) 949-1988

Objector's Watershed File Report or Zone 2 Well Report No. (if the Objector's claimed water rights are within the San Pedro River Watershed):

____-____-____-____

Or Objector's Catalogued Well Number (if the Objector's claimed water rights appear only in Volume 8 of the HSR):

_____

Or Objector's Statement of Claimant No. (if the Objector's claimed water rights are located outside the San Pedro River Watershed):

39-11-05478	39-05-41142	39-07-12652	39-07-12676	39-05-50058	39-07-12169
39-U8-60083	39-L8-36340	39-L8-37360	39-U8-63614	39-07-12675	39-05-50059

STATE OF ARIZONA

VERIFICATION (must be completed by objector)

COUNTY OF MARICOPA

I hereby make this Objection. I certify that, if required, a copy of the foregoing Objection was served upon the following Claimant(s) by mailing true and correct copies thereof on the 18 day of May, 1992, postage prepaid and addressed as follows:

Name: FORT HUACHUCA

Address: FORT HUACHUCA

FORT HUACHUCA AZ 85613

(The above section must be completed if you object to another claimant's Watershed File Report, Zone 2 Well Report, or Catalogued Well Report. It does not need to be completed if you file an objection to your **own** Watershed File Report, Zone 2 Well Report, Catalogued Well report; or to information contained in Volume 1 of the Hydrographic Survey Report.)

I declare under perjury that I am a claimant in this proceeding or the duly-authorized representative of a claimant; that I have read the contents of this Objection (both sides and any attachments) and know the contents thereof; and that the information contained in the Objection is true based on my own personal knowledge, except those portions of the Objection which are indicated as being known to me on information and belief and, as to those portions, I believe them to be true.

Alfred L. Cox

Signature of Objector or Objector's Representative

SUBSCRIBED AND SWORN to before me this 11 day of May, 1992.

James R. Ritterhouse

Notary Public for the State of Arizona

OFFICIAL SEAL
JAMES ROBERT RITTERHOUSE
Notary Public - State of Arizona
MARICOPA COUNTY
My Comm. Expires Jan. 5, 1994

Objections must be filed with the Clerk of the Superior Court in and for Maricopa County, Maricopa County Courthouse Annex, 3345 W. Durango Street, Phoenix, AZ 85009, on or before May 18, 1992.

STATEMENT OF THE OBJECTION

The following the are main categories of the typical Watershed File Report (Zone 2 Well Reports and some Watershed File Reports lack certain categories). Please check the category(ies) to which you object, and state the reason for the objection on the back of this form.

- ☐ 1. I object to the description of **Land Ownership**
- ☒ 2. I object to the description of **Applicable Filings and Decrees**
- ☐ 3. I object to the description of **DWR's Analysis of Filings and Decrees**
- ☒ 4. I object to the description of **Diversions** for the claimed water right(s)
- ☐ 5. I object to the description of **Uses** for the claimed water right(s)
- ☐ 6. I object to the description of **Reservoirs** used for the claimed water right(s)
- ☐ 7. I object to the description of **Shared Uses & Diversions** for the claimed water right(s)
- ☐ 8. I object to the **PWR (Potential Water Right) Summary** of the claimed water right(s)
- ☒ 9. I object to the description of **Quantities of Use** for the claimed water right(s)
- ☒ 10. I object to the **Explanation** provided for the claimed water right(s)
- ☐ 11 Other Objections (please state volume, page and line number for each objection)

REASON FOR OBJECTION

The reason for my objection is as follows (please number your objections to correspond to the boxes checked above; please attach supporting information and additional pages as necessary):

CATEGORY NUMBER

See Attached

FMC002195

Attachment to Objection re Fort Huachuca
WFR# 111-23-073

2. HSR does not show Water Rights Registration for each Zone 1 Potential Water Right. (420)

2. HSR does not show location of POU for Statement of Claimant (478)

4. Use of the water claimed depletes water for senior federal and Indian water rights (1150)

9. HSR does not show claimed water use rate. (1000)

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF MARICOPA

IN RE THE GENERAL ADJUDICATION OF ALL RIGHTS TO USE WATER IN THE GILA RIVER SYSTEM AND SOURCE

No. W1,W2,W3 & W4

MANDATORY FORM FOR OBJECTIONS TO The Hydrographic Survey Report for The San Pedro River Watershed

W1-11-000605

Please file a separate objection for each Watershed File Report, Zone 2 Well Report or Catalogued Well Report. Objections to information contained in Volume 1 of the HSR can be stated on one objection form. Objections must be written. Use of this form, or a computer facsimile, is required. Objections must be received on or before May 18, 1992.

This objection is directed to Watershed File Report or Zone 2 Well Report No. 111 23 073 - ____ (please insert no.)

or Catalogued Well No. ____ (please insert no.)

OBJECTOR INFORMATION

Objector's Name: City of Mesa

Objector's Address: P.O. Box 1466, Mesa, Arizona 85211-1466

Objector's Telephone No.: (602) 644-2343

Objector's Watershed File Report or Zone 2 Well Report No. (if the Objector's claimed water rights are within the San Pedro River Watershed):

____ - ____ - ____ - ____

Or Objector's Catalogued Well Number (if the Objector's claimed water rights appear only in Volume 8 of the HSR):

____

Or Objector's Statement of Claimant No. (if the Objector's claimed water rights are located outside the San Pedro River Watershed):

39 - L8-37263-37640, ~~39-07-7828~~

STATE OF ARIZONA
COUNTY OF Maricopa

VERIFICATION (must be completed by objector)

I hereby make this Objection. I certify that, if required, a copy of the foregoing Objection was served upon the following Claimant(s) by mailing true and correct copies thereof on the 18th day of May, 1992, postage-prepaid and addressed as follows:

Name: Fort Huachuca

Address: Fort Huachuca, AZ 85613

(The above section must be completed if you object to another claimant's Watershed File Report, Zone 2 Well Report, or Catalogued Well Report. It does not need to be completed if you file an objection to your own Watershed File Report, Zone 2 Well Report, Catalogued Well Report or to information contained in Volume 1 of the Hydrographic Survey Report.)

I declare under penalty of perjury that I am a claimant in this proceeding or the duly- authorized representative of a claimant; that I have read the contents of this Objection (both sides and any attachments) and know the contents thereof; and that the information contained in the Objection is true based on my own personal knowledge, except those portions of the Objection which are indicated as being known to me on information and belief and, as to those portions, I believe them to be true.

Stephen A. Burg
Signature of Objector or Objector's Representative

SUBSCRIBED AND SWORN to before me this 15th day of May, 1992.

Carla Wagner
Notary Public for the State of Arizona

Residing at Mesa

My commission expires 10-25-95

Objections must be filed with the Clerk of the Superior Court in and for Maricopa County, Maricopa County Courthouse Annex, 3345 W. Durango Street, Phoenix, AZ 85009, on or before May 18, 1992.

STATEMENT OF THE OBJECTION

The following the are main categories of the typical Watershed File Report (Zone 2 Well Reports and some Watershed File Reports lack certain categories). Please check the category(ies) to which you object, and state the reason for the objection on the back of this form.

- ☐ 1. I object to the description of **Land Ownership**
- ☐ 2. I object to the description of **Applicable Filings and Decrees**
- ☐ 3. I object to the description of **DWR's Analysis of Filings and Decrees**
- ☐ 4. I object to the description of **Diversions** for the claimed water right(s)
- ☐ 5. I object to the description of **Uses** for the claimed water right(s)
- ☐ 6. I object to the description of **Reservoirs** used for the claimed water right(s)
- ☐ 7. I object to the description of **Shared Uses & Diversions** for the claimed water right(s)
- ☐ 8. I object to the **PWR (Potential Water Right) Summary** of the claimed water right(s)
- ☐ 9. I object to the description of **Quantities of Use** for the claimed water right(s)
- ☐ 10. I object to the **Explanation** provided for the claimed water right(s)
- ☒ 11. Other Objections (please state volume, page and line number for each objection)

REASON FOR OBJECTION

The reason for my objection is as follows (please number your objections to correspond to the boxes checked above; please attach supporting information and additional pages as necessary):

CATEGORY NUMBER

11 Objector has objected to Volume 1, page 558, lines 1-10, of the San Pedro HSR for the reason that, although the Department of Water Resources has correctly concluded that effluent is neither appropriable surface water nor groundwater, see A.R.S. § 45-141 and Arizona Public Service Company v. Long, 160 Ariz. 429, 773 P.2d 988 (1989), this matter has not been placed directly before the adjudication court. A number of representative claims, including the claim in this WFR, should be consolidated for a case of "broad legal importance." (534)

FMC002198

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF MARICOPA

IN RE THE GENERAL ADJUDICATION OF ALL RIGHTS TO USE WATER IN THE GILA RIVER SYSTEM AND SOURCE

No. W1,W2,W3 & W4
W111000605

MANDATORY FORM FOR OBJECTIONS TO
The Hydrographic Survey Report for
The San Pedro River Watershed

Please use a separate objection for each Watershed File Report, Zone 2 Well Report or Catalogued Well Report. Objections to information contained in Volume 1 of the HSR can be stated on one objection form. Objections must be written. Use of this form, or a computer facsimile, is required. Objections must be received on or before May 18, 1992.

This objection is directed to Watershed File Report or Zone 2 Well Report No. **111-23-073** or Catalogued Well No.

OBJECTOR INFORMATION

Objector's Name: City of Phoenix
Objector's Address: Suite 800
251 W. Washington St.
Phoenix, AZ 85003

Objector's Telephone: (602)-262-6761

Objector's Watershed File Report or Zone 2 Well Report No. (if the Objector's claimed water rights are within the San Pedro River Watershed): N/A

Or Objector's Catalogued Well Number (if the Objector's claimed water rights appear only in Volume 8 or the HSR): N/A

Or Objector's Statement of Claimant No. (if the Objector's claimed water rights are located outside the San Pedro River Watershed):

39-07-7927; 39-05-50153 through 39-05-50155; 39-L8-37666 through 39-L8-37691

STATE OF ARIZONA
COUNTY OF MARICOPA

VERIFICATION

I hereby make this Objection. I certify that, if required, a copy of the foregoing Objection was served upon the claimant(s) by mailing true and correct copies thereof on the 18th day of May, 1992, postage prepaid and addressed as follows:

FORT HUACHUCA
& U.S. ARMY INTELLIGENCE
FORT HUACHUCA

FORT HUACHUCA AZ 85613

OFFICIAL SEAL
CHARLENE ZAVALA
Notary Public - Arizona
Principal Offices in
Maricopa County
My Commission Expires May 24, 1992

Objections must be filed with the Clerk of the Superior Court in and for Maricopa County, Maricopa County Courthouse Annex, 3345 W. Durango Street, Phoenix, AZ 85009, on or before May 18, 1992.

I declare under penalty of perjury that I am a claimant in this proceeding or the duly-authorized representative of a claimant; that I have read the contents of this Objection (both sides and any attachments) and know the contents thereof; that the information contained in the Objection is true based on my own personal knowledge, except those portions of the Objection which are indicated as being known to me on information and belief and as to those portions, I believe them to be true.

M. James Callahan
Signature of Objector or Objector's Representative

SUBSCRIBED AND SWORN to before me this 18th day of May, 1992

Charlene Zavala
Notary Public for the State of Arizona
Residing at: Phoenix, Maricopa County, Arizona
My commission expires: MAY 24, 1992

STATEMENT OF THE OBJECTION

The following are the main categories of the typical Watershed File Report (Zone 2 Well Reports and some Watershed File Reports lack certain categories). Please check the category(ies) to which you object and state the reason for the objection on the back of this form.

1. I object to the description of **Land Ownership**
2. I object to the description of **Applicable Filings and Decrees**
3. I object to the description of **DWR's Analysis of Filings and Decrees**
X 4. I object to the description of **Diversions** for the claimed water right(s)
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6. I object to the description of **Reservoirs** used for the claimed water right(s)
7. I object to the description of **Shared Uses & Diversion** for the claimed water right(s)
X 8. I object to the **PWR (Potential Water Right) Summary** of the claimed water right(s)
9. I object to the description of **Quantities of Use** for the claimed water right(s)
10. I object to the **Explanation** provided for the claimed water right(s)
X 11. Other Objections (please state volume, page and line number for each objection)

REASON FOR OBJECTION

The reason for my objection is as follows (please number your objections to correspond to the boxes checked above; please attach supporting information and additional pages as necessary):

Category
Numbers

4
8
11

Attachment to Watershed File Report: 111-23-073

PHOENIX OBJECTS TO CATEGORY 11 FOR THE REASON THAT: THE METHOD USED BY DWR TO DETERMINE SIGNIFICANT DIMINISHMENT FOR FT. HUACHUCA (MAJOR USER CODE 1283) HAS BEEN IMPROPERLY APPLIED IN THAT ALL OF THE GROUNDWATER TABLE DECLINE FOR FT. HUACHUCA HAS BEEN ARBITRARILY ATTRIBUTED TO ONLY 38 OF THE ZONE 2 WELLS NEAR SIERRA VISTA. (180) A SIMILAR OBJECTION IS MADE BY PHOENIX TO VOLUME 1, APPENDIX G. (180)

Attachment to Watershed File Report: 111-23-073

PHOENIX OBJECTS TO CATEGORY 11 FOR THE REASON THAT: DWR'S METHOD FOR DETERMINING IMPACTS TO FT. HUACHUCA'S (MAJOR USER CODE 1283) WELLS COMPARES OFF-RESERVATION PUMPING TO ON-RESERVATION PUMPING, BUT FAILS TO INCLUDED 8 NON-POTABLE WELLS ON FT. HUACHUCA IN ITS ASSESSMENT OF ON-RESERVATION PUMPING. (180)
A SIMILAR OBJECTION IS MADE BY PHOENIX TO VOLUME 1, PAGE G-8. (180)

Attachment to Watershed File Report: 111-23-073

PHOENIX OBJECTS TO CATEGORY 4 FOR THE REASON THAT: DWR FAILS TO IDENTIFY AS ZONE 2 WELLS THOSE WELLS ON FT. HUACHUCA (MAJOR USER CODE 1283), WHICH MAY IMPACT OTHER FEDERAL RESERVATIONS. (560)
PHOENIX OBJECTS TO CATEGORY 11 FOR THE REASON THAT: A SIMILAR OBJECTION IS MADE BY PHOENIX TO VOLUME 1, PAGE 419. (119)

Attachment to Watershed File Report: 111-23-073

PHOENIX OBJECTS TO CATEGORY 8 FOR THE REASON THAT: DWR HAS IMPROPERLY INTERJECTED AN ECONOMIC ANALYSIS INTO THE STANDARD OF SIGNIFICANT DIMINISHMENT WHEN IT CALCULATES THE ECONOMIC IMPACT NEIGHBORING WELLS HAVE ON FORT HUACHUCA'S (MAJOR USER CODE 1283) BY PROJECTING ADDITIONAL FUTURE COSTS THE FORT MAY INCUR IF THE GROUNDWATER TABLE IS LOWERED AS A RESULT OF PUMPING FROM NEIGHBORING WELLS. (180)
PHOENIX OBJECTS TO CATEGORY 11 FOR THE REASON THAT: A SIMILAR OBJECTION IS MADE BY PHOENIX TO VOLUME 1, PAGES G-14 AND G-17. (180)
THE WATERSHED FILE REPORT RELATES TO THE FORT HUACHUCA MILITARY RESERVATION (MAJOR USER CODE 1283).

Attachment to Watershed File Report: 111-23-073

PHOENIX OBJECTS TO CATEGORY 8 FOR THE REASON THAT: DWR IS INCONSISTENT AND INEFFECTUAL IN REPORTING INFORMATION RELATING TO FEDERAL RESERVED RIGHTS CLAIMS IN THAT THE LEVEL OF INFORMATION VARIES WITHOUT APPARENT REASON. (200)
PHOENIX OBJECTS TO CATEGORY 11 FOR THE REASON THAT: A SIMILAR OBJECTION IS MADE BY PHOENIX TO VOLUME 1, PAGE 571. (146)
THE WATERSHED FILE REPORT RELATES TO THE FORT HUACHUCA MILITARY RESERVATION (MAJOR USER CODE 1283).

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF MARICOPA

IN RE THE GENERAL ADJUDICATION OF ALL RIGHTS TO USE WATER IN THE GILA RIVER SYSTEM AND SOURCE

No. W1,W2,W3 & W4
Contested Case No. W1-11-000605

COPY

MANDATORY FORM FOR OBJECTIONS TO The Hydrographic Survey Report for the San Pedro River Watershed

Please file a separate objection for each Watershed File Report, Zone 2 Well Report or Catalogued Well Report. Objections to information contained in Volume 1 of the HSR can be stated on one objection form. Objections must be written. Use of this form, or a computer facsimile, is required. Objections must be received on or before May 18, 1992.

This objection is directed to Watershed File Report or Zone 2 Well Report No. 111-23-___-073 (please insert no.) or Catalogued Well No. _____ (please insert no.)

OBJECTOR INFORMATION

Objector's Name: Salt River Project
Objector's Address: Post Office Box 52025
Phoenix, Arizona 85072-2025
Objector's Telephone No: (602) 236-2210

Objector's Watershed File Report or Zone 2 Well Report No. (If the Objector's claimed water rights are within the San Pedro River Watershed):

___-___-___

Or Objector's Catalogued Well Number (if the Objector's claimed water rights appear only in Volume 8 of the HSR):

_____

Or Objector's Statement of Claimant No. (if the Objector's claimed water rights are located outside the San Pedro Watershed):

39-07 01040, 01041, 01206, 01207, 01998
39-05 50053, 50054, 50055
39-L8 35212, 35213

STATE OF Arizona

COUNTY OF Maricopa

I hereby make this Objection. I certify that, if required, copy of the foregoing Objection was served upon the following Claimant(s) by mailing true and correct copies thereof on the 14th day of May, 1992, postage prepaid and addressed as follows:

Name: FORT HUACHUCA

Address: FORT HUACHUCA

FORT HUACHUCA, AZ 85613

(The above section must be completed if you object to another claimant's Watershed File Report, Zone 2 Well Report, or Catalogued Well Report. It does not need to be completed if you file an objection to your own Watershed File Report, Zone 2 Well Report, Catalogued Well Report, or to information contained in Volume 1 of the Hydrographic Survey Report.)

VERIFICATION (must be completed by objector)

I declare under penalty of perjury that I am a claimant in this proceeding or the duly-authorized representative of a claimant; that I have read the contents of this Objection (both sides and any attachments) and know the contents thereof; and that the information contained in the Objection is true based on by own personal knowledge, except those portions of the Objection which are indicated as being known to me on information and belief and, as to those portions, I believe them to be true.

David C. Roberts
Signature of Objector or Objector's Representative

SUBSCRIBED AND SWORN to before me this 1st day of May, 1992.

Linda Jepperson
Notary Public for the State of Arizona

Residing at Maricopa County

My commission expires

OFFICIAL SEAL
LINDA JEPPERSON
Notary Public - State of Arizona
MARICOPA COUNTY
My Comm. Expires March 24, 1995

Objections must be filed with the Clerk of the Superior Court in and for Maricopa County, Maricopa County Courthouse Annex, 3345 W. Durango Street, Phoenix Az 85009, on or before May 18, 1992.

STATEMENT OF THE OBJECTION

The following are the main categories of the typical Watershed File Report (Zone 2 Well Reports and some Watershed File Reports lack certain categories). Please check the category(ies) to which you object, and state the reason for the objection on the back of this form.

[ ] 1. I object to the description of LAND OWNERSHIP

[ ] 2. I object to the description of APPLICABLE FILINGS AND DECREES

[ ] 3. I object to the description of DWR's ANALYSIS OF FILINGS AND DECREES

[ ] 4. I object to the description of the DIVERSIONS for the claimed water right(s)

[ ] 5. I object to the description of the USES for the claimed water right(s)

[ ] 6. I object to the description of RESERVOIRS used for the claimed water right(s)

[ ] 7. I object to the description of SHARED USES & DIVERSIONS for the claimed water right(s)

[X] 8. I object to the PWR (POTENTIAL WATER RIGHT) SUMMARY of the claimed water right(s)

[ ] 9. I object to the description of the QUANTITIES OF USE for the claimed water right(s)

[ ] 10. I object to the EXPLANATION provided for the claimed water right(s)

[ ] 11. Other Objections (please state volume number, page number and line number for each objection)

REASON FOR OBJECTION

The reason for my objection is as follows (please number your objections to correspond to the boxes checked above; please attach supporting information and additional pages as necessary):

CATEGORY NUMBER	
	SEE ATTACHMENT 1
	In this attachment the uniform code designated by the
	Special Master in accordance with Case Management
	Order No. 1 is shown in parenthesis following each
	objection statement.

ATTACHMENT 1

WFR CATEGORY 8 - PWR SUMMARY

The Salt River Project objects to the form and content of this Watershed File Report (WFR). Ordinarily, the WFR contains a thorough summary of all technical and factual information pertinent to water uses on a parcel of land. The WFR for Fort Huachuca contains no Potential Water Rights (PWRs), and DWR has assigned no apparent dates of first use or quantities of use for water uses encompassed by this WFR. Moreover, although DWR has reported "water uses" for Fort Huachuca in Volume 1, the legal and evidentiary significance, if any, of these "water uses" is not stated anywhere in the HSR.

This WFR contains insufficient information from which to determine the validity, nature and extent of the water rights claimed for Fort Huachuca. The Salt River Project therefore submits this objection to the form and content of the WFR, and reserves the right to participate in hearings regarding any water rights associated with Fort Huachuca.

The Salt River Project also objects to DWR's evaluation of the impact of surrounding underground water pumping on Fort Huachuca. For a discussion of the problems associated with DWR's evaluation of impacts, see the Salt River Project's Volume 1 objections to that evaluation, a copy of which is attached to this objection and incorporated herein by reference (0210,0560).

EXCERPT FROM
SALT RIVER PROJECT OBJECTIONS TO
VOLUME 1 OF THE SAN PEDRO RIVER HSR

GROUNDWATER IMPACT EVALUATION

(page numbers refer to Volume 1)

Impacts on Groundwater Under Federal Reservations
pp. 414-417, G-1 - G-17

The Salt River Project objects to the legal distinctions for nonappropriable groundwater underlying federal reservations created by the Gila River Adjudication Court's Order of September 9, 1988. The Superior Court's Order, which is currently on appeal to the Arizona Supreme Court, provides for federal reserved rights to groundwater and, apparently, would protect those rights from "significant diminishment" by off-reservation pumping. In contrast, pumpers of nonappropriable groundwater under state law are afforded no unique protections from interference by other state law pumpers or from federal rights.

The Superior Court's creation of federal reserved water rights to nonappropriable groundwater and "double standard" for protection from interference is contrary to law and, further, would result in an administrative nightmare once the decree was entered. All water rights recognized by the decree should be entitled to the same degree of protection from interference by other water rights, irrespective of the underlying basis for those rights.

The Salt River Project also objects to DWR's quantification of significant diminishment of groundwater available to Fort Huachuca. DWR has inappropriately expanded the scope of the information that it is required to provide on the impact of surrounding pumping on a federal reservation's groundwater resources. DWR was not directed to evaluate the impact of historic or future pumping. Likewise, there is no authority to estimate the economic impacts of past and future off-reservation pumping. The Court simply directed DWR to identify groundwater users that may affect groundwater under federal reservations.

The Court's September 9, 1988 order on groundwater and surface water contains the following pertinent statements at page 24, lines 24-28; and page 25, lines 1-12 and 21-26:

> "Having ruled on the legal issues before it from the motion and the eight questions before the Court, the Court will now move to the area of its instruction to the Department of Water Resources for its Hydrographic Survey Reports.

First, these reports should include all claims of surface rights and claims where the water being used is sub-surface flow under the criteria previously described. These rights are to be catalogued, prioritized and entitlements assigned thereto by indicating the nature, extent and relative priority thereto, all as required by A.R.S. § 45-256. All other groundwater sources, not involving federal claims, shall be catalogued and their data determined as previously indicated.

When dealing with a claim made under federal law, the same procedure should be followed for those claims where the federal claim is for a diversion and use which is in physical use at this time. Where the claim is for a federal reserved right and there is no present physical use D.W.R. shall also:

. . . d. In determining a prioritization of such claimed federal reserved rights, it will be necessary to determine all stream users or diversions of either surface water or groundwater which significantly affect those sources reasonably available on, at or near the federal parcel which would be available to fulfill the determined entitlement." (emphasis supplied)

Nowhere in the Court's order are drawdown calculations or an economic impact analysis requested of the Department.

The Salt River Project objects to DWR's analysis of significant diminishment on other grounds as well. First, DWR fails to specify the historical municipal pumping amounts that it used in the model. Second, the analysis fails to discuss the impact of the Fort's own pumping on the groundwater supply in the area. This is particularly important in relation to the possible impacts of Fort Huachuca-Sierra Vista pumping on surface water supplies for another federal reservation, the San Pedro Riparian National Conservation Area. Third, the economic analysis fails to convert streams of costs over time to the net present value of those costs. Fourth, annual rather than average changes in lift are required for an appropriate economic analysis. Fifth, it is particularly inappropriate to speculate on the impact of future pumping since many of the variables may change; e.g., pumping amounts by off-reservation users or the reservation's own withdrawals. For example, Fort Huachuca was closed in the late 1940s and may be closed again in the future. Sixth, a model that is intended only to assess regional impacts cannot be used to quantify hydrologic or economic impacts on specific federal wells.

RECEIVED MAY 7 1992

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF MARICOPA

IN RE THE GENERAL ADJUDICATION OF ALL RIGHTS TO USE WATER IN THE GILA RIVER SYSTEM AND SOURCE

W1-11-000605
No. W1,W2,W3 & W4

MANDATORY FORM FOR OBJECTIONS TO The Hydrographic Survey Report for The San Pedro River Watershed

Please file a separate objection for **each** Watershed File Report, Zone 2 Well Report or Catalogued Well Report. Objections to information contained in Volume 1 of the HSR can be stated on one objection form. Objections must be written. Use of this form, or a computer facsimile, is required. Objections must be **received** on or before May 18, 1992.

This objection is directed to Watershed File Report or Zone 2 Well Report No. 111 - 23 - 073 - _____ (please insert no.)

or Catalogued Well No. _____ (please insert no.)

OBJECTOR INFORMATION

Objector's Name: United States of America

Objector's Address: Mr. Gary Randall, Department of Justice, General Litigation Section, P.O. Box 663, Washington, DC 20044-0663

Objector's Telephone No.: (202) 272-6978

Objector's Watershed File Report or Zone 2 Well Report No. (if the Objector's claimed water rights are within the San Pedro River Watershed):

111 - 23 - 073 - _____

Or Objector's Catalogued Well Number (if the Objector's claimed water rights appear only in Volume 8 of the HSR):

_____

Or Objector's Statement of Claimant No. (if the Objector's claimed water rights are located outside the San Pedro River Watershed):

39 - _____

STATE OF _____

COUNTY OF _____

VERIFICATION (must be completed by objector)

I hereby make this Objection. I certify that, if required, a copy of the foregoing Objection was served upon the following Claimant(s) by mailing true and correct copies thereof on the _____ day of _____, 199___, postage prepaid and addressed as follows:

Name: _____

Address: _____

_____

(The above section must be completed if you object to another claimant's Watershed File Report, Zone 2 Well Report, or Catalogued Well Report. It does not need to be completed if you file an objection to your own Watershed File Report, Zone 2 Well Report, Catalogued Well Report; or to information contained in Volume 1 of the Hydrographic Survey Report.)

I declare under penalty of perjury that I am a claimant in this proceeding or the duly- authorized representative of a claimant; that I have read the contents of this Objection (both sides and any attachments) and know the contents thereof; and that the information contained in the Objection is true based on my own personal knowledge, except those portions of the Objection which are indicated as being known to me on information and belief and, as to those portions, I believe them to be true.

Gary B. Randall
Signature of Objector or Objector's Representative
FOR THE UNITED STATES

SUBSCRIBED AND SWORN to before me this 7 day of May 1992

Pamela L. Sparks

Notary Public for the State of _____

Residing at _____

My commission expires _____

PAMELA L. SPARKS
Notary Public - State of Arizona
MARICOPA COUNTY
My Comm. Exp. Dec. 25, 1995

Objections must be filed with the Clerk of the Superior Court in and for Maricopa County, Maricopa County Courthouse Annex, 3345 W. Durango Street, Phoenix, AZ 85009, on or before May 18, 1992.

FMC002211

STATEMENT OF THE OBJECTION

The following the are main categories of the typical Watershed File Report (Zone 2 Well Reports and some Watershed File Reports lack certain categories). Please check the category(ies) to which you object, and state the reason for the objection on the back of this form.

☐ 1. I object to the description of **Land Ownership**

☐ 2. I object to the description of **Applicable Filings and Decrees**

☐ 3. I object to the description of **DWR's Analysis of Filings and Decrees**

☐ 4. I object to the description of **Diversions** for the claimed water right(s)

☐ 5. I object to the description of **Uses** for the claimed water right(s)

☐ 6. I object to the description of **Reservoirs** used for the claimed water right(s)

☐ 7. I object to the description of **Shared Uses & Diversions** for the claimed water right(s)

☒ 8. I object to the **PWR (Potential Water Right) Summary** of the claimed water right(s)

☐ 9. I object to the description of **Quantities of Use** for the claimed water right(s)

☐ 10. I object to the **Explanation** provided for the claimed water right(s)

☒ 11. Other Objections (please state volume, page and line number for each objection)

REASON FOR OBJECTION

The reason for my objection is as follows (please number your objections to correspond to the boxes checked above; please attach supporting information and additional pages as necessary):

CATEGORY NUMBER	
8	See Attachment
11	See Attachment

ATTACHMENT TO OBJECTION RE UNITED STATES OF AMERICA AND FORT HUACHUCA

WFR No. 111-23-073
CONTESTED CASE NUMBER
VOLUME 3, W1-11-000605

8. Volume 3, page 117. No potential water right numbers, apparent first use dates or water sources and classifications are assigned or determined for Fort Huachuca. The United States of America realizes that no abbreviation for military uses appears in Volume 3's List of Abbreviations, at page 7 and that the Watershed File Report in the Explanation refers to Fort Huachuca's Major User Report in Volume 1, Chapter 5, Section 5.4. Nevertheless, the United States objects in order to preserve its opportunity to establish the nature, extent, and priority of its claims to surface water and ground water at Fort Huachuca. (220) (820) (920) (1283)

11. Volume 3, page 7, TABLE 1, entitled "LIST OF ABBREVIATIONS." The HSR omitted an abbreviation for military use. (220) (1283)

In an order dated December 11, 1990, the Arizona Supreme Court granted review by way of interlocutory appeal of the following six issues:

1. Do the procedures for filing and service of pleadings adopted by the trial court in its Pre-trial Order Number 1 comport with due process under the United States and Arizona Constitutions?

2. Did the trial court err in adopting its 50% / 90 day test for determining whether underground water is "appropriable" under A.R.S. Section 45-141?

3. What is the appropriate standard to be applied in determining the amount of water reserved for federal lands?

4. Is non-appropriable groundwater subject to federal reserved rights?

5. Do federal reserved rights holders enjoy greater protection from groundwater pumping than holders of state law rights?

6. Must claims of conflicting water use or interference with water rights be resolved as part of the general adjudication?

ATTACHMENT TO OBJECTION RE UNITED STATES OF AMERICA AND FORT HUACHUCA

WFR No. 111-23-073
CONTESTED CASE NUMBER
VOLUME 3. W1-11-000605

The six issues which are on interlocutory appeal before the Arizona Supreme Court, when resolved, may affect the content of the Arizona Department of Water Resources' Hydrographic Survey Report (HSR) and the Watershed File Reports. The United States of America, on behalf of the Department of the Army and Fort Huachuca, objects to any portion of the San Pedro River HSR or Watershed File Report whose contents are changed or affected by a future Arizona Supreme Court ruling on any of the six issues on interlocutory appeal. In other words, once the Arizona Supreme Court rules on any of the six issues, the United States of America reserves the right to object to any HSR or Watershed File Report that is changed or affected by the Supreme Court's ruling, especially in light of the fact that at least three of the issues in appeal directly concern federal reserved rights. (200) (220) (1130) (1283)

ORT HUACHUCA FEDERAL RESERVED WATER RIGHTS
JFR 111-F01

OUTLINE	SOURCE (SEE KEY BELOW)
I. INTRODUCTION	
A. LOCATION	1
B. HISTORY	1,2
C. ESTABLISHMENT	1,2
D. POPULATION	13
E. PURPOSE	2
II. WATER RESOURCES	
A. HISTORICAL USE	8
1. SOURCES	8
2. RESERVES DURING DROUGHT	8
B. SURFACE WATER	4,6,7
1. POTABLE SPRINGS	3,6,11
2. WILDLIFE SPRINGS	6
3. IMPOUNDMENTS	6
C. GROUNDWATER	
1. POTABLE WELLS	5,9
2. POTENTIAL WELLS	5,9
III. HYDROLOGY	
A. AVAILABLE SURFACE SUPPLY	3,4,7,10,12
1. SOURCES	3,4,7
2. CLIMATE	14
B. AVAILABLE GROUNDWATER	3,4,7,10
1. ALLUVIAL AQUIFER	4,7
2. MOUNTAIN FRONT RECHARGE	4,7
C. GROUNDWATER/SURFACE WATER	7
D. USERS IMPACTED BY FORT'S FRR	7
IV. CURRENT WATER USE(IDENTIFIED BY ADWR)	
A. MUNICIPAL USE	5,9
B. RECREATION/WILDLIFE USE	6,9
C. EFFLUENT USE	1
D. IRRIGATION USE	1,9
E. OTHER USE	
1. NON-POTABLE WELLS	10
2. LIBBY AIR FIELD	10
V. CLAIMED WATER USE	9,12
VI. QUANTIFICATION OF FRR	
A. "FIXED" USE	
1. WILDLIFE SPRINGS	6
2. IMPOUNDMENTS	6
3. IRRIGATION	9
B. "EXPANDING" USE	
1. MUNICIPAL USE	9,12
2. EFFLUENT	?

SOURCE KEY

1 SAN PEDRO WFR
2 "REVIEW OF UTILIZATION OF U.S. ARMY REAL PROPERTY AT FORT HUACHUCA, FY 86"-SEE PHYSICAL FILE
3 "REPORT ON WATER SUPPLY -FORT HUACHUCA AND VICINITY, ARIZONA"-SEE PHYSICAL FILE
4 "WATER RESOURCES OF FORT HUACHUCA MILITARY RESERVATION, SOUTHEASTERN ARIZONA"-SEE PHYSICAL FILE
5 MATERIALS FILED DURING COMMENT PERIOD-SEE PHYSICAL FILE
6 NOTEBOOKS-BASE PERSONNEL
7 HYDROLOGY DIVISION
8 FORT MUSEUM-OLD POST
9 ADWR SUMMARY REPORT-ON PC
10 FUTURE FIELD WORK
11 BASE PERSONNEL:
MARIE COTRELL-BASE ATTORNEY 533-3120
MICHAEL SHAUGHNESSEY-REALTY SPECIALIST 533-1863
DAVE RIKEHART-CORP OF ENGINEERS 241-2016
ANN GAMSON-CORP OF ENGINEERS
TOM COCKRAN-WATER SERVICES(ON BASE)
CLARK DERDINE-WILDLIFE BIOLOGIST(ON BASE)
12 ADJUDICATION CLAIMS
13 POPULATION DATA SUPPLIED BY BASE(1982-1988)
14 PHYSICAL FILE

Clerk of the Superior Court
Received From D.W.R.
10/4/91
Date
B. Bonfim
Deputy Clerk

STATEMENT OF CLAIMANT FORM
FOR
OTHER USES[1]
AMENDMENT
SUPERIOR COURT OF MARICOPA COUNTY

CLAIM BEING AMENDED
NO. 39- 010774

RECEIVED
AUG - 5 1991
ADJUDICATIONS

1. Claimant Name: U.S. Army Intelligence Center and Fort Huachuca
Claimant Address: c/o Office of Staff Judge Advocate City Fort Huachuca
State: Arizona Zip Code 85613-5000 Telephone 602/533-3181

2. Basis of Claim:
A. ☐ Appropriation Right acquired prior to June 12, 1919. 1974 Water Rights Registration Act Registry No. _____
B. ☐ Appropriation Right acquired after June 12, 1919. Application No. _____ Permit No. _____, or Certificate of Water Right No. _____
C. ☐ Decreed water right. Principal litigants, court, date and case no.: _____
D. ☐ Right to withdraw groundwater. Grandfathered Right No. _____
E. ☒ Other, describe: Federal reserved water rights and see Item 16

92 MAY -7 PM 2:11
FILED
JUDITH ALLEN, CLERK
BY [signature] DEP.

3. Claimed Priority Date: October 28, 1881 (month/day/year)

4. Use:
A. ☐ Municipal
B. ☐ Commercial or Industrial
C. ☐ Mining
D. ☐ Stockwatering other than from a stockpond
E. ☐ Recreation, Fish & Wildlife
F. ☐ Other, describe: Military installation purposes

5. Source of Water: See Item 16
A. ☐ Stream: name _____, tributary to _____
B. ☐ Spring: name _____, tributary to _____
C. ☐ Lake or Reservoir: name _____, tributary to _____
D. ☐ Groundwater

6. Legal description of the Point of Diversion: (attach additional sheet if required) See Item 16
____ ¼, ____ ¼, ____ ¼, Section ____, Township ____ N/S, Range ____ E/W

7. If there are Irrigation, Domestic or Stockpond uses also supplied from the Point of Diversion, describe:
See Item 16

8. Means of Diversion: See Item 16
A. ☐ Instream pump
B. ☐ Gravity flow into ditch, canal or pipeline.
C. ☐ Well: Arizona Department of Water Resources Well Registration No. 55-_____
D. ☐ Other, describe _____

[1] *See Instructions for explanation of uses in this category*

FMC002217

9. **Means of Conveyance:** See Item 16

A. ☐ Ditch, canal or pipeline. If the means of conveyance is owned and/or operated by some other entity, please give name and address: _____

B. ☐ Other, describe: _____

10. **Place of Use, if other than point of diversion:** (attach additional sheet if required) See Item 16

County _____

Legal Subdivision	Section	Township	Range
_____	_____	_____N/S	_____E/W
_____	_____	_____N/S	_____E/W

11. **Claimed Right:** See Item 16

A. Maximum Flow Rate: _____ ☐ cubic-feet per second ☐ gallons per minute ☐ Arizona miner's inches

B. Annual Volume of Water Use: _____ acre-feet

C. Storage Right: _____ acre-feet

12. **Attach** photographs, maps or sketches necessary to show the point of diversion, storage reservoir(s), place(s) of use and means of conveyance.

13. It may be necessary for a representative from the Department of Water Resources to inspect the diversion, conveyance and place of use. Your signature following will grant permission to enter your property for the purpose of inspection: Signature of Claimant _____

14. Should it be necessary for a representative of the Department to contact you as the claimant or your representative, are there any special instructions regarding time of day or address to aid in locating the specified person? Office of Staff Judge Advocate (Tom King) 602/533-3181

15. **Mail form(s) to:** Department of Water Resources, P.O. Box 2920, Phoenix, Arizona 85062.

16. Additional comments: _____

The additional comments are set forth on the attached sheets titled "Additional Comments, Amended Water Rights Claim, Fort Huachuca, Arizona".

(attach additional sheet if required)

17. **Notarized Statement:**

I (~~We~~), Robert J. Covalucci, Colonel, MI, on behalf of the claimant(s) named in this claim, do hereby certify under penalty of perjury, that the information contained and statements made herein are to the best of my(our) knowledge and belief true, correct and complete.

_____

(seal)

My Commission Expires March 8, 1994

_____ Notary Public

My Commission Expires:

or, _____

Authorized Personnel of the Department of Water Resources

FMC002218

Additional Comments
Amended Water Rights Claim
Fort Huachuca, Arizona

On 4 January 1982, the claimant filed two Statements of Claimant (hereinafter referred to as Claims Nos. 39-010774 and 39-010775 or claims) covering its water rights at Fort Huachuca, Arizona. These concurrently filed claims shared a common set of attachments. By Amended Statement of Claimant dated 21 August 1989, the claimant amended Claim No. 39-010775 to identify additional means used by it to gain access to its water at the installation.

The amendment which the claimant is now filing to each of the originally filed claims has been prepared to clarify matters set forth in the original claims.

The basis of claim for the water at the installation is federal reserved water rights.

The claimed use for the water at the installation is for military installation purposes.

The claimed priority date for all water rights at the installation is 28 October 1881, the date of the original reservation of lands for the installation.

Fort Huachuca is a military installation with federal reserved rights to that quantity of water which will be needed to fulfill all future requirements of the installation.

Given the character of the installation with its large land base and ability to absorb additional mission activities, as well as other favorable growth indicators (i.e., availability of open air space, proximity to a support community with a low to moderate cost of living, excellent meteorological conditions, etc.), it is anticipated that there will be substantial (and possibly dramatic) increases in mission activities and population through the years with concomitant increases in the volume of water needed to support those activities.

Despite the current downsizing of the Department of Defense, Fort Huachuca is in a growth period and, for the reasons stated above, it is anticipated that growth will continue well into the future. As other bases are closed or downsized, Fort Huachuca will be called upon to assume missions formerly performed by those bases, including, but not limited to, large scale mobilization of reserve forces at various and unanticipated times as was recently experienced during Operation Desert Shield/Storm.

Although the increased mission activities at the installation in future years can not be forecasted with precision because of the military, political, funding, technological, etc. aspects of Department of Defense operations, it can be reasonably anticipated that the satisfaction of future requirements will not be assured without access to the quantity of water claimed in Claims Nos. 39-010774 and 39-010775, as amended.

Based upon the foregoing considerations and the necessity to quantify in this adjudication proceeding the water claimed at the installation, the claimant claims 10,522 acre feet of water per year. (10,087 acre feet under Claim No. 39-010774 and 435 acre feet under Claim No. 39-010775)

The right to that total quantity of water is not limited by the current methods of diversion or withdrawal or the manner in which the total was divided between the two claims. The claimant asserts its right to all and any portion of that total as changing conditions dictate regardless of where on the installation, and by what means, the water may be diverted or withdrawn in future years.

In addition to the water mentioned above, the claimant asserts its right to all effluent generated by the installation. (Currently, effluent is being produced at the installation at a rate in excess of 1,600 acre feet per year, and the rate will increase in future years.)

Statements in Claims Nos. 39-010774 and 39-010775 and in this amendment identifying the current use of water from individual sources, diversions, or withdrawals (i.e., domestic, municipal, recreation, etc.) have been made for the purpose of assisting the reader in understanding current conditions, and those statements shall not be construed as defining or limiting how the water at the installation will be used in future years for similar or dissimilar military installation purposes.

The statement in this amendment or elsewhere that the basis of claim for water at the installation is federal reserved water rights shall not be construed as an intention of the claimant to relinquish or disclaim any water rights at the installation which might be cognizable under state water law.

The attachment hereto titled "Current Estimated Annual Water Use" lists the current sources, etc. of water at the installation.

07/18/91

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT/K-GAL)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES. ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	ANNUAL USE (K-GAL)	WELL DATA	REMARKS
39-10774	SP-SPATIAL RESOLUTION	W22	FORT HUACHUCA	SENW&W2221S20E	4,463 FEET	MILITARY (SEE REMARKS)	WELL	SEE REMARKS	66.9	21800.0	SEE REMARKS	MILITARY USE-WASHING DOWN PHOTO PAD AND VEHICLES. WELL FROM UPPER UNIT OF BASIN FILL-QUATERNARY. WELL DATA: 8" DIA. CASING; PUMP, TURBINE-350GPM; ELEC POWER; DISCHARGE, UNMETERED GPM. PIPELINE-STEEL AND PLASTIC (6' DIA.); 400' PIPELINE TO FIRST PLACE OF USE; 3,500' TOTAL LENGTH PIPELINE. 750' CASING DEPTH-TOTAL WEEL DEPTH; 329.5' TO WATER.
39-19774	WM1-WINDMILL #1	W23	HUACHUCA CITY	NESESW3420S20E	4,235 FEET	CAPPED	WELL	SEE REMARKS	0.0	0.0	SEE REMARKS	WINDMILL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. 4" DIA CASING SIZE; EQUIPMENT, WINDMILL; WINDMILL POWER; DISCHARGE MEASUREMENT NONE GPM. 80' CASING DEPTH, 80' TOTAL WELL DEPTH, 30' TO WATER. NOT PRESENTLY IN OPERATION.
39-10774	WM2-WINDMILL #2	W25	HUACHUCA CITY	SWSESW2720S20E	4,175 FEET	CAPPED	WELL	SEE REMARKS	0.0	0.0	SEE REMARKS	WINDMILL WATER FROM STREAM ALLUVIUM-QUATERNARY. 4" DIA CASING SIZE; EQUIPMENT, WINDMILL; WINDMILL POWER; DISCHARGE MEASUREMENT NONE GPM. 125' CASING DEPTH; 125' TOTAL WELL DEPTH; 40' TO WATER. NOT PRESENTLY IN OPERATION.
39-10774	ERB-EAST RANGE BUNKER	W20	FORT HUACHUCA	NWSENW0721S21E	4,275 FEET	DOMESTIC MILITARY	WELL	SEE REMARKS	0.5	175.5	SEE REMARKS	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. 4" DIA. CASING SIZE; NO EQUIPMENT; NO POWER; DISCHARGE MEASUREMENT UNMETERED GPM. PIPELINE, STEEL, 1 1/4" DIA. 60' PIPELINE TO FIRST PLACE OF USE, 60' TOTAL LENGTH OF PIPELINE. 350' CASING DEPTH AND TOTAL WELL DEPTH; 225' TO WATER.

FMC002221

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT/K-GAL)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES. ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	ANNUAL USE (K-GAL)	WELL DATA	REMARKS
39-10774	WR1-REMBASS #1	IR02/W10	FORT HUACHUCA	NESWNE2621S20E	4,500 FEET	MILITARY	WELL	SEE REMARKS	0.0	270.4	SEE REMARKS	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. 6" DIA. CASING SIZE; EQUIPMENT, PUMP, SUBMERSIBLE, 125 GPM; ELEC POWER; DISCHARGE MEASUREMENT UNMETERED GPM. PIPELINE, STEEL, 1 1/4" DIA., 50' PIPELINE TO FIRST PLACE OF USE, 50' TOTAL LENGTH OF PIPELINE, 422' CASING DEPTH AND TOTAL WELL DEPTH; 217' TO WATER.
39-10774	WR2-REMBASS #2	IR02/W11	FORT HUACHUCA	SWSESE1421S20E	4,425 FEET	MILITARY-IRRIG. OF SENOR FIELD	WELL	SEE REMARKS	1.3	416.0	SEE REMARKS	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. 8" DIA. CASING SIZE; EQUIPMENT-PUMP, SUBMERSIBLE, 125 GPM; ELEC POWER; DISCHARGE MEASUREMENT UNMETERED GPM. PIPELINE STEEL, 2 1/2" DIA., 20' PIPELINE TO FIRST PLACE OF USE, 20' TOTAL LENGTH OF PIPELINE; 420' CASING DEPTH AND TOTAL WELL DEPTH; 217' TO WATER.
39-10774	TW1-TEST WELL #1	W12	FORT HUACHUCA	NWSWSE2021S20E	4,600 FEET	CAPPED	WELL	SEE REMARKS	0.0	0.0	NONE	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. THIS IS A TEST WELL AND IS PRESENTLY CAPPED.
39-10774	TW2-TEST WELL #2	W13	FORT HUACHUCA	NESWNW3021S20E	4,830 FEET	CAPPED	WELL	SEE REMARKS	0.0	0.0	NONE	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. THIS IS A TEST WELL AND IS PRESENTLY NOT USED.
39-10774	TW3-TEST WELL #3	W14	FORT HUACHUCA	NENENE1621S20E	4,400 FEET	CAPPED	WELL	SEE REMARKS	0.0	0.0	NONE	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. THIS IS A TEST WELL AND IS NOT PRESENTLY USED.
39-10774	TW4-TEST WELL #4	W15	FORT HUACHUCA	SWSENE1521S20E	4,425 FEET	CAPPED	WELL	SEE REMARKS	0.0	0.0	NONE	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. THIS IS A TEST WELL AND IS NOT PRESENTLY USED.
39-10774	TW6-TEST WELL #6	W16	HUACHUCA CITY	SESWSW3520S20E	4,280 FEET	CAPPED	WELL	SEE REMARKS	0.0	0.0	NONE	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. THIS IS A TEST WELL AND IS NOT PRESENTLY USED.

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT/K-GAL)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES. ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	ANNUAL USE (K-GAL)	WELL DATA	REMARKS
39-10774	TW7-TEST WELL #7	W17	FORT HUACHUCA	SESWNW1121S20E	4,350 FEET	CAPPED	WELL	SEE REMARKS	0.0	0.0	NONE	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. THIS IS A TEST WELL AND IS NOT PRESENTY USED.
39-10774	TW8-TEST WELL #8	W18	FORT HUACHUCA	NWNWSW1321S20E	4,400 FEET	CAPPED	WELL	SEE REMARKS	0.0	0.0	NONE	WELL WATER FROM UPPER UNIT FO BASIN FILL-QUATERNARY. THIS IS A TEST WELL AND IS NOT PRESENTLY USED.
39-10774	TW9-TEST WELL #9	W19	LEWIS SPRINGS	SWSWNW1721S21E	4,300 FEET	CAPPED	WELL	SEE REMARKS	0.0	0.0	NONE	WELL WATER FROM UPPER UNIT OF BASIN FILL-QWUATERNARY. THIS IS A TEST WELL AND IS NOT PRESENTLY USED.
39-10774	SPP1-SPRING #1	MU01/S01	PYEATT RANCH	SENWSW1422S19E	5,650 FEET	MUNICIPAL	SPRING	SEE REMARKS	5.3	1740.0	N/A	SPRING FROM BOLSA QUARTZITE-CAMBRIAN. UNKNOWN ANNUAL USE. HUACHUCA CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGENCIES; PIPELINE STILL IN PLACE.
39-10774	SPP2-SPRING #2	MU01/S02	PYEATT RANCH	SENWSW1422S19E	5,650 FEET	MUNICIPAL	SPRING	SEE REMARKS	5.3	1740.0	N/A	SPRING FROM BOLSA QUARTZITE-CAMBRIAN. UNKNOWN ANNUAL USE. HUACHUCA CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGENCIES; PIPELINE STILL IN PLACE.
39-10774	SPP3-SPRING #3	MU01/S03	PYEATT RANCH	NENENE2222S19E	5,975 FEET	MUNICIPAL	SPRING	SEE REMARKS	5.3	1740.0	N/A	SPRING FROM BOLSA QUARTZITE-CAMBRAIN. UNKNOWN ANNUAL USE. HUACHUCA CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGENCIES; PIPELINE STILL IN PLACE.
39-10774	SPP3A-SPRING #3A	MU01/S03	PYEATT RANCH	NENENE2222S19E	5,975 FEET	MUNICIPAL	SPRING	SEE REMARKS	5.3	1740.0	N/A	SPRING FROM BOLSA QUARTZITE-CAMBRIAN. UNKNOWN ANNUAL USE. HUACHUCA CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGENCIES; PIPELINE STILL IN PLACE.
39-10774	SPP4-SPRING #4	MU01/S04	PYEATT RANCH	NWNENE2222S19E	6,000 FEET	MUNICIPAL	SPRING	SEE REMARKS	5.3	1740.0	N/A	SPRING FROM ABRIGO LIMESTONE-CAMBRIAN. UNKNOWN ANNUAL USE. HUACHUCA CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGENCIES; PIPELINE STILL IN PLACE

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT/K-GAL)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES. ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	ANNUAL USE (K-GAL)	WELL DATA	REMARKS
39-10774	PICNIC-PICNIC SPRING	MU01/S07	MILLER PEAK	NWNESW3122S20E	5,375 FEET	MUNICIPAL	SPRING	SEE REMARKS	12.0	3907.0	N/A	SPRINNG FROM ABRIGO LIMESTONE-CAMBRIAN. UNKNOWN ANNUAL USE. GARDEN CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGENCIES; MILITARY USE (LEADERSHIP REACTION CRSE); CAMPGROUND TOILETS (LOWER GARDEN CYN); MAINTAINS POND LEVELS AT GRAVEL PIT (#1) AND GOLF CRSE (#2); AND CONSTRUCTION AND FIRE FIGHTING USES. PIPELINE STILL IN PLACE.
39-10774	CHAIN-CHAIN SPRING	MU01/S08	MILLER PEAK	NESWSW3122S20E	5,425 FEET	MUNICIPAL	SPRING	SEE REMARKS	12.0	3907.0	N/A	SPRING FROM ABRIGO LIMESTONE-CAMBRIAN. UNKNOWN ANNUAL USE. GARDEN CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGENCIES; MILITARY USE (LEADERSHIP REACTION CRSE); CAMPGROUND TOILETS (LOWER GARDEN CYN); MAINTAINS POND LEVELS AT GRAVEL PIT (#1) AND GOLF CRSE (#2); AND CONSTRUCTION AND FIRE FIGHTING USES. PIPELINE STILL IN PLACE.
39-10774	SPP1-SPRING #1	MU01/S09	MILLER PEAK	SESESE3622S19E	5,700 FEET	MUNICIPAL	SPRING	SEE REMARKS	12.0	3907.0	N/A	SPRING FROM MARTIN LIMESTONE-DEVONIAN. UNKNOWN ANNUAL USE. GARDEN CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGENCIES; MILITARY USE (LEADERSHIP REACTION CRSE); CAMPGROUND TOILETS (LOWER GARDEN CYN); MAINTAINS POND LEVELS AT GRAVEL PIT (#1) AND GOLF CRSE (#2); AND CONSTRUCTION AND FIRE FIGHTING USES. PIPELINE STILL IN PLACE.
39-10774	SPP1A-SPRING #1A	MU01/S11	MILLER PEAK	NENENE0123S19E	5,700 FEET	MUNICIPAL	SPRING	SEE REMARKS	12.0	3907.0	N/A	SPRING FROM MARTIN LIMESTONE-DEVONIAN. UNKNOWN ANNUAL USE. GARDEN CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGENCIES; MILITARY USE (LEADERSHIP REACTION CRSE); CAMPGROUND TOILETS (LOWER GARDEN CYN); MAINTAINS POND LEVELS AT GRAVEL PIT (#1) AND GOLF CRSE (#2); AND CONSTRUCTION AND FIRE FIGHTING

FMC002224

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT/K-GAL)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES. ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	ANNUAL USE (K-GAL)	WELL DATA	REMARKS
39-10774	SPP1B-SPRING #1B	MU01/S10	MILLER PEAK	SESESE3622S19E	5,600 FEET	MUNICIPAL	SPRING	SEE REMARKS	12.0	3907.0	N/A	SPRING FROM MARTIN LIMESTONE-DEVONIAN. UNKNOWN ANNUAL USE. GARDEN CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGANCIES; MILITARY USE (LEADERSHIP REACTION CRSE); CAMPGROUND TOILETS (LOWER GARDEN CYN); MAINTAINS POND LEVELS AT GRAVEL PIT (#1) AND GOLF CRSE (#2); AND CONSTRUCTION AND FIRE FIGHTING USES. PIPELONE STILL IN PLACE.
39-10774	SPP2-SPRING #2	MU01/S13	MILLER PEAK	NENESW0123S19E	6,200 FEET	MUNICIPAL	SPRING	SEE REMARKS	12.0	3907.0	N/A	SPRING FROM NACO GROUP-PENNSYLVANIAN AND PERMIAN-CARBONIFEROUS. UNKNOWN ANNUAL USE. GARDER CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGENCIES; MILITARY USES (LEADERSHIP REACTION CRSE); CAMPGROUND TOILETS (LOWER GARDEN CYN); MAINTAINS POND LEVELS AT GRAVEL PIT (#1) AND GOLF CRSE (#2); AND CONSTRUCTION AND FIRE FIGHTING USES. PIPELINE STILL IN PLACE.
39-10774	SPP3-SPRING #3	MU01/S12	MILLER PEAK	NWNESW0123S19E	6,200 FEET	MUNICIPAL	SPRING	SEE REMARKS	12.0	3907.0	N/A	SPRING FROM NACO GROUP-PENNSYLVANIAN AND PERMIAN-CARBONIFEROUS. UNKNOWN ANNUAL USE. GARDEN CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGENCIES; MILITARY USE (LEARDERSHIP REACTION CRSE); CAMPGROUND TOILETS (LOWER GARDEN CYN); MAINTAINS POND LEVELS AT GRAVEL PIT (#1) AND GOLF CRSE (#2); AND CONSTRUCTION AND FIRE FIGHTING USES. PIPELINE STILL IN PLACE.

FMC002225

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT/K-GAL)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES. ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	ANNUAL USE (K-GAL)	WELL DATA	REMARKS
39-10774	SPP4-SPRING 04	MU01/S14	MILLER PEAK	NWSWSW0123S19E	6,200 FEET	MUNICIPAL	SPRING	SEE REMARKS	12.0	3907.0	N/A	SPRING FROM NACO GROUP-PENNSYLVANIAN AND PERMIAN-CARBONIFEROUS. UNKNOWN ANNUAL USE. GARDEN CANYON POTABLE SPRING SYSTEM-STANDBY USES FOR MOBILIZATION AND EMERGENCIES; MILITARY USE (LEADERSHIP REACTION CRSE); CAMPGROUND TOILETS (LOWER GARDEN CYN); MAINTAINS POND LEVELS AT GRAVEL PIT (#1) AND GOLF CRSE (#2); AND CONSTRUCTION AND FIRE FIGHTING USES. PIPELINE STILL IN PLACE.
39-10774	W1-WELL #1	MU01/W07	FORT HUACHUCA	NWNWNW0322S20E	4,641 FEET	DOMESTIC/MILITARY	WELL	SEE REMARKS	214.9	70039.0	SEE REMARKS	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. 14" DIA. CASING SIZE.-EQUIPMENT,- TURBINE, ELEC POWER; DISCHARGE MEASUREMENT 500 GPM. PIPELINE CAST IRON, 12" DIA.; 100' PIPELINE TO FIRST PLACE OF USE AND TOTAL LENGTH OF PIPELINE; 813' CASING DEPTH AND TOTAL WELL DEPTH; 527' TO WATER.
39-10774	W2-WELL #2	MU01/W08	FORT HUACHUCA	NWNWNW0322S20E	4,641 FEET	DOMESTIC/MILITARY	WELL	SEE REMARKS	125.9	41037.0	SEE REMARKS	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. 14" DIA. CASING SIZE; EQUIPMENT, TURBINE; ELEC POWER; DISCHARGE MEASUREMENT 700 GPM. PIPELINE CAST IRON, 12" DIA.; 100' PIPELINE TO FIRST PLACE OF USE AND TOTAL LENGTH OF PIPELINE; 710' CASING DEPTH AND TOTAL WELL DEPTH; 523' TO WATER.
39-10774	W3-WELL #3	MU01/W06	FORT HUACHUCA	NWNESE3321S20E	4,619 FEET	DOMESTIC/MILITARY	WELL	SEE REMARKS	919.6	299645.0	SEE REMARKS	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. 16-18" DIA. CASING SIZE; EQUIPMENT, TURBINE; ELEC POWER; DISCHARGE MEASUREMENT 700 GPM. PIPELINE CAST IRON, 12" DIA.; 200' PIPELINE TO FIRST PLACE OF USE AND TOTAL LENGTH OF PIPELINE; 802' CASING DEPTH AND TOTAL WELL DEPTH; 468' TO WATER.

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT/K-GAL)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES. ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	ANNUAL USE (K-GAL)	WELL DATA	REMARKS
39-10774	W4-WELL #4	MU01/W04	FORT HUACHUCA	NENWNE3321S20E	4,619 FEET	DOMESTIC/MILITARY	WELL	SEE REMARKS	276.5	90094.0	SEE REMARKS	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. 18" DIA. CASING SIZE; EQUIPMENT, TURBINE; ELEC POWER; DISCHARGE MEASUREMENT 700 GPM. EQUIPMENT, TURBINE; ELEC POWER; DISCHARGE MEASUREMENT 700' GPM. PIPELINE CAST IRON, 12" DIA.; 200' PIPELINE TO FIRST PLACE OF USE AND TOTAL LENGTH OF PIPELINE; 912' CASING DEPTH AND TOTAL WELL DEPTH; 488' TO WATER.
39-10774	W5-WELL #5	MU01/W03	FORT HUACHUCA	SWNESW2821S20E	4,600 FEET	DOMESTIC/MILITARY	WELL	SEE REMARKS	628.2	204697.0	SEE REMARKS	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. 16-18" DIA.CASING SIZE; EQUIPMENT, TURBINE; ELEC POWER; DISCHARGE MEASUREMENT 700 GPM. PIPELINE CAST-IRON, 12" DIA.; 200' PIPELINE TO FIRST PLACE OF USE AND TOTAL LENGTH OF PIPELINE; 800' CASING DEPTH AND TOTAL WELL DEPTH; 468' TO WATER.
39-10774	W6-WELL #6	MU01/W05	FORT HUACHUCA	NWNWSE3321S20E	4,645 FEET	DOMESTIC/MILITARY	WELL	SEE REMARKS	802.4	261460.0	SEE REMARKS	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. 16" DIA. CASING SIZE; EQUIPMENT, TURBINE; ELEC POWER; DISCHARGE MEASUREMENT 700 GPM. PIPELINE CAST-IRON, 12" DIA.; 200' PIPELINE TO FIRST PLACE OF USE AND TOTAL LENGTH OF PIPELINE; 803' CASING DEPTH, 1,230' TOTAL WELL DEPTH; 516' TO WATER.
39-10774	W7-WELL #7	MU01/W02	FORT HUACHUCA	NWNWNW2221S20E	4,475 FEET	DOMESTIC/MILITARY	WELL	SEE REMARKS	412.7	134469.0	SEE REMARKS	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. 16" DIA. CASING SIZE; EQUIPMENT, TURBINE; ELEC POWER; DISCHARGE MEASUREMENT 800 GPM. PIPELINE STEEL CEMENT COATED, 24" DIA.; 6 MILES TO FIRST PLACE OF USE AND TOTAL LENGTH OF PIPELINE PUMPED DIRECTLY INTO POST DISTRIBUTION SYSTEM; 762' CASING DEPTH AND TOTAL WELL

FMC002227

07/18/91

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT/K-GAL)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES. ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	ANNUAL USE (K-GAL)	WELL DATA	REMARKS
39-10774	W8-WELL #8	W01/MU	FORT HUACHUCA	NESENE16215S20E	4,425 FEET	DOMESTIC/MILITARY	WELL	SEE REMARKS	412.9	134539.0	SEE REMARKS	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. 16" DIA. CASING SIZE; EQUIPMENT, TURBINE; ELEC POWER; DISCHARGE MEASUREMENT 800 GPM. PIPELINE STEEL CEMENT COATED, 24" DIA.; 6 MILES PIPELINE TO FIRST USE AND TOTAL LENGTH OF PIPELINE PUMPED DIRECTLY INTO POST DISTRIBUTION SYSTEM; 807'; CASING DEPTH AND TOTAL WELL DEPTH; 500' TO WATER.
39-10774	W9-WELL #9	MU01/W21	FORT HUACHUCA	NWSWW21S20E	4,350 FEET	CAPPED	WELL	SEE REMARKS	0.0	0.0	NONE	WELL WATER FROM UPPER UNIT OF BASIN FILL-QUATERNARY. THIS IS A TEST WELL AND IS PRESENTLY CAPPED.
39-10774	GW-WELL #9	MU01/W09	MILLER PEAK	NWSESE29S22S20E	5,075 FEET	MILITARY AND WILDLIFE	WELL	SEE REMARKS	4.4	1440.0	SEE REMARKS	WELL WATER FROM GRANITE-PRECAMBRIAN. 8" DIA. CASING SIZE; EQUIPMENT, SUBMERSIBLE; ELEC POWER; DISCHARGE MEASUREMENT 80 GPM. PIPELINE STEEL, 4" DIA.; UNK LENGTH; 202' CASING DEPTH AND TOTAL WELL DEPTH; 17' TO WATER. WELL PUMPS INTO WATER LINE FROM GARDEN CYN SPRING SYSTEM AND IS USED AS POTABLE WATER FOR INSTALLATION AND RECREATION PONDS FOR FISHING AND WILDLIFE. USED TO MAINTAIN LEVEL OF GRAVEL PIT POND (#1) AND GOLF CRSE POND (#2).
*** Total ***									0.0	0.0		
									3989.5	1300037.9		

FMC002228

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	WELL DATA	REMARKS
39-10775	1-GRAVEL PIT	PS05	FORT HUACHUCA	SENESE1722S20E	4,925 FEET	RECREATION AND WILDLIFE	POND	WOODCUTTER CANYON	11.5	N/A	
39-10775	1A-WOODCUTTER	SP31	FORT HUACHUCA	SENWSW1622S20E	4,875 FEET	EROSION AND FLOOD CONTROL	POND	WOODCUTTER CANYON	2.0	N/A	
39-10775	1B-WOODCUTTER	SP33	FORT HUACHUCA	NWNWNE1622S20E	4,800 FEET	EROSION AND FLOOD CONTROL	POND	WOODCUTTER CANYON	2.0	N/A	
39-10775	1C-LOWER WOODCUTTER	SP35	FORT HUACHUCA	NWNWNE1022S20E	4,675 FEET	EROSION AND FLOOD CONTROL	POND	WOODCUTTER CANYON	2.0	N/A	
39-10775	2-GOLF COURSE	PS04	FORT HAUCHUCA	SWNWNE0922S20E	4,725 FEET	RECREATION AND WILDLIFE	POND	SOLDIER CREEK	14.4	N/A	
39-10775	3-OFFICERS CLUB	SR05	FORT HUACHUCA	SENESE0122S19E	5,075 FEET	RECREATION AND WILDLIFE	POND	SOLDIER CREEK	12.2	N/A	
39-10775	5-HIDDEN	PS03	PYEATT RANCH	NESENW2821S19E	4,900 FEET	RECREATION AND WILDLIFE	POND	BLACKTAIL CANYON	5.6	N/A	
39-10775	6-LOWER SOLDIER	SR06	FORT HUACHUCA	NENENE0722S20E	4,825 FEET	RECR.,WILDL.,EROS.,FLOOD CTRL	POND	ROCK SPRINGS CREEK	0.6	N/A	
39-10775	7-UPPER SOLDIER	SP30	FORT HUACHUCA	NWSENE1322S19E	5,700 FEET	EROSION AND FLOOD CONTROL	POND	ROCK SPRING CREEK	1.6	N/A	
39-10775	8-FLY	SP24	FORT HUACHUCA	SESWSW0622S19E	5,000 FEET	GAME MANAGEMENT	POND	SOLDIER CREEK	0.9	N/A	
39-10775	9-SYCAMORE	PS02	PYEATT RANCH	SESESW2021S19E	4,775 FEET	RECREATION AND WILDLIFE	POND	SYCAMORE CANYON	6.0	N/A	
39-10775	10-SAUGHTER HOUSE	SR02	PYEATT RANCH	SWSWSE2321S19E	4,650 FEET	REC.,WLDF.,EROS., & FLD CTRL	POND	SLAUGHTER HOUSE CANYON	8.4	N/A	
39-10775	11-LANDING STRIP	SP49	PYEATT RANCH	SWNWNW3521S19E	4,825 FEET	EROSION AND FLOOD CONTROL	POND	COYOTE CANYON	0.9	N/A	
39-10775	12-BUFFALO CORRAL	SP06	PYEATT RANCH	SESWNE2621S19E	4,725 FEET	EROSION AND FLOOD CONTROL	POND	SYCAMORE CANYON	0.5	N/A	
39-10775	13-BLACKTAIL	SR04	PYEATT RANCH	NWSENE1622S19E	7,000 FEET	RECREATION AND WILDLIFE	POND	BLACKTAIL CANYON	0.8	N/A	
39-10775	14-WEST HUACHUCA	SP08	PYEATT RANCH	NENWSE2122S19E	6,550 FEET	EROSION AND FLOOD CONTROL	POND	HUACHUCA CANYON	0.7	N/A	
39-10775	15-HUACHUCA CORRAL	SP51	PYEATT RANCH	SENWSE2222S19E	6,075 FEET	EROSION AND FLOOD CONTROL	POND	HUACHUCA CANYON	0.4	N/A	
39-10775	16-BOY SCOUT CABIN	SP44	HUACHUCA PEAK	NESESE0223S19E	6,350 FEET	EROSION AND FLOOD CONTROL	POND	GARDEN CANYON	0.5	N/A	
39-10775	17-UPPER WOODCUTTER	SP34	FORT HUACHUCA	NENESW2022S20E	5,150 FEET	EROSION AND FLOOD CONTROL	POND	WOODCUTTER CANYON	7.0	N/A	
39-10775	18-WOODCUTTER	SP35	FORT HUACHUCA	SWNWSW1022S20E	4,750 FEET	EROSION AND FLOOD CONTROL	POND	WOODCUTTER CANYON	4.5	N/A	
39-10775	19-ANTELOPE	PS01	PYEATT RANCH	NENWSW1621S19E	4,650 FEET	RECREATION AND WILDLIFE	POND	BABOCOMARI	4.8	N/A	
39-10775	20-POWER LINE	SP48	PYEATT RANCH	SWNWSE2721S19E	4,875 FEET	GAME MANAGEMENT	POND	BLACKTAIL CANYON	1.3	N/A	

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	WELL DATA	REMARKS
39-10775	21 NORTH	SP46	PYEATT RANCH	NWSWNE1521S19E	4,575 FEET	GAME MANAGEMENT	POND	BABOCOMARI	0.3	N/A	
39-10775	22-HUACHUCA CANYON	SP50	PYEATT RANCH	SENWSW1422S19E	5,625 FEET	EROSION AND FLOOD CONTROL	POND	HUACHUCA CANYON	0.2	N/A	
39-10775	23-LOWER HUACHUCA	SP09	FORT HUACHUCA	SWSESE0721S20E	4,450 FEET	EROSION AND FLOOD CONTROL	POND	HUACHUCA CANYON	4.8	N/A	
39-10775	24-LOWER BLACKTAIL	SP01	PYEATT RANCH	SENWNE2221S19E	4,700 FEET	EROSION AND WILDLIFE	POND	BLACKTAIL CANYON	0.5	N/A	
39-10775	25-UNKNOWN WEST	SP47	PYEATT RANCH	NWNESE1421S19E	4,575 FEET	EROSION CONTROL	POND	SLAUGHTER HOUSE WASH	0.2	N/A	
39-10775	26-LOWER GARDEN	SP39	MILLER PEAK	NESWSW2322S20E	4,775 FEET	EROSION AND FLOOD CONTROL	POND	GARDEN CANYON	3.0	N/A	
39-10775	27-LOWER FLY	SP23	FORT HUACHUCA	SWSESW0622S20E	4,950 FEET	EROSION AND FLOOD CONTROL	POND	SOLDIER CREEK	6.0	N/A	
39-10775	29-LOWER HORSE PASTURE	SP26	FORT HUACHUCA	SWSESW0622S20E	4,850 FEET	EROSION AND FLOOD CONTROL	POND	SOLDIER CREEK	0.8	N/A	
39-10775	30-UPPER GARDEN	SR07	HUCAHUCA PEAK	NWSWSE0223S19E	6,350 FEET	RECREATION AND WILDLIFE	POND	GARDEN CANYON	0.4	N/A	
39-10775	31-FAIRWAY	SR09	FORT HUACHUCA	NENWSE0422S20E	4,675 FEET	EROSION AND FLOOD CONTROL	POND	SOLDIER CREEK	0.4	N/A	
39-10775	32A-SEDIMENT #1A	E01	FORT HUACHUCA	SENESE3321S20E	4,600 FEET	SEWAGE EVAPORATION	POND	SOLDIER CREEK		N/A	CAPACITY OF THE POND IS 2.2 AC-FT. POINT OF DIVERSION (Z-1A) FOR EFFLUENT IRRIGATION OF GOLF COURSE; SEWAGE TREATMENT PLANT #1;4,000 LF OF PIPELINE (8" STEEL) TO GOLF COURSE.
39-10775	32B-SEDIMENT #1B	E01	FORT HUACHUCA	SENESE3321S20E	4,600 FEET	SEWAGE EVAPORATION	POND	SOLDIER CREEK		N/A	CAPACITY OF THE POND IS 2.2 AC-FT. POINT OF DIVERSION (Z-1B) FOR EFFLUENT IRRIGATION OF GOLF COURSE; SEWAGE TREATMENT PLANT #1; SAME PIPELINE USED AS Z-1A.
39-10775	33-SEDIMENT #2	E02	FORT HUACHUCA	SWSWSE2821S20E	4,600 FEET	SEWAGE EVAPORATION	POND	SOLDIER CREEK		N/A	CAPACITY OF THE POND IS 5.5 AC-FT. POINT OF DIVERSION (Z2) FOR EFFLUENT IRRIGATION OF CHAFFEE PARADE FIELD AND 3% OF THE EFFLUENT TO GOLF COURSE. SEWAGE TREATMENT PLANT #2: 8,400 LF OF PIPELINE (8" STEEL) TO CHAFFEE PARADE FIELD.

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	WELL DATA	REMARKS
39-10775	34-SEDIMENT #3	SP20	FORT HUACHUCA	NWSESE2121S20E	4,500 FEET	SEWAGE EVAPORATION	POND	SOLDIER CREEK		N/A	CAPACITY OF THE POND IS 16.5 AC-FT.
39-10775	34A-SEDIMENT	SP18	FORT HUACHUCA	NENWSE2121S20E	4,475 FEET	SEWAGE EVAPORATION	POND	SOLDIER CREEK		N/A	CAPACITY OF THE POND IS 1.7 AC-FT.
39-10775	34B-SEDIMENT	SP55	FORT HUACHUCA	NWSENE2121S20E	4,475 FEET	SEWAGE EVAPORATION	POND	SOLDIER CREEK		N/A	CAPACITY OF THE POND IS 2.5 AC-FT.
39-10775	34C-SEDIMENT	SP15	FORT HUACHUCA	NWNENE2121S20E	4,450 FEET	SEWAGE EVAPORATION	POND	SOLDIER CREEK		N/A	CAPACITY OF THE POND IS 1.0 AC-FT.
39-10775	34D-SEDIMENT	SP12	FORT HUACHUCA	NESWNW1521S20E	4,375 FEET	SEWAGE EVAPORATION	POND	SOLDIER CREEK		N/A	CAPACITY OF THE POND IS 4.0 AC-FT.
39-10775	35-EAST #1	SP54	FORT HUACHUCA	SESENE1621S20E	4,425 FEET	RECREATION	POND	SOLDIER CREEK	3.6	N/A	
39-10775	37-EAST #3	SP13	FORT HUACHUCA	SWSENE1421S20E	4,375 FEET	EROSION AND FLOOD CONTROL	POND	SAN PEDRO	3.2	N/A	
39-10775	38-EAST #4	SP22	FORT HUACHUCA	NWNESW2721S20E	4,525 FEET	EROSION AND FLOOD CONTROL	POND	SOLDIER CREEK	4.1	N/A	
39-10775	39-KINO	SR3	PYEATT RANCH	NENWSW3221S19E	5,125 FEET	RECREATION	POND	SYCAMORE CANYON	1.4	N/A	
39-10775	39A	SP07	PYEATT RANCH	SESWNE3121S19E	5,100 FEET	EROSION AND FLOOD CONTROL	POND	SYCAMORE CANYON	0.5	N/A	
39-10775	41-LOWER ANTELOPE	SP04	PYEATT RANCH	SWSENW1621S19E	4,650 FEET	WILDLIFE	POND	SYCAMORE CANYON	6.0	N/A	
39-10775	42-SYCAMORE II	SP05	PYEATT RANCH	NENESW2921S19E	4,875 FEET	RECREATION	POND	SYCAMORE CANYON	7.0	N/A	
39-10775	43-WEST HUACHUCA #2	SP43	PYEATT RANCH	NWNESW2122S19E	6,840 FEET	EROSION CONTROL AND WILDLIFE	POND	HUACHUCA CANYON	0.3	N/A	
39-10775	44-GATE 5	SP14	FORT HUACHUCA	NESWSW1621S20E	4,500 FEET	EROSION CONTROL AND WILDLIFE	POND	HUACHUCA CANYON	0.4	N/A	
39-10775	45	SP17	FORT HUACHUCA	NWNESE1021S20E	4,350 FEET	EROSION CONTROL	POND	SOLDIER CREEK	0.4	N/A	
39-10775	46-#3 SEWAGE	SP16	FORT HUACHUCA	SESWNE2121S20E	4,475 FEET	SEWAGE EVAP. AND WILDLIFE	POND	SOLDIER CREEK		N/A	CAPACITY OF POND IS 2.2 AC-FT.
39-10775	47-#2 SEWAGE	SP19	FORT HUACHUCA	SWNESE2121S20E	4,500 FEET	SEWAGE EVAP. AND WILDLIFE	POND	SOLDIER CREEK		N/A	CAPACITY OF POND IS .9 AC-FT.
39-10775	48-HORSE PASTURE	SP25	FORT HUACHUCA	SWSESW0622S20E	4,925 FEET	EROSION CONTROL	POND	SOLDIER CREEK	0.6	N/A	
39-10775	50-GOLF COURSE FAIRWAY	SR10	FORT HUACHUCA	NWNWNE0422S20E	4,700 FEET	RECREATION	POND	SOLDIER CREEK	0.2	N/A	
39-10775	51	SP36	LEWIS SPRINGS	NWSESE1021S21E	4,050 FEET	EROSION CONTROL	POND	GRAVEYARD GULCH	3.0	N/A	
39-10775	52-MIDDLE GARDEN CYN	SP41	MILLER PEAK	SENWNE2022S20E	4,900 FEET	RECREATION AND WILDLIFE	POND	GARDEN CANYON	8.5	N/A	
39-10775	GWM-GARDEN WINDMILL	W25	MILLER PEAK	NENENW3222S20E	5,110 FEET	CAPPED	WELL	SEE REMARKS	0.0		WATER SOURCE. GRANITE-PRECAMBRAIN. WELL CAPPED. 16" DIA. CASING SIZE. WINDMILL DESTROYED BY HIGH WINDS-1983. DEPTH OF CASING 200'. DEPTH TO WATER 17'.

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CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	CURRENT ESTIMATED ANNUAL WATER USE (AC-FT) DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	WELL DATA	REMARKS
39-10775	SP2-SPRING #2	WL19	MILLER PEAK	SWNESE3322S20E	5,250 FEET	WILDLIFE	SPRING	SEE REMARKS	2.6	N/A	WATER SOURCE, GRANITE-PRECAMBRIAN. NON-POTABLE (TINKER CANYON).
39-10775	SP3-SPRING #3	WL22	MILLER PEAK	NWNESE3322S20E	5,180 FEET	WILDLIFE	SPRING	SEE REMARKS	1.0	N/A	WATER SOURCE, GRANITE-PRECAMBRIAN. NON-POTABLE (TINKER CANYON).
39-10775	SP4-SPRING #4	WL24	MILLER PEAK	SESWSW0723S20E	7,100 FEET	WILDLIFE	SPRING	SEE REMARKS	4.2	N/A	WATER SOURCE, GLANCE CONGLOMERATE-BISBEE GROUP-CRETACEOUS. SAWMILL SPRING, NON-POTABLE (SAWMILL CANYON).
39-10775	SP5-SPRING #5	WL14	HUACHUCA PEAK	NWNESE3522S19E	6,475 FEET	WILDLIFE	SPRING	SEE REMARKS	4.2	N/A	WATER SOURCE, GLANCE CONGLOMERATE-BISBEE GROUP-CRETACEOUS. NON-POTABLE (MCCLURE CANYON).
39-10775	SP6-SPRING #6	WL20	MILLER PEAK	NESESW3622S19E	6,075 FEET	WILDLIFE	SPRING	SEE REMARKS	2.6	N/A	WATER SOURCE, MORITA FORMATION-BISBEE GROUP-CRETACEOUS. NON-POTABLE (MCCLURE CANYON).
39-10775	SP7-SPRING #7	WL17	MILLER PEAK	SESWNW3622S19E	5,950 FEET	WILDLIFE	SPRING	SEE REMARKS	2.6	N/A	WATER SOURCE, MORITA FORMATION-BISBEE GROUP-CRETACEOUS. MCCLURE SPRING, NON-POTABLE (MCCLURE CANYON).
39-10775	SP8-SPRING #8	WL18	MILLER PEAK	SWSWSE2522S19E	6,100 FEET	WILDLIFE	SPRING	SEE REMARKS	2.6	N/A	WATER SOURCE, GRANITE-PRECAMBRIAN. CAVE SPRINGS, NON-POTABLE (GARDEN CANYON).
39-10775	SP9-SPRING #9	WL16	MILLER PEAK	NENWSE2522S19E	6,500 FEET	WILDLIFE	SPRING	SEE REMARKS	4.2	N/A	WATER SOURCE, BOLSA QUARTZITE-CAMBRIAN. NON-POTABLE (WOODCUTTER CANYON).

FMC002232

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	WELL DATA	REMARKS
39-10775	SP10-SPRING #10	WL15	MILLER PEAK	SWSWSW1922S20E	5,900 FEET	WILDLIFE	SPRING	SEE REMARKS	2.6	N/A	WATER SOURCE, GRANITE-PRECAMBRIAN. NON-POTABLE (WOODCUTTER CANYON).
39-10775	SP11-SPRING #11	WL11	FORT HUACHUCA	SWNESW2022S20E	5,200 FEET	WILDLIFE	SPRING	SEE REMARKS	1.0	N/A	WATER SOURCE, GRANITE-PRECAMBRIAN. NON-POTABLE (WOODCUTTER CANYON).
39-10775	SP12-SPRING #12	WL09	FORT HUACHUCA	SENESE0722S20E	5,000 FEET	WILDLIFE	SPRING	SEE REMARKS	1.0	N/A	WATER SOURCE, GRANITE-PRECAMBRIAN. NON-POTABLE (SOLDIER CREEK).
39-10775	SP13-SPRING #13	WL10	FORT HUACHUCA	NESWSW1322S19E	6,375 FEET	WILDLIFE	SPRING	SEE REMARKS	2.6	N/A	WATER SOURCE, GRANITE-PRECAMBRIAN. NON-POTABLE (SOLDIER CREEK).
39-10775	SP14-SPRING #14	WL13	HUACHUCA PEAK	SWSWNE2722S19E	6,825 FEET	WILDLIFE	SPRING	SEE REMARKS	2.6	N/A	WATER SOURCE, MONITA FORMATION-BISBEE GROUP-CRETACEOUS. NON-POTABLE (HUACHUCA CANYON).
39-10775	SP15A-SPRING #15A	WL08	PYEATT RANCH	SENWSE2222S19E	6,075 FEET	WILDLIFE	SPRING	SEE REMARKS	1.0	N/A	WATER COURCE, MORITA FORMATION-BISBEE GROUP-CRETACEOUS. NON-POTALBE (HAUCHUCA CANYON).
39-10775	15B-MOSS FALLS SPRING	WL26	PYEATT RANCH	NESESE2222S19E	6,800 FEET	WILDLIFE	SPRING	SEE REMARKS	0.0	N/A	USEAGE UNKNOWN. WATER SOURCE, MORITA FORMATION-BISBEE GROUP-CRETACEOUS. UNKNOWN ANNUAL USE. NON-POTABLE (HUACHUCA CANYON).
39-10775	SP16-SPRING #16	WL07	PYEATT RANCH	SWNWSW1422S19E	5,975 FEET	WILDLIFE	SPRING	SEE REMARKS	1.0	N/A	WATER SOURCE, GRANITE-PRECAMBRIAN. NON-POTABLE (HUACHUCA CANYON).
39-10775	SP17-SPRING #17	WL06	PYEATT RANCH	NWSENW1522S19E	6,550 FEET	WILDLIFE	SPRING	SEE REMARKS	2.6	N/A	WATER SOURCE, MARTIN LIMESTONE-DEVONIAN. NON-POTABLE (HUACHUCA CANYON).

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	WELL DATA	REMARKS
39-10775	SP18-SPRING #18	WL05	PYEATT RANCH	NENWNE1622S19E	6,650 FEET	WILDLIFE	SPRING	SEE REMARKS	2.6	N/A	WATER SOURCE, MORITA FORMATION-BISBEE GROUP-CRETACEOUS. BLACKTAIL SPRING, NON-POTABLE (BLACKTAIL CANYON).
39-10775	SP19-SPRING #19	WL04	PYEATT RANCH	SWSENE0822S19E	6,200 FEET	WILDLIFE	SPRING	SEE REMARKS	2.6	N/A	WATER SOURCE, MORITA FORMATION-BISBEE GROUP-CRETACEOUS. DEER SPRING, NON-POTABLE (BLACKTAIL CANYON).
39-10775	SP20-SPRING #20	WL03	PYEATT RANCH	NENWNE0422S19E	5,525 FEET	WILDLIFE	SPRING	SEE REMARKS	1.0	N/A	WATER SOURCE, GRANITE-PRECAMBRIAN. NON-POTABLE (SLAUGHTER HOUSE CANYON).
39-10775	SP21-SPRING #21	WL01	PYEATT RANCH	SWSWSW2621S19E	4,800 FEET	WILDLIFE	SPRING	SEE REMARKS	1.0	N/A	WATER SOURCE, PANTANO(?)FORMATION OF BRENNAN(1957) TERTIARY. NON-POTABLE (SLAUGHTER HOUSE CANYON).
39-10775	SP22-SPRING #22	WL02	PYEATT RANCH	SWNWSW3221S19E	5,175 FEET	WILDLIFE	SPRING	SEE REMARKS	2.6	N/A	WATER SOURCE, GRANITE-PRECAMBRIAN. KIND SPRING, NON-POTABLE (SYCAMORE CANYON).
39-10775	SP23-SPRING #23	WL12	FORT HUACHUCA	SWSENW2122S20E	4,950 FEET	WILDLIFE	SPRING	SEE REMARKS	1.0	N/A	WATER SOURCE, GRANITE-PRECAMBRIAN. NON-POTABLE (GARDEN WASH).
39-10775	SP24-SPRING #24	WL23	MILLER PEAK	NENWNW0723S20E	7,000 FEET	WILDLIFE	SPRING	SEE REMARKS	1.0	N/A	WATER SOURCE, NACO GROUP-PENNSYLVANIAN AND PERMIAN-CARBONIFEROUS. NON-POTABLE (SCHELLITE CANYON).

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ESTIMATED ANNUAL WATER USE (AC-FT)	WELL DATA	REMARKS
39-10775	SP25-SPRING #25	WL21	MILLER PEAK	SWSESW3622S19E	6,300 FEET	WILDLIFE	SPRING	SEE REMARKS	1.4 N/A		WATER SOURCE, MARTIN LIMESTONE-DEVONIAN. NON-POTABLE (MCCLURE CANYON).
39-10775	CABIN SPRING	WL25	MILLER PEAK	NESWSW0123S19E	6,225 FEET	WILDLIFE	SPRING	SEE REMARKS	2.6 N/A		WATER SOURCE, GLANCE CONGLOMERATE-BISBEE GROUP-CRETACEOUS. ORIGINALLY CLAIMED AS POTABLE. CHANGED TO NON-POTABLE. LOCATED 1,100' NE OF BOY SCOUT CABIN. (GARDEN CANYON)
39-10775	A-TINKER	SP42	MILLER PEAK	SWSESW3322S20E	5,375 FEET	GAME MANAGEMENT	POND	GARDEN CANYON	0.5 N/A		
39-10775	B-DAM	SP56	LEWIS SPRINGS	SENESE1821S21E	4,318 FEET	EROSION AND FLOOD CONTROL	POND	GRAVEYARD GULCH	0.5 N/A		
39-10775	C-DAM	SP58	LEWIS SPRINGS	SWNWSW1721S21E	4,300 FEET	EROSION AND FLOOD CONTROL	POND	GRAVEYARD GULCH	0.5 N/A		
39-10775	D-DAM	SP59	LEWIS SPRINGS	SWNWNE2021S21E	4,300 FEET	EROSION AND FLOOD CONTROL	POND	GRAVEYARD GULCH	0.5 N/A		
39-10775	E-DAM	SP37	LEWIS SPRINGS	SWNWNE2021S21E	4,275 FEET	EROSION AND FLOOD CONTROL	POND	GRAVEYARD GULCH	0.5 N/A		
39-10775	F-DAM	SP38	LEWIS SPRINGS	SESWNW2021S21E	4,315 FEET	EROSION AND FLOOD CONTROL	POND	GRAVEYARD GULCH	0.5 N/A		
39-10775	G-DAM	SP57	LEWIS SPRINGS	SWNWSW1721S21E	4,300 FEET	EROSION AND FLOOD CONTROL	POND	GRAVEYARD GULCH	0.5 N/A		
39-10775	H-DAM	SP52	FORT HUACHUCA	SWSENE1021S20E	4,345 FEET	EROSION AND FLOOD CONTROL	POND	SOLDIER CREEK	0.5 N/A		
39-10775	I-DAM	SP53	FORT HUACHUCA	NESENW1021S20E	4,350 FEET	EROSION AND FLOOD CONTROL	POND	SOLDIER CREEK	0.5 N/A		
39-10775	J-DAM	SP11	FORT HUACHUCA	SWSENE1021S20E	4,325 FEET	EROSION AND FLOOD CONTROL	POND	SOLDIER CREEK	0.5 N/A		
39-10775	K-DAM	SP01	HUACHUCA CITY	SENENE0321S20E	4,275 FEET	EROSION AND FLOOD CONTROL	POND	SOLDIER CREEK	0.5 N/A		
39-10775	L-DAM	SP02	FORT HUACHUCA	SENENE0921S20E	4,325 FEET	EROSION AND FLOOD CONTROL	POND	SOLDIER CREEK	0.5 N/A		
39-10775	M-DAM	SP21	FORT HUACHUCA	NWNWNE3621S19E	4,850 FEET	EROSION,FLOOD CTRL,RECREATION	POND	HUACHUCA WASH	2.8 N/A		
39-10775	N-LOWER GARDEN	SP40	MILLER PEAK	NENENE2022S20E	4,900 FEET	EROSION,FLOOD CTRL,RECREATION	POND	GARDEN WASH	5.2 N/A		
39-10775	O-DAM	SP45	PYEATT RANCH	SWSESE3121S19E	5,175 FEET	EROSION,FLOOD CTRL, WILDLIFE	POND	MANILA WASH	0.5 N/A		
39-10775	P-DAM	SP32	FORT HUACHUCA	SENWNE1522S20E	4,700 FEET	EROSION AND FLOOD CONTROL	POND	GARDEN CANYON	0.5 N/A		
39-10775	Q-DAM	SP10	FORT HUACHUCA	SENWSE1821S20E	4,525 FEET	WILDLIFE	POND	HUACHUCA CANYON	0.5 N/A		
39-10775	R-DAM	SP03	FAIRBANK	NESENW2120S21E	3,950 FEET	GAME MANAGEMENT	POND	SAN PEDRO	0.3 N/A		
									0.0		

FMC002235

CURRENT ESTIMATED ANNUAL WATER USE
(AC-FT)

CLAIM NO	INVENTORY ID	AZ DEPT OF WATER RES ID	USGSQUAD NAME	LOCATION	ELEVATION	MILITARY USE	DIVERSION	WATER COURSE	ANNUAL USE (AC-FT)	WELL DATA	REMARKS
*** Total ***									214.4		

FMC002236

JUDITH ALLEN, CLERK
BY Wolson DEP.
FILED

92 MAY -7 PM 2:13

ARIZONA WATER COMMISSION
CENTRAL SECURITY BUILDING
222 N. Central Ave.
Suite 550
Phoenix, Arizona 85004
602-255-1581

WILLIAM J. PALMER, CLERK
BY J Canaron DEP.
FILED

1982 JAN -4 PM 2:30

STATEMENT OF CLAIMANT

(Leave Blank)

IN THE MATTER OF DETERMINATION OF)
RELATIVE RIGHTS TO THE USE OF)
WATERS OF THE SAN PEDRO RIVER AND ITS)
TRIBUTARY WATERSHED, INC. ARAVAIPA CK.)

File No. 39-010774

Filed: 1-4-82 (date) at 2:30 (time) PM

The State Land Department has enclosed with the accompanying Notice this form on which claimant shall present as required, the particulars of his claim of right to the subject waters. All applicable portions must be completed. A separate Statement of Claimant must be submitted for each source or point of diversion of public water unless those waters are commingled prior to use. A map published by the United States Geological Survey or a map of equal standard shall be submitted with this Statement showing on the face of the map the particulars of point of diversion, place of use and other pertinent information.

(Print or type. If more space is required, use explanatory at end of form, or attachment.)

1. Name of Claimant: UNITED States Army Communications Command and Fort Huachuca
(Last) (First) (M.I.)

Fort Huachuca, Arizona 85613 — 602-538-3335
(Address, City, State, Zip) (Telephone No.)

2. State the nature of the right or use on which claim is based: (indicate, and attach supporting documentation)

A. ___ Right to surface water initiated by beneficial use prior to June 12, 1919. Indicate registry number if previously submitted under Water Rights Registration Act _____.

B. ___ Court Decreed Water Right. Cite Title and Date of Case _____ Cause No. _____ County _____.

C. ___ Application for Permit to Appropriate Water filed. State Land Department Application No. _____, Permit No. _____, Certificate of Water Right No. _____.

D. ___ Claim of Water Right for a Stockpond. State Land Department Application No. _____.

E. x Other. Describe: Federal reserved water rights and legitimate and authorized Federal activities.

3. A. Date of initiation of right: October 29, 1881 and May 14, 1883
(Month/Day/Year)

B. Date water first used for beneficial purposes: See attached report entitled Water Sources, Ft. Huachuca, Ariz., May 1980, Revised December 1981. Dates for springs (Month/Day/Year) at Tab A, dates for wells at Tab B.

4. Purpose, annual amount and annual period of use: See attached report, Tabs A and B.

Purpose	Amount		Month/Day	Month/Day
Irrigation		ac.ft./gallons	From	to
Domestic		ac.ft./gallons	From	to
Stockwater		ac.ft./gallons	From	to
Municipal		ac.ft./gallons	From	to
Power		ac.ft./gallons	From	to
Mining		ac.ft./gallons	From	to
Recreation		ac.ft./gallons	From	to
Wildlife		ac.ft./gallons	From	to
Other Uses		ac.ft./gallons	From	to

5. A. (1) If for irrigation purposes, describe place of use: (also indicate on map) The installation irrigates a golf course, parade grounds, and landscaping.

Township (N/S)	Range (E/W)	Section	Legal Subdivision	No. of Acres.

(2) If land reclaimed over period of years, indicate schedule and amount of land reclaimed first and each subsequent year(s): N/A

FMC002237

5. A. (3) Indicate kind of crops cultivated: N/A

Character of soil: _____

B. If for domestic purposes, number of persons: N/A, or families: _____

C. If for stockwater purposes, number and kind of stock watered: N/A

D. If for municipal purposes, population to be served, and estimate of future requirements: Personnel living on post number 9304. Another 6465 work on the installation. There are no known future population increases.

E. If for power purposes, describe type of plant and capacity: N/A

F. If for mining purposes, describe purpose of use, location and character of the mine(s) to be served: N/A

G. If for recreational purposes, describe: See attached report, Tab A.

H. If for wildlife purposes, including fish, describe: See attached report, Tab A.

I. If for other purposes, describe: Military purposes.

6. A. Direct source of public water diverted: N/A tributary to _____ on the _____ watershed.

B. Point of Diversion (indicate on map): _____ ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

C. Place of use (indicate on map): _____ ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

7. State all other sources of water supply not described in Question 6 of this form.

A. Type of Source: Wells and potable springs described in attached report, Tabs A & B.

B. Location of Source (indicate on map): _____ ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

See attached report, ~~Tabs A & E.~~

C. If other source is well, list following: See attached report, Tabs A,B,C, & E.

(1) Date well construction began: _____ (Month/Day/Year); Date well place in use: _____ (Month/Day/Year).

(2) Location (10 acre subdivision) (indicate on map): _____ ¼ _____ ¼ _____ ¼ Section _____, Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base Meridian, County of _____.

(3) State Land Department Intent to Drill, File No. _____, or Application for Permit No. _____.

(4) State whether free flowing or pump: _____. If pump, list type of pump and capacity: _____

(5) Casing depth _____ ft. Total well depth _____ ft. Diameter of casing _____ inches.

(6) Depth to water: _____ ft. (Static Level)

(7) Annual amount pumped, or otherwise extracted: _____ Ac.Ft./Gallons

(8) State purpose of use: _____.

(9) Indicate annual period of use: _____ (Month/Day) to _____ (Month/Day)

8. Water storage reservoir and/or diverting works: See attached report, Tab D, for storage capacity in distribution system.

A. Location (indicate on map): _____ ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

B. Name of storage reservoir and/or diverting works (if known): _____

C. Maximum capacity: _____ Ac.Ft.

D. Maximum depth of water: _____ ft.

RECEIVED JAN 4 1984 DEPT. OF WATER RESOURCES

8. E. (1) Year construction began: N/A.

(2) Year construction completed _____.

(3) Date water first stored: _____ (Month/Year).

F. If dam, list following: N/A

(1) Construction material: _____

(2) Maximum Length: Top _____ ft.; Bottom _____ ft.

(3) Maximum Width: Top _____ ft.; Bottom _____ ft.

(4) Maximum Height: _____ ft.

G. If diverting works, describe: N/A

9. Distribution works: N/A

A. If ditch or canal:

(1) Date construction began: _____ (Month/Day/Year)

Date construction completed: _____ (Month/Day/Year)

(2) Length of ditch or canal to first place of use: _____ ft., total length of ditch or canal: _____ ft.

(3) Top width: _____ ft.; Bottom width: _____ ft.

(4) Grade (slope) of ditch: _____

(5) If ditch or canal owned and/or operated by an association or company or such other entity, list name of association or company or such other entity: _____

B. If pipeline: See attached report, Tab D.

(1) Type: _____ (i.e., aluminum, steel, etc.)

(2) Diameter: _____ inches

(3) Length of pipeline to first place of use: _____ ft. and total length of pipeline: _____ ft.

(4) Grade (slope) of pipeline: _____

C. If other, describe: _____

10. Enlargement(s) of storage reservoir and/or diverting and/or distributing works

A. Date begun: N/A (Month/Day/Year)

Date completed: _____ (Month/Day/Year)

B. Describe details of enlargement(s): _____

C. Dimensions of works as originally constructed and as enlarged: _____

Explanatory

This does not waive any future claims to additional water for mission activities under applicable law.

Amount of potable water claimed is 3287 Million gallons annually as shown at Tab F of attached report.

A copy from the National Archives, Tab G, of attached report refers to the 1881 executive order establishing Fort Huachuca and the 1883 executive order enlarging the boundaries.

History and use of the installation are briefly described at Tab H of the attached report.

(continued on the next page)

ARIZONA
DEPT. OF

'82 JAN -4 P2:23

WATER
RESOURCES

(if more space is required, attach separate sheet(s)

STATE OF ARIZONA)
)SS
County of Cochise)
)

VERIFICATION

US Army Communications Command
and Fort Huachuca
Fort Huachuca, Arizona ,
(please print Claimant-Affiant's name)

WILLIAM R. DERR, LTC, MI, Deputy Commander
(Claimant-Affiant representative's name)

being first duly sworn, deposes and says; That the affiant, or its duly authorized representative, possesses the knowledge and the authorization to execute this verification as to the correctness and truthfulness of the matters set forth in the "Statement of Claimant", except as to those matters alleged upon information and belief, and as to those matters believes them to be true and correct.

For ~~Corporations, Partnerships, Associations~~
US Army Communications Command
and Fort Huachuca, Fort Huachuca,
AZ 85613

Claimant-affiant representative's signature

Claimant-affiant signature

William R. Derr LTC
Claimant-affiant signature

Attest:
Claimant-affiant representative's signature

Subscribed and sworn to before me this
28th day of December, 1981.

SEAL

Notary Public or authorized Employee of
the Arizona Water Commission

RECEIVED
JAN 4 1982
DEPT. OF
WATER RESOURCES

My Commission expires 31 March 1984

FMC002240

22-78

Claim - Main wells, Canyon water, Smo " wells

ARIZONA WATER COMMISSION
CENTRAL SECURITY BUILDING
222 N. Central Ave.
Suite 550
Phoenix, Arizona 85004
602-255-1581

STATEMENT OF CLAIMANT

(Leave Blank)

IN THE MATTER OF DETERMINATION OF)
RELATIVE RIGHTS TO THE USE OF)
WATERS OF THE SAN PEDRO RIVER AND ITS)
TRIBUTARY WATERSHED, INC. ARAVAIPA CK.)

File No. 39-010774

Filed: 1-4-82 (date) at 2:30 PM (time)

The State Land Department has enclosed with the accompanying Notice this form on which claimant shall present as required, the particulars of his claim of right to the subject waters. All applicable portions must be completed. A separate Statement of Claimant must be submitted for each source or point of diversion of public water unless those waters are commingled prior to use. A map published by the United States Geological Survey or a map of equal standard shall be submitted with this Statement showing on the face of the map the particulars of point of diversion, place of use and other pertinent information.

(Print or type. If more space is required, use explanatory at end of form, or attachment.)

1. Name of Claimant: _____
(Last) (First) (M.I.)

_____
(Address, City, State, Zip) (Telephone No.)

2. State the nature of the right or use on which claim is based: (indicate, and attach supporting documentation)

A. ___ Right to surface water initiated by beneficial use prior to June 12, 1919. Indicate registry number if previously submitted under Water Rights Registration Act _____.

B. ___ Court Decreed Water Right. Cite Title and Date of Case _____ Cause No. _____ County _____.

C. ___ Application for Permit to Appropriate Water filed. State Land Department Application No. _____, Permit No. _____, Certificate of Water Right No. _____.

D. ___ Claim of Water Right for a Stockpond. State Land Department Application No. _____.

E. x Other. Describe: Federal reserved water rights and legitimate and authorized Federal activities.

3. A. Date of initiation of right: October 29, 1881 and May 14, 1883 (Month/Day/Year)

B. Date water first used for beneficial purposes: See attached report entitled Water Sources, Ft. Huachuca, Ariz., May 1980, Revised December 1981. Dates for springs (Month/Day/Year) at Tab A, dates for wells at Tab B.

4. Purpose, annual amount and annual period of use: See attached report, Tabs A and B.

Purpose	Amount	Month/Day	Month/Day
Irrigation	_____ ac.ft./gallons	From _____	to _____
Domestic	_____ ac.ft./gallons	From _____	to _____
Stockwater	_____ ac.ft./gallons	From _____	to _____
Municipal	_____ ac.ft./gallons	From _____	to _____
Power	_____ ac.ft./gallons	From _____	to _____
Mining	_____ ac.ft./gallons	From _____	to _____
Recreation	_____ ac.ft./gallons	From _____	to _____
Wildlife	_____ ac.ft./gallons	From _____	to _____
Other Uses	_____ ac.ft./gallons	From _____	to _____

5. A. (1) If for irrigation purposes, describe place of use: (also indicate on map) The installation irrigates a golf course, parade grounds, and landscaping.

Township (N/S)	Range (E/W)	Section	Legal Subdivision	No. of Acres.

(2) If land reclaimed over period of years, indicate schedule and amount of land reclaimed first and each subsequent year(s): N/A

FMC002241

5. A. (3) Indicate kind of crops cultivated: N/A

Character of soil: _____

B. If for domestic purposes, number of persons: N/A, or families: _____

C. If for stockwater purposes, number and kind of stock watered: N/A

D. If for municipal purposes, population to be served, and estimate of future requirements: Personnel living on post number 9304. Another 6465 work on the installation. There are no known future population increases.

E. If for power purposes, describe type of plant and capacity: N/A

F. If for mining purposes, describe purpose of use, location and character of the mine(s) to be served: N/A

G. If for recreational purposes, describe: See attached report, Tab A.

H. If for wildlife purposes, including fish, describe: See attached report, Tab A.

I. If for other purposes, describe: Military purposes.

6. A. Direct source of public water diverted: N/A tributary to _____ on the _____ watershed.

B. Point of Diversion (indicate on map): _____ ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

C. Place of use (indicate on map): _____ ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

7. State all other sources of water supply not described in Question 6 of this form.

A. Type of Source: Wells and potable springs described in attached report, Tabs A & B.

B. Location of Source (indicate on map): _____ ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

See attached report, ~~Tabs A & E.~~

C. If other source is well, list following: See attached report, Tabs A,B,C, & E.

(1) Date well construction began: _____ (Month/Day/Year); Date well place in use: _____ (Month/Day/Year).

(2) Location (10 acre subdivision) (indicate on map): _____ ¼ _____ ¼ _____ ¼ Section _____, Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base Meridian, County of _____.

(3) State Land Department Intent to Drill, File No. _____, or Application for Permit No. _____.

(4) State whether free flowing or pump: _____. If pump, list type of pump and capacity: _____

(5) Casing depth _____ ft. Total well depth _____ ft. Diameter of casing _____ inches.

(6) Depth to water: _____ ft. (Static Level)

(7) Annual amount pumped, or otherwise extracted: _____ Ac.Ft./Gallons

(8) State purpose of use: _____.

(9) Indicate annual period of use: _____ (Month/Day) to _____ (Month/Day)

8. Water storage reservoir and/or diverting works: See attached report, Tab D, for storage capacity in distribution system.

A. Location (indicate on map): _____ ¼ _____ ¼, Section _____, Township _____ (N/S), Range _____ (E/W), Gila and Salt River Baseand Meridian, County _____. Ownership _____

B. Name of storage reservoir and/or diverting works (if known): _____

C. Maximum capacity: _____ Ac.Ft.

D. Maximum depth of water: _____ ft.

FMC002242

8. E.(1) Year construction began: N/A _____.

(2) Year construction completed _____.

(3) Date water first stored: _____(Month/Year).

F. If dam, list following:

(1) Construction material: _____

(2) Maximum Length: Top _____ft.; Bottom _____ft.

(3) Maximum Width: Top _____ft.; Bottom _____ft.

(4) Maximum Height: _____ft.

G. If diverting works, describe: _____

9. Distribution works:

A. If ditch or canal: N/A

(1) Date construction began: _____ (Month/Day/Year)

Date construction completed: _____ (Month/Day/Year)

(2) Length of ditch or canal to first place of use: _____ft., total length of ditch or canal: _____ft.

(3) Top width: _____ft.; Bottom width: _____ft.

(4) Grade (slope) of ditch: _____

(5) If ditch or canal owned and/or operated by an association or company or such other entity, list name of association or company or such other entity: _____

B. If pipeline: See attached report, Tab D.

(1) Type: _____(i.e., aluminum, steel, etc.)

(2) Diameter: _____inches

(3) Length of pipeline to first place of use: _____ft. and total length of pipeline: _____ft.

(4) Grade (slope) of pipeline: _____

C. If other, describe: _____

10. Enlargement(s) of storage reservoir and/or diverting and/or distributing works

A. Date begun: N/A (Month/Day/Year)

Date completed: _____ (Month/Day/Year)

B. Describe details of enlargement(s): _____

C. Dimensions of works as originally constructed and as enlarged: _____

Explanatory

This does not waive any future claims to additional water for mission activities under applicable law.

Amount of potable water claimed is 3287 Million gallons annually as shown at Tab F of attached report.

A copy from the National Archives, Tab G, of attached report, refers to the 1881 executive order establishing Fort Huachuca and the 1883 executive order enlarging the boundaries.

History and use of the installation are briefly described at Tab H of the attached report.

(continued on the next page)

(if more space is required, attach separate sheet(s)

STATE OF ARIZONA)
County of _____)SS
)

VERIFICATION

_____, _____
(please print Claimant-Affiant's name) (Claimant-Affiant representative's name)

being first duly sworn, deposes and says; That the affiant, or its duly authorized representative, possesses the knowledge and the authorization to execute this verification as to the correctness and truthfulness of the matters set forth in the "Statement of Claimant", except as to those matters alleged upon information and belief, and as to those matters believes them to be true and correct.

For Corporations, Partnerships, Associations, etc.

_____
Claimant-affiant signature

_____
Claimant-affiant representative's signature

_____
Claimant-affiant signature

Attest: _____
Claimant-affiant representative's signature

Subscribed and sworn to before me this _____day of_____, 19___.

SEAL

_____
Notary Public or authorized Employee of the Arizona Water Commission

My Commission expires _____

FMC002244

W A T E R S O U R C E S

Fort Huachuca
Arizona

May 1980

Revised December 1981

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Tab B	Water Well Data
Tab C	Water Well Production
Tab D	Water Distribution
Tab E	Map
Tab F	Quantification of Water Right
Tab G	General Orders, Number 36, May 24, 1883
Tab H	Excerpt from Utilization Report

ATTACHMENT A

INVENTORY OF WATER RIGHTS CLAIMS

WATER WELLS

MAP NO.	NAME		LOCATION		USE			
	DIVERSION	Water Course or Source	T, R & Sec G&SRM	Mil. Coord.	Quantity	Time of Year	PURPOSE & EXTENT OF USE	Approx. Date of First Use
W1	Well #1.	Soldier Creek	NW¼NW¼NW¼ Sec 3 T22S, R20E	657910	DETAILED INFORMATION ON WATER WELLS AT TAB B			
W2	Well #2	Soldier Creek	NW¼NW¼NW¼ Sec 3 T22S, R20E	657910				
W3	Well #3	Soldier Creek	NW¼NE¼SE¼ Sec 33 T21S, R20E	655919				
W4	Well #4	Soldier Creek	NE¼NW¼NE¼ Sec 33 T21S, R20E	653925				
W5	Well #5	Soldier Creek	SW¼NE¼SW¼ Sec 28 T21S, R20E	646932				
W6	Well #6	Soldier Creek	NW¼NW¼SE¼ Sec 33 T21S, R20E	650919				
W7	Well #7	Soldier Creek	NW¼NW¼NW¼ Sec 22 T21S, R20E	659959				
W8	Well #8	Soldier Creek	NE¼SE¼NE¼ Sec 16 T21S, R20E	655972				
9	Well #9	Soldier Creek	SW¼NW¼NW¼ Sec 10 T21S, R20E	658988				
WR1	Rembass Well 1	Graveyard Gulch	NE¼SW¼NE¼ Sec 26 T21S, R20E	685938				
WR2	Rembass Well 2	Graveyard Gulch	NE¼NW¼NE¼ Sec 23 T21S, R20E	684957				
WM1	Windmill #1	Soldier Creek	NE¼SE¼SW¼ Sec 34 T20S, R20E	672012				
WM2	Windmill #2	Soldier Creek	SW¼SE¼SW¼ Sec 27 T20S, R20E	672027				

FMC002248

INVENTORY OF WATER RIGHTS CLAIMS

WATER WELLS

MAP NO.	NAME: DIVERSION	NAME: Water Course or Source	LOCATION: T, R & Sec G&SRM	LOCATION: Mil. Coord.	USE: Quantity	USE: Time of Year	PURPOSE & EXTENT OF USE	Approx. Date of First Use
GW	Well	Garden Canyon	NW¼SE¼SE¼ Sec 29 T22S, R20E	638834				
SP	Spatial Res Well	Soldier Creek	SW¼NW¼NW¼ Sec 22 T21S, R20E	658958				
ERB	East Range Bunker Well	Graveyard Gulch	NW¼SE¼NW¼ Sec 7 T21S, R21E	712987				
TW1	Test Well #1		NW¼SW¼SE¼ Sec 20 T21S, R20E	636946				
TW2	Test Well #2		SE¼SW¼NW¼ Sec 30 T21S, R20E	612937				
TW3	Test Well #3		NE¼NE¼NE¼ Sec 16 T21S, R20E	655973				
TW4	Test Well #4		SW¼SE¼NE¼ Sec 15 T21S, R20E	669967				
TW6	Test Well #6		SE¼SW¼SW¼ Sec 35 T20S, R20E	683012				
W7	Test Well #7		SE¼SW¼NW¼ Sec 11 T21S, R20E	675984				
TW8	Test Well #8		NW¼NW¼SW¼ Sec 13 T21S, R20E	689966				
TW9	Test Well #9		SW¼SW¼NW¼ Sec 17 T21S, R21E	723968				

FMC002249

INVENTORY OF WATER RIGHTS CLAIMS

SPRINGS - POTABLE

MAP NO.	NAME: DIVERSION	NAME: Water Course or Source	LOCATION: T, R & Sec G&SRM	LOCATION: Mil. Coord.	USE: Quantity	USE: Time of Year	PURPOSE & EXTENT OF USE	Approx. Date of First Use
SPP 1&2	Spring 1 & 2	Huachuca Canyon	NW¼SW¼ Sec 14 T22S, R19E	582 871			Augments the potable water system serving approx 16,000 persons	1877
SPP 3&3a	Spring 3 & 3a	Huachuca Canyon	NE¼NE¼ Sec 22 T22S, R19E	577 861			" "	"
SPP 4	Spring 4	Huachuca Canyon	NE¼NE¼ Sec 22 T22S, R19E	576 860			" "	"
			TOTAL - HUACHUCA CANYON		26.7	ANNUAL		
Picnic	Picnic Spring	Garden Canyon	NE¼SW¼ Sec 31 T22S, R20E	616 820			Augments the potable water system serving approx 16,000 persons	1877
Chain	Chain Spring	Garden Canyon	SW¼SW¼ Sec 31 T22S, R20E	613 819			" "	"
SPP1	Spring 1	Garden Canyon	SE¼SE¼ Sec 36 T22S, R19E	608 813			" "	"
SPP1a	Spring 1a	Garden Canyon	NE¼NE¼ Sec 1 T23S, R19E	608 812			" "	"
SPP1b	Spring 1b	Garden Canyon	SE¼SE¼ Sec 36 T22S, R19E	609 814			" "	"
SPP2	Spring 2	Garden Canyon	NE¼SW¼ Sec 1 T23S, R19E	602 804			" "	"
SPP3	Spring 3	Garden Canyon	NE¼SW¼ Sec 1 T23S, R19E	600 803			" "	"
SPP4	Spring 4	Garden Canyon	SW¼SW¼ Sec 1 T23S, R19E	597 802			" "	"
CABIN	Cabin Spring	Garden Canyon	SE¼SE¼ Sec 2 T23S, R19E	593 799			" "	"
			TOTAL - GARDEN CANYON		98.5	ANNUAL		

FMC002250

INVENTORY OF WATER RIGHTS CLAIMS

SPRINGS - NONPOTABLE

MAP NO.	NAME		LOCATION		USE		PURPOSE & EXTENT OF USE	Approx. Date of First Use
	DIVERSION	Water Course or Source	T, R & Sec G&SRM	Mil. Coord.	Quantity	Time of Year		
SP2	Spring #2	Tinker Canyon	NE¼SW¼ Sec 33 T22S, R20E	653 818	2.6		Wildlife Management, Game Water	1954
SP3	Spring #3	Tinker Canyon	SW¼SW¼ Sec 33 T22S, R20E	642 814	1.0		" " " "	"
SP4	Spring #4	Sawmill Canyon	SW¼SW¼ Sec 7 T23S, R20E	614 782	4.2		" " " "	"
SP5	Spring #5	McClure Canyon	NE¼SE¼ Sec 35 T22S, R19E	593 822	4.2		" " " "	"
SP6	Spring #6	McClure Canyon	NW¼SW¼ Sec 36 T22S, R19E	597 823	2.6		" " " "	"
SP7	Spring #7	McClure Canyon	SW¼NW¼ Sec 36 T22S, R19E	594 825	2.6		" " " "	"
SP8	Spring #8	Garden Canyon	SW¼NW¼ Sec 31 T22S, R20E	611 826	2.6		" " " "	"
SP9	Spring #9	Woodcutters Canyon	NW¼SE¼ Sec 25 T22S, R19E	605 838	4.2		" " " "	"
SP10	Spring #10	Woodcutters Canyon	SW¼SW¼ Sec 19 T22S, R20E	614 850	2.6		" " " "	"
SP11	Spring #11	Woodcutters Canyon	NE¼SW¼ Sec 20 T22S, R20E	632 854	1.0		" " " "	"
SP12	Spring #12	Soldier Creek	NE¼SE¼ Sec 7 T22S, R20E	625 884	1.0		" " " "	"
SP13	Spring #13	Soldier Creek	SW¼SW¼ Sec 13 T22S, R19E	596 869	2.6		" " " "	"
SP14	Spring #14	Huachuca Canyon	NW¼NE¼ Sec 27 T22S, R19E	573 848	2.6		" " " "	"

FMC002251

INVENTORY OF WATER RIGHTS CLAIMS

SPRINGS - NONPOTABLE

MAP NO.	NAME: DIVERSION	NAME: Water Course or Source	LOCATION: T, R & Sec G&SRM	LOCATION: Mil. Coord.	USE: Quantity	USE: Time of Year	PURPOSE & EXTENT OF USE	Approx. Date of First Use
SP15	Spring #15	Huachuca Canyon.	NW¼SE¼ Sec 22 T22S, R19E	571 853	1.0	ANNUAL	Wildlife Management - Game Water	1954
SP16	Spring #16	Huachuca Canyon	NW¼SW¼ Sec 14 T22S, R19E	581 868	1.0	"	" " " "	"
SP17	Spring #17	Huachuca Canyon	SE¼NW¼ Sec 15 T22S, R19E	567 876	2.6	"	" " " "	"
SP18	Spring #18	Blacktail Canyon	NW¼NE¼ Sec 16 T22S, R19E	558 879	2.6	"	" " " "	"
SP19	Spring #19	Blacktail Canyon	SE¼NE¼ Sec 8 T22S, R19E	541 888	2.6	"	" " " "	"
SP20	Spring #20	Slaughter-House Canyon	NW¼NE¼ Sec 4 T22S, R19E	557 913	1.0	"	" " " "	"
SP21	Spring #21	Slaughter-House Canyon	SW¼SW¼ Sec 26 T21S, R19E	578 931	1.0	"	" " " "	"
SP22	Spring #22	Sycamore Canyon	NW¼SW¼ Sec 32 T21S, R19E	530 918	2.6	"	" " " "	"
SP23	Spring #23	Tributary to Garden Wash	NE¼SW¼ Sec 21 T22S, R20E	647 854	1.0	"	" " " "	"
SP24	Spring #24	Schellote Canyon	NW¼NW¼ Sec 7 T23S, R20E	613 797	1.0	"	" " " "	"
SP25	Spring #25	Tributary to McClure Cany	SW¼SW¼ Sec 36 T22S, R19E	601 818	1.4	"	" " " "	"

FMC002252

INVENTORY OF WATER RIGHTS CLAIMS

PONDS

MAP NO.	NAME		LOCATION		USE		PURPOSE & EXTENT OF USE	Approx. Date of First Use
	DIVERSION	Water Course or Source	T, R & Sec G&SRM	Mil. Coord.	Quantity	Time of Year		
1	Gravel Pit	Tributary to Woodcutters Canyon	NE¼SE¼ Sec 17 T22S, R20E	637 867	11.5	ANNUAL	Post Recreation and Wildlife Mgmt Fishing	1954
1a	Woodcutter	Woodcutter Canyon	NW¼SW¼ Sec 16 T22S, R20E	644 869	2.0	"	Erosion Control	1979
1b	Woodcutter	Woodcutter Canyon	NW¼NE¼ Sec 16 T22S, R20E	646 879	2.0	"	" "	"
1c	Woodcutter	Woodcutter Canyon	NE¼NW¼ Sec 10 T22S, R20E	665 893	4.5	"	" "	"
2	Golf Course	Tributary to Soldier Creek	NW¼NE¼, Sec 9 T22S, R20E	652 893	14.4	"	Post Recreation and Wildlife Mgmt Fishing	1954
3	Officers Club	Soldier Creek	NE¼SE¼ Sec 1 T22S, R19E	607 903	12.2	"	" "	"
4	Pan Am	Huachuca Canyon	SE¼SW¼ Sec 24 T21S, R19E	599 947	3.2	"	" "	"
5	Hidden	Blacktail Canyon	SE¼NW¼ Sec 28 T21S, R19E	554 940	5.6	"	" "	"
6	Lower Soldier Creek	Rock Spring Creek	NE¼NE¼ Sec 7 T22S, R20E	622 892	.6	"	" " (Erosion Control&Fishing)	"
7	Upper Soldier Creek	Rock Spring Creek	SE¼NE¼ Sec 13 T22S, R19E	606 874	1.6	"	Erosion Control	"
8	Fly	Soldier Creek	NE¼NE¼ Sec 12 T22S, R19E	607 894	.9	"	Post Recreation and Wildlife Mgmt Fishing	"
9	Sycamore	Sycamore Canyon	SE¼SW¼ Sec 20 T21S, R19E	535 946	6.	"	" "	"
10	Slaughter-House	Slaughter-House Canyon	SW¼SE¼ Sec 23 T21S, R19E	586 946	8.4	"	" " (Erosion Control&Fishing)	"

FMC002253

INVENTORY OF WATER RIGHTS CLAIMS

PONDS

MAP NO.	NAME		LOCATION		USE		PURPOSE & EXTENT OF USE	Approx. Date of First Use
	DIVERSION	Water Course or Source	T, R & Sec G&SRM	Mil. Coord.	Quantity	Time of Year		
11	Landing Strip	Coyote Canyon	NE¼NW¼ Sec 35 T21S, R19E	584 928	.9	ANNUAL	Erosion Control	1954
12	Buffalo Corral	Coyote Canyon	SW¼NE¼ Sec 26 T21S, R19E	587 939	1.5	"	" "	"
13	Blacktail	Blacktail Canyon	SE¼NE¼ Sec 16 T22S, R19E	558 876	.8	"	Post Recreation and Wildlife Mgmt Fishing	"
14	West Huachuca	Huachuca Canyon	NW¼NW¼ Sec 22 T22S, R19E	563 863	.7	"	" "	"
15	Huachuca Corral	Huachuca Canyon	NW¼SE¼ Sec 22 T22S, R19E	571 853	.4	"	Erosion Control	"
16	Boy Scout Cabin	Garden Canyon	NW¼SE¼ Sec 2 T23S, R19E	593 800	.5	"	Post Recreation and Wildlife Mgmt Fishing and Erosion Control	"
17	Upper Woodcutters	Woodcutter Canyon	NE¼SW¼ Sec 20 T22S, R20E	630 852	7.	"	Erosion Control	"
18	Lower Woodcutters	Woodcutter Canyon	NW¼SW¼ Sec 10 T22S, R20E	658 883	2.	"	" "	"
19	Antelope	Tributary to Babocomari R.	NW¼SW¼ Sec 16 T21S, R19E	546 965	4.8	"	Post Recreation and Wildlife Mgmt Fishing and Game Water	"
20	Power Line	Blacktail Canyon	NW¼SW¼ Sec 27 T21S, R19E	557 935	1.3	"	Game Water	"
21	North	Tributary to Babocomari R.	SW¼NE¼, Sec 15 T21S, R19E	568 973	.3	"	" "	"
22	Huachuca Canyon	Huachuca Canyon	NW¼SW¼, Sec 14 T22S, R19E	580 868	.2	"	Erosion Control	"
23	Lower Huachuca	Huachuca Canyon	SE¼SE¼ Sec 7 T21S, R20E	623 975	4.8	"	" "	"

FMC002254

INVENTORY OF WATER RIGHTS CLAIMS

PONDS

MAP NO.	NAME		LOCATION		USE		PURPOSE & EXTENT OF USE	Approx. Date of First Use
	DIVERSION	Water Course or Source	T, R & Sec G&SRM	Mil. Coord.	Quantity	Time of Year		
24	Lower Blacktail	Blacktail Canyon	NW¼NE¼ Sec 22 T21S, R19E	573 958	.5	ANNUAL	Post Recreation and Wildlife Mgmt Game Water	1954
25	Unknown West	Slaughter-House Wash	SW¼NE¼ Sec 14 T21S, R19E	589 971	.2	"	" "	"
26	Lower Garden	Garden Canyon	SW¼SW¼ Sec 23 T22S, R20E	674 844	3.0	"	Erosion Control	"
27	Lower Fly	Soldier Creek	NW¼SW¼ Sec 6 T22S, R20E	608 896	6.0	"	" "	"
28	Upper Horse Pasture	Soldier Creek	SW¼SW¼ Sec 6 T22S, R20E	611 894	.8	"	" "	"
29	Lower Horse Pasture	Soldier Creek	SE¼SW¼ Sec 6 T22S, R20E	614 895	.9	"	" "	"
30	Upper Garden	Garden Canyon	NW¼SE¼ Sec 2 T23S, R19E	587 802	.4	"	Post Recreation and Wildlife Mgmt Fishing	"
31	Fairway	Soldier Creek	SW¼NE¼ Sec 4 T22S, R20E	653 903	.4	"	Erosion Control	"
32	Sediment #1	Soldier Creek	NE¼SE¼ Sec 33 T21S, R20E	655 916	.3	"	" "	"
33	Sediment #2	Soldier Creek	SE¼SW¼ Sec 28 T21S, R20E	652 926	.3	"	" "	"
34	Sediment #3	Soldier Creek	SE¼SE¼ Sec 21 T21S, R20E	653 944	16.5	"	Effluent from Sewage Plant - Evaporation	"
34a	Sediment	Soldier Creek	NE¼SE¼ Sec 21 T21S, R20E	654 948	2.5	"	" "	1978
34b	Sediment	Soldier Creek	SE¼NE¼ Sec 21 T21S, R20E	652 953	1.7	"	" "	"

FMC002255

PONDS

MAP NO.	NAME		LOCATION		USE		PURPOSE & EXTENT OF USE	Approx. Date of First Use
	DIVERSION	Water Course or Source	T, R & Sec G&SRM	Mil. Coord.	Quantity	Time of Year		
34c	Sediment	Soldier Creek	NE¼NE¼ Sec 21 T21S, R20E	654 958	1.0	ANNUAL	Effluent from Sewage Plant - Evaporation	1978
34d	Sediment	Soldier Creek	NW¼NW¼ Sec 15 T21S, R20E	660 972	4.0	"	" " and Erosion Control	"
35	East #1	Soldier Creek	SE¼SE¼ Sec 16 T21S, R20E	653 963	3.6	"	Erosion Control and Fishing	1954
36	East #2	Tributary to Babocomari R.	NE¼NE¼ Sec 4 T21S, R20E	656 007	.9	"	Erosion Control	"
37	East #3	Tributary to San Pedro R.	SE¼NE¼ Sec 14 T21S, R20E	686 968	3.2	"	" "	"
38	East #4	Soldier Creek	SE¼SW¼ Sec 27 T21S, R20E	664 931	4.1	"	" "	"
39		Tributary to Sycamore Cany.	NW¼SW¼ Sec 32 T21S, R19E	531 919	1.4	"	Fishing	"
39a		Tributary to Sycamore Cany.	SE¼NE¼ Sec 31 T21S, R19E	528 922	.5	"	Erosion Control	"
a	Dam	Tributary to Garden Canyon	NE¼NW¼ Sec 33 T22S, R20E	649 829	.5	"	Game Water	"
b	Dam	Tributary to Graveyard Glch	SW¼SE¼ Sec 18 T21S, R21E	713 963	.5	"	Erosion Control	1977
c	Dam	Tributary to Graveyard Glch	NE¼SW¼ Sec 17 T21S, R21E	724 966	.5	"	" "	"
d	Dam	Tributary to Graveyard Glch	SW¼NW¼ Sec 20 T21S, R21E	723 954	.5	"	" "	"
e	Dam	Tributary to Graveyard Glch	NW¼NW¼ Sec 20 T21S, R21E	724 956	.5	"	" "	"

FMC002256

INVENTORY OF WATER RIGHTS CLAIMS

PONDS

MAP NO.	NAME: DIVERSION	NAME: Water Course or Source	LOCATION: T, R & Sec G&SRM	LOCATION: Mil. Coord.	USE: Quantity	USE: Time of Year	PURPOSE & EXTENT OF USE	Approx. Date of First Use
f	Dam	Tributary to Graveyard Glch	SE¼NE¼ Sec 19 T21S, R21E	718 953	.5	ANNUAL	Erosion Control	1977
g	Dam	Tributary to Graveyard Glch	SE¼SE¼ Sec 18 T21S, R21E	718 963	.5	"	" "	"
h	Dam	Tributary to Soldiers Creek	NE¼SW¼ Sec 10 T21S, R20E	643 984	.5	"	" "	"
i	Dam	Tributary to Soldiers Creek	SE¼NW¼ Sec 10 T21S, R20E	645 986	.5	"	" "	"
j	Dam	Tributary to Soldiers Creek	SE¼NE¼ Sec 10 T21S, R20E	649 984	.5	"	" "	"
k	Dam	Tributary to Soldiers Creek	SE¼SE¼ Sec 3 T21S, R20E	672 994	.5	"	" "	"
l	Dam	Tributary to Soldiers Creek	NE¼NE¼ Sec 9 T21S, R20E	667 995	.5	"	" "	"
m	Dam	Huachuca Wash	NW¼NE¼ Sec 36 T21S, R19E	602 927	2.8	"	" " and Fishing	1979
n	Dam	Garden Washes	NE¼NE¼ Sec 28 T22S, R20E	657 844	5.2	"	" " "	"
o	Dam	Tributary to Sycamore Wash	SE¼SE¼ Sec 31 T21S, R19E	528 917	.5	"	" "	1954
p	Dam	Tributary to Garden Canyon	NW¼NE¼ Sec 15 T22S, R20E	669 876	.5	"	" "	"
q	Dam	Tributary to Huachuca Cany.	NW¼SE¼ Sec 18 T21S, R20E	618 963	.5	"	Game Water	"
r	Dam	Tributary to San Pedro R.	SE¼NW¼ Sec 21 T20S, R21E	753 053	.3	"	Game Water	1976

FMC002257

ATTACHMENT B

WELL #1

Constructed 1939, put into use 1940

Pump: Type and capacity - Trubine, 500 GPM

823 ft casing depth, 14" diameter, 823 ft total well depth

527 ft to water

70,039 Kgal pumped FY 81, used continuously, military-domestic purposes

Pipeline: cast iron, 12" diameter

100' pipeline to first place of use--total length of pipeline

WELL #2

Constructed 1940, put into use 1941

Pump: Type and capacity - Turbine, 700 GPM

710' casing depth, 14" diameter, 710' total well depth

523' to water

41,037 Kgal pumped FY 81, used continuously, military domestic purposes

Pipeline: cast iron, 12" diameter

100' pipeline to first place of use--total length of pipeline

WELL #3

Constructed 1942, put into use 1943

Pump: Type and capacity--Turbine, 700 GPM

802' casing depth, 16-18" diameter, 802' total well depth

488' to water

299,645 Kgal pumped FY 81, used continuously, military domestic purposes

Pipeline: cast iron, 12" diameter

200' to first place of use--total length of pipeline

WELL #4

Constructed 1942, put into use 1943

Pump: Type and capacity--Turbine, 700 GPM

912' casing depth, 18" diameter, 912' total well depth

488' to water

90,094 Kgal pumped FY 81, used continuously, military domestic purposes

Pipeline: Iron, 12" diameter

200' pipeline to first place of use--total length of pipeline

WELL #5

Constructed 1942, put into use 1943

Pump: Type and capacity - Turbine, 700 GPM

800' casing depth, 16"-18" diameter, 800' total well depth

468' to water

204,697 Kgal pumped FY 81, used continuously, military domestic purposes

Pipeline: cast iron, 12" diameter

200' pipeline to first place of use--total length of pipeline

WELL #6

Constructed 1958, put into use 1959

Pump: type and capacity - Turbine, 700 GPM

803' casing depth, 16" diameter, 1,230' total well depth

516' to water

261,460 Kgal pumped FY 81, used continuously, military domestic purposes

Pipeline: cast iron, 12" diameter

200' pipeline to first place of use--total length of pipeline

WELL #7

Constructed 1971, put into use 1982

Pump: type and capacity--Turbine, 800 GPM

762' casing depth, 16" diameter, 762' total well depth

500' to water

Not in use presently

Pipeline: Steel cement coated, 24" diameter
6 miles to first place of use, 6 miles total length of pipeline.

Remarks: 24" water line runs 6 miles from East Range pump directly into the Post distribution system

WELL #8

Constructed 1971, put into use 1982

Pump: type and capacity--Turbine, 800 GPM

807' casing depth, 16" diameter, 807' total well depth

500' to water

Not in use presently

Pipeline: Steel cement coated, 24" diameter

6 miles pipeline to first place of use, 6 miles ~~total~~ length of pipeline

Remarks: [illegible] miles from East Range pumps directly into [illegible]

Well #9, This is a test well and is presently capped.

WELL - EAST RANGE BUNKER

Constructed 1957, put into use 1958

350' casing depth, 4" diameter, 350' total well depth

225' to water

Unmetered, usage estimated as 175.5 Kgal, used as required, military domestic purposes

Pipeline: Steel, 1 1/4" diameter

60' pipeline to first place of use, 60' total length of pipeline

WELL - GARDEN CANYON

Constructed 1930 (est), put into use 1930 (est)

Pump: type and capacity - Submersible, 80 GPM

202' casing depth, 8" diameter, 202' total well depth

17' to water

Unmetered, 35.5 Mgal estimated annual usage; military, fishing and wildlife usage

Pipeline: Steel, 4" diameter

Unknown length of pipeline and grade

Remarks: [illegible] Garden Canyon Springs. Water is used as [illegible] wildlife.

WELL - WINDMILL #1

Constructed 1910, put into use 1910

Pump: type and capacity - windmill

80' casing depth, 4" diameter, 80' total well depth

30' to water

Not presently in operation.

Pipeline length and grade N/A

Remarks: First well going north discharges into tank and out to water trough.

WELL - WINDMILL #2

Constructed 1905, put into use 1905

Pump: Type and capacity - Windmill

125' casing depth, 4" diameter, 125' total well depth

40' to water

Not presently in operation.

Pipeline length and grade N/A

Remarks: Second well going north discharges into water trough.

WELL - REMBASS #1

Constructed 1977, put into use 1978

Pump: type and capacity - Submersible, 125 GPM

422' casing depth, 6" diameter, 422' total well depth

217' to water

Unmetered, 270.4 Kgal estimated annual usage. Used as required, military purposes.

Pipeline: Steel, 1 1/4" diameter

50' pipeline to first place of use, 50' total length of pipeline, unknown grade

WELL - REMBASS #2

Constructed 1977, put into use 1978

Pump: type and capacity - Submersible, 125 GPM

420' casing depth, 8" diameter, 420' total well depth

217' to water

Unmetered, 416 Kgal estimated annual usage, used as required, military purposes - irrigation sensor field

Pipeline: Steel, 2 1/2" diameter

20' pipeline to first place of use, 20' total length of pipeline, unknown grade

WELL - SPATIAL RESOLUTION

Constructed 1963, put into use 1964

Pump: type and capacity - Turbine 350 GPM

750' casing depth, 8" diameter, 750' total well depth

329.5' to water

Unmetered, 21.8Mgal estimated annual usage, used as required, military purposes - washing down photo pad and vehicles

Pipeline: Steel and plastic, 6" diameter

400' pipeline to first place of use, 3,500' total length of pipeline, unknown grade

Remarks: East Range

ATTACHMENT C

WELL PRODUCTION

THOUSANDS OF GALLONS

WELL NO.	#1	#2	#3	#4	#5	#6	#7	#8	TOTAL KGAL
1980									
OCTOBER	868	558	28081	4733	22562	23598	--	--	80,40
NOVEMBER	1813	490	26033	2482	14911	19945	--	--	65,67
DECEMBER	425	793	20052	9300	14676	10576	--	--	55,82
1981									
JANUARY	408	1085	25171	1514	13361	17466	--	--	59,005
FEBRUARY	248	270	24767	4752	15070	21250	--	--	66,357
MARCH	572	376	25800	4336	16437	23203	--	--	70,724
APRIL	5376	8020	26517	13284	16204	24973	--	--	94,374
MAY	20070	5758	24656	10606	18715	23151	--	--	102,956
JUNE	24540	14899	27180	15187	22952	26970	--	--	131,728
JULY	11128	6265	20534	7799	10381	22441	--	--	78,548
AUGUST	1391	1068	24964	9167	20605	24369	--	--	81,564
SEPTEMBER	3200	1455	25890	6934	18823	23518	--	--	79,820
							TOTAL		966,972

New wells #7 and #8 are expected to be placed in service about March 1982. Use of these wells is not expected to increase total water consumption.

ANNUAL USAGE SMALLER WELLS

Rembass #1 (Estimated)	270.4 KGAL
Rembass #2 (Estimated)	416 KGAL
East Range Bunker (Estimated)	175.5 KGAL
Garden Canyon (Estimated)	35.5 MGAL
Spatial Resolution (Estimated)	21.8 MGAL
TOTAL	58,161,900 GAL

ATTACHMENT D

W. WATER (CATEGORY CODE 840 through 845)

The main source of water for Fort Huachuca is eight deep wells capable of producing 5,376,000 gallons per day (16-hour operation). There are five other wells capable of producing 868,000 gallons per day (16-hour operation). The Huachuca and Garden Canyon springs contribute an appreciable amount of water. The greatest monthly production was recorded as 105,000,000 gallons and the least monthly production as 933,000 gallons. Present storage capacity is 5,630,000 gallons.

Post water is distributed by a system of cast iron, asbestos cement and steel pipe totaling 1,256,148 lineal feet. There is also 104,560 lineal feef of non-potable water line which is used to irrigate the Golf Course and Chaffee Field.

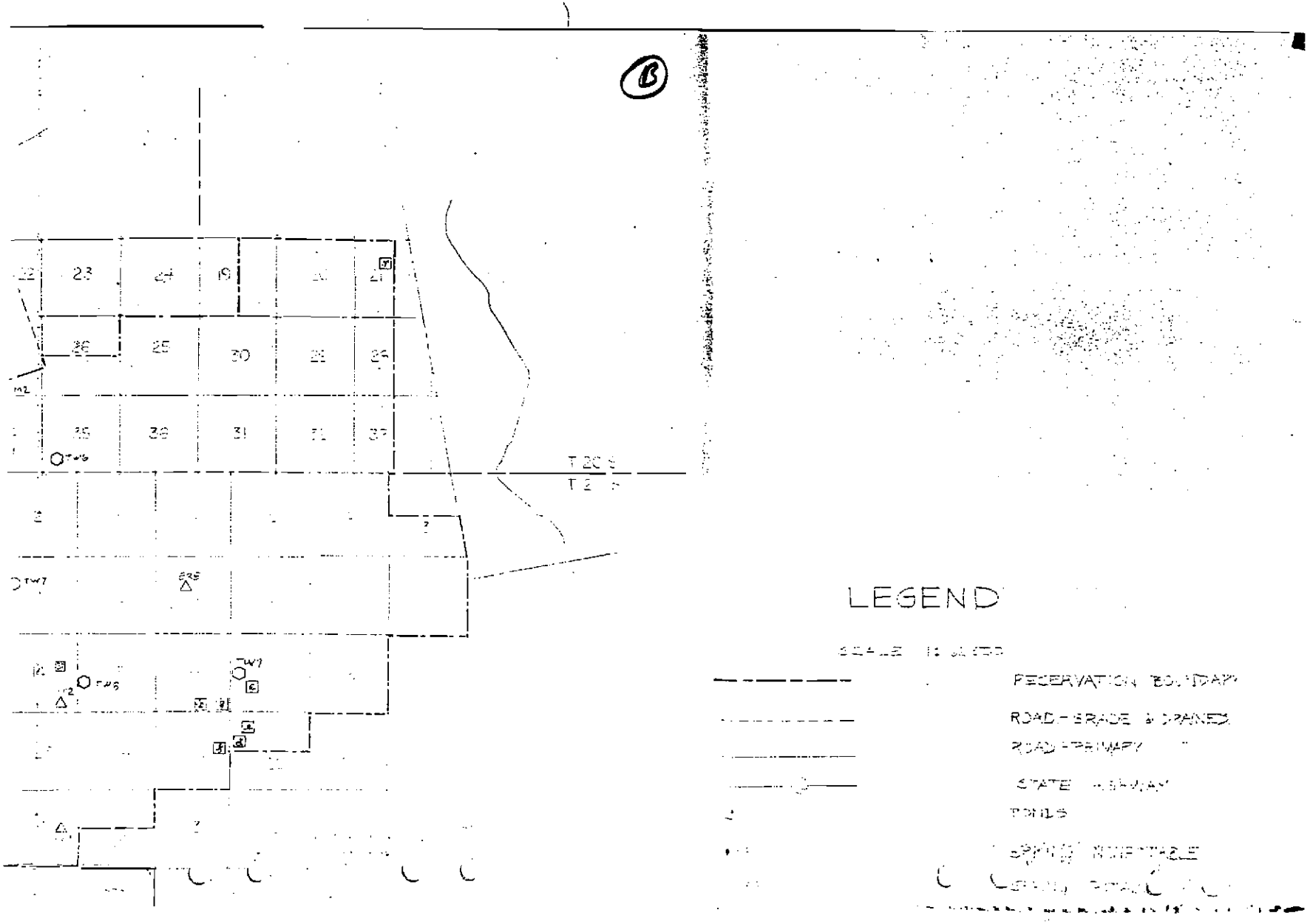
	EA	SF	COST
Permanent Buildings	21	17,701	$1,849,052
Temporary Buildings	1	81	500
SUBTOTAL	22	17,782	$1,849,552
Permanent (Other Than Buildings)	31	—	$7,329,682
TOTAL	53	17,782	$9,179,234

Water Wells (13 each)	Gallons per day	- 6,244,000
Storage Capacity	Gallons per day	- 5,630,000
Water Lines	Lineal Feet	- 1,360,708

	PERM	TEMP	MEASUREMENT	COST-P	COST-T	COST
Water Treatment Plant	1	—	800 GPM	54,200	—	$ 54,200
Water Treatment Bldgs	6	—	2,284 SF	217,536	—	217,536
Elevated Storage Tanks	3	—	610,000 GAL	180,365	—	180,365
Ground Storage Tanks	2	—	70,000 GAL	21,000	—	21,000
Water Well W/Pumps Bldg	6	—	6,529 SF	201,300	—	201,300
Water Well W/Pumps	13	—	6,244,000 GAL	492,493	—	492,493
Reservoirs	4	—	4,950,000 GAL	435,900	—	435,900
Water Pumps Station Bldg	8	—	8,551 SF	1,420,116	—	1,420,116
Test Wells,(Inactive)	5	—	—	212,239	—	212,239
Spring Box Shed	—	1	81 SF	—	500	500
Water Line-Potable	1	—	1,256,148 LF	5,715,285	—	5,715,285
Water Line-Non-Potable	2	—	104,560 LF	218,200	—	218,200
Water Support Bldg	1	—	337 SF	10,100	—	10,100
TOTAL	52	1	N/A	9,178,734	500	9,179,234

ATTACHMENT E

39-0/0-77Y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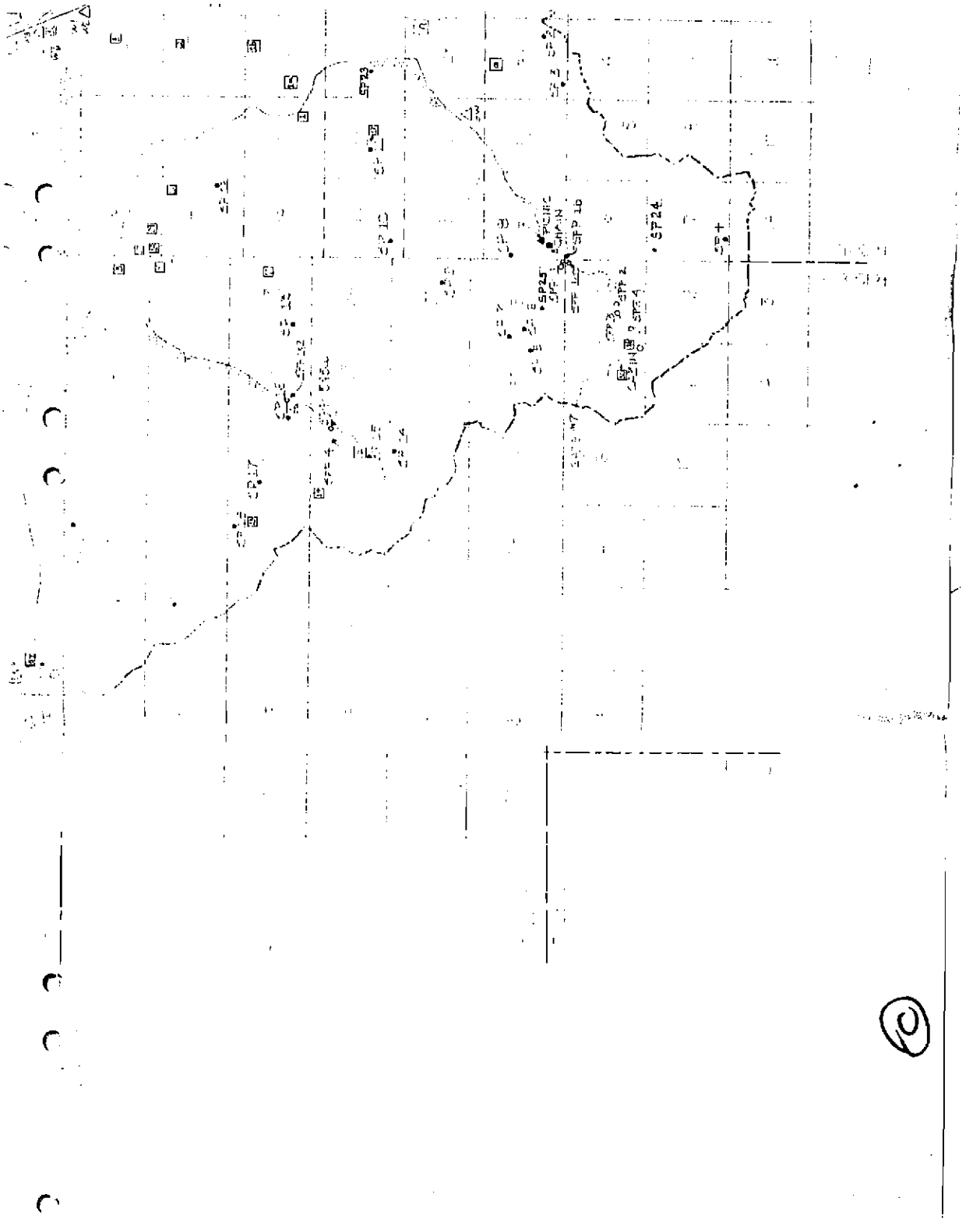
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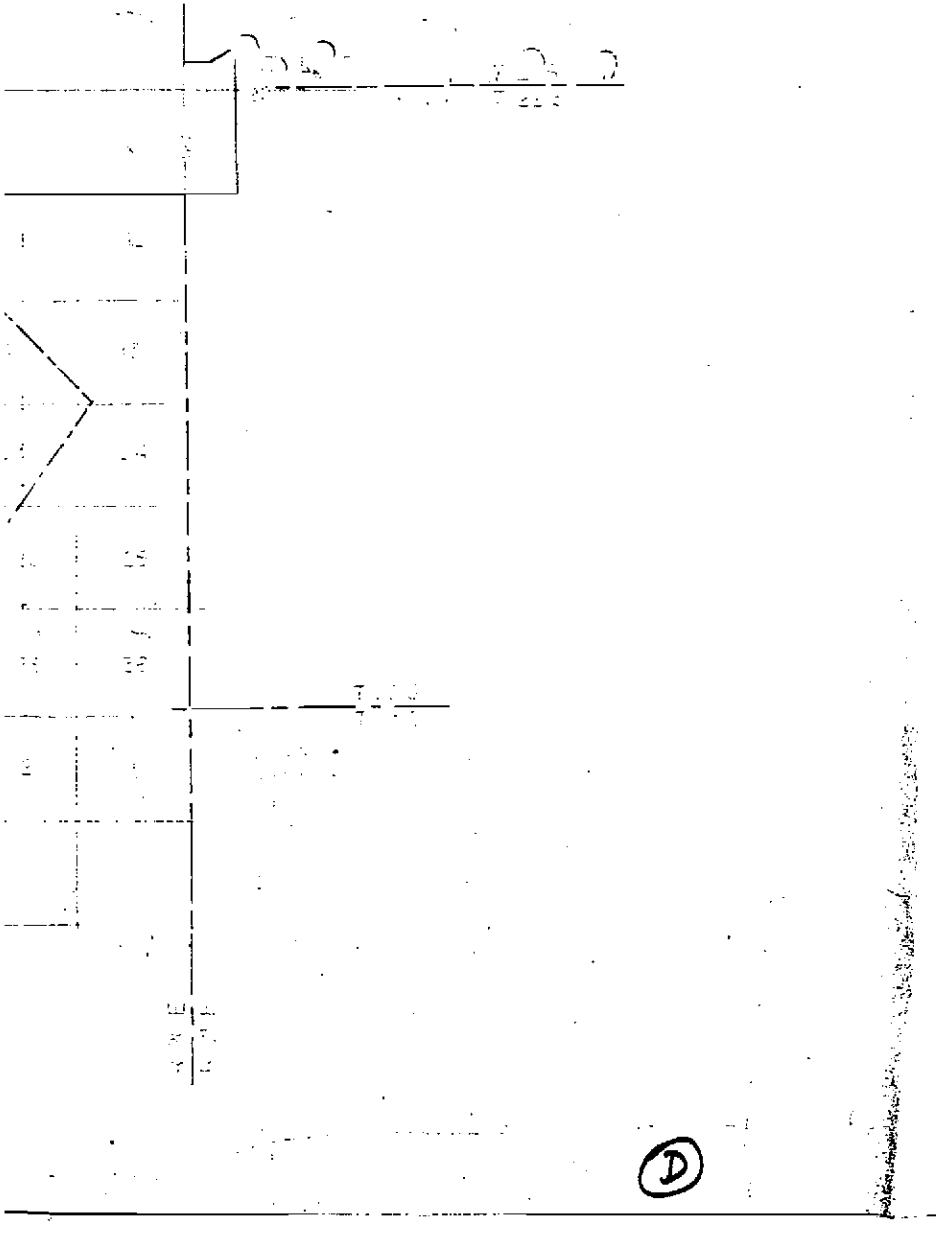
FMC002274



WELL WITH WINDMILL
WELL WITH PUMP
WELL

REVISION	DESCRIPTION	APP'VD	DA
	ADD DRAWINGS SP27-28; PD-28 39, 39a, 1a-1c, 34a-34j a-r		22
	ADD WELLS No 1,2,3,4,5,6,7,8,9, WM1+2, WR1+2, W6, SP		5 M.
	ADD TEST WELLS 1-4, 6-9		5M.

NOTE DRAWINGS ARE NOT TO BE SCALED

FACILITIES ENGINEERING DIRECTORA
FORT HUACHUCA, ARIZONA

COORDINATION
UTILITIES DIV.
B. & G. DIV.
FIRE PREV./PROT. DIV.
SAFETY DIV.
DRAWN BY: PDF

WATER RIGHT CLAIMS
FT. HUACHUCA

APPROVAL
DESIGNED BY:
REVIEWED BY:
CHIEF ENG. BR.
USING AGENCY

DIR, FAC. ENGR. DIR.
CHIEF ENG. DIV.
DATE 1/4/
PROJECT NO.
REF. SHEET NO.
SHEET 1 OF 1
DRAWING NO. FH-RE-42

D

FMC002275

ATTACHMENT F

QUANTIFICATION OF WATER RIGHT FOR POTABLE WATER

YEAR	USAGE	INCREASE OVER PREVIOUS YEAR
FY 79	913 Mgal	----
FY 80	981 Mgal	7.4%
FY 81	1025 Mgal	4.5%

Using an average of 6% increase per year for 20 years gives a projected usage of 3287M gallons in FY 2001. Recommend this figure be used as it is less than the presently developed well capacity and provides a reasonable margin for potential expansion of the post and the ability to meet unusual demands such as the 275,000 gallons per day requirement for dust control during construction of the new runway at Libby Army Air Field.

T G Cochran

THOMAS G. COCHRAN, PE
Chief, Utilities Division

ATTACHMENT G

COPY

GENERAL ORDERS,)
)
No. 36.)

HEADQUARTERS OF THE ARMY,
ADJUTANT GENERAL'S OFFICE,
Washington, May 24, 1883

By direction of the Secretary of War the following is announced for the information and guidance of all concerned:

By authority of the President of the United States, dated May 14, 1883, the military reservation at Fort Huachuca, Arizona Territory (originally declared by Executive Order of October 29, 1881, and announced in General Orders, No. 35, Headquarters Department of Arizona, series of 1881), is enlarged to embrace the following described limits, viz:

Beginning at a post marked U.S.M.R., No. 1, set in a mound of stone on a conical butte in the northern foot-hills of the Huachuca Mountains, which butte is about 6 miles distant from the post of Fort Huachuca, on the road to Hereshaw, and about 500 yards south of said road, and running thence north, 1° 55' east, 287.71 chains, to a post marked U.S.M.R., No. 2, which post coincides in position with a post marked S.I.B., No. 3, of the southern boundary of the Babocomari grant, as surveyed by S.H. Allis; thence north, 82° 35' east, along the southern boundary of said grant, 524.74 chains, to a post marked U.S.M.R., No. 3, near to and west of the road from Fort Huachuca to Huachuca Station, on the New Mexico and Arizona Railroad; thence south, 21° 41' east, 511.21 chains to a post marked U.S.M.R., No. 4; thence south, 43° 41' east, 171.09 chains, to a post marked U.S.M.R., No. 5, near to and west of the road from Tanner's Canon to Charleston; thence south, 34° 15' west, 251.64 chains, to a post marked U.S.M.R., No. 6, set in a mound of stone on the foot-hills of the Huachuca Mountains, between Tanner's and Ramsey's Canons; thence along the water-shed separating these canons to the main water-shed of the Huachuca Mountains; thence along this water-shed to the point of beginning.

BY COMMAND OF GENERAL SHERMAN:

R. C. DRUM,
Adjutant General

OFFICIAL:

Assistant Adjutant General

Assistant to the Office of the Adjutant General.

FMC002279

ATTACHMENT H

REVIEW OF UTILIZATION

OF

US ARMY REAL PROPERTY AT FORT HUACHUCA

1. GENERAL COMMENTS

a. Fort Huachuca, comprised of 73,344 acres, is situated along the foothills and north plateau of the Huachuca Mountain Range in Cochise County, located in the southeast portion of the State of Arizona as indicated in TAB A. The most southerly boundary of the reservation is approximately eight miles from the US - Mexican International Boundary. Interstate Highway 10 (US 80) is approximately 35 miles north of the reservation. The primary access is State Highway 90, which also serves the town of Sierra Vista, near the main gate, and the community of Huachuca City, near the north gate. Further access to the reservation is provided at the east gate by State Highway 90. In general, the ridge of the Huachuca Mountains serves as the southwestern reservation boundary. This boundary throughout its entire length commonly serves Fort Huachuca and the Coronado National Forest.

b. Approximately 33,786 acres off-post are under the control of Fort Huachuca and consist of 28,968 acres in the Willcox Dry Lake Bombing Range, 4,800 acres in the vicinity of Gila Bend, Arizona, and 615 acres of test sites within the Fort Huachuca - Tucson area. The general location of these sites is indicated in TAB A.

c. The terrain features of the reservation are variable with elevations ranging from 3,900 feet to 8,700 feet above mean sea level. In the developed areas of the main post, tree plantings and some native tree groups are common, and ground slopes are generally between 2% and 3%. The mobilization area and ranges have only scattered vegetation; the mountain slopes have dense tree growth.

d. The cantonment area of Fort Huachuca encompasses approximately 6,885 acres or 9% of the entire reservation. The nucleus of the post development in 1881 was the compound along Huachuca Canyon Creek and Christy Avenue to Apache Flats. In the early 1900-1918 period, quarters and troop support facilities centered in this general area. Expansion of the cantonment merged toward the east with accelerated mobilization construction during the war years. The reactivation of the Post into permanent status after World War II placed emphasis on family housing, community support facilities, and essential operational facilities. Demolition of numerous Theater of Operation type structures during inactive period opened the cantonment area for permanent construction; however, a major portion of the cantonment area remains with temporary wood-frame mobilization buildings, many of which have been rehabilitated to serve as student quarters, classrooms, and administrative buildings. These interim measures were necessary pending authorization for replacement with permanent facilities.

e. Fort Huachuca maintains an extensive road and street system which is in reasonably good condition and consists of 1,375,048 SY of treated roads and 1,914,880 SY of untreated roads. The road net is generally expanded into a block system with avenue thoroughfares.

2. HISTORY

Fort Huachuca is an old Cavalry and Infantry Post dating from 1881. The initial mission of the Fort was to support Army troops in the Apache Indian Wars, and in 1916 it played an important role in the Villa Punitive Expedition into Mexico. During World War II the installation was expanded as a training center for a full division. After the war (1945-1951), the Post was closed

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and declared surplus to military needs; however, in 1951 the installation was reactivated for training of aviation engineer troops. In May 1953, Headquarters Sixth Army placed the installation on an inactive status, but reactivated it in February 1954 for establishment of the US Army Electronic Proving Ground. In July 1967, Fort Huachuca became the Headquarters of the US Army Strategic Communications Command, subsequently renamed the US Army Communications Command (USACC), and has continued in this status to the present time.

3. MISSION

a. The current mission of Headquarters, Fort Huachuca, is to provide, in accordance with AR 10-7, or as directed by the Commanding General, USACC, logistic and administrative support to the USACC and tenant organizations, provide resources and assistance to area Army commanders in support of Army emergency plans and training support to active Army and reserve component units in accordance with AR 210-20, or as directed by the Commanding General, USACC.

b. Major tenant activities and their missions are:

(1) The mission of the Commanding General, USACC, a major field commander of the Department of Army, is to engineer, install, operate and maintain defense communication systems and assigned Army communications world-wide in accordance with AR 10-13.

(2) The mission of the US Army Electronic Proving Ground at Fort Huachuca is to operate an electromagnetic environmental test facility and a systems test facility; to plan, conduct, evaluate and report on engineering tests of

communications-electronics and avionics equipment and systems; service testing of communications-electronics equipment and systems used above division level; and provide technical and logistical consultation service.

(3) The primary mission of the US Army Intelligence Center and School (USAICS) is to plan and develop the necessary doctrine, organization and material requirements to structure the military intelligence support for the Army in the field; train Army personnel in combat, counter and strategic intelligence; train selected DOD personnel and allied officers in intelligence operations; conduct professional education courses for officers and non-commissioned officers. Plan, develop and conduct instruction and training for individuals and units in the employment, operation and maintenance of combat surveillance and electronic warfare equipment in concepts and resources.

(4) The mission of the US Army Communications Security Logistics Agency (USACSLA) is the management of the COMSEC logistics and related matters.

(5) The Medical Department Activity (MEDDAC) is the main Army medical activity for the State of Arizona. It includes the Raymond W. Bliss Army Hospital, which is a Class I activity, and the Veterinary Activity. In and out patient medical care and treatment is provided to active duty and retired military personnel, their dependents and other personnel, as authorized by DA. This organization also provides veterinary services, food inspections and zoonotic control. MEDDAC provides medical staff support to the installation commander.

(6) The Dental Activity (DENTAC) is the main Army dental activity for the State of Arizona. It includes the Runion Dental Clinic and three other dental facilities. This activity provides services for prevention and

FMC002284

treatment of disease conditions to active duty personnel, their dependents, and other personnel, as authorized by DA. DENTAC provides dental staff support to the installation commander.

(7) The US Army Communications Command Agency provides support to operate and maintain all communications electronic equipment, to include ATC/NAVAIDS, as required by activities located at Fort Huachuca.

(8) The Atmospheric Sciences Laboratory (ERADCOM), Meteorological Team, provides meteorological services for Army research, development, test and evaluation activities at Fort Huachuca.

(9) The US Army Intelligence and Security Command (USAINSCOM) conducts CI activities to provide timely information and OPSEC support to maintain and insure the security of the Army commands, activities and agencies within assigned geographical area of responsibility.

(10) The Joint Test Element, Joint Tactical Communications Office (TRI-TAC) operates, maintains, and manages the Joint Test Facility. Coordinates and participates in the planning, scheduling, conducting, and reporting of Joint Development Test and Evaluation (DT&E), and Initial Operational Tests and Evaluations (IOT&E). Insures testing in accordance with approved test plans and Detailed Test Procedures (DTP). Prepares TRI-TAC independent evaluation reports.

(11) The USACIDC Field Office provides criminal investigation support to all US Army activities located within the geographical area of the State of Arizona. Establishes and maintains effective liaison with federal, state and local law enforcement agencies on matters pertaining to criminal investigation in which the US Army has vested interest.

(12) Other support services and activities are shown at TAB B.

c. In addition to the tenant and support activities, Fort Huachuca is supporting various USAR/NG and other active units. To support the training of these units, the installation has designated 10,700 acres on the West Range, and 4,300 acres on the South Range. Total man days of range training is shown at TAB C.

4. The Post Population report by organization, activity, and agency is included at TAB D.

5. Land uses in the area adjacent to the installation are as follows:

a. The land adjacent to Fort Huachuca is used primarily for residential/business property and cattle raising. Fort Huachuca is the main source of income for the communities adjacent to the post. Other major sources of income are the construction industry (over $75,000,000.00 from 1975 thru 1979), Inland Motors, to employ up to 200 persons, tourism, cattle raising, retail and services trade. There are approximately 5000 retired military and dependents living within a 60-mile radius of the post.

b. There is little or no development of oil and gas resources in this area.

c. The few minor cases of either civilian encroachment on post, or conflict between military operations and the civilian population, have been quickly resolved through amiable and cooperative relationship which exists between the post and local communities.

FMC002286

JUDITH ALLEN, CLERK
BY Wilcoxson DEP.
FILED

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF MARICOPA

92 MAY -7 PM 2:18

AMENDED STATEMENT OF CLAIMANT

IN THE MATTER OF DETERMINATION OF)
RELATIVE RIGHTS TO THE USE OF)
WATERS OF THE SAN PEDRO RIVER AND)
ITS TRIBUTARY WATERSHED, INC.)
ARAVAIPA CK.)

CLAIM BEING AMENDED

NO. 39-10775

(Print or type. If more space is required, use explanatory at end of form, or attachment.)

1. Name of Claimant: United States Army Garrison, Fort Huachuca, Arizona 85613-6000
(Last) (First) (M.I.)
Fort Huachuca, Arizona 85613-6000 (602) 533-1864/1863
(Address, City, State, Zip) (Telephone No.)

2. State the nature of the right or use on which claim is based: (indicate, and attach supporting documentation)

A. ___ Right to surface water initiated by beneficial use prior to June 12, 1919. Indicate registry number if previously submitted under Water Rights Registration Act _____.

B. ___ Court Decreed Water Right. Cite Title and Date of Case _____
Cause No. _____ County _____.

C. ___ Application for permit to Appropriate Water filed. Application No. _____
Permit No. _____, Certificate of Water Right No. _____

D. ___ Claim of Water Right for a Stockpond. Application No. _____.

E. X Other. Describe: Federal reserved water rights.

Clerk of the Superior Court
Received From D.W.R.
12/2/90
Date
Deputy Clerk

3. A. Date of initiation of right: October 28, 1881, and May 14, 1883
(Month/Day/Year)

B. Date water first used for beneficial purposes: See Attachment A.
(Month/Day/Year)

4. Purpose, annual amount and annual period of use: See Attachment A.

Purpose	Amount	Month/Day	Month/Day
Irrigation	_____ ac.ft./gallons	From _____	to _____
Domestic	_____ ac.ft./gallons	From _____	to _____
Stockwater	_____ ac.ft./gallons	From _____	to _____
Municipal	_____ ac.ft./gallons	From _____	to _____
Power	_____ ac.ft./gallons	From _____	to _____
Mining	_____ ac.ft./gallons	From _____	to _____
Recreation	_____ ac.ft./gallons	From _____	to _____
Wildlife	_____ ac.ft./gallons	From _____	to _____
Other uses	_____ ac.ft./gallons	From _____	to _____

5. A. (1) If for irrigation purposes, describe places of use: (also indicate on map) See Attachment A.

Township (N/S)	Range (E/W)	Section	Legal Subdivision	No. of Acres

(2) If land reclaimed over period of years, indicate schedule and amount of land reclaimed first and each subsequent year(s): N/A

(3) Indicate kind of crops cultivated: N/A
Character of soil: _____

B. If for domestic purposes, number of persons: N/A, or families: _____.

C. If for stockwater purposes, number and kind of stock watered: N/A

FMC002287

D. If for municipal purposes, population to be served, and estimate of future requirements: N/A

E. If for power purposes, describe type of plant and capacity: N/A

F. If for mining purposes, describe purpose of use, location and character of the mine(s) to be served: N/A

G. If for recreational purposes, describe: See Attachment A

H. If for wildlife purposes, including fish, describe: See Attachment A

I. If for other purposes, describe: See Attachment A

6. A. Direct source of public water diverted: See Attachment A tributary to _____ on the _____ watershed.

B. Point of Diversion (indicate on map): See Attachment A , Section _____ , Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____ . Ownership _____ .

7. State information on the well which is your source of water supply. N/A

A. Well registration number: _____

B. Location of well (indicate on map): _____ , Section _____ , Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____ . Ownership _____ .

C. List the following:

(1) Date well construction began: _____ (Month/Day/Year) ; Date well placed in use: _____ (Month/Day/Year) .

(2) Location (10 acre subdivision) (indicate on map): _____ , Section _____ , Township _____ (N/S), Range _____ (E/W),

(3) Intent to Drill, File No. _____ , or Application for Permit No. _____ .

(4) State whether free flowing or pump: _____ . If pump, list type of pump and capacity: _____

(5) Casing depth _____ ft. Total well depth _____ ft. Diameter of casing _____ inches.

(6) Depth to water: _____ ft. (Static Level)

(7) Annual amount pumped, or otherwise extracted: _____ Ac.Ft./Gallons

(8) State purpose of use: _____ .

(9) Indicate annual period of use: _____ (Month/Day) to _____ (Month/Day) .

8. Water storage reservoir and/or diverting works: See Attachment A

A. Location (indicate on map): _____ , Section _____ , Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____ . Ownership _____ .

A. Name of storage reservoir and/or diverting works (if known): _____ .

C. Maximum capacity: _____ Ac. Ft.

D. Maximum depth of water: _____ ft.

E. (1) Year construction began: _____ .

(2) Year construction completed: _____ .

(3) Date water first stored: _____ (Month/Year).

F. If dam, list following:

(1) Construction material: _____ .

(2) Maximum Length: Top _____ ft.; Bottom _____ ft.

(3) Maximum Width: Top _____ ft.; Bottom _____ ft.

(4) Maximum Height: _____ ft.

G. If diverting works, describe: See Attachment A

9. Distribution works: N/A

A. (1) Date construction began: _____ (Month/Day/Year).

(2) Length of ditch or canal to first place of use: _____ ft., total length of ditch or canal: _____ ft.

(3) Top width: _____ ft.; Bottom width: _____ ft.

(4) Grade (slope) of ditch: _____.

(5) If ditch or canal owned and/or operated by an association or company or such other entity, list name or association or company or such other entity: _____.

B. If pipeline:

(1) Type: _____ (i.e., aluminum, steel, etc.)

(2) Diameter: _____ inches.

(3) Length of pipeline to first place of use: _____ ft. and total length of pipeline: _____ ft.

(4) Grade (slope) of pipeline: _____.

C. If other, describe: _____.

10. Enlargement(s) of the storage reservoir and/or diverting and/or distributing works. N/A

A. Date begun: _____ (Month/Day/Year).

Date completed: _____ (Month/Day/Year).

B. Describe details of enlargement(s): _____

C. Dimensions of work as originally constructed and as enlarged: _____

Explanatory

This does not waive any future claims to additional water for mission activities under applicable law.

(continued on the next page)

(if more space is required, attach separate sheet(s))

STATE OF ARIZONA)
) SS
County of Cochise)
)

VERIFICATION

William R. Harnagel
Colonel, U.S. Army
Commanding
Fort Huachuca, Arizona
(please print Claimant name) , or
(Claimant representative's name)

being first duly sworn, deposes and says; That the claimant or duly authorized representative, possesses the knowledge and the authorization to execute this verification as to the correctness and truthfulness of the matters set forth in the "Statement of Claimant", except as to those matters alleged upon information and belief, and as to those matters believes them to be true and correct.

William R. Harnagel
Claimant signature

Claimant representative signature

Subscribed and sworn to before me this 21st day of August, 1989.

(SEAL)

Jenny A. Snell
Notary Public or authorized Employee of the Department of Water Resources

My Commission expires MY COMMISSION EXPIRES MAY 12, 1990

GARDEN WINDMILL

Well - Garden Windmill

Constructed 1930 (est), put into use 1981

Pump: none

200' casing depth, 16" diameter, 200' total well depth

17' to water

Windmill established in 1981 for wildlife purposes. High winds in 1982 destroyed windmill. Well is presently capped.

Pipeline: unk

Unknown length of pipeline and grade to first use.

AMENDED INVENTORY OF WATER RIGHTS
FORT HUACHUCA, ARIZONA

Amended Claim	Source	Location	Claimed Use	Name	Water Course	Annual Use	First Use Date	Remarks
39-10775	Dam	SWSENW 16 21S 19E	WL	41, Lower Antelope	Sycamore	6.0	1975	ADWR #WL1-SP01
	Dam	NENESW 29 21S 19E	WL	42, Sycamore II	Sycamore	7.0	1975	ADWR #WL5-SP05
	Dam	NWNESW 21 22S 19E	EC, WL	43, West Huachuca #2	Huachuca	.3	1975	ADWR #WL8-SP08
	Dam	NESWSW 16 21S 20E	EC, WL	44, Gate 5 Pond	Huachuca	.4	1975	ADWR #WL14-SP14
	Dam	SENWSE 10 21S 20E	EC, WL	45	Soldier	.4	1975	ADWR #WL17-SP17
	Dam	SESWNE 21 21S 20E	SE, WL	46, #3 Sewage Pond	Soldier	2.2	1975	ADWR #WL18-SP18
	Dam	SWNESE 21 21S 20E	SE, WL	47, #2 Sewage Pond	Soldier	.9	1975	ADWR #WL19-SP19
	Dam	SWSESW 06 22S 20E	EC	48, Horse Pasture Pond	Soldier	.6	1975	ADWR #WL25-SP25
	Dam	NWNWNE 04 22S 20E	RE	50, Golf Course Pond	Soldier	.2	1975	ADWR #WL28-SP28
	Dam	NWSESE 10 21S 21E	EC	51	Graveyard Gulch	3.0	1975	ADWR #WL36-SP36
	Dam	SENWNE 28 22S 20E	RE, WL	52, Middle Garden Cyn Pond	Garden	8.5	1975	ADWR #WL41-SP41
	Dam	SENESE 33 21S 20E	SE	32b, Sediment#1b	Soldier	2.2	1984	
	Spring	NESESE 22 22S 19E	WL	15b, Moss Falls	Huchuca	unk	1877	Field discovered June 1989
	Well	NENENW 32 22S 20E	WL	GWM, Garden Windmill	Garden	Capped	1930	Windmill established in 1981. Destroyed in 1982.
	Effluent	SENESE 33 21S 20E	IR	Golf Course, Z-1/32a	N/A	631.3	1954	Point of distribution is 32a/Sediment#1a at Sewage Plant1. Usage includes 3% of effluent production at Sewage Plant2. Golf Crse-84.8 ac. ADWR #IR01.
	Effluent	SENESE 33 21S 20E	IR	Golf Course, Z-1/32b	N/A	631.2	1954	Point of distribution is 32b/Sediment#1b at Sewage Plant1. Usage includes 3% of effluent production at Sewage Plant2. Golf Crse-84.8 ac. ADWR #IR01.
	Effluent	SWSWSE 28 21S 20E	IR	Chaffee Parade Field, Z-2	N/A	499.0	1954	Point of Distribution is 33/Sediment#2 at Sewage Plant2. 3% of production is diverted to Golf Crse. Chaffee Field-10.25 ac. ADWR #IR02.

WL-Wildlife, EC-Erosion Control, SE-Sewage Evaporation, RE- Recreation, IR-Irrigation, ADWR-AZ Dept of Water Resources.

FMC002292

Attachment A

ARIZONA WATER COMMISSION
CENTRAL SECURITY BUILDING
222 N. Central Ave.
Suite 550
Phoenix, Arizona 85004
602-255-1581

HERSON D. PALMER, CLERK
BY J Carson DEP.
FILED

1982 JAN -4 PM 2:30

STATEMENT OF CLAIMANT

(Leave Blank)

IN THE MATTER OF DETERMINATION OF)
RELATIVE RIGHTS TO THE USE OF)
WATERS OF THE SAN PEDRO RIVER AND ITS)
TRIBUTARY WATERSHED, INC. ARAVAIPA CK.)

File No. 39-010775

Filed: 1-4-82 at 2:30 P.M.
(date) (time)

FILED MAY 1 1982 JUDITH ALLEN, CLERK BY J Carson DEP.

The State Land Department has enclosed with the accompanying Notice this form on which claimant shall present as required, the particulars of his claim of right to the subject waters. All applicable portions must be completed. A separate Statement Claimant must be submitted for each source or point of diversion of public water unless those waters are commingled prior to use. A map published by the United States Geological Survey or a map of equal standard shall be submitted with this Statement showing on the face of the map the particulars of point of diversion, place of use and other pertinent information.

(Print or type. If more space is required, use explanatory at end of form, or attachment.)

1. Name of Claimant: United States Army Communications Command and Fort Huachuca
(Last) (First) (M.I.)

Fort Huachuca, Arizona 85613 — 602-538-3335
(Address, City, State, Zip) (Telephone No.)

2. State the nature of the right or use on which claim is based: (indicate, and attach supporting documentation)

A. ___ Right to surface water initiated by beneficial use prior to June 12, 1919. Indicate registry number if previously submitted under Water Rights Registration Act _____.

B. ___ Court Decreed Water Right. Cite Title and Date of Case _____ Cause No. _____ County _____.

C. ___ Application for Permit to Appropriate Water filed. State Land Department Application No. _____, Permit No. _____, Certificate of Water Right No. _____.

D. ___ Claim of Water Right for a Stockpond. State Land Department Application No. _____.

E. X Other. Describe: State water law and legitimate and authorized Federal Activities.

3. A. Date of initiation of right: See attached report, entitled Water Source, Ft. Huachuca, May 1980, Revised December (Month/Day/Year) 1981, Tab A.

B. Date water first used for beneficial purposes: See Attached. Report Tab A. (Month/Day/Year)

4. Purpose, annual amount and annual period of use: See attached report, Tab A.

Purpose	Amount	Month/Day	Month/Day
Irrigation	ac.ft./gallons	From	to
Domestic	ac.ft./gallons	From	to
Stockwater	ac.ft./gallons	From	to
Municipal	ac.ft./gallons	From	to
Power	ac.ft./gallons	From	to
Mining	ac.ft./gallons	From	to
Recreation	ac.ft./gallons	From	to
Wildlife	ac.ft./gallons	From	to
Other Uses	ac.ft./gallons	From	to

5. A. (1) If for irrigation purposes, describe place of use: (also indicate on map) N/A

Township (N/S)	Range (E/W)	Section	Legal Subdivision	No. of Acres.

(2) If land reclaimed over period of years, indicate schedule and amount of land reclaimed first and each subsequent year(s): _____

FMC002293

5. A.(3) Indicate kind of crops cultivated: N/A

Character of soil: _____

B. If for domestic purposes, number of persons: N/A, or families: _____

C. If for stockwater purposes, number and kind of stock watered: N/A

D. If for municipal purposes, population to be served, and estimate of future requirements: N/A

E. If for power purposes, describe type of plant and capacity: N/A

F. If for mining purposes, describe purpose of use, location and character of the mine(s) to be served: N/A

G. If for recreational purposes, describe: See attached report, Tab A.

H. If for wildlife purposes, including fish, describe: See attached report, Tab A.

I. If for other purposes, describe: Military Purposes.

6. A. Direct source of public water diverted: N/A tributary to _____ on the _____ watershed.

B. Point of Diversion (indicate on map): _____ ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

C. Place of use (indicate on map): _____ ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

7. State all other sources of water supply not described in Question 6 of this form.

A. Type of Source: All sources in attached report except wells and potable springs.

B. Location of Source (indicate on map): See attached report, Tab A and Tab E. ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

C. If other source is well, list following: N/A

(1) Date well construction began: _____ (Month/Day/Year); Date well place in use: _____ (Month/Day/Year).

(2) Location (10 acre subdivision) (indicate on map): _____ ¼ _____ ¼ _____ ¼ Section _____, Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base Meridian, County of _____.

(3) State Land Department Intent to Drill, File No. _____, or Application for Permit No. _____.

(4) State whether free flowing or pump: _____. If pump, list type of pump and capacity: _____

(5) Casing depth _____ ft. Total well depth _____ ft. Diameter of casing _____ inches.

(6) Depth to water: _____ ft. (Static Level)

(7) Annual amount pumped, or otherwise extracted: _____ Ac.Ft./Gallons

(8) State purpose of use: _____.

(9) Indicate annual period of use: _____ (Month/Day) to _____ (Month/Day)

FMC002294

8. Water storage reservoir and/or diverting works: See attached report, Tab A for pond information.

A. Location (indicate on map): _____ ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

B. Name of storage reservoir and/or diverting works (if known) _____

C. Maximum capacity: _____ Ac.Ft.

D. Maximum depth of water: _____ ft.

RECEIVED JAN 4 1986 DEPT. OF WATER RESOURCES

8. E. (1) Year construction began: _____.

(2) Year construction completed _____.

(3) Date water first stored: _____(Month/Year).

F. If dam, list following:

(1) Construction material: _____

(2) Maximum Length: Top _____ft.; Bottom _____ft.

(3) Maximum Width: Top _____ft.; Bottom _____ft.

(4) Maximum Height: _____ft.

G. If diverting works, describe: _____

9. Distribution works: N/A

A. If ditch or canal:

(1) Date construction began: _____ (Month/Day/Year)

Date construction completed: _____ (Month/Day/Year)

(2) Length of ditch or canal to first place of use: _____ft., total length of ditch or canal: _____ft.

(3) Top width: _____ft.; Bottom width: _____ft.

(4) Grade (slope) of ditch: _____

(5) If ditch or canal owned and/or operated by an association or company or such other entity, list name of association or company or such other entity: _____

B. If pipeline: N/A

(1) Type: _____(i.e., aluminum, steel, etc.)

(2) Diameter: _____inches

(3) Length of pipeline to first place of use: _____ft. and total length of pipeline: _____ft.

(4) Grade (slope) of pipeline: _____

C. If other, describe: _____

10. Enlargement(s) of storage reservoir and/or diverting and/or distributing works N/A

A. Date begun: _____ (Month/Day/Year)

Date completed: _____ (Month/Day/Year)

B. Describe details of enlargement(s): _____

C. Dimensions of works as originally constructed and as enlarged: _____

Explanatory

This does not waive any future claims to additional water for mission activities under applicable law.

A copy from the National Archives, Tab G of attached report refers to the 1881 executive order establishing Fort Huachuca and the 1883 executive order enlarging the boundaries.

History and use of the installation are briefly described at Tab H. of the attached report.

(continued on the next page)

(if more space is required, attach separate sheet(s)

STATE OF ARIZONA)
County of Cochise) SS
)

VERIFICATION

US Army Communications Command
and Fort Huachuca
Fort Huachuca, Arizona ,
(please print Claimant-Affiant's name)

WILLIAM R. DERR, LTC, MI, Deputy Commander
(Claimant-Affiant representative's name)

being first duly sworn, deposes and says; That the affiant, or its duly authorized representative, possesses the knowledge and the authorization to execute this verification as to the correctness and truthfulness of the matters set forth in the "Statement of Claimant", except as to those matters alleged upon information and belief, and as to those matters believes them to be true and correct.

For ~~[illegible]~~
US Army Communications Command and
Fort Huachuca, Fort Huachuca, AZ 85613

Claimant-affiant representative's signature

Claimant-affiant signature

William R. Derr LTC
Claimant-affiant signature

Attest:
Claimant-affiant representative's signature

Subscribed and sworn to before me this
28th day of December , 19 81.

SEAL

Notary Public or authorized Employee of
the Arizona Water Commission

My commission expires 31 March 1984

RECEIVED
JAN 4 1982
DEPT. OF WATER RESOURCES

FMC002296

22-78

C laim - spring, ponar, adams

ARIZONA WATER COMMISSION
CENTRAL SECURITY BUILDING
222 N. Central Ave.
Suite 550
Phoenix, Arizona 85004
602-255-1581

RECEIVED JAN 2 1982 DEPT. OF WATER RESOURCES

STATEMENT OF CLAIMANT

(Leave Blank)

IN THE MATTER OF DETERMINATION OF)
RELATIVE RIGHTS TO THE USE OF)
WATERS OF THE SAN PEDRO RIVER AND ITS)
TRIBUTARY WATERSHED, INC. ARAVAIPA CK.)

File No. 39-010775

Filed: 1-4-82 at 2:30 PM
(date) (time)

The State Land Department has enclosed with the accompanying Notice this form on which claimant shall present as required, the particulars of his claim of right to the subject waters. All applicable portions must be completed. A separate Statement of Claimant must be submitted for each source or point of diversion of public water unless those waters are commingled prior to use. A map published by the United States Geological Survey or a map of equal standard shall be submitted with this Statement showing on the face of the map the particulars of point of diversion, place of use and other pertinent information.

(Print or type. If more space is required, use explanatory at end of form, or attachment.)

1. Name of Claimant: _____
(Last) (First) (M.I.)

_____
(Address, City, State, Zip) (Telephone No.)

2. State the nature of the right or use on which claim is based: (indicate, and attach supporting documentation)

A. ___ Right to surface water initiated by beneficial use prior to June 12, 1919. Indicate registry number if previously submitted under Water Rights Registration Act _____.

B. ___ Court Decreed Water Right. Cite Title and Date of Case _____ Cause No. _____ County _____.

C. ___ Application for Permit to Appropriate Water filed. State Land Department Application No. _____, Permit No. _____, Certificate of Water Right No. _____.

D. ___ Claim of Water Right for a Stockpond. State Land Department Application No. _____.

E. X Other. Describe: State water law and legitimate and authorized Federal Activities.

3. A. Date of initiation of right: See attached report, entitled Water Source, Ft. Huachuca May 1980, Revised December (Month/Day/Year) 1981, Tab A.

B. Date water first used for beneficial purposes: See Attached. Report Tab A. (Month/Day/Year)

4. Purpose, annual amount and annual period of use: See attached report, Tab A.

Purpose	Amount	Month/Day	Month/Day
Irrigation	_____ ac.ft./gallons	From _____	to _____
Domestic	_____ ac.ft./gallons	From _____	to _____
Stockwater	_____ ac.ft./gallons	From _____	to _____
Municipal	_____ ac.ft./gallons	From _____	to _____
Power	_____ ac.ft./gallons	From _____	to _____
Mining	_____ ac.ft./gallons	From _____	to _____
Recreation	_____ ac.ft./gallons	From _____	to _____
Wildlife	_____ ac.ft./gallons	From _____	to _____
Other Uses	_____ ac.ft./gallons	From _____	to _____

5. A.(1) If for irrigation purposes, describe place of use: (also indicate on map) N/A

Township (N/S)	Range (E/W)	Section	Legal Subdivision	No. of Acres.

(2) If land reclaimed over period of years, indicate schedule and amount of land reclaimed first and each subsequent year(s): _____

FMC002297

5. A. (3) Indicate kind of crops cultivated: N/A

Character of soil: _____

B. If for domestic purposes, number of persons: N/A, or families: _____

C. If for stockwater purposes, number and kind of stock watered: N/A

D. If for municipal purposes, population to be served, and estimate of future requirements: N/A

E. If for power purposes, describe type of plant and capacity: N/A

F. If for mining purposes, describe purpose of use, location and character of the mine(s) to be served: N/A

G. If for recreational purposes, describe: See attached report, Tab A.

H. If for wildlife purposes, including fish, describe: See attached report, Tab A.

I. If for other purposes, describe: Military Purposes.

6. A. Direct source of public water diverted: N/A tributary to _____ on the _____ watershed.

B. Point of Diversion (indicate on map): _____ ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

C. Place of use (indicate on map): _____ ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

7. State all other sources of water supply not described in Question 6 of this form.

A. Type of Source: All sources in attached report except wells and potable springs.

B. Location of Source (indicate on map): See attached report, Tab A and Tab E. ¼ _____ ¼, Section _____ Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base and Meridian, County _____. Ownership _____

C. If other source is well, list following: N/A

(1) Date well construction began: _____ (Month/Day/Year); Date well place in use: _____ (Month/Day/Year).

(2) Location (10 acre subdivision) (indicate on map): _____ ¼ _____ ¼ _____ ¼ Section _____, Township _____ (N/S), Range _____ (E/W), Gila and Salt River Base Meridian, County of _____.

(3) State Land Department Intent to Drill, File No. _____, or Application for Permit No. _____.

(4) State whether free flowing or pump: _____. If pump, list type of pump and capacity: _____

(5) Casing depth _____ ft. Total well depth _____ ft. Diameter of casing _____ inches.

(6) Depth to water: _____ ft. (Static Level)

(7) Annual amount pumped, or otherwise extracted: _____ Ac.Ft./Gallons

(8) State purpose of use: _____.

(9) Indicate annual period of use: _____ (Month/Day) to _____ (Month/Day)

8. Water storage reservoir and/or diverting works: See attached report, Tab A for pond information.

A. Location (indicate on map): _____ ¼ _____ ¼, Section _____, Township _____ (N/S), Range _____ (E/W), Gila and Salt River Baseand Meridian, County _____. Ownership _____

B. Name of storage reservoir and/or diverting works (if known): _____

C. Maximum capacity: _____ Ac.Ft.

D. Maximum depth of water: _____ ft.

8. E.(1) Year construction began: _____.

(2) Year construction completed _____.

(3) Date water first stored: _____(Month/Year).

F. If dam, list following:

(1) Construction material: _____

(2) Maximum Length: Top _____ft.; Bottom _____ft.

(3) Maximum Width: Top _____ft.; Bottom _____ft.

(4) Maximum Height: _____ft.

G. If diverting works, describe: _____

9. Distribution works: N/A

A. If ditch or canal:

(1) Date construction began: _____ (Month/Day/Year)

Date construction completed: _____ (Month/Day/Year)

(2) Length of ditch or canal to first place of use: _____ft., total length of ditch or canal: _____ft.

(3) Top width: _____ft.; Bottom width: _____ft.

(4) Grade (slope) of ditch: _____

(5) If ditch or canal owned and/or operated by an association or company or such other entity, list name of association or company or such other entity: _____

B. If pipeline: N/A

(1) Type: _____(i.e., aluminum, steel, etc.)

(2) Diameter: _____inches

(3) Length of pipeline to first place of use: _____ft. and total length of pipeline: _____ft.

(4) Grade (slope) of pipeline: _____

C. If other, describe: _____

10. Enlargement(s) of storage reservoir and/or diverting and/or distributing works N/A

A. Date begun: _____ (Month/Day/Year)

Date completed: _____ (Month/Day/Year)

B. Describe details of enlargement(s): _____

C. Dimensions of works as originally constructed and as enlarged: _____

Explanatory

This does not waive any future claims to additional water for mission activities under applicable law.

A copy from the National Archives, Tab G of attached report refers to the 1881 executive order establishing Fort Huachuca and the 1883 executive order enlarging the boundaries.

History and use of the installation are briefly described at Tab H. of the attached report.

(continued on the next page)

(if more space is required, attach separate sheet(s))

STATE OF ARIZONA)
)
County of _____)SS
)

VERIFICATION

_____, _____
(please print Claimant-Affiant's name) (Claimant-Affiant representative's name)

being first duly sworn, deposes and says; That the affiant, or its duly authorized representative, possesses the knowledge and the authorization to execute this verification as to the correctness and truthfulness of the matters set forth in the "Statement of Claimant", except as to those matters alleged upon information and belief, and as to those matters believes them to be true and correct.

For Corporations, Partnerships, Associations, etc.

_____
Claimant-affiant signature

_____
Claimant-affiant representative's signature

_____
Claimant-affiant signature

Attest: _____
Claimant-affiant representative's signature

Subscribed and sworn to before me this
_____day of_____, 19___.

SEAL

_____
Notary Public or authorized Employee of the Arizona Water Commission

My Commission expires _____

U. S. ARMY COMMUNICATIONS COMMAND &
FORT HUACHUCA (M.I.)
FORT HUACHUCA AZ 85613

STATE OF ARIZONA
DEPARTMENT OF WATER RESOURCES
WATER RIGHTS ADMINISTRATION
99 EAST VIRGINIA
PHOENIX, ARIZONA 85004

RECEIPT

KIND ENTRY	FILE REFERENCE NO.
39	010774
	~~XXXX~~ and
39	010775

(2)

FUND SOURCE	ACCOUNT NO. AGENCY	CHAPTER	DIV.	INT. ACCT.	ITEM DESCRIPTION	RATE	$ AMOUNT
					Filing fee for Statement of Claimant	20.00	40.00
					San Pedro River Adjudication		
						WAITER PAYMENT	
						GUESTS	2
						CHK NO	863
						SN PEDRO	40.00
						TAX	0.00
						TOTL	40.00
							40.00
					Check No. 01,510,863	# 8795 A	10:08

6/3/82 jc

TOTAL $ 40.00

FMC002301

U. S. ARMY COMMUNICATIONS COMMAND &
FORT HUACHUCA (M.I.)
FORT HUACHUCA AZ 85613

STATE OF ARIZONA
DEPARTMENT OF WATER RESOURCES
WATER RIGHTS ADMINISTRATION
99 EAST VIRGINIA
PHOENIX, ARIZONA 85004

RECEIPT

KIND ENTRY	FILE REFERENCE NO.
39	010774
	~~XXXX~~ and
39	010775

(2)

FUND SOURCE	ACCOUNT NO. AGENCY	CHAPTER	DIV.	INT. ACCT.	ITEM DESCRIPTION	RATE	$ AMOUNT
					Filing fee for Statement of Claimant	20.00	40.00
					San Pedro River Adjudication		
						~~WAITER~~	~~PAYMENT~~
						GUESTS	2
						CHK NO	863
						SN PEDRO	40.00
						TAX	0.00
						TOTL	40.00
							40.00
					Check No. 01,510,863	# 8795 A	10:08

6/3/82 jc

TOTAL $ 40.00

FMC002302

ARIZONA DEPARTMENT OF WATER RESOURCES

15 South 15th Avenue, Phoenix, Arizona 85007
Telephone (602) 542-1553
Fax (602) 256-0506

June 19, 1991

FIFE SYMINGTON
Governor

ELIZABETH ANN RIEKE
Director

Mr. B. David Reichardt
Chief, Arizona Real Estate Office
Department of the Army
Los Angeles District, Corps of Engineers
3636 North Central Avenue, Suite 770
Phoenix, Arizona 85012-1936

RE: Final San Pedro River Watershed Hydrographic Survey Report (HSR), Gila River General Adjudication: Fort Huachuca Special Report

Dear Mr. Reichardt:

The Arizona Department of Water Resources (DWR) is in the process of preparing the final San Pedro River Watershed HSR which is scheduled to be submitted to the Maricopa County Superior Court on November 4, 1991. DWR is revising its special report on the water uses and claims made by Fort Huachuca and additional or updated information is required. The information requested is as follows:

1. A map showing the evolution of the Fort's boundaries from its creation to the present time. The associated Congressional Acts, Presidential Proclamations, general orders, or agreements pertaining to these boundary changes are also requested by DWR.

2. The military population at the Fort for the years 1989, 1990 and 1991 (if available).

3. The effluent produced in the years 1989 and 1990.

4. The total municipal water use by the Fort in the years 1989 and 1990.

5. The source of the consumptive values for pasture and turf for the Chaffee parade field, the Post's golf course and the other irrigated areas from Rembass wells #1 and #2 as stated in the Fort's comments on the 1990 preliminary San Pedro River HSR.

Please provide this information to DWR no later than August 5, 1991. Your assistance in this request is greatly appreciated. If you have any questions, please call me at (602) 542-1520.

Sincerely,

Donald J. Gross, P.E.

Donald J. Gross, P.E.
Chief, Investigations Section
Adjudications Division

DJG/md

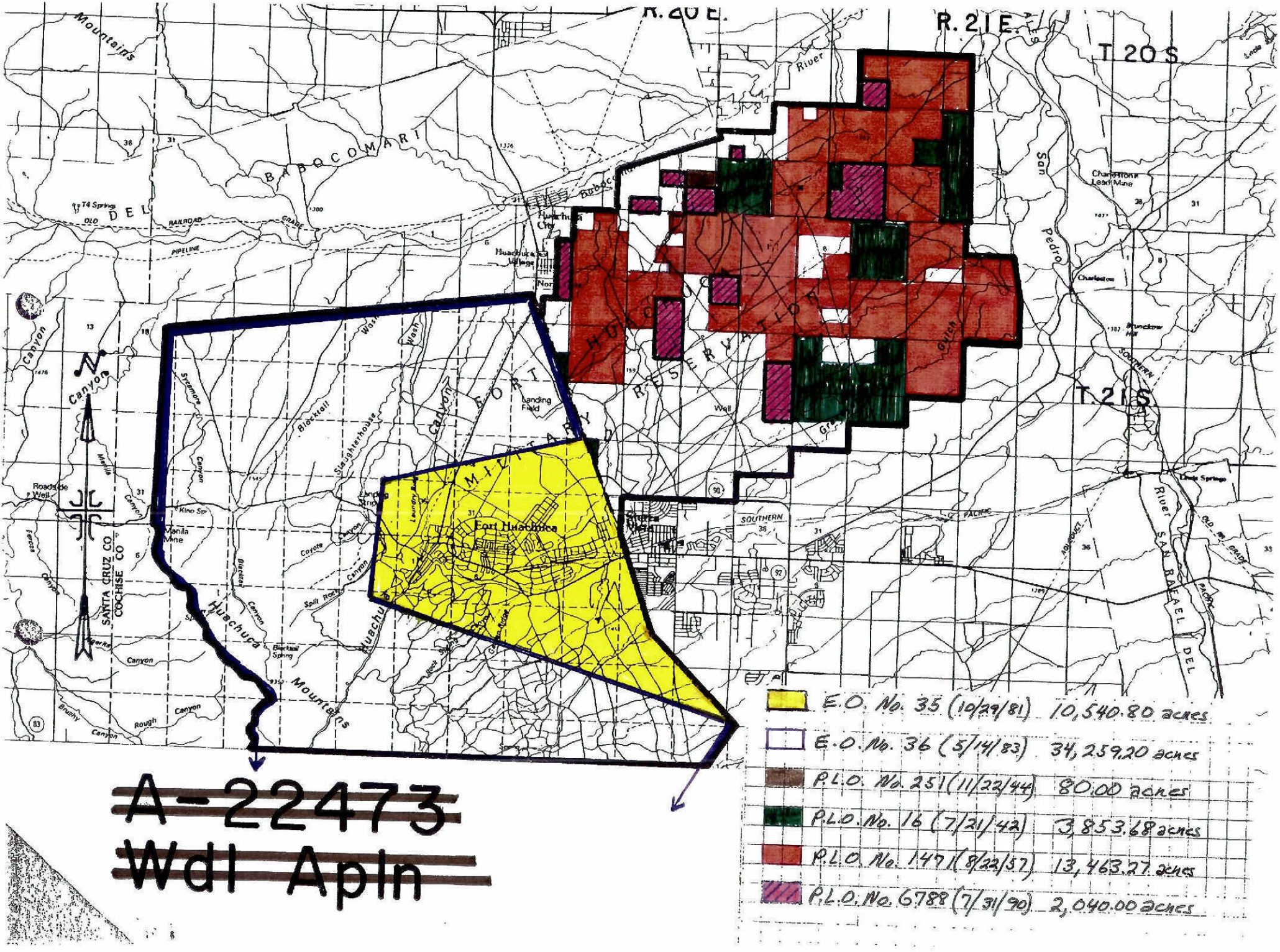
Don-

Attached are copies of the E.O.'s and the P.L.O.'s covering lands at Fort Huachuca. These are copies of the copies in our File.

Also attached is a color-coded drawing which should be helpful in seeing what lands are covered by what withdrawals.

DAVE
6/18/91

Don, I will see if we can get better copies of the withdrawal documents from BLM.



E.O. No. 35 (10/29/81) 10,540.80 acres

E.O. No. 36 (5/14/83) 34,259.20 acres

P.L.O. No. 251 (11/22/44) 80.00 acres

P.L.O. No. 16 (7/21/42) 3,853.68 acres

P.L.O. No. 1471 (8/22/57) 13,463.27 acres

P.L.O. No. 6788 (7/31/90) 2,040.00 acres

~~A-22473~~

~~Wdl Apln~~

1448824
"B" H. Ed

UNITED STATES
DEPARTMENT OF THE INTERIOR
GENERAL LAND OFFICE
WASHINGTON

March 16, 1932.

I hereby certify that the annexed copy of Executive Order, dated October [illegible], 1881, is a

true and literal exemplification of the original on file in this office and in my custody.

IN TESTIMONY WHEREOF I have hereunto subscribed my name and caused the seal of this office to be affixed, at the city of Washington, on the day and year above written.

Assistant Commissioner of the General Land Office.

War Department N-1

Washington City

Adjutant General October 28th, 1881

To

The President

Sir:

Since the receipt upon recommendation of the General of the Army, to request that a Military Reservation be duly declared and set apart by the Executive, per the proposal of Camp Huachuca, Arizona Territory, with boundaries as surveyed by 1st Lieut. Carl F. Palfrey, Corps of Engineers and described in his report, dated August 24th, 1881, as follows:

"Beginning at a post branded "U.S. M.R. No 1" set in a mound of stone on conical hill of northwestern foothills of Huachuca

Mts. N. 23° 14' 30" W. 257.71 chains, to a post branded "U.S. M.R. No 2" set in a

FMC002308

on the road to [illegible] one thousand [illegible]

feet and [illegible]

Thence North [illegible]

East two hundred and [illegible]

and seventeen hundredths (2217.17)

chains to a post marked [illegible]

which post coincides in [illegible]

a post marked [illegible] B [illegible] of the

southern boundary of the Santa Maria

Grant as surveyed by J. H. [illegible]

Thence North [illegible]

East, along the southern boundary of

said grant five hundred and twenty-two

and seventy-four hundredths [illegible]

to a post marked [illegible]

and West of the road from Tucson

to Huachuca Station on the New Mexico

and Arizona Railroad.

FMC002309

FMC002310

War Department

2218
A

Washington City

March 12th 1883

[illegible]

[illegible]

[illegible]

Sir:

Upon recommendation of the General of the Army I have the honor to request that the Military Reservation of Fort (Camp Free Fort) Huachuca in the Territory of Arizona, originally declared for Executive order dated October 29, 1881, may be enlarged to embrace the following described limits, viz:-

Beginning at a post marked U.S.M.R. No. 1, set in a mound of stone on a conical butte in the Southern foot-hills of the Huachuca Mountains, which butte is about six (6) miles distant from the post of Fort Huachuca,

EO 1883

FMC002311

~~E-44~~

N-2

mound of stone (being the same as post "S. J. J. N. No 3" of the tract known as the Rancheria tract, as surveyed by J. M. M.) thence N 12° 35' E along the Southern Boundary of said tract, 11.30 chains to a post branded "M. S. M. R. No 3"; thence S. 69° 02' 30" E 5.20 chains to a post branded "M. S. M. R. No 4"; thence S 5° 55' 30" W; 2.51.61 chains to a post branded "M. S. M. R. No 5" set in a mound of stone on the ridge of eastern foothills of Huachuca Mts, below Cañon known as "Sunnys" and "Ramsay's"; thence by most direct lines of water divide to point of main divide of Huachuca Mts, leaving from said post S. 5° 55' 30" W; thence along said main divide to the northwesternmost point; thence by most direct lines of water flow to point of beginning. The posts set upon

FMC002312

the foothills are in conspicuous positions there or the open mesa are near the main travelled roads and plainly visible from them.

"The proposed reservation covers the eastern and Northeastern slope of the mountains from the edge and South of Tanner's Cañon to and including the northern and northwestern spurs with a belt of open mesa about three miles wide. All situations which have been considered valuable for military occupation are included."

As mapped the proposed reservation is outlined herewith and the General Land Office reports that the lands included therein are unappropriated public lands and that no objection is known to their reservation for military purposes.

I have the honor to be, Sir,
with great respect,
Your Obedient Servant,
Redfield Proctor
Secretary of War

FMC002313

Sir,

I have the honor to transmit herewith a Map of the Fort Leavenworth Reservation showing the boundaries of the reservation as laid down by Capt. T. Talbot, Engineer in 1841, as well as the recommended by Lieut. C. S. Fetterer, Engineer, in February and March 1873, hereinafter described, as enclosed herewith, together with copies of a report from the Quartermaster's Office, dated March 30, 1873, showing the necessity for extending the Northern side of the Reservation to the Southern boundary of the Babocomari Grant, as originally intended, for the purpose of securing to the Government the valuable grazing lands in the vicinity of the post.

FMC002314

Thence South [illegible] East

two hundred and eleven and [illegible]

hundredths (211.[illegible]) chains to a post [illegible]

[illegible]

Thence South 43 41 East

one hundred and seventy-one and seven

hundredths (171.07) chains to a post

marked U.S. M.T. No. [illegible] near to and West

of the road from Florence Fort to

Charleston.

Thence South 34 15 West

two hundred and fifty-one and eighty-four

hundredths (251.84) chains to a post marked

U.S. M.T. No. 6, set in a mound of stones

the foot-hills of the Huachuca Mountains

between Tombstone and Hamburg Camps.

Thence along the water

shed separating these Camps to the main

water shed of the Huachuca Mountains

FMC002315

Washington City
March 12th 1883

No. 276

Secretary of Int.

Requests that the [illegible] Reservation of [illegible] American [illegible] be [illegible] in accordance with [illegible]
[illegible]
[illegible] March 1883 [illegible]
[illegible] C. of Indian Affairs

[illegible]

Executive Mansion
Washington Mar 14 1883

The within request is approved and the selection of the Reservation is made and declared accordingly.

The Secretary of the Interior will cause the same to be noted in the General Land Office.

Chester A. Arthur

FMC002316

W-9

I have the honor to be,
Sir,
Your obedient Servant
[illegible]
Secretary of War.

[illegible] enclosure, viz:
[illegible] 1883
[illegible]

FMC002317

Coast Guard officer of the district", (iii) "district Coast Guard officer of the district", and (iv) "District Coast Guard Officer of the injured reservist's district", respectively.

2. Pursuant to the authority contained in Public Law 441, 78th Congress, 2d Session, approved September 27, 1944, the regulations, United States Coast Guard Reserve, 1941 (6 F.R. 1925; 8 F.R. 1319), as amended, are hereby further amended as follows:

Section 8.10103 (a) is hereby amended to read as follows:

(a) *Place.* Members of the Women's Reserve shall not be assigned to duty on board vessels of the Navy or Coast Guard or in aircraft while such aircraft are engaged in combat missions and shall not be assigned to duty outside the American area and the Territories of Hawaii and Alaska, and may be assigned to duty outside the continental United States only upon their prior request. The term "American area" is defined in section 3 of Public Law 441, 78th Congress, 2d Session.

3. Pursuant to the authority contained in Public Law 447, 78th Congress, 2d Session, approved September 30, 1944, the regulations, United States Coast Guard Reserve, 1941 (6 F.R. 1925), as amended, are hereby further amended to read as follows:

Section 8.7201 (c) is amended to read as follows:

(c) (1) If any temporary reservist is physically injured in line of duty while performing active duty or while engaged in authorized travel to or from such duty, or dies as a result of such physical injury, he or his beneficiaries shall be entitled to all the benefits prescribed by law for civil employees of the United States, and the United States Employees' Compensation Commission shall have jurisdiction in such cases and shall perform the same duties with reference thereto as in the case of civil employees of the United States.

(2) For the purpose of computing benefits under this § 8.7201 (c), such temporary reservist, regardless of his pay or pay status, shall be deemed to have had monthly pay of $150.

(3) The provisions of this § 8.7201 (c) shall not apply in any case coming within the purview of the workmen's compensation law of any State, Territory, or other jurisdiction because of a concurrent employment status of such temporary reservist; and where such temporary reservist or dependent should be entitled to a benefit under this § 8.7201 (c) and also to any concurrent benefit from the United States on account of the same disability or death, such temporary reservist or his dependent shall elect which benefit he shall receive.

(4) A temporary reservist who incurs physical injury or contracts sickness or disease while performing active Coast Guard service shall be entitled to receive the same hospital treatment as is afforded members of the Regular Coast Guard.

(5) Notice of injury and any claim for benefits on account of disability or death within the purview of this § 8.7201 (c) which occurred prior to September 30, 1944, may be received as timely filed, if filed within one year from September 30, 1944.

Dated: November 25, 1944.

R. R. WAESCHE,
Vice Admiral,
U. S. Coast Guard,
Commandant.

Approved:

JAMES FORRESTAL,
Secretary of the Navy.

[F. R. Doc. 44-18069; Filed, Nov. 28, 1944; 11:13 a. m.]

TITLE 43—PUBLIC LANDS: INTERIOR

Chapter I—General Land Office[1]

[Public Land Order [illegible]]

ARIZONA

WITHDRAWING PUBLIC LAND FOR USE OF WAR DEPARTMENT FOR ARTILLERY RANGE

By virtue of the authority vested in the President and pursuant to Executive Order No. 9337 of April 24, 1943, it is ordered as follows:

Subject to valid existing rights, the following-described public land is hereby withdrawn from all forms of appropriation under the public-land laws, including the mining and mineral-leasing laws, and reserved for the use of the War Department as an artillery range:

GILA AND SALT RIVER MERIDIAN

T. 20 S., R. 20 E.,
Sec. 34, S½NE¼.

The area described contains 80 acres.

This order shall take precedence over but not modify the withdrawal for classification and other purposes made by Executive Order No. 6910 of November 26, 1934, so far as such order affects the above-described land.

The jurisdiction granted by this order shall cease at the expiration of the six months' period following the termination of the unlimited national emergency declared by Proclamation No. 2487 of May 27, 1941 (55 Stat. 1647). Thereupon, jurisdiction over the land hereby reserved shall be vested in the Department of the Interior, and any other Department or agency of the Federal Government according to their respective interests then of record. The land, however, shall remain withdrawn from appropriation as herein provided until otherwise ordered.

MICHAEL W. STRAUS,
Acting Secretary of the Interior.

NOVEMBER 22, 1944.

[F. R. Doc. 44-18261; Filed, Dec. 1, 1944; 10:46 a. m.]

[1] Appendix.

TITLE 49—TRANSPORTATION AND RAILROADS

Chapter I—Interstate Commerce Commission

[Rev. S. O. 242-A]

PART 95—CAR SERVICE

DEMURRAGE CHARGES ON CLOSED BOX CARS

At a session of the Interstate Commerce Commission, Division 3, held at its office in Washington, D. C., on the 29th day of November, A. D. 1944.

Upon further consideration of Revised Service Order No. 242 (9 F.R. 12553) of October 13, 1944, as amended (9 F.R. 13761) and good cause appearing therefor:

It is ordered, That:

(a) Revised Service Order No. 242 (9 F.R. 12553) of October 13, 1944, as amended (9 F.R. 13761), providing increased demurrage charges on box cars held for loading or unloading, be, and it is hereby, vacated and set aside.

(b) *Announcement of vacation of suspension.* Each of the railroads affected by this order shall publish, file, and post a supplement to each of its tariffs affected announcing the vacation by this order on the effective date hereof, of the suspension made by Revised Service Order No. 242 and stating that the provisions in said tariffs which were in effect prior to such suspension will be applied on and after the effective date of this order. (40 Stat. 101 sec. 402, 418, 41 Stat. 476, sec. 4, 54 Stat. 901, 911; 49 U. S. C. 1 (10)-(17), 15 (2))

It is further ordered, That this order shall become effective at 7:00 a. m. December 1, 1944; that a copy of this order and direction shall be served upon each State Commission and upon the Association of American Railroads, Car Service Division, as agent of all railroads subscribing to the car service and per diem agreement under the terms of that agreement; and that notice of this order be given to the general public by depositing a copy in the office of the Secretary of the Commission at Washington, D. C., and by filing it with the Director, Division of the Federal Register.

By the Commission, Division 3.

[SEAL] W. P. BARTEL,
Secretary.

[F. R. Doc. 44-18240; Filed, Nov. 30, 1944; 3:57 p. m.]

[S. O. 246-A]

PART 95—CAR SERVICE

DEMURRAGE CHARGES ON STATE BELT RAILROAD OF CALIFORNIA

At a session of the Interstate Commerce Commission, Division 3, held at its office in Washington, D. C., on the 29th day of November, A. D. 1944.

Upon further consideration of Service Order No. 246 (9 F.R. 12657) of October 17, 1944, as amended (9 F.R. 13807), and good cause appearing therefor:

FMC002318

Order No. 9146 of April 24, 1942, and the act of June 28, 1934, as amended, c. 865, 48 Stat. 1269 (U.S.C. title 43, secs. 315–315p), it is ordered as follows:

The public lands in the following-described areas are hereby withdrawn, subject to valid existing rights, from all forms of appropriation under the public-land laws, including the mining laws, and reserved for the use of the War Department as an ammunition storage depot for the Chemical Warfare Service:

SALT LAKE MERIDIAN

T. 6 S., R. 4 W.,
Secs. 6, 7, 18, 19, 30;
T. 6 S., R. 5 W.,
Secs. 1, 2, 3, 11 to 14, inclusive, 23 to 26, inclusive, and those parts of secs. 4, 9, 10, 15, 22, and 27, lying east of the Union Pacific Railroad right-of-way.

The areas described, including both public and non-public lands, aggregate 12,484 acres.

The order of the Secretary of the Interior of April 8, 1935, establishing Utah Grazing District No. 2 is hereby modified to the extent necessary to permit the use of the lands as herein provided.

It is intended that the public lands within the areas described herein shall be returned to the administration of the Department of the Interior when they are no longer needed for the purpose for which they are reserved.

[SEAL] HAROLD L. ICKES,
Secretary of the Interior.

JULY 21, 1942.

[F. R. Doc. 42-7359; Filed, July 30, 1942; 10:17 a. m.]

[Public Land Order 2[illegible]]

ARIZONA

WITHDRAWING PUBLIC LANDS FOR USE OF THE WAR DEPARTMENT AS A FIELD ARTILLERY RANGE

By virtue of the authority vested in the President and pursuant to Executive Order No. 9146 of April 24, 1942, it is ordered as follows:

The following-described public lands are hereby withdrawn, subject to valid existing rights, from all forms of appropriation under the public-land laws, including the mining laws, and reserved for the use of the War Department as a field artillery range:

GILA AND SALT RIVER MERIDIAN

T. 10 S., R. 20 E.,
Sec. 35;
T. 11 S., R. 20 E.,
Sec. 17, Lot 4;
Sec. 20, Lot 1;
Sec. 29, Lot 1;
T. 10 S., R. 21 E.,
Sec. 29, W½;
Sec. 30, SE¼;
Sec. 31, W½NW¼;
Sec. 33, W½;
T. 11 S., R. 21 E.,
Sec. 6;
Sec. 17, E½ SW¼;
Sec. 19, Lots 1–3, E½W½, SE¼;
Sec. 29, Lots 1, 2, E½NW¼, NE¼;
Sec. 30, E½;
containing 9,859.18 acres.

This order shall take precedence over but shall not rescind or revoke the temporary withdrawal for classification and other purposes made by Executive Order No. 6910 of November 26, 1934, as amended, so far as such order affects the above-described lands.

It is intended that the lands described herein shall be returned to the administration of the Department of the Interior when they are no longer needed for the purpose for which they are reserved.

[SEAL] HAROLD L. ICKES,
Secretary of the Interior.

JULY 21, 1942.

[F. R. Doc. 42-7360; Filed, July 30, 1942; 10:18 a. m.]

WYOMING

AIR-NAVIGATION SITE WITHDRAWAL NO. 184 AND MODIFICATION OF GRAZING DISTRICTS NOS. 3 AND 4

It is ordered, under and pursuant to the provisions of section 4 of the act of May 24, 1928, 45 Stat. 729; 49 U.S.C. 214, that the following-described tracts of public land near Bitter Creek and Tipton, Wyoming, be, and they are hereby, withdrawn from all forms of appropriation under the public-land laws and reserved, subject to valid existing rights, for the use of the Department of Commerce as beacon sites on the Salt Lake-Omaha Airway:

SIXTH PRINCIPAL MERIDIAN

SITE NO. 19, BITTER CREEK

T. 19 N., R. 99 W., sec. 3, NW¼NE¼NE¼, 10 acres.

SITE NO. 20, TIPTON

T. 19 N., R. 96 W., sec. 19, SE¼NW¼NW¼, 10 acres.

And so far as they affect the above-described lands, the departmental orders of October 31, 1936, establishing Wyoming Grazing Districts Nos. 3 and 4, are hereby modified and made subject to the withdrawal effected by this order.

[SEAL] HAROLD L. ICKES,
Secretary of the Interior.

JULY 16, 1942.

[F. R. Doc. 42-7365; Filed, July 30, 1942; 10:16 a. m.]

REDUCING AND REVOKING CERTAIN STOCK DRIVEWAY WITHDRAWALS IN NEVADA

The departmental orders of February 19, April 17 and 22, October 24 and 30, and November 3 and 4, 1919, January 21 and October 13, 1920, April 7, and July 30, 1921, December 1, 1922, August 22, 1923, October 3, 1925, May 1, 1930, July 9, 1931, December 19, 1932, and February 11, 1941, establishing and modifying stock driveway withdrawals under section 10 of the act of December 29, 1916, as amended by the act of January 20, 1920, 39 Stat. 865, 45 Stat. 1144, 43 U.S.C. 300, are hereby revoked so far as they affect the following-described lands, of which a portion is within the Winnemucca National Wildlife Refuge, and the greater portion of the remainder in Nevada Grazing District No. 2, which includes lands within the Charles Sheldon Antelope Range:

MOUNT DIABLO MERIDIAN

T. 38 N., R. 18 E.,
Sec. 32, S½N½ and S½;
Secs. 33, 34, 35, and 36;
T. 41 N., R. 18 E.,
Sec. 2;
Sec. 3, E½;
Sec. 11, E½ and E½W½;
Sec. 13;
Sec. 14, N½, N½S½, and SW¼SW¼;
Secs. 15, 16, 17, 24, and 25;
T. 42 N., R. 18 E.,
Secs. 9, 10, 15, and 22;
Sec. 26, SW¼;
Sec. 27;
Sec. 34, N½ and SE¼;
Sec. 35, W½;
T. 43 N., R. 18 E.,
Secs. 2, 11, and 14;
Sec. 23, N½, NE¼SW¼, S½SW¼, and SE¼;
Sec. 26, N½ and N½S½;
Sec. 27;
Sec. 34, W½E½ and W½;
T. 44 N., R. 18 E.,
Sec. 1, W½;
Sec. 2, E½;
Sec. 11, E½;
Sec. 12, W½;
Sec. 13, W½;
Sec. 14, E½;
Sec. 23, E½;
Sec. 24, W½;
Sec. 25, W½;
Sec. 26, E½;
Sec. 35, E½, SE¼NW¼, and E½SW¼;
Sec. 36, NW¼;
T. 45 N., R. 18 E.,
Secs. 3, 10, 14, 15, and 23;
Sec. 24, W½;
Sec. 25, W½;
Sec. 26, E½;
Sec. 35, E½;
Sec. 36, W½;
T. 46 N., R. 18 E.,
Secs. 3, 10, 15, 22, 27, and 34;
T. 47 N., R. 18 E.,
Secs. 15, 22, 27, and 34;
T. 37 N., R. 19 E.,
T. 38 N., R. 19 E., secs. 31 to 36, inclusive;
T. 41 N., R. 19 E., secs. 25 to 30, inclusive;
T. 34 N., R. 20 E.,
Sec. 1, S½N½, and S½;
Sec. 2;
Sec. 11, N½N½;
Sec. 12, N½N½;
T. 35 N., R. 20 E.,
Sec. 2;
Sec. 3, lots 1 and 2;
Secs. 11, 14, 23, 26, and 35;
T. 36 N., R. 20 E.,
Secs. 1 and 2;
Sec. 11, SE¼;
Sec. 12, NE¼, N½NW¼, SE¼NW¼, and S½;
Sec. 13, N½ and SW¼;
Sec. 14, E½;
Sec. 23;
Sec. 24, NW¼;
Secs. 25 and 35;
T. 37 N., R. 20 E.,
Sec. 1, W½;
Sec. 5, W½, W½SW¼, SW¼SW¼, and SE¼;
Secs. 8, 9, 16, and 6;
Sec. 11, E½;
Sec. 12, W½;
Sec. 13, W½;
Secs. 14, 23, 24, and 36;
T. 38 N., R. 20 E.,
Secs. 10, 11, 14, 23, 26, and 35;
T. 39 N., R. 20 E.,
Secs. 2 and 11;
Sec. 14, NE¼, NE¼NW¼, S½NW¼, and S½;
Secs. 23, 26, and 35;
T. 39½ N., R. 20 E., secs. 23, 26, and 35;

TITLE 43—PUBLIC LANDS: INTERIOR

Chapter I—Bureau of Land Management, Department of the Interior

Appendix—Public Land Orders

[Public Land Order 1471]

[Arizona 014355]

ARIZONA

WITHDRAWING PUBLIC LANDS IN ARIZONA FOR USE OF DEPARTMENT OF THE ARMY, IN CONNECTION WITH ELECTRONICS PROVING GROUND, FORT HUACHUCA, ARIZONA

By virtue of the authority vested in the President and pursuant to Executive Order No. 10355 of May 26, 1952, it is ordered as follows:

1. Subject to valid existing rights, the following described public lands in Arizona are hereby withdrawn from all forms of appropriation under the public land laws, including the mining and mineral leasing laws, except as hereafter indicated, and reserved for use by the Department of the Army, for military purposes:

GILA AND SALT RIVER MERIDIAN

T. 20 S., R. 20 E.,
Sec. 25, NE¼NE¼, S½NE¼, E½W½, and SE¼;
Sec. 26, Lot 1, NE¼SW¼, SW¼SW¼, and SE¼;
Sec. 36.

T. 21 S., R. 20 E.,
Secs. 1 and 2;
Sec. 3, Lot 1, N½SE¼, and SE¼SE¼;
Sec. 4, Lots 2 and 3, S½N½, and S½;
Sec. 9;
Sec. 10, N½ and SW¼;
Sec. 11, SE¼;
Sec. 12;
Sec. 13, NE¼;
Sec. 16.

T. 20 S., R. 21 E.,
Sec. 19, NE¼;
Sec. 20;
Sec. 21, W½;
Sec. 29, N½, SW¼;
[illegible]

T. 21 S., R. 21 E.,
Sec. 3, Lots 6, 7, W½SE¼ and SW¼;
Sec. 4, Lots 1, 2, 3, 4, S½N½, E½S½, and SW¼SW¼;
Sec. 6, Lots 1, 2, 3, 4, and SE¼;
Sec. 7, Lots 1, 2, 3, 4, NE¼, E½W½, and S½SE¼;
Secs. 8, 9, 10, and 16.

The areas described aggregate 13,463.27 acres.

2. The withdrawal made by this order shall attach to the following-described lands, or any of them, upon acquisition of title thereto by the United States:

T. 20 S., R. 20 E.,
Sec. 25, NW¼NE¼ and W½W½;
Sec. 26, SE¼SW¼.

T. 21 S., R. 20 E.,
Sec. 3, Lots 2, 3, 4, S½N½, SW¼ and SW¼SE¼;
Sec. 4, Lot 4;
Sec. 5, E½SE¼;
Sec. 8, E½NE¼;

T. 21 S., R. 21 E.,
Sec. 4, SE¼SW¼ and S½SE¼;
Sec. 6, S½N½ and SW¼;
Sec. 7, N½SE¼.

3. The jurisdiction granted by this order is subject to the following conditions:

(a) That the interests of the United States in all minerals, including oil and gas, in the lands shall remain under jurisdiction of the Department of the Interior, and no disposition of, or exploration for such minerals shall be made except under the applicable mining and mineral leasing laws, and then only after such modification of the provisions of this order, with concurrence of the Department of the Army, as may be necessary to permit such disposition.

(b) All hunting, fishing and trapping on the lands shall be in accordance with the fish and game laws of the State of Arizona. The general public shall enjoy the same rights to hunt, fish or trap on the lands as may be afforded to military personnel, their dependents or employees of the Department of Defense.

(c) Upon termination of jurisdiction of the Department of the Army over the lands, that Department shall certify to the Department of the Interior that the lands have been decontaminated of unexploded ordnance or other objects or materials potentially dangerous to users of the lands, and such certification shall be an essential prerequisite to the reassumption by the Department of the Interior of jurisdiction over the lands.

(d) The Department of the Army may close roads or trails commonly in public use but only at times when the public safety or national security as determined by the Commanding Officer in charge requires such closure, and appropriate warning notices shall be kept posted during such times.

(e) Grazing use of the lands, if determined by the Commanding Officer in charge to be compatible with their use for military purposes, shall be administered by the Bureau of Land Management under the provisions of the Taylor Grazing Act of June 28, 1934 (48 Stat. 315, 43 U. S. C. 315, et seq.) as amended.

(f) The Department of the Army shall take all necessary precautions to prevent and suppress brush and range fires occurring within the withdrawn lands or outside such lands when resulting from military use, and may enter into agreement with the Bureau of Land Management to provide for a transfer of funds for the suppression of range fires by the Bureau of Land Management.

(g) Personnel of the State Department of Fish and Game and the United States Bureau of Sport Fisheries and Wildlife shall have access to the lands at appropriate times, not inconsistent with military requirements, at such times as may be mutually agreed upon with the Commanding Officer of the installation in charge, for the purpose of conducting investigations and programs for the control of predatory animals, and at all times when hunting, fishing, or trapping is being permitted, for enforcement of the game laws.

(h) Personnel of the Bureau of Land Management shall have access to and across the lands, when necessary, and at appropriate times not inconsistent with military requirements, in connection with administration of adjacent public lands, and the Department of the Army shall designate such times as the necessities therefor arise.

(i) The withdrawal made by this order shall not extend to any waters in or upon the lands. Any waters not heretofore appropriated shall continue subject to appropriation, as may be authorized by applicable law. The Department of the Army shall not appropriate any of such waters except under applicable State law.

ROGER C. ERNST,
Assistant Secretary of the Interior.

AUGUST 22, 1957.

[F. R. Doc. 57-7028; Filed, Aug. 27, 1957; 8:45 a. m.]

Tract A

FMC002320

specified in 721.85(a)(1), (b)(1) and (c)(1).

(v) *Release to water.* Requirements as specified in § 721.90(a)(2), (b)(2) and (c)(2).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, andprocessors of this substance, as specified in § 721.125(a) through (c), (e), (f), (i) and (j).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

23. By adding new § 721.2194 to subpart E to read as follows:

§ 721.2194 Substituted triazine isocyanurate (generic name).

(a) *Chemical substance and significant new uses subject to reporting.* (1) The chemical substance substituted triazine isocyanurate (PMN P-86-66) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Protection in the workplace.* Requirements as specified in § 721.63(a)(1), (a)(3), (a)(4), (a)(5)(iv) through (a)(5)(vii), (a)(6)(i), (a)(6)(ii) and (a)(6)(iii), (b) (concentration set at 1.0 percent) and (c).

(ii) *Hazard communication program.* Requirements as specified in § 721.72(b)(2), (d), (e) (concentration set at 1.0 percent), (f) and (g)(1)(iii), (g)(2)(i), (g)(2)(ii) and (g)(2)(iii). The provisions of § 721.72(d) requiring employees to be provided with information on the location and availability of a written hazard communication program and MSDSs do not apply when the written program and MSDS are not required under § 721.72(a) and (c), respectively. The provision of § 721.72(g) requiring placement of specific information on an MSDS does not apply when an MSDS is not required under § 721.72(c).

(iii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(f), (j) (as a curing agent for epoxy resins), and (q).

(iv) *Disposal.* Requirements as specified in 721.85(a)(1), (a)(2), (b)(1), (b)(2), (c)(1) and (c)(2).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (c), (e) through (g), and (j).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

24. By adding new § 721.2196 to subpart E to read as follows:

§ 721.2196 Poly(substituted triazinyl) piperazine (generic name).

(a) *Chemical substance and significant new uses subject to reporting.*(1) The chemical substance poly(substituted triazinyl) piperazine (PMN P-88-436) is subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

(2) The significant new uses are:

(i) *Hazard communication program.* Requirements as specified in § 721.72(b)(2),(c),(e), (f), (g)(1) (statement—health effects not fully determined), (g)(2)(i) through (iii) and (g)(5).

(ii) *Industrial, commercial, and consumer activities.* Requirements as specified in § 721.80(q).

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Recordkeeping.* The following recordkeeping requirements are applicable to manufacturers, importers, and processors of this substance, as specified in § 721.125(a) through (c), (g), and (h).

(2) *Limitations or revocation of certain notification requirements.* The provisions of § 721.185 apply to this significant new use rule.

(3) *Determining whether a specific use is subject to this section.* The provisions of § 721.575(b)(1) apply to this section.

(Approved by the Office of Management and Budget under OMB control number 2070-0012)

[FR Doc. 90-18552 Filed 8-8-90; 8:45 am]

BILLING CODE 6560-50-F

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Public Land Order 6788

[AZ-930-00-4214-10; A-22473]

Withdrawal and Reservation of the Mineral Estate, Fort Huachuca Military Reservation; Arizona

AGENCY: Bureau of Land Management, Interior.

ACTION: Public land order.

SUMMARY: This order withdraws 2,040 acres of the mineral estate located within the boundaries of the Fort Huachuca Military Reservation, from location and entry under the mining laws for a period of 20 years.

EFFECTIVE DATES: August 9, 1990.

FOR FURTHER INFORMATION CONTACT: John Mezes, BLM, Arizona State Office, P.O. Box 16563, Phoenix, Arizona 85011, 602-640-5509.

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, 90 Stat. 2751; 43 U.S.C. 1714, it is ordered as follows:

1. Subject to valid existing rights, the following described public mineral estate is hereby withdrawn from location or entry under the United States mining laws (30 U.S.C. ch. 2) in order to provide for the continued uninterrupted use of the land as an integral part of the East Range, Fort Huachuca, Arizona. The surface of the land is either owned or leased by the withdrawing Agency, Department of the Army.

Gila and Salt River Meridian

T. 20 S., R. 20 E.,
Sec. 28, SE¼SW¼;
Sec. 33, S½SE¼;
Sec. 34, S½NW¼, and SE¼;
T. 20 S., R. 21 E.,
Sec. 19, SE¼;
Sec. 31, S½, NE¼, and E½NW¼.
T. 21 S., R. 20 E.,
Sec. 5, E½SE¼;
Sec. 8, E½NE¼;
Sec. 10, SE¼;
Sec. 11, NE¼;
Sec. 13, SE¼;
Sec. 15, NE¼;
Sec. 24, NE¼.

The areas described aggregate 2,040 acres in Cochise County.

2. 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), the Secretary

determines that the withdrawal shall be extended.

Dated: July 31, 1990.

Dave O'Neal,

Assistant Secretary of the Interior.

[FR Doc. 90-18675 Filed 8-8-90; 8:45 am]

BILLING CODE 4310-32-M

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43 CFR Public Land Order 6789

[AK-932-00-4214-10; A-026010, A-027005]

Partial Revocation of Public Land Order No. 1094 and Public Land Order No. 1127, as Amended, for Selection of Lands by the State of Alaska; Alaska

AGENCY: Bureau of Land Management, Interior.

ACTION: Public land order.

SUMMARY: This order revokes two public land orders insofar as they affect 749 acres of National Forest System lands withdrawn for use by the Forest Service, Department of Agriculture, for public service sites. The lands are no longer needed for the purpose for which they were withdrawn. This action will also accommodate community grant selections AA-17587, AA-57977, and AA-71609, filed by the State of Alaska and approved by the Department of Agriculture pursuant to section 6(a) of the Alaska Statehood Act. Any lands described herein that are not conveyed to the State of Alaska will be subject to the terms and conditions of the national forest reservation and any other withdrawals of record.

EFFECTIVE DATE: August 9, 1990.

FOR FURTHER INFORMATION CONTACT: Sandra C. Thomas, BLM Alaska State Office, 222 W. 7th Avenue, No. 13, Anchorage, Alaska 99513-7599, 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. Public Land Order No. 1094 and Public Land Order No. 1127, as amended, which withdrew lands within the Chugach National Forest for use by the Forest Service for public service sites, are hereby revoked as to the following described lands:

Seward Meridian

Seward Highway/Hope Highway Junction (A-026010)

A tract extending 10 chains on each side of the centerline of the Seward-Anchorage Highway beginning at Station 1474+00 Section C and extending along and parallel to the highway centerline to Station 1507+60 of the Hope Highway Section D, approximate latitude 60°47' N., longitude 149°26' W., located within the following described area:

T. 8 N., R. 1 W. (unsurveyed).
Sec. 15.

The area described contains approximately 74 acres.

Snug Harbor Road (A-027005)

A strip of land 25 chains (1,650 feet) in width paralleling the southwest shore of Kenai Lake, located within the following described areas:

T. 4 N., R. 2 W. (unsurveyed).
Sec. 18:
T. 4 N., R. 3 W. (unsurveyed).
Secs. 1, 2, 12, and 13.

The area described contains approximately 675 acres.

The areas described aggregate a total of approximately 749 acres.

2. Subject to valid existing rights, the lands described above are hereby opened to selection by the State of Alaska under the Alaska Statehood Act of July 7, 1958, 48 U.S.C. prec. 21 (1988).

3. As provided by section 6(g) of the Alaska Statehood Act, the State of Alaska is provided a preference right of selection for the lands described above for a period of ninety-one (91) days from the date of publication of this order, if the lands are otherwise available. Any of the lands described herein that are not conveyed to the State of Alaska will be subject to the terms and conditions of the Chugach National Forest reservation and any other withdrawals of record.

Dated: August 1, 1990.

Dave O'Neal,

Assistant Secretary of the Interior.

[FR Doc. 90-18719 Filed 8-8-90; 8:45 am]

BILLING CODE 4310-JA-M

[AK-932-00-4214-10; F-532]

43 CFR Public Land Order 6790

Partial Revocation of Public Land Order No. 4508 for Selection of Land by the State of Alaska

AGENCY: Bureau of Land Management, Interior.

ACTION: Public land order.

SUMMARY: This order revokes a public land order insofar as it affects 470 acres of public land withdrawn for the Department of Commerce for the Bender Mountain Geophysical Observatory. The land is no longer needed for the purpose for which it was withdrawn. This action will also open the land for selection by the State of Alaska, if such land is otherwise available. Any land described herein that is the State will be subject and conditions of withd

EFFECTIVE DATE: Augus

FOR FURTHER INFORMAT Sandra C. Thomas, BLM Office, 222 W. 7th Aven Anchorage, Alaska 995 5477.

By virtue of the auth Secretary of the Interio of the Federal Land Pol Management Act of 197 (1988), and by section 1 Alaska Native Claims U.S.C. 1616(d)(1) (1988) follows:

1. Public Land Order withdrew public land Mountain Geophysical hereby revoked insofa following described la

Fairbanks Meridian

Commencing from the Sec. 16, T. 1 N., R. 1 W., beginning:

Thence N. 89°54' W., 5. along the section lin and 16 to the northw

Thence S. 0°8' E., 2,970 along the section lin and 17;

Thence S. 89°54' E., 33

Thence S. 0°8' E., 990 point approximately centerline of the ex

Thence easterly, with approximately 440 centerline of the ex on the section line 16;

Thence N. 0°8' W., alo between Secs. 15 a or less to the point

The area described con 470 acres.

2. Subject to valid land described above to selection by the Sta either the Alaska Stat 7, 1958, 48 U.S.C. prec section 906(b) of the Interest Lands Conse U.S.C. 1635 (1988).

3. The State of Alas under section 906(e) National Interest Lan Act, 43 U.S.C. 1635(e) effective without furt State upon publicatio land order in the Fed not conveyed to the S to the terms and con withdrawals of reco

FORT HUACHUCA

1990 PRELIMINARY HSR

REPORT

MW:FTHUMU7.WK1,6-24-91

FORT HUACHUCA,PROJECTED MUNICIPAL WATER USE
*ACTUAL VALUES AS REPORTED BY BASE PERSONEL(EXCLUDING GPCD RATE).

	YEAR	POPULATION 0.06	GPCD	AF/YR USE	YEAR	POPULATION 0.03	GPCD	AF/YR USE	YEAR	POPULATION 0.01	GPCD	AF/YR USE	YEAR	POPULATION 0	GPCD	AF/YR USE
*	1982	9433	259	2736	1982	9433	259	2736	1982	9433	259	2736	1982	9433	259	2736
*	1983	9996	257	2876	1983	9996	257	2876	1983	9996	257	2876	1983	9996	257	2876
*	1984	10127	271	3071	1984	10127	271	3071	1984	10127	271	3071	1984	10127	271	3071
*	1985	10502	254	2986	1985	10502	254	2986	1985	10502	254	2986	1985	10502	254	2986
*	1986	8890	291	2898	1986	8890	291	2898	1986	8890	291	2898	1986	8890	291	2898
*	1987	9667	210	2273	1987	9667	210	2273	1987	9667	210	2273	1987	9667	210	2273
*	1988	9142	313	3201	1988	9142	313	3201	1988	9142	313	3201	1988	9142	313	3201
	1989	9691	265	2875	1989	9416	265	2793	1989	9233	265	2739	1989	9142	265	2712
90	1990	10272	265	3047	1990	9699	265	2877	1990	9326	265	2767	1990	9142	265	2712
	1991	10888	265	3230	1991	9990	265	2964	1991	9419	265	2794	1991	9142	265	2712
	1992	11542	265	3424	1992	10289	265	3052	1992	9513	265	2822	1992	9142	265	2712
	1993	12234	265	3629	1993	10598	265	3144	1993	9608	265	2850	1993	9142	265	2712
	1994	12968	265	3847	1994	10916	265	3238	1994	9704	265	2879	1994	9142	265	2712
95	1995	13746	265	4078	1995	11244	265	3335	1995	9801	265	2908	1995	9142	265	2712
	1996	14571	265	4323	1996	11581	265	3436	1996	9899	265	2937	1996	9142	265	2712
	1997	15445	265	4582	1997	11928	265	3539	1997	9998	265	2966	1997	9142	265	2712
	1998	16372	265	4857	1998	12286	265	3645	1998	10098	265	2996	1998	9142	265	2712
	1999	17354	265	5148	1999	12655	265	3754	1999	10199	265	3026	1999	9142	265	2712
2000	2000	18396	265	5457	2000	13034	265	3867	2000	10301	265	3056	2000	9142	265	2712
	2001	19499	265	5785	2001	13425	265	3983	2001	10404	265	3087	2001	9142	265	2712
	2002	20669	265	6132	2002	13828	265	4102	2002	10508	265	3117	2002	9142	265	2712
	2003	21909	265	6500	2003	14243	265	4225	2003	10614	265	3149	2003	9142	265	2712
	2004	23224	265	6890	2004	14670	265	4352	2004	10720	265	3180	2004	9142	265	2712
5	2005	24617	265	7303	2005	15110	265	4483	2005	10827	265	3212	2005	9142	265	2712
	2006	26094	265	7741	2006	15564	265	4617	2006	10935	265	3244	2006	9142	265	2712
	2007	27660	265	8206	2007	16031	265	4756	2007	11045	265	3276	2007	9142	265	2712
	2008	29320	265	8698	2008	16511	265	4898	2008	11155	265	3309	2008	9142	265	2712
	2009	31079	265	9220	2009	17007	265	5045	2009	11267	265	3342	2009	9142	265	2712
10	2010	32944	265	9773	2010	17517	265	5197	2010	11379	265	3376	2010	9142	265	2712
	2011	34920	265	10359	2011	18043	265	5352	2011	11493	265	3409	2011	9142	265	2712
	2012	37015	265	10981	2012	18584	265	5513	2012	11608	265	3444	2012	9142	265	2712
	2013	39236	265	11640	2013	19141	265	5678	2013	11724	265	3478	2013	9142	265	2712
	2014	41590	265	12338	2014	19716	265	5849	2014	11841	265	3513	2014	9142	265	2712
15	2015	44086	265	13078	2015	20307	265	6024	2015	11960	265	3548	2015	9142	265	2712
	2016	46731	265	13863	2016	20916	265	6205	2016	12079	265	3583	2016	9142	265	2712
	2017	49535	265	14695	2017	21544	265	6391	2017	12200	265	3619	2017	9142	265	2712
	2018	52507	265	15577	2018	22190	265	6583	2018	12322	265	3655	2018	9142	265	2712
	2019	55657	265	16511	2019	22856	265	6780	2019	12445	265	3692	2019	9142	265	2712
20	2020	58997	265	17502	2020	23541	265	6984	2020	12570	265	3729	2020	9142	265	2712
	2021	62537	265	18552	2021	24248	265	7193	2021	12695	265	3766	2021	9142	265	2712
	2022	66289	265	19665	2022	24975	265	7409	2022	12822	265	3804	2022	9142	265	2712
	2023	70266	265	20845	2023	25724	265	7631	2023	12951	265	3842	2023	9142	265	2712
	2024	74482	265	22096	2024	26496	265	7860	2024	13080	265	3880	2024	9142	265	2712
25	2025	78951	265	23421	2025	27291	265	8096	2025	13211	265	3919	2025	9142	265	2712

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MW:FTHUEF7.WK1,6-24-91

FORT HUACHUCA, PROJECTED EFFLUENT PRODUCTION
*ACTUAL VALUES AS REPORTED BY BASE PERSONEL(EXCLUDING GPCD RATE).

	YEAR	POPULATION 0.06	GPCD	AF/YR USE	YEAR	POPULATION 0.03	GPCD	AF/YR USE	YEAR	POPULATION 0.01	GPCD	AF/YR USE	YEAR	POPULATION 0	GPCD	AF/YR USE
*	1982	9433			1982	9433			1982	9433			1982	9433		
*	1983	9996			1983	9996			1983	9996			1983	9996		
*	1984	10127			1984	10127			1984	10127			1984	10127		
*	1985	10502			1985	10502			1985	10502			1985	10502		
*	1986	8890			1986	8890			1986	8890			1986	8890		
*	1987	9667			1987	9667			1987	9667			1987	9667		
*	1988	9142			1988	9142			1988	9142			1988	9142		
	1989	9691	139	1509	1989	9416	139	1466	1989	9233	139	1438	1989	9142	139	1423
90	1990	10272	139	1599	1990	9699	139	1510	1990	9326	139	1452	1990	9142	139	1423
	1991	10888	139	1695	1991	9990	139	1555	1991	9419	139	1467	1991	9142	139	1423
	1992	11542	139	1797	1992	10289	139	1602	1992	9513	139	1481	1992	9142	139	1423
	1993	12234	139	1905	1993	10598	139	1650	1993	9608	139	1496	1993	9142	139	1423
	1994	12968	139	2019	1994	10916	139	1700	1994	9704	139	1511	1994	9142	139	1423
95	1995	13746	139	2140	1995	11244	139	1751	1995	9801	139	1526	1995	9142	139	1423
	1996	14571	139	2269	1996	11581	139	1803	1996	9899	139	1541	1996	9142	139	1423
	1997	15445	139	2405	1997	11928	139	1857	1997	9998	139	1557	1997	9142	139	1423
	1998	16372	139	2549	1998	12286	139	1913	1998	10098	139	1572	1998	9142	139	1423
	1999	17354	139	2702	1999	12655	139	1970	1999	10199	139	1588	1999	9142	139	1423
2000	2000	18396	139	2864	2000	13034	139	2029	2000	10301	139	1604	2000	9142	139	1423
	2001	19499	139	3036	2001	13425	139	2090	2001	10404	139	1620	2001	9142	139	1423
	2002	20669	139	3218	2002	13828	139	2153	2002	10508	139	1636	2002	9142	139	1423
	2003	21909	139	3411	2003	14243	139	2218	2003	10614	139	1653	2003	9142	139	1423
	2004	23224	139	3616	2004	14670	139	2284	2004	10720	139	1669	2004	9142	139	1423
5	2005	24617	139	3833	2005	15110	139	2353	2005	10827	139	1686	2005	9142	139	1423
	2006	26094	139	4063	2006	15564	139	2423	2006	10935	139	1703	2006	9142	139	1423
	2007	27660	139	4307	2007	16031	139	2496	2007	11045	139	1720	2007	9142	139	1423
	2008	29320	139	4565	2008	16511	139	2571	2008	11155	139	1737	2008	9142	139	1423
	2009	31079	139	4839	2009	17007	139	2648	2009	11267	139	1754	2009	9142	139	1423
10	2010	32944	139	5129	2010	17517	139	2727	2010	11379	139	1772	2010	9142	139	1423
	2011	34920	139	5437	2011	18043	139	2809	2011	11493	139	1789	2011	9142	139	1423
	2012	37015	139	5763	2012	18584	139	2893	2012	11608	139	1807	2012	9142	139	1423
	2013	39236	139	6109	2013	19141	139	2980	2013	11724	139	1825	2013	9142	139	1423
	2014	41590	139	6476	2014	19716	139	3070	2014	11841	139	1844	2014	9142	139	1423
15	2015	44086	139	6864	2015	20307	139	3162	2015	11960	139	1862	2015	9142	139	1423
	2016	46731	139	7276	2016	20916	139	3257	2016	12079	139	1881	2016	9142	139	1423
	2017	49535	139	7713	2017	21544	139	3354	2017	12200	139	1900	2017	9142	139	1423
	2018	52507	139	8175	2018	22190	139	3455	2018	12322	139	1919	2018	9142	139	1423
	2019	55657	139	8666	2019	22856	139	3559	2019	12445	139	1938	2019	9142	139	1423
20	2020	58997	139	9186	2020	23541	139	3665	2020	12570	139	1957	2020	9142	139	1423
	2021	62537	139	9737	2021	24248	139	3775	2021	12695	139	1977	2021	9142	139	1423
	2022	66289	139	10321	2022	24975	139	3889	2022	12822	139	1996	2022	9142	139	1423
	2023	70266	139	10940	2023	25724	139	4005	2023	12951	139	2016	2023	9142	139	1423
	2024	74482	139	11597	2024	26496	139	4125	2024	13080	139	2037	2024	9142	139	1423
25	2025	78951	139	12293	2025	27291	139	4249	2025	13211	139	2057	2025	9142	139	1423

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Revision 5/1/98

TABLE
ARIZONA DEPARTMENT OF WATER RESOURCES
NON-INDIAN FEDERAL RESERVED WATER RIGHTS
FILE SUMMARY

UNITED STATES ARMY COMMUNICATIONS COMMAND
FORT HUACHUCA
11-F01

FMC002326

	CLAIMED INFORMATION						DWR INFORMATION							
ENT NT	SOURCE	LOCATION	CLAIMED USE	NAME	WATERCOURSE	1988 ANNUAL USE AF	WATER USE #	POD #	WATER USE TYPE	USE STATUS	USE LOCATION	POD LOCATION	ACREAGE OR CAPACITY (ac-ft)	MAP
74 *	WELL	NWSESE 29 22S 20E	ML	GW	GARDEN CANYON	108		W09	CAPPED	UNUSED		NWSESE 29 22S 20E		
	WELL	NWSWSE 20 21S 20E	TEST	TEST#1				W12	CAPPED	UNUSED		NWSWSE 20 21S 20E		
	WELL	SESWNW 30 21S 20E	TEST	TEST#2				W13	CAPPED	UNUSED		SESWNW 30 21S 20E		
	WELL	NENENE 16 21S 20E	TEST	TEST#3				W14	CAPPED	UNUSED		NENENE 16 21S 20E		
	WELL	SWSENE 15 21S 20E	TEST	TEST#4				W15	CAPPED	UNUSED		SWSENE 15 21S 20E		
	WELL	SESWSW 35 20S 20E	TEST	TEST#6				W16	CAPPED	UNUSED		SESWSW 35 20S 20E		
	WELL	SESWNW 11 21S 20E	TEST	TEST#7				W17	CAPPED	UNUSED		SESWNW 11 21S 20E		
	WELL	NWNWSW 13 21S 20E	TEST	TEST#8				W18	CAPPED	UNUSED		NWNWSW 13 21S 20E		
	WELL	SWSWNW 17 21S 21E	TEST	TEST#9				W19	CAPPED	UNUSED		SWSWNW 17 21S 21E		
*	WELL	NWSENW 07 21S 21E	ML	ERB	GRAVEYARD GULCH	1		W20	ML	SOURCE A WELL		NWSENW 07 21S 21E		
	WELL	SWNWNW 10 21S 20E	ML	WELL#9	SOLDIER CREEK			W21	CAPPED	UNUSED		SWNWNW 10 21S 20E		
	WELL	SWNWNW 22 21S 20E	ML	SP	SOLDIER CREEK	67		W22	ML	SOURCE A WELL		SENWNW 22 21S 20E		
	WELL	NESWNE 26 21S 20E	ML	WR1	GRAVEYARD GULCH	1	IR02	W10	ML,IR	VERIFIED	SEE TEXT/MAP	NESWNE 26 21S 20E	47.9	111-20-CDD
	WELL	NENWNE 23 21S 20E	ML,IR	WR2	GRAVEYARD GULCH	1		W11	ML,IR	VERIFIED	SEE TEXT/MAP	NWNENE 23 21S 20E		111-20-CDA
	SPR	NWSW 14 22S 19E	MU	SPRING#1	HUACHUCA CANYON		MU01	S01	MU	VERIFIED		NWSW 14 22S 19E		111-23
	SPR	NWSW 14 22S 19E	MU	SPRING#2	HUACHUCA CANYON			S02	MU	VERIFIED		NWSW 14 22S 19E		111-23
	SPR	NENE 22 22S 19E	MU	SPRING#3	HUACHUCA CANYON			S03	MU	VERIFIED		NENE 22 22S 19E		111-22
	SPR	NENE 22 22S 19E	MU	SPRING#3a	HUACHUCA CANYON			S04	MU	VERIFIED		NENE 22 22S 19E		111-22
	SPR	NENE 22 22S 19E	MU	SPRING#4	HUACHUCA CANYON			S05	MU	VERIFIED		NENE 22 22S 19E		111-22
	SPR	NESW 31 22S 20E	MU	PICNIC SPRING	GARDEN CANYON			S07	MU	VERIFIED		NESW 31 22S 20E		111-23
	SPR	SWSW 31 22S 20E	MU	CHAIN SPRING	GARDEN CANYON			S08	MU	VERIFIED		NWSW 31 22S 20E		111-23
	SPR	SESE 36 22S 19E	MU	SPRING#1	GARDEN CANYON			S09	MU	VERIFIED		SESE 36 22S 19E		111-23
*	SPR	SESE 36 22S 19E	MU	SPRING#1b	GARDEN CANYON			S10	MU	VERIFIED		NENE 01 23S 19E		111-23

ML

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*=USE CHANGE DUE TO AMMENDED STATEMENT OF CLAIMANT

TABLE
ARIZONA DEPARTMENT OF WATER RESOURCES
NON-INDIAN FEDERAL RESERVED WATER RIGHTS
FILE SUMMARY

UNITED STATES ARMY COMMUNICATIONS COMMAND
FORT HUACHUCA
11-F01

	CLAIMED INFORMATION							DWR INFORMATION							
MENT ANT	SOURCE	LOCATION	CLAIMED USE	NAME	WATERCOURSE	1988 ANNUAL USE AF		WATER USE #	POD #	WATER USE TYPE	USE STATUS	USE LOCATION	POD LOCATION	ACREAGE OR CAPACITY (ac-ft)	MAP
774	* SPR	NENE 01 23S 19E	MU	SPRING#1a	GARDEN CANYON			MU01	S11	MU	VERIFIED		NENE 01 23S 19E		111-23
	* SPR	NESW 01 23S 19E	MU	SPRING#3	GARDEN CANYON				S12	MU	VERIFIED		NESW 01 23S 19E		111-23
	* SPR	NESW 01 23S 19E	MU	SPRING#2	GARDEN CANYON				S13	MU	VERIFIED		NESW 01 23S 19E		111-23
	SPR	SWSW 01 23S 19E	MU	SPRING#4	GARDEN CANYON				S14	MU	VERIFIED		SWSW 01 23S 19E		111-23
	* WELL	NESENE 16 21S 20E	DM,ML	WELL#8	SOLDIER CREEK	486			W01	MU	VERIFIED		NESENE 16 21S 20E		111-20
	* WELL	NWNWNW 22 21S 20E	DM,ML	WELL#7	SOLDIER CREEK	486			W02	MU	VERIFIED		NWNWNW 22 21S 20E		111-20
	WELL	SWNESW 28 21S 20E	DM,ML	WELL#5	SOLDIER CREEK	43			W03	MU,ML	VERIFIED		SWNESW 28 21S 20E		111-20
	WELL	NENWNE 33 21S 20E	DM,ML	WELL#4	SOLDIER CREEK	546			W04	MU,ML	VERIFIED		NENWNE 33 21S 20E		111-20
	WELL	NWNWSE 33 21S 20E	DM,ML	WELL#6	SOLDIER CREEK	754			W05	MU,ML	VERIFIED		NWNWSE 33 21S 20E		111-20
	WELL	NWNESE 33 21S 20E	DM,ML	WELL#3	SOLDIER CREEK	238			W06	MU,ML	VERIFIED		NWNESE 33 21S 20E		111-20
	WELL	NWNWNW 03 22S 20E	DM,ML	WELL#1	SOLDIER CREEK	276			W07	MU,ML	VERIFIED		NWNWNW 03 22S 20E		111-23
	WELL	NWNWNW 03 22S 20E	DM,ML	WELL#2	SOLDIER CREEK	369			W08	MU,ML	VERIFIED		NWNWNW 03 22S 20E		111-23
775	* EFF		IR	GOLF COURSE	Z1				E01	RC	VERIFIED	SEE TEXT	SENESE 33 21S 20E	94.8	
	* EFF		IR	CHAFFEE FIELD	Z2				E02	IR	VERIFIED	SEE TEXT	SWSWSE 28 21S 20E	10.3	
	WELL	NESESW 34 20S 20E	ML	WM1	SOLDIER CREEK				W23	CAPPED	UNUSED		NESESW 34 20S 20E		
	WELL	SWSESW 27 20S 20E	ML	WM2	SOLDIER CREEK				W24	CAPPED	UNUSED		SWSESW 27 20S 20E		
	WELL	NENENW 32 22S 20E	WL	GWM	GARDEN CANYON				W25	WL	SOURCE A WELL		SWNENW 32 22S 20E		
	DAM	NWSW 16 21S 19E	RC,WL	ANTELOPE(19)	BABOCOMARI	4.8		PS01		RC,WL	VERIFIED	NWSW 16 21S 19E		26.4	111-19
	DAM	SESW 20 21S 19E	RC,WL	SYCAMORE(9)	SYCAMORE CANYON	6		PS02		RC,WL	VERIFIED	SESW 20 21S 19E		38.8	111-19
	DAM	SENW 28 21S 19E	RC,WL	HIDDEN(5)	BLACKTAIL CANYON	5.6		PS03		RC,WL	VERIFIED	SENW 28 21S 19E		22.5	111-19

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*=USE CHANGE DUE TO AMMENDED STATEMENT OF CLAIMANT

FMC002327

TABLE
ARIZONA DEPARTMENT OF WATER RESOURCES
NON-INDIAN FEDERAL RESERVED WATER RIGHTS
FILE SUMMARY

UNITED STATES ARMY COMMUNICATIONS COMMAND
FORT HUACHUCA
11-F01

FMC002328

	CLAIMED INFORMATION						DWR INFORMATION							
STATEMENT OF CLAIMANT	SOURCE	LOCATION	CLAIMED USE	NAME	WATERCOURSE	1988 ANNUAL USE AF	WATER USE #	POD #	WATER USE TYPE	USE STATUS	USE LOCATION	POD LOCATION	ACREAGE OR CAPACITY (ac-ft)	MAP
39-10775	DAM	NWNE 09 22S 20E	RC,WL	GOLF COURSE(2)	SOLDIER CREEK	14.4	PS04		RC,WL	VERIFIED	NWNE 09 22S 20E		59.7	111-23
	DAM	NESE 17 22S 20E	RC,WL	GRAVEL PIT(1)	WOODCUTTER CANYON	11.5	PS05		RC,WL	VERIFIED	NESE 17 22S 20E		57.4	111-23
	* DAM	NENE 03 21S 20E	EC,FC	(k)	SOLDIER CREEK	0.5	SP01		WL,EC,FC	VERIFIED	NENE 03 21S 20E			111-20
	DAM	NENE 09 21S 20E	EC,FC	(l)	SOLDIER CREEK	0.5	SP02		WL,EC,FC	VERIFIED	NENE 09 21S 20E			111-20
	DAM	SENW 21 20S 21E	WL	(r)	SAN PEDRO	0.3	SP03		WL	VERIFIED	NENW 21 20S 21E			111-20
	* DAM	SWNW 16 21S 19E	WL	LOWER ANTELOPE(41)	BABOCAMARI		SP04		WL	VERIFIED	SWNW 16 21S 19E		14.9	111-19
	* DAM	NESW 29 21S 19E	WL	SYCAMORE II(42)	SYCAMORE		SP05		WL	VERIFIED	NESW 29 21S 19E		10.5	111-19
	DAM	SWNE 26 21S 19E	EC,FC	BUFFALO CORRAL(12)	COYOTE CANYON	1.5	SP06		WL	VERIFIED	SWNE 26 21S 19E			111-20
	* DAM	SWNE 31 21S 19E	EC,FC	(39a)	SYCAMORE	0.5	SP07		WL,EC,FC	VERIFIED	SWNE 31 21S 19E			111-19
	* DAM	NWSE 21 22S 19E	RC,WL	WEST HUACHUCA(14)	HUACHUCA CANYON	0.7	SP08		WL	VERIFIED	SWNE 21 22S 19E			111-22
	DAM	SESE 07 21S 20E	EC,FC	LOWER HUACHUCA(23)	HUACHUCA CANYON	4.8	SP09		WL,EC,FC	VERIFIED	SESE 07 21S 20E			111-20
	DAM	NWSE 18 21S 20E	WL	(q)	HUACHUCA CANYON	0.5	SP10		WL	VERIFIED	NWSE 18 21S 20E			111-20

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ARIZONA DEPARTMENT OF WATER RESOURCES
NON-INDIAN FEDERAL RESERVED WATER RIGHTS
FILE SUMMARY

UNITED STATES ARMY COMMUNICATIONS COMMAND
FORT HUACHUCA
11-F01

FMC002329

	CLAIMED INFORMATION						DWR INFORMATION							
MENT ANT	SOURCE	LOCATION	CLAIMED USE	NAME	WATERCOURSE	1988 ANNUAL USE AF	WATER USE #	POD #	WATER USE TYPE	USE STATUS	USE LOCATION	POD LOCATION	ACREAGE OR CAPACITY (ac-ft)	MAP
775	DAM	SENE 10 21S 20E	EC,FC	(j)	SOLDIER CREEK	0.5	SP11		WL,EC,FC	VERIFIED	SWNE 10 21S 20E			111-20
	* DAM	SWNW 15 21S 20E	SE	SEDIMENT(34d)	SOLDIER CREEK	4	SP12		WL,EC,FC,S	VERIFIED	SWNW 15 21S 20E		29.6	111-20
	DAM	SENE 14 21S 20E	EC,FC	EAST#3(37)	SAN PEDRO	3.2	SP13		WL,EC,FC	VERIFIED	SENE 14 21S 20E			111-20
	* DAM	SWSW 16 21S 20E	WL	GATE#5(44)	SOLDIER CREEK		SP14		WL	VERIFIED	SWSW 16 21S 20E			111-20
	* DAM	NENE 21 21S 20E	SE	SEDIMENT(34c)	SOLDIER CREEK	1	SP15		WL,EC,FC	VERIFIED	SESE 16 21S 20E		6.0	111-20
	DAM	SENE 21 21S 20E	SE	#3SEWAGE(46)	SOLDIER CREEK	2.5	SP16		SE	VERIFIED	NWSE 21 21S 20E		11.0	111-20
	* DAM	NWSE 10 21S 20E	WL	POND(45)	SOLDIER CREEK		SP17		WL	VERIFIED	NWSE 10 21S 20E			111-20
	* DAM	NWSE 21 21S 20E	SE	SEDIMENT(34a)	SOLDIER CREEK	1.7	SP18		WL,SE	VERIFIED	NWSE 21 21S 20E			111-20
	* DAM	SESE 21 21S 20E	WL	#2SEWAGE(47)	SOLDIER CREEK		SP19		WL	VERIFIED	SWSE 21 21S 20E		12.0 5.5	111-20
	DAM	SESE 21 21S 20E	SE	SEDIMENT#3(34)	SOLDIER CREEK	16.5	SP20		SE,WL	VERIFIED	SWSE 21 21S 20E			111-20
	DAM	NWNE 36 21S 19E	EC,FC,RC	(m)	HUACHUCA WASH	2.8	SP21		WL,EC,FC	VERIFIED	NWNE 36 21S 19E			111-20
	* DAM	NESW 27 21S 20E	EC,FC	EAST#4(38)	SOLDIER CREEK	4.1	SP22		WL,EC,FC	VERIFIED	NESW 27 21S 20E			111-20
	* DAM	SWSW 06 22S 20E	EC,FC	LOWER FLY(27)	SOLDIER CREEK	0.8	SP23		WL,EC,FC	VERIFIED	SESW 06 22S 20E			111-23

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RC=RECREATION; S=SPRING(POD); SE=SEWAGE EVAPORATION; SP=WILDLIFE POND; SPR=SPRING(SOURCE); SR=SMALL RESERVOIR; W=WELL(POD); WL=WILDLIFE

TABLE
ARIZONA DEPARTMENT OF WATER RESOURCES
NON-INDIAN FEDERAL RESERVED WATER RIGHTS
FILE SUMMARY

UNITED STATES ARMY COMMUNICATIONS COMMAND
FORT HUACHUCA
11-F01

FMC002330

			CLAIMED INFORMATION					DWR INFORMATION							
STATEMENT OF CLAIMANT	SOURCE	LOCATION	CLAIMED USE	NAME	WATERCOURSE	1988 ANNUAL USE AF		WATER USE #	POD #	WATER USE TYPE	USE STATUS	USE LOCATION	POD LOCATION	ACREAGE OR CAPACITY (ac-ft)	MAP
39-10775	* DAM	SESW 06 22S 20E	RC,WL	FLY(8)	SOLDIER CREEK	0.9		SP24		WL,EC,FC	VERIFIED	SESW 06 22S 20E			111-23
	* DAM	SESW 06 22S 20E	WL	HORSE PASTURE(48)	SOLDIER CREEK			SP25		WL	VERIFIED	SESW 06 22S 20E			111-23
	* DAM	SESW 06 22S 20E	WL	L HORSE PASTURE(29)	SOLDIER CREEK			SP26		WL	VERIFIED	SESW 06 22S 20E			111-23
	DAM	SWNW 10 22S 20E	EC,FC	LOWER WOODCUTTER(18)	WOODCUTTER CANYON	2		SP29		WL,EC,FC	VERIFIED	SWNW 10 22S 20E		20.7	111-23
	* DAM	SENE 13 22S 19E	EC,FC	UPPER SOLDIER(7)	ROCK SPRING CREEK	1.6		SP30		WL,EC,FC	VERIFIED	SENE 13 22S 19E			111-23
	DAM	NWSW 16 22S 20E	EC,FC	WOODCUTTER(1b)	WOODCUTTER CANYON	2		SP31		WL,EC,FC	VERIFIED	NWNE 16 22S 20E		8.4	111-23
	DAM	NWNE 15 22S 20E	EC,FC	(p)	GARDEN CANYON	0.5		SP32		WL,EC,FC	VERIFIED	NWNE 15 22S 20E			111-23
	DAM	NWNE 16 22S 20E	EC,FC	WOODCUTTER(1a)	WOODCUTTER CANYON	2		SP33		WL,EC,FC	VERIFIED	SENW 16 22S 20E			111-23
	DAM	NESW 20 22S 20E	EC,FC	UPPER WOODCUTTER(17)	WOODCUTTER CANYON	7		SP34		WL,EC,FC	VERIFIED	NESW 20 22S 20E			111-23
	* DAM	SWNE 10 22S 20E	EC,FC	WOODCUTTER(1c)	WOODCUTTER CANYON	4.5		SP35		WL,EC,FC	VERIFIED	SWNE 10 22S 20E			111-23
	* DAM	SESE 10 21S 21E	WL	POND(51)	SAN PEDRO			SP36		WL	VERIFIED	SESE 10 21S 21E			111-20
40	DAM	NWNW 20 21S 21E	EC,FC	(e)	GRAVEYARD GULCH	0.5		SP37		WL,EC,FC	VERIFIED	NWNE 20 21S 21E			111-20

KEY: DM=DOMESTIC; E=EFFLUENT(POD); EC=EROSION CONTROL; FC=FLOOD CONTROL; IR=IRRIGATION; ML=MILITARY; MU=MUNICIPAL; POD=POINT OF DIVERSION; PS=PRIMARY STORAGE RESERVOIR; RC=RECREATION; S=SPRING(POD); SE=SEWAGE EVAPORATION; SP=WILDLIFE POND; SPR=SPRING(SOURCE); SR=SMALL RESERVOIR; W=WELL(POD); WL=WILDLIFE
*=USE CHANGE DUE TO AMMENDED STATEMENT OF CLAIMANT

TABLE
ARIZONA DEPARTMENT OF WATER RESOURCES
NON-INDIAN FEDERAL RESERVED WATER RIGHTS
FILE SUMMARY

UNITED STATES ARMY COMMUNICATIONS COMMAND
FORT HUACHUCA
11-F01

MENT ANT	SOURCE	LOCATION	CLAIMED USE	CLAIMED INFORMATION NAME	WATERCOURSE	1988 ANNUAL USE AF	WATER USE #	POD #	WATER USE TYPE	USE STATUS	DWR INFORMATION USE LOCATION	POD LOCATION	ACREAGE OR CAPACITY (ac-ft)	MAP
775	* DAM	SWNW 20 21S 21E	EC,FC	(f)	GRAVEYARD GULCH	0.5	SP38		WL,EC,FC	VERIFIED	SWNW 20 21S 21E			111-20
	DAM	SWSW 23 22S 20E	EC,FC	LOWER GARDEN(26)	GARDEN CANYON	3	SP39		WL,EC,FC	VERIFIED	SESE 22 22S 20E			111-23
	DAM	NENE 28 22S 20E	EC,FC,RC	(n)	GARDEN WASH	5.2	SP40		WL,EC,FC	VERIFIED	NENE 28 22S 20E		16.9	111-23
	* DAM	NWNE 28 22S 20E	WL	M GARDEN CANYON(52)	GARDEN WASH		SP41		WL	VERIFIED	NWNE 28 22S 20E		27.1	111-23
	* DAM	SESW 33 22S 20E	WL	TINKER(a)	GARDEN CANYON	0.5	SP42		WL	VERIFIED	SESW 33 22S 20E			111-23
	* DAM	NESW 21 22S 19E	WL	W HUACHUCA#2(43)	ROUGH CANYON		SP43		WL	VERIFIED	NESW 21 22S 19E			111-22
	* DAM	SESE 02 23S 19E	EC,FC	BOY SCOUT(16)	GARDEN CANYON	0.5	SP44		WL,EC,FC	VERIFIED	SESE 02 23S 19E			111-23
	* DAM	SESE 31 21S 19E	WL,EC,FC	(o)	SYCAMORE WASH	0.5	SP45		WL,EC,FC	VERIFIED	SESE 31 21S 19E			111-19
	* DAM	SWNE 15 21S 19E	WL	NORTH(21)	BABOCOMARI	0.3	SP46		WL	VERIFIED	SWNE 15 21S 19E			111-19
	* DAM	NESE 14 21S 19E	RC,WL	UNKNOWN WEST(25)	SLAUGHTERHOUSE WASH	0.2	SP47		WL,EC	VERIFIED	NESE 14 21S 19E			111-20
	* DAM	NWSE 27 21S 19E	WL	POWER LINE(20)	BLACKTAIL CANYON	1.3	SP48		WL	VERIFIED	NWSE 27 21S 19E			111-19
	* DAM	NWNW 35 21S 19E	EC,FC	LANDING STRIP(11)	COYOTE CANYON	0.9	SP49		WL,EC,FC	VERIFIED	NWNW 35 21S 19E			111-20
	* DAM	NWSW 14 22S 19E	EC,FC	HUACHUCA CANYON(22)	HUACHUCA CANYON	0.2	SP50		WL,EC,FC	VERIFIED	NWSW 14 22S 19E			111-23

KEY: DM=DOMESTIC; E=EFFLUENT(POD); EC=EROSION CONTROL; FC=FLOOD CONTROL; IR=IRRIGATION; ML=MILITARY; MU=MUNICIPAL; POD=POINT OF DIVERSION; PS=PRIMARY STORAGE RESERVOIR; RC=RECREATION; S=SPRING(POD); SE=SEWAGE EVAPORATION; SP=WILDLIFE POND; SPR=SPRING(SOURCE); SR=SMALL RESERVOIR; W=WELL(POD); WL=WILDLIFE

FMC002331

TABLE
ARIZONA DEPARTMENT OF WATER R
NON-INDIAN FEDERAL RESERVED WAT
FILE SUMMARY

UNITED STATES ARMY COMMUNICATIONS
FORT HUACHUCA
11-F01

FMC002332

STATEMENT OF CLAIMANT	SOURCE	LOCATION	CLAIMED USE	CLAIMED INFORMATION NAME	WATERCOURSE	1988 ANNUAL USE AF	WATER USE #	POD #
39-10775	* DAM	NWSE 22 22S 19E	EC,FC	HUACHUCA CORRAL(15)	HUACHUCA CANYON	0.4	SP51	
	* DAM	SENE 10 21S 20E	EC,FC	(h)	SOLDIER CREEK	0.5	SP52	
	* DAM	SENW 10 21S 20E	EC,FC	(i)	SOLDIER CREEK	0.5	SP53	
	* DAM	SENE 16 21S 20E	SE	EAST#1(35)	SOLDIER CREEK	3.6	SP54	
	* DAM	SENE 21 21S 20E	SE	SEDIMENT(34b)	SOLDIER CREEK		SP55	
	* DAM	NESE 18 21S 21E	EC,FC	(b)	GRAVEYARD GULCH	0.5	SP56	
	* DAM	NWSW 17 21S 21E	EC,FC	(g)	GRAVEYARD GULCH	0.5	SP57	
	* DAM	NWSW 17 21S 21E	EC,FC	(c)	GRAVEYARD GULCH	0.5	SP58	
	* DAM	SWNE 20 21S 21E	EC,FC	(d)	GRAVEYARD GULCH		SP59	
	DAM	NWNE 22 21S 19E	RC,WL	LOWER BLACKTAIL(24)	BLACKTAIL CANYON	0.5	SR01	
	DAM	SWSE 23 21S 19E	RC,WL,EC,FC	SLAUGHTERHOUSE(10)	SLAUGHTERHOUSE CANYON	8.4	SR02	
bs	DAM	NWSW 32 21S 19E	RC	KINO(39)	SYCAMORE	1.4	SR03	

KEY: DM=DOMESTIC; E=EFFLUENT(POD); EC=EROSION CONTROL; FC=FLOOD CONTROL; IR=IRRIGATION; ML=MILITARY;
RC=RECREATION; S=SPRING(POD); SE=SEWAGE EVAPORATION; SP=WILDLIFE POND; SPR=SPRING(SOURC
*=USE CHANGE DUE TO AMMENDED STATEMENT

FMC002333

TABLE
ARIZONA DEPARTMENT OF WATER RESOURCES
NON-INDIAN FEDERAL RESERVED WATER RIGHTS
FILE SUMMARY

UNITED STATES ARMY COMMUNICATIONS COMMAND
FORT HUACHUCA
11-F01

	CLAIMED INFORMATION						DWR INFORMATION							
STATEMENT OF CLAIMANT	SOURCE	LOCATION	CLAIMED USE	NAME	WATERCOURSE	1989 ANNUAL USE AF	WATER USE #	POD #	WATER USE TYPE	USE STATUS	USE LOCATION	POD LOCATION	ACREAGE OR CAPACITY (ac-ft)	MAP
39-10775	DAM	SENE 16 22S 19E	RC,WL	BLACKTAIL(13)	BLACKTAIL CANYON	0.8	SR04		RC,WL,EC,F	VERIFIED	NWSE 16 22S 19E			111-22
	DAM	NESE 01 22S 19E	RC,WL	OFFICERS CLUB(3)	SOLDIER CREEK	12.2	SR05		RC,WL	VERIFIED	NESE 01 22S 19E			111-23
	DAM	NENE 07 22S 20E	RC,WL,EC,FC	LOWER SOLDIER(6)	ROCK SPRING CREEK	0.6	SR06		RC,WL,EC,F	VERIFIED	NENE 07 22S 20E			111-23
	* DAM	SWSE 02 23S 19E	RC,WL	UPPER GARDEN(30)	GARDEN CANYON	0.4	SR07		RC,WL	VERIFIED	SWSE 02 23S 19E			111-23
	* DAM	NWSE 04 22S 20E	EC,FC	FAIRWAY(31)	SOLDIER CREEK	0.4	SR09		RC,WL	VERIFIED	NWSE 04 22S 20E			111-23
7/	* DAM	SWSE 04 22S 20E	RC	FAIRWAY(50)	SOLDIER CREEK		SR10		RC,WL	VERIFIED	SWSE 04 22S 20E			111-23
	SPR	SWSW 26 21S 19E	WL	SPRING#21	SLAUGHTERHOUSE CANYON	1	WL01		WL	SPRING	SWSW 26 21S 19E			111-20
	SPR	NWSW 32 21S 19E	WL	SPRING#22	SYCAMORE CANYON	2.6	WL02		WL	SPRING	NWSW 32 21S 19E			111-19
	SPR	NWNE 04 22S 19E	WL	SPRING#20	SLAUGHTERHOUSE CANYON	1	WL03		WL	SPRING	NWNE 04 22S 19E			111-22
	SPR	SENE 08 22S 19E	WL	SPRING#19	BLACKTAIL CANYON	2.6	WL04		WL	SPRING	SENE 08 22S 19E			111-22
	SPR	NWNE 16 22S 19E	WL	SPRING#18	BLACKTAIL CANYON	2.6	WL05		WL	SPRING	NWNE 16 22S 19E			111-22
	SPR	SENW 15 22S 19E	WL	SPRING#17	HUACHUCA CANYON	2.6	WL06		WL	SPRING	SENW 15 22S 19E			111-22
	SPR	NWSW 14 22S 19E	WL	SPRING#16	HUACHUCA CANYON	1	WL07		WL	SPRING	NWSW 14 22S 19E			111-23

KEY: DM=DOMESTIC; E=EFFLUENT(POD); EC=EROSION CONTROL; FC=FLOOD CONTROL; IR=IRRIGATION; ML=MILITARY; MU=MUNICIPAL; POD=POINT OF DIVERSION; PS=PRIMARY STORAGE RESERVOIR; RC=RECREATION; S=SPRING(POD); SE=SEWAGE EVAPORATION; SP=WILDLIFE POND; SPR=SPRING(SOURCE); SR=SMALL RESERVOIR; W=WELL(POD); WL=WILDLIFE

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TABLE
ARIZONA DEPARTMENT OF WATER RESOURCES
NON-INDIAN FEDERAL RESERVED WATER RIGHTS
FILE SUMMARY

UNITED STATES ARMY COMMUNICATIONS COMMAND
FORT HUACHUCA
11-F01

FMC002334

	CLAIMED INFORMATION						DWR INFORMATION						
STATEMENT OF CLAIMANT	SOURCE	LOCATION	CLAIMED USE	NAME	WATERCOURSE	1988 ANNUAL USE AF	WATER USE #	POD #	WATER USE TYPE	USE STATUS	USE LOCATION	POD LOCATION	ACREAGE OR CAPACITY (ac-ft)	MAP
39-10775	SPR	NWSE 22 22S 19E	WL	SPRING#15	HUACHUCA CANYON	1	WL08		WL	SPRING	NWSE 22 22S 19E			111-22
	SPR	NESE 07 22S 20E	WL	SPRING#12	SOLDIER CREEK	1	WL09		WL	SPRING	NESE 07 22S 20E			111-23
	SPR	SWSW 13 22S 19E	WL	SPRING#13	SOLDIER CREEK	2.6	WL10		WL	SPRING	SWSW 13 22S 19E			111-23
	SPR	NESW 20 22S 20E	WL	SPRING#11	WOODCUTTERS CANYON	1	WL11		WL	SPRING	NESW 20 22S 20E			111-23
	* SPR	SENW 21 22S 20E	WL	SPRING#23	GARDEN WASH	1	WL12		WL	SPRING	SENW 21 22S 20E			111-23
	* SPR	SWNE 27 22S 19E	WL	SPRING#14	HUACHUCA CANYON	2.6	WL13		WL	SPRING	SWNE 27 22S 19E			111-22
	SPR	NESE 35 22S 19E	WL	SPRING#5	MCCLURE CANYON	4.2	WL14		WL	SPRING	NESE 35 22S 19E			111-23
	SPR	SWSW 19 22S 20E	WL	SPRING#10	WOODCUTTERS CANYON	2.6	WL15		WL	SPRING	SWSW 19 22S 20E			111-23
	SPR	NWSE 25 22S 19E	WL	SPRING#9	WOODCUTTERS CANYON	4.2	WL16		WL	SPRING	NWSE 25 22S 19E			111-23
	SPR	SWNW 36 22S 19E	WL	SPRING#7	MCCLURE CANYON	2.6	WL17		WL	SPRING	SWNW 36 22S 19E			111-23
	* SPR	NWSE 25 22S 19E	WL	SPRING#8	GARDEN CANYON	2.6	WL18		WL	SPRING	SWSE 25 22S 19E			111-23
	* SPR	NESE 33 22S 20E	WL	SPRING#2	TINKER CANYON	2.6	WL19		WL	SPRING	NESE 33 22S 20E			111-23

KEY: DM=DOMESTIC; E=EFFLUENT(POD); EC=EROSION CONTROL; FC=FLOOD CONTROL; IR=IRRIGATION; ML=MILITARY; MU=MUNICIPAL; POD=POINT OF DIVERSION; PS=PRIMARY STORAGE RESERVOIR; RC=RECREATION; S=SPRING(POD); SE=SEWAGE EVAPORATION; SP=WILDLIFE POND; SPR=SPRING(SOURCE); SR=SMALL RESERVOIR; W=WELL(POD); WL=WILDLIFE
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TABLE
ARIZONA DEPARTMENT OF WATER RESOURCES
NON-INDIAN FEDERAL RESERVED WATER RIGHTS
FILE SUMMARY

UNITED STATES ARMY COMMUNICATIONS COMMAND
FORT HUACHUCA
11-F01

FMC002335

			CLAIMED INFORMATION					DWR INFORMATION							
STATEMENT OF CLAIMANT	SOURCE	LOCATION	CLAIMED USE	NAME	WATERCOURSE	1988 ANNUAL USE AF		WATER USE #	POD #	WATER USE TYPE	USE STATUS	USE LOCATION	POD LOCATION	ACREAGE OR CAPACITY (ac-ft)	MAP
39-10775	* SPR	SESW 36 22S 19E	WL	SPRING#6	MCCLURE CANYON	2.6		WL20		WL	SPRING	SESW 36 22S 19E			111-23
	* SPR	SESW 36 22S 19E	WL	SPRING#25	MCCLURE CANYON	1.4		WL21		WL	SPRING	SESW 36 22S 19E			111-23
	* SPR	NESE 33 22S 20E	WL	SPRING#3	TINKER CANYON	1		WL22		WL	SPRING	NESE 33 22S 20E			111-23
	SPR	NWNW 07 23S 20E	WL	SPRING#24	SCHELLOTE CANYON	1		WL23		WL	SPRING	NWNW 07 23S 20E			111-23
	SPR	SWSW 07 23S 20E	WL	SPRING#4	SAWMILL CANYON	4.2		WL24		WL	SPRING	SWSW 07 23S 20E			111-23
	* SPR	SWSW 01 23S 19E	WL	CABIN SPRING	GARDEN CANYON			WL25		WL	SPRING	SWSW 01 23S 19E			111-23
						--- 3581.6									

KEY; DM=DOMESTIC; E=EFFLUENT(POD); EC=EROSION CONTROL; FC=FLOOD CONTROL; IR=IRRIGATION; ML=MILITARY; MU=MUNICIPAL; POD=POINT OF DIVERSION; PS=PRIMARY STORAGE RESERVOIR;
RC=RECREATION; S=SPRING(POD); SE=SEWAGE EVAPORATION; SP=WILDLIFE POND; SPR=SPRING(SOURCE); SR=SMALL RESERVOIR; W=WELL(POD); WL=WILDLIFE
*=USE CHANGE DUE TO AMMENDED STATEMENT OF CLAIMANT

1987 PRELIMINARY HSR
REPORT

FORT HUACHUCA
111-23-F1

Introduction

Fort Huachuca, currently the United States Army Communications Command Post, is located approximately sixty miles southeast of Tucson, Arizona, and about fifteen miles north of the Mexican Border. The fort is situated along the northern range of the Huachuca Mountains in Cochise County, just west of the City of Sierra Vista, and due south of Huachuca City along state highway 92 (Figure 39).

The fort was established on October 29, 1881, by Presidential Executive Order, although the United States Army installed an outpost at this location on March 3, 1877 (Camp Huachuca). The primary purpose of the post was to aid in the repression of Apache Indian attacks against the influx of settlements into the southern areas of the Arizona Territory. Following the surrender of the Apache Chief Geronimo in September of 1886, the primary purpose of the fort shifted to the Villista Campaign ("Pancho" Villa), although a few renegade bands of Apache Indians continued to raid settlers and settlements.

The Villista Campaign, which was designed to stop raids by Pancho Villa in the United States, eventually led to political friction between the United States and the Republic of Mexico, since the United States dispatched troops deep into Mexico. Although the U.S. Government claimed to pursue Villistas into Mexican territory only for the purpose of halting raids within U.S. boundaries, U.S. officials were concerned that the Mexican Government would view this "expedition" as unfriendly aggression. In 1917, the Villista expedition returned to the United States.

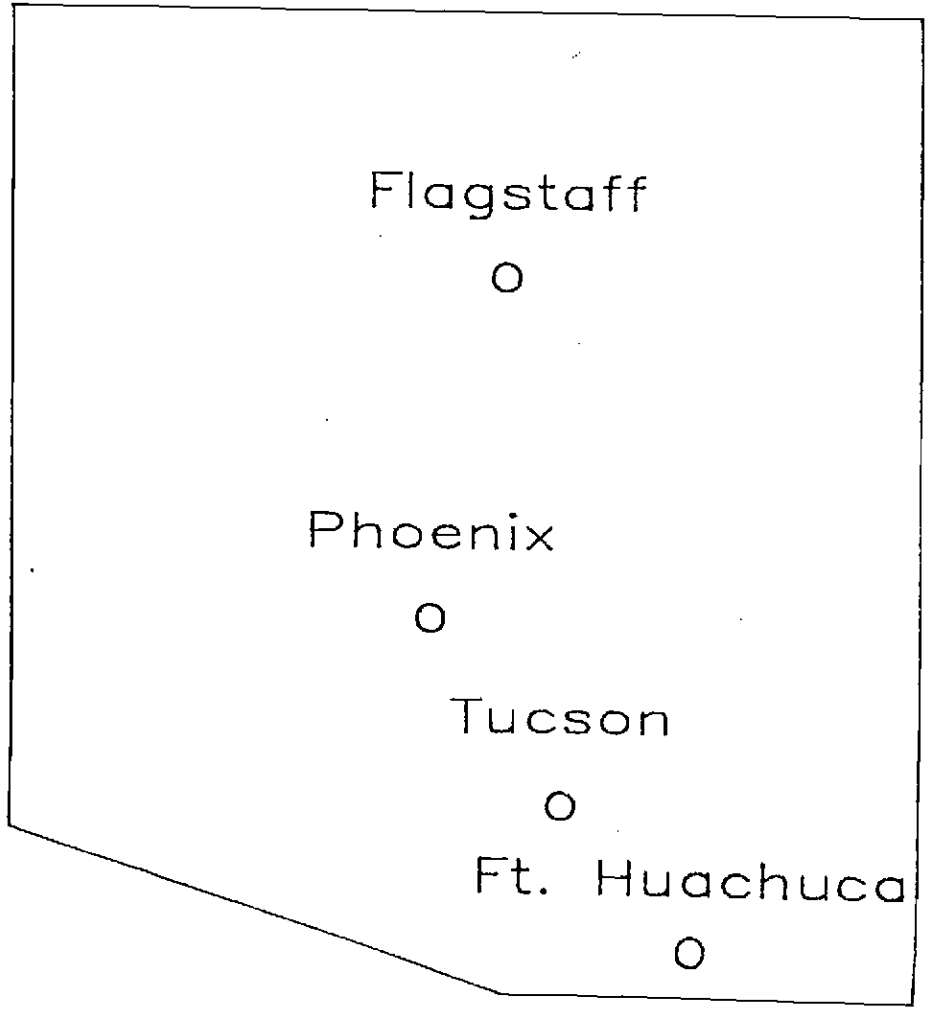
Following the punitive expedition against the Villistas in 1917, the United States declared war in Europe (World War I). At this time, the fort was primarily used to train troops, and during World War II, the fort was utilized to train full divisions. After the end of World War II (1945-1951), the fort was closed, and designated as surplus property by the U.S. Army. At the start of the Korean War, the fort was reactivated. However, at the close of the Korean Conflict (1953), the fort was once again deactivated, and reclassified as surplus. Fort Huachuca was reactivated on February 1, 1954, as the U.S. Army Electronic Proving Ground. In July of 1967, Fort Huachuca became the U.S. Army Strategic Communications Command, subsequently renamed the U.S. Army Communications Command. Fort Huachuca has remained in this status up to the present.

Hydrogeology

The primary water resources of Fort Huachuca are groundwater and surface water systems fed by precipitation on the land surface. The average annual precipitation for the fort (at 5,000 feet) is approximately 15.4 inches, where summer thunderstorms in July and August account for nearly fifty percent of the total annual rainfall (Figures 40 and 41).

Fig.39

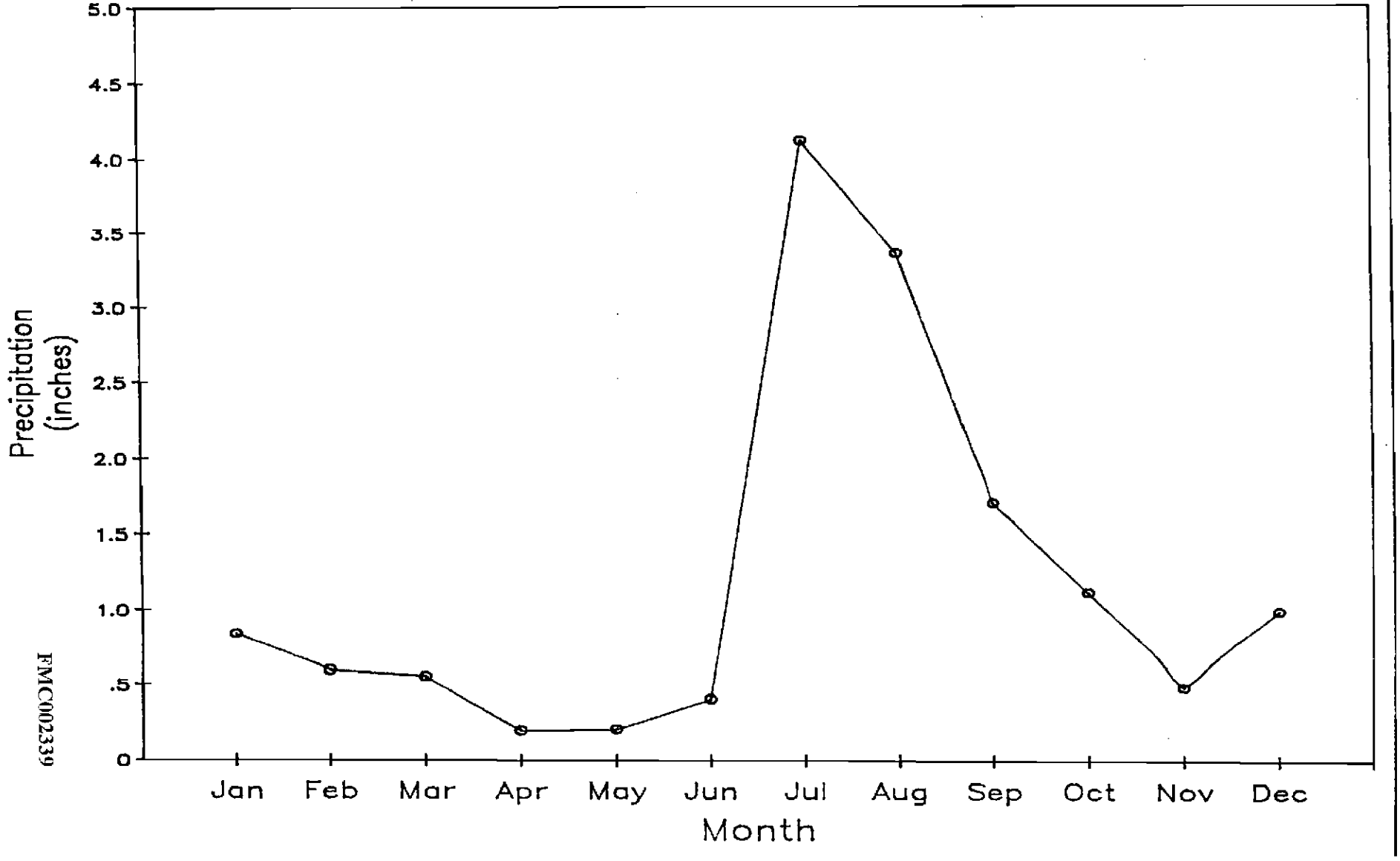
Location of Ft. Huachuca, Arizona



FMC002338

Fig.40

AVERAGE MONTHLY PRECIPITATION
FORT HUACHUCA, ARIZONA
1951 TO 1980
Source: Ariz. St. Univ. Climatology Laboratory



FMC002339

The major water supplies for Fort Huachuca are from two primary sources located on the east side of the Huachuca Mountains. These are (1) groundwater from a regional aquifer, and (2) water from fracture and fault-controlled springs. The regional aquifer is recharged along the mountain fronts, and from flow from mountain washes. Flows from mountain washes rarely reach the San Pedro River, except during severe thunderstorms prevalent during the summer months. There is little or no groundwater recharge from soil percolation. Springs are recharged by surface runoff from rainfall and snowmelt. These waters are trapped by fractures in the mountain rock formations, where the water is rapidly discharged through the springs. The only springs capable of yielding sufficient quantity and quality of water usable by the fort for domestic purposes are located in either Garden Canyon or Huachuca Canyon (Figure 42).

Size and Growth

Fort Huachuca has claimed a post population of 9,304 (residents), with an additional 6,465 employees who work on the post (non-residents). The claim indicates no known future population increases. Mr. Tom Cochran, Chief Utilities Engineer for the fort, indicated a present full-time post population of about 9,000, with about 7,500 day-time residents. When calculating municipal needs for the installation (water requirements, refuge, etc.), an "effective population" of 11,400 is used. Effective Population (EP) is calculated by the following formula:

$$EP = DT/_{3} + FT \quad , \text{ where}$$

EP = Effective Population
DT = Daytime (non-resident) population
FT = Full-time (resident) population

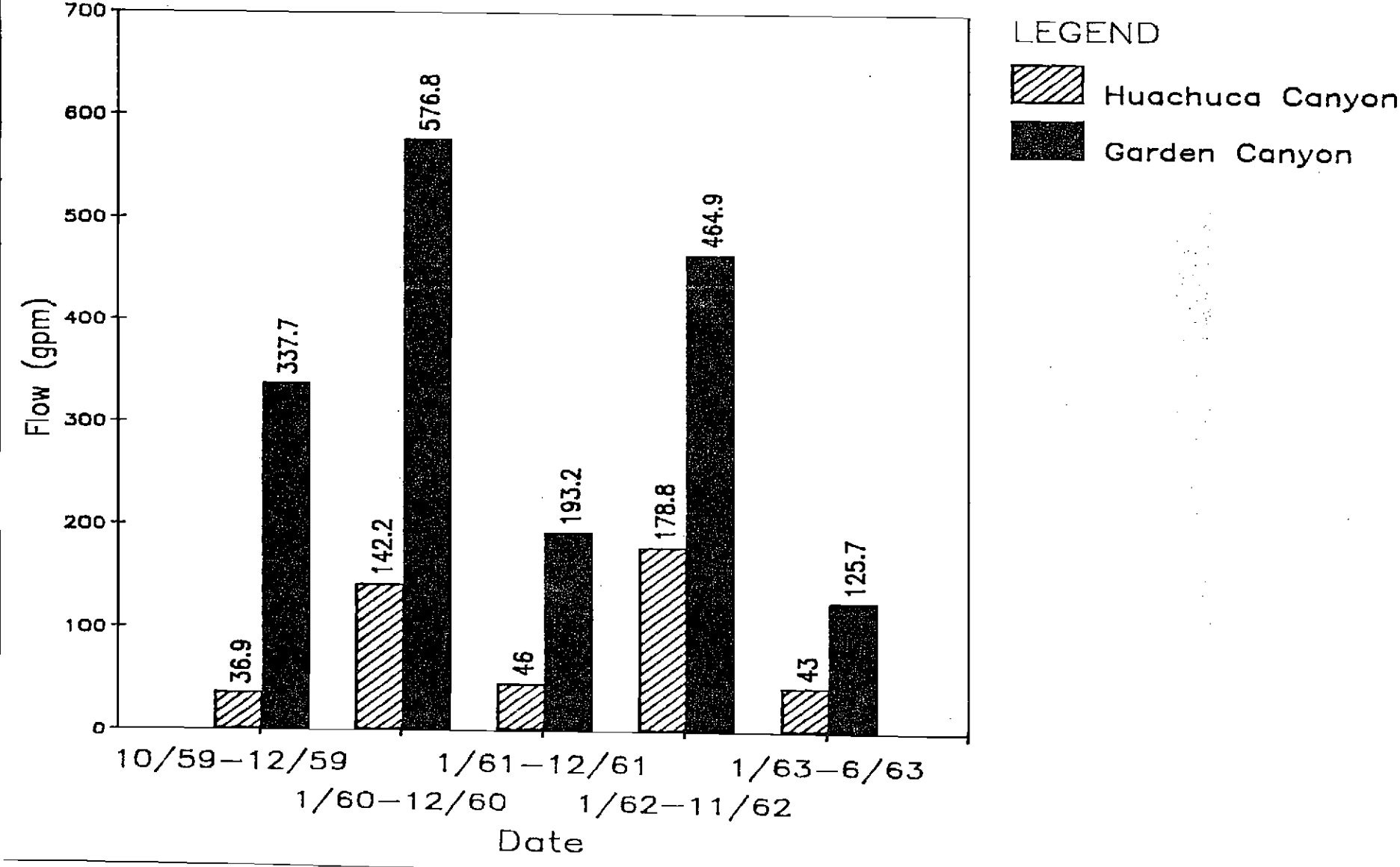
The Arizona Department of Commerce listed a 1985 post population of 9,022, including 6,231 military employees and 6,223 civilian workers.

Fort Huachuca was incorporated into the city limits of Sierra Vista on February 17, 1971. In 1970, the post population was 6,659, and in 1980, the population was 9,475. Sierra Vista currently has a population of 30,520. Projections by the Arizona Department of Economic Security indicates a population of 54,625 by the year 2000. This amounts to an annual growth rate of approximately 5.5 to 6.0%. The growth rate of the state of Arizona has been estimated at about 3.0% per year. Although Sierra Vista's economy is closely related to the installation, the post population has changed little within the past five years (±3%), despite the area's population boom (Figure 43). It should be pointed out that although the population of Fort Huachuca has not changed, the fort's well field is directly affected by well pumping from surrounding areas, since the aquifers tapped by Fort Huachuca, Sierra Vista, and developments just outside of Sierra Vista are hydraulically continuous. Therefore, any pumping of wells by Sierra Vista will, in time, cause drawdown in Fort Huachuca.

FMC002340

Fig.42

Average spring flow for Garden and Huachuca Canyons
Fort Huachuca, Arizona
1959 through 1963
Data based on U.S.G.S. Report #1819–D



FMC002341

The fort has claimed an on-post land area of 73,344 acres. When the post was first established in 1881, the size of the fort was 41,760 acres. On May 14, 1883, the fort boundaries were expanded by Presidential Executive Order to 44,800 acres. In the 1940's, Fort Huachuca was expanded again to include lands due east of the original boundaries. This area is now known as the East Range, and encompasses approximately 13,545 acres. This brought the total area of Fort Huachuca to about 58,345 acres. In August of 1957, 13,463 acres of Bureau of Land Management (BLM) land was removed from the public domain, and transferred to Fort Huachuca, bringing the fort's total acreage to 71,808 acres. The remaining acreage claimed by the fort (1,536 acres) is currently state trust land that is utilized by the fort pending exchange between the State of Arizona and the United States Government (Figure 44).

Fort Huachuca and the City of Sierra Vista share an airfield located within the west range of Fort Huachuca. Pursuant to the Airport and Airway Development Act of 1970, the Federal Aviation Administration (FAA) required Fort Huachuca to convey 29.0 acres to the City of Sierra Vista. This conveyance, deeded to Sierra Vista on December 12, 1982, reduced the fort's acreage to 73,315, the present size of Fort Huachuca. Sierra Vista began construction for a new air terminal on this newly acquired acreage on September 6, 1983, and it was completed on February 15, 1984.

Claimed Data

Fort Huachuca has claimed a total of twenty-four wells, thirty-eight springs, and sixty-five ponds. These diversions are summarized below (Table 39). Total amount of potable water claimed is 3,287 million gallons (10,087 af) per annum (see projected water use). The fort based these claims on (1) Federal Reserve Water Rights and (2) legitimate and authorized federal activities.

For the above diversions, the fort claimed approximate dates of first use. These dates (years) are shown below (Table 40).

TABLE 39. SUMMARY OF DIVERSIONS CLAIMED BY FORT HUACHUCA

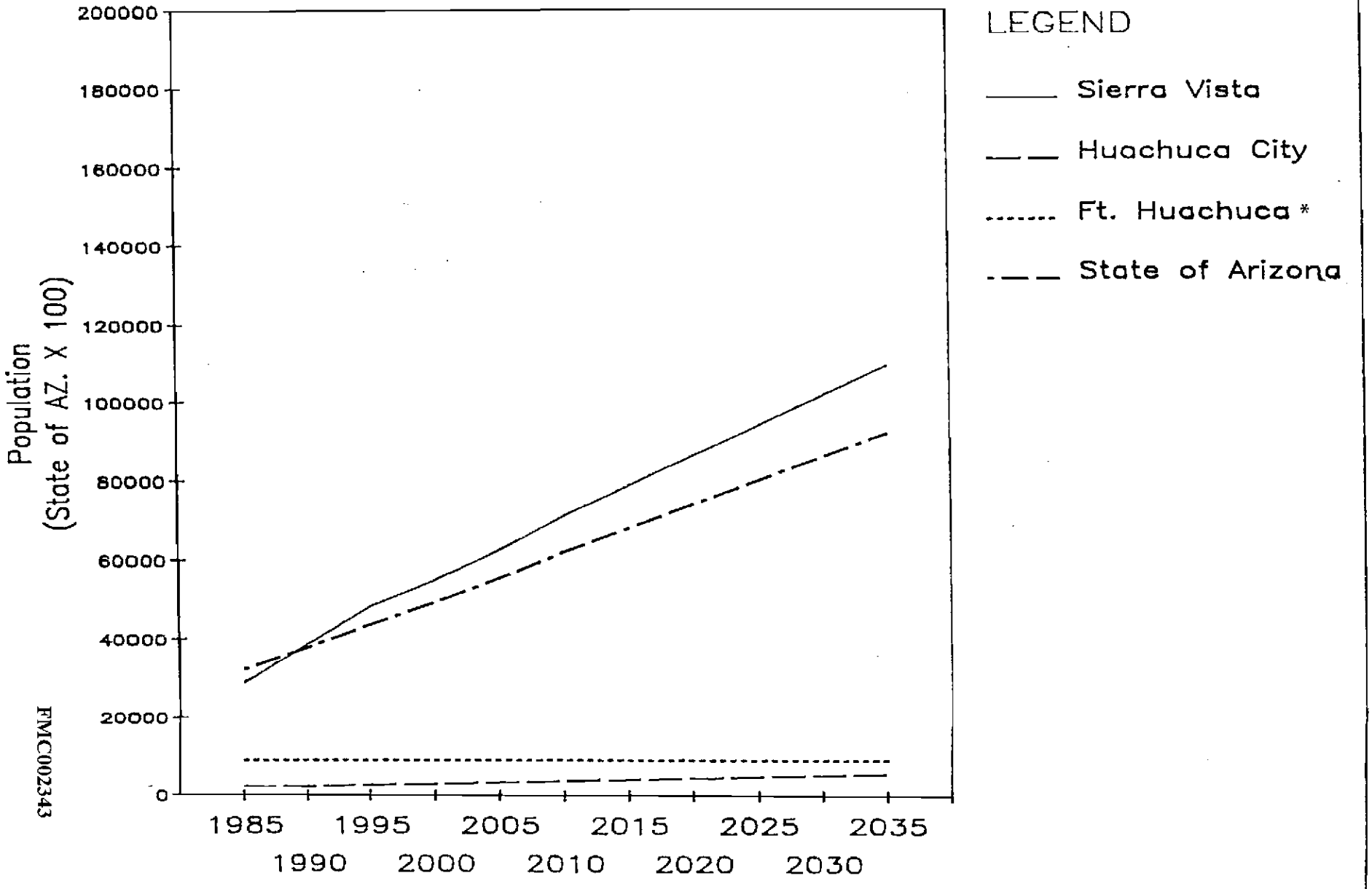
Wells	# Claimed	Quantity (annual)
Potable (Domestic)	6	966,972,000 gal. (2967.6 AC-FT)
Non-potable	9	58,161,900 gal. (178.5 AC-FT)
Test	9	
Total	24	1,025,133,900 gal. (3146.1 AC-FT)
Springs		
Potable	14	125.2 AC-FT
Non-potable	24	51.6 AC-FT
Total	38	176.8 AC-FT
Ponds		
Effluent evaporation	5	25.7 AC-FT
Game management	5	2.6 AC-FT
Wildlife, Recreation	17	72.1 AC-FT
Erosion control	38	65.4 AC-FT
Total	65	165.8 AC-FT

FMC002342

Fig.43

PROJECTED POPULATION GROWTH FOR THE SIERRA VISTA AREA

Source: Arizona Dept. of Economic Security, 3/86

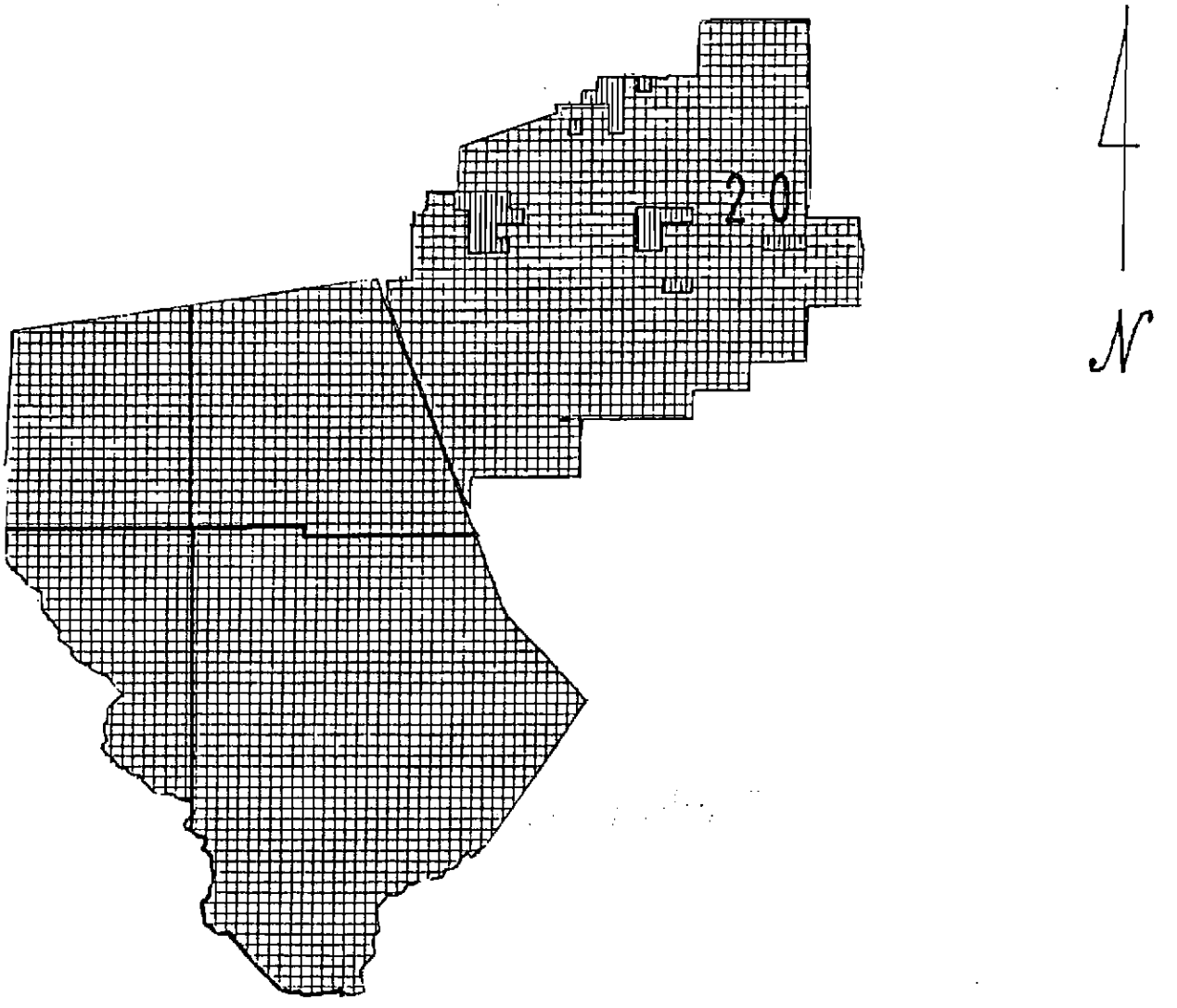


*Assumes no population changes

FMC002343

Fig.44

STATE TRUST LANDS LOCATED WITHIN FORT HUACHUCA BOUNDARIES



Fort Huachuca

State Trust Land

SCALE

1 : 200,000
(1 in. equals approx. 3.2 mi.)

FMC002344

TABLE 40. DATES (YEARS) OF FIRST USE FOR CLAIMED DIVERSIONS

Wells	First Use
#1	1940
#2	1941
#3	1943
#4	1943
#5	1943
#6	1959
#7	1982
#8	1982
East Rg. Bunker	1958
Garden Canyon	1930(est).
Rembass #1	1978
Rembass #2	1978
Spatial Resolution	1964
Springs	
Potable	1877
Non-potable	1954
Ponds	
All, except as shown below	1954
Dam (SENW2120S21E)	1976
Dam (SWSE1821S21E)	1976
Dam (NESW1721S21E)	1977
Dam (SWNW2021S21E)	1977
Dam (NWNW2021S21E)	1977
Dam (SENE1921S21E)	1977
Dam (SESE1821S21E)	1977
Dam (NESW1021S20E)	1977
Dam (SENW1021S20E)	1977
Dam (SENE1021S20E)	1977
Dam (SESE0321S20E)	1977
Dam (NENE0921S20E)	1977
Sediment (NESE2121S20E)	1978
Sediment (SENE2121S20E)	1978
Sediment (NENE2121S20E)	1978
Sediment (NWNW1521S20E)	1978
Dam (NWNE3621S19E)	1979
Dam (NENE2822S20E)	1979

Analysis of Claim

DWR staff visited Fort Huachuca on several occasions. The purpose of these field trips was to (1) investigate claimed water uses by the fort, and (2) gather other pertinent data as necessary (documentation, mapping, etc.).

DWR staff verified the use of well #1 through #8, spatial resolution well, east range bunker well, and the Garden Canyon well (non-potable). The Garden Canyon well (no number given in claim) can be connected into the potable system. These wells are discussed in the summary spreadsheet (Table 45), and Table 41 below.

TABLE 41. DEPTH AND DISCHARGE OF SIX WELLS (POTABLE) LOCATED IN FORT HUACHUCA, ARIZONA

Well #	Depth(ft.)[1]	Discharge(gpm)[2]
1	701	500/500
2	710	700/900
3	802	700/700
4	912	700/700
5	800	700/700
6	1,230	700/310

(1) Figures from U.S.G.S. Report #1819-D.
(2) Figures shown are claimed data by fort/data reported by U.S.G.S.

All potable springs were visited, except for Cabin Spring, which could not be found (Table 42). DWR staff did not visit any non-potable springs.

As stated previously, Fort Huachuca claimed sixty-five ponds. DWR staff was able to verify forty-two of these impoundments using aerial photography or field check. Of these forty-two impoundments, eleven were surveyed (Table 43); twenty-eight were too small to be surveyed (less than one surface acre in size, or a capacity less than 15 acre feet); two had pipes in the dam (flood control); and one was destroyed (Pan Am) due to airport expansion.

In addition to claimed ponds, DWR staff verified thirteen impoundments not claimed by Fort Huachuca (aerial photography). Of these thirteen impoundments, five were surveyed (Table 43); the remaining eight impoundments were less than one surface acre in size.

Storage and Distribution (Potable Water)

Fort Huachuca has claimed a total storage capacity of 5,630,000 gallons, and a distribution system totaling 1,256,148 lineal feet (see stock maps). There is also 104,560 lineal feet of non-potable water line which is used to irrigate the golf course and Chaffee Parade Field (see irrigation maps, vol. 5).

TABLE 42. SPRING FLOW MEASUREMENTS FOR GARDEN CANYON AND HUACHUCA CANYON, FORT HUACHUCA, ARIZONA

System	Spring #	Period	Number of Measurements	Discharge(gpm)
Garden Canyon	1	Jan.1962-June.1963	46	194
Garden Canyon	1a	Winter, 1960-1961	Not Listed	400 *
Garden Canyon	2	Jan.1960-Aug.1961	47	176
Garden Canyon	3	Mar.1960-Nov.1962	43	32.9
Garden Canyon	4	Mar.1960-Nov.1962	43	32.9
Garden Canyon	Cabin	Not Listed	Not Listed	15-25
Garden Canyon	Chain	Not Listed	Not Listed	150-250 **
Garden Canyon	Picnic	Not Listed	Not Listed	540 *
Huachuca Canyon	2	Feb.1960-Sep.1962	47	16.5
Huachuca Canyon	3	Apr.1961-Jan.1962	47	28.3

* Maximum flow measured (data not listed).

** Based on flow during wet weather; does not flow during the remainder of the year.

Source: USGS Report #1819-D.

TABLE 43. SUMMARY OF SURVEYED IMPOUNDMENTS (SEE STOCK MAPS FOR EXACT LOCATION.)

Map #	Name	Location	Capacity (AC-FT)	Area (acres)
PS1	Antelope	S.16 T.21S R.19E	26.4	2.6
PS2	Sycamore	S.20 T.21S R.19E	38.8	3.9
PS3	Hidden	S.28 T.21S R.19E	22.5	2.1
PS4	Golf Course	S.9 T.22S R.20E	59.7	7.6
PS5	Gravel Pit	S.17 T.22S R.20E	57.4	7.0
WL4	Unclaimed	S.16 T.21S R.19E	14.9	2.2
WL5	Unclaimed	S.29 T.21S R.19E	10.5	1.5
WL12	Sediment	S.15 T.21S R.20E	29.6	9.5
WL15	East #1	S.16 T.21S R.20E	6.0	2.5
WL16	Sediment	S.21 T.21S R.20E	11.0	3.5
WL18	Unclaimed	S.21 T.21S R.20E	12.0	2.8
WL19	Unclaimed	S.21 T.21S R.20E	5.5	3.3
WL29	Lower Woodcutter	S.9 T.22S R.20E	20.7	2.5
WL31	Woodcutter	S.16 T.22S R.20E	8.4	1.8
WL40	Dam	S.28 T.22S R.20E	16.9	2.4
WL41	Unclaimed	S.28 T.22S R.20E	27.1	4.1
	TOTAL		367.4 AC-FT	59.3 acres

FMC002347

Irrigation (outside municipal system)

The fort currently irrigates four areas that utilize non-potable water. Two areas are located in the east range; the other two in the west range. Together, total irrigation areas are 142.92 acres. These areas are summarized in Table 44.

TABLE 44. IRRIGATION SUMMARIZATION - FT. HUACHUCA

	Location	Source	Acres
IR 1	S.32 T.21S R.20E	Water Trt. Plt.#2	10.25
IR 2	S.26 T.21S R.20E	Rembass #1	5.67
IR 2	S.23 T.21S R.20E	Rembass #2	42.20
RC 1	S.4 T.22S R.20E	Water Trt. Plt's 1 & 2	84.80

Both IR1 and IR3 are irrigated using a sprinkler system. IR1 (Chaffer Parade Field) receives it's water supply from water treatment plant #2 (effluent). RC1 (golf course) receives water from water treatment plant #1 and #2 (see map). IR2 (Rembass well #1 and #2) is flood irrigated using groundwater.

Projected Water Use

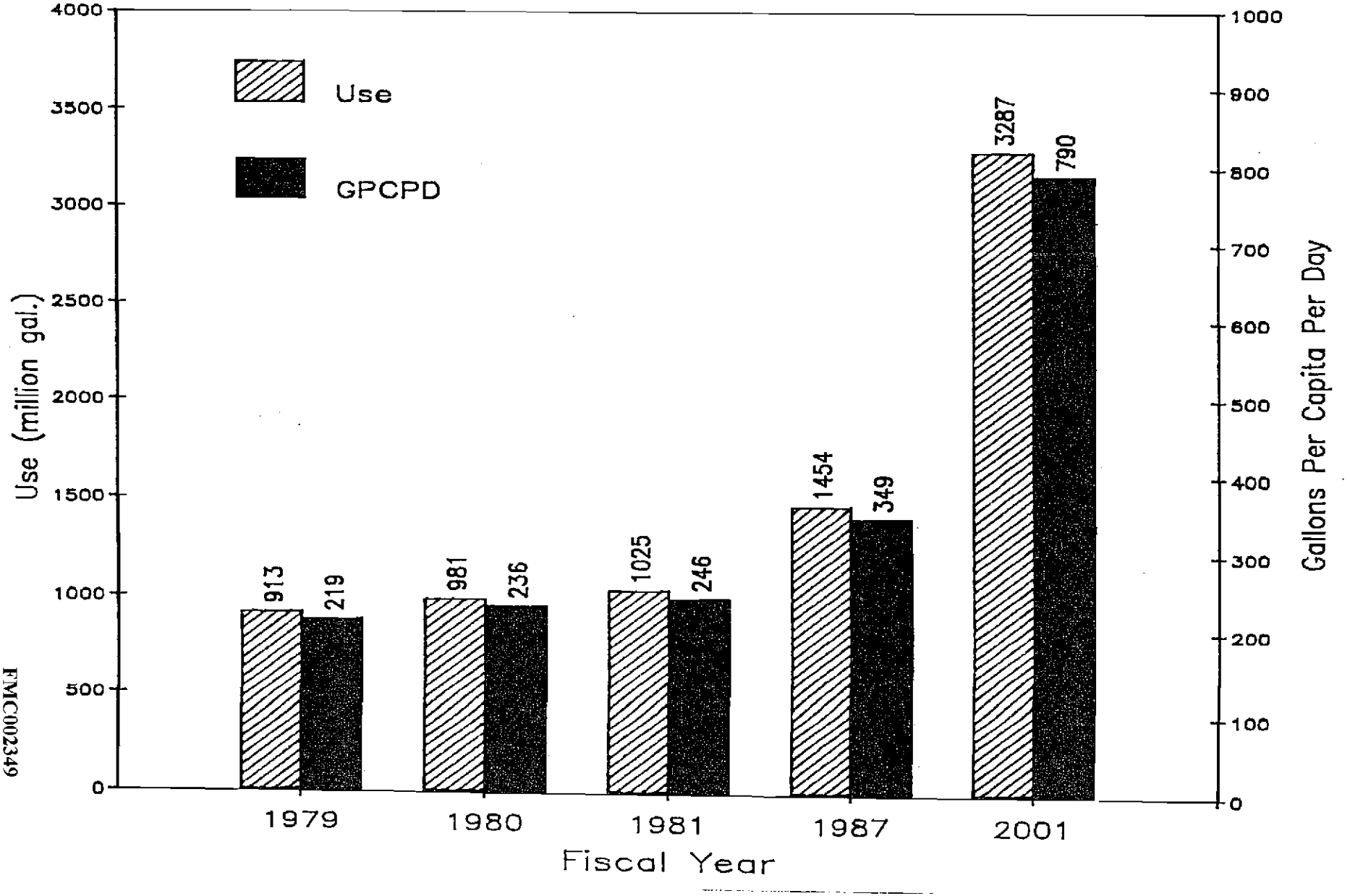
Fort Huachuca has projected a future potable water use of 3,287 million gallons for fiscal year 2001. This was based on an average of 6% increase per year for twenty years. The fort recommends this usage figure since (1) it is less than the present capacities of all potable wells currently developed, (2) allows for a reasonable margin for future expansion of the fort, and (3) ability to meet unusual water demands, such as 275,000 gallons per day for dust control during construction of the new runway at Libby Army Airfield (Sierra Vista Airport), which was completed in December of 1985 (Figure 45).

Non-Federal Claims Within Fort Boundaries

A claimant in the Sierra Vista subwatershed has claimed a well that is located within Fort Huachuca boundaries. The fort did not claim this well, nor did the fort claim a well within the same section:

Claimant: Hotter, Nancy
Statement of Claimant #39-005884
Watershed File #: 111-23-BBA-001
Dom. Well File #: 35-082899
Claimed Location: T.22S R.20E
SW¼ NE¼ NW¼ Sect. 8
[D(22-20)8CAB]
Filed: 6/25/80

Fig.45



FMC002349

Summary

Fort Huachuca is currently the United States Army Communications Command Post. It is comprised of 73,315 acres, with an estimated population of 9,000 full-time residents, and about 7,500 day-time residents. For the past five years, the population of the fort has changed only ± 3%. The fort does not know of any future population increases.

Fort Huachuca has claimed twenty-four wells, thirty-eight springs, and sixty-five ponds. For their domestic supply, the fort claimed 3,287 million gallons (3.287×10^6) per year, which is the projected water use by the installation in the year 2001. The fort also claimed a potable water storage capacity of 5,630,000 gallons, with a pipe distribution system totaling 1,256,148 lineal feet.

The Department of Water Resources (DWR) staff has verified thirteen wells (on-site inspection), thirteen domestic springs (on-site inspection), and forty-two ponds (personal inspection and aerial photography). DWR staff also verified thirteen unclaimed ponds. A total of sixteen ponds were surveyed. The total capacity of these ponds are 367.4 acre-feet. Twenty-three claimed ponds could not be located by aerial photography.

FMC002350

TABLE 45. FEDERAL RESERVED WATER RIGHTS SUMMARY SPREADSHEET

KEY	
DOM	Domestic
ER	Erosion Control
IRR	Irrigation
MIL	Military Purposes
RC	Recreation
WL	Wildlife/Game Mgt.

FMC002351

TABLE 45. FEDERAL RESERVED WATER RIGHTS SUMMARY SPREADSHEET
FT. HUACHUCA - #111-23-F1

CLAIMED DATA

Adj.File#	Diversion	Uses	Name	Course	Location	Flow (GPM)	File Date	Fee Pd.
3910774	WELL	DOM/MIL	WELL#1	SOLDIER CK	NWNWNW0322S20E	500	6/3/82	$40.00
3910774	WELL	DOM/MIL	WELL#2	SOLDIER CK	NWNWNW0322S20E	700		
3910774	WELL	DOM/MIL	WELL#3	SOLDIER CK	NWNESE3321S20E	700		
3910774	WELL	DOM/MIL	WELL#4	SOLDIER CK	NENWNE3321S20E	700		
3910774	WELL	DOM/MIL	WELL#5	SOLDIER CK	SWNESW2821S20E	700		
3910774	WELL	DOM/MIL	WELL#6	SOLDIER CK	NWNWSE3321S20E	700		
3910774	WELL	NONE	WELL#7	SOLDIER CK	NWNWNW2221S20E	800		
3910774	WELL	NONE	WELL#8	SOLDIER CK	NESENE1621S20E	800		
3910774	WELL	TEST	WELL#9	SOLDIER CK	SWNWNW1021S20E	NL		
3910774	WELL	MILITARY	REMBASS#1	GRVYRD GLCH	NESWNE2621S20E	125		
3910774	WELL	MIL/IRR	REMBASS#2	GRVYRD GLCH	NENWNE2321S20E	125		
3910774	WELL	NL	WINDMILL#1	SOLDIER CK	NESESW3420S20E	NL		
3910774	WELL	NL	WINDMILL#2	SOLDIER CK	SWSESW2720S20E	NL		
3910774	WELL	NL	WELL	GARDEN CANY	NWSESE2922S20E	NL		
3910774	WELL	NL	SPATIAL RES	SOLDIER CK	SWNWNW2221S20E	NL		
3910774	WELL	NL	E RNG BUNKR	GRVYRD GLCH	NWSENW0721S21E	NL		

DWR REPORTED DATA

Diversion	Uses	Name	Course	Location	Flow (GPM)	Remarks
WELL	DOM/MIL	WELL#1	SOLDIER CK	NWNWNW0322S20E		
WELL	DOM/MIL	WELL#2	SOLDIER CK	NWNWNW0322S20E		
WELL	DOM/MIL	WELL#3	SOLDIER CK	NENESE3321S20E		
WELL	DOM/MIL	WELL#4	SOLDIER CK	NENWNE3321S20E		
WELL	DOM/MIL	WELL#5	SOLDIER CK	SWNESW2821S20E		
WELL	DOM/MIL	WELL#6	SOLDIER CK	NWNWSE3321S20E		
WELL	NONE	WELL#7	SOLDIER CK	NWNWNW2221S20E		
WELL	NONE	WELL#8	SOLDIER CK	NESENE1621S20E		
WELL	TEST	WELL#9	SOLDIER CK	SWNWNW1021S20E		
WELL	MIL/IRR	REMBASS#1	GRVYRD GLCH	NESWNE2621S20E		
WELL	MIL/IRR	REMBASS#2	GRVYRD GLCH	NWNENE2321S20E		
WELL	NO USE FOUND	WINDMILL#1	SOLDIER CK	NESESW3420S20E		
WELL	NO USE FOUND	WINDMILL#2	SOLDIER CK	SWSESW2720S20E		
WELL	NO USE FOUND	WELL	GARDEN CANY	NWSESE2922S20E		
WELL	NO USE FOUND	SPATIAL RES	SOLDIER CK	SWNWNW2221S20E		
WELL	NO USE FOUND	E RNG BUNKR	GRVYRD GLCH	NWSENW0721S21E		

FMC002352

TABLE 45. FEDERAL RESERVED WATER RIGHTS SUMMARY SPREADSHEET
FT. HUACHUCA - #111-23-F1 CONTINUED

CLAIMED DATA

Adj.File#	Diversion	Uses	Name	Course	Location	Flow (GPM)	File Date Fee Pd.
3910774	WELL	NL	TEST#1	NL	NWSWSE2021S20E	NL	
3910774	WELL	NL	TEST#2	NL	SESWNW3021S20E	NL	
3910774	WELL	NL	TEST#3	NL	NENENE1621S20E	NL	
3910774	WELL	NL	TEST#4	NL	SWSENE1521S20E	NL	
3910774	WELL	NL	TEST#6	NL	SESWSW3520S20E	NL	
3910774	WELL	NL	TEST#7	NL	SESWNW1121S20E	NL	
3910774	WELL	NL	TEST#8	NL	NWNWSW1321S20E	NL	
3910774	SPRING	DOMESTIC	SPRING1&2	HUACH CANY	NWSW1422S19E	NL	
3910774	SPRING	DOMESTIC	SPRING3&3A	HUACH CANY	NENE2222S19E	NL	
3910774	SPRING	DOMESTIC	SPRING 4	HUACH CANY	NENE2222S19E	NL	
3910774	SPRING	DOMESTIC	PICNIC SPR	GARDEN CANY	NESW3122S20E	NL	
3910774	SPRING	DOMESTIC	CHAIN SPR	GARDEN CANY	SWSW3122S20E	NL	
3910774	SPRING	DOMESTIC	SPRING 1	GARDEN CANY	SESE3622S19E	NL	
3910774	SPRING	DOMESTIC	SPRING 1A	GARDEN CANY	NENE0123S19E	NL	
3910774	SPRING	DOMESTIC	SPRING 1B	GARDEN CANY	SESE3622S19E	NL	
3910774	SPRING	DOMESTIC	SPRING 2	GARDEN CANY	NESW0123S19E	NL	

DWR REPORTED DATA

Diversion	Uses	Name	Course	Location	Flow (GPM)	Remarks
WELL	TEST	TEST#1	NL	NWSWSE2021S20E		
WELL	TEST	TEST#2	NL	SESWNW3021S20E		
WELL	TEST	TEST#3	NL	NENENE1621S20E		
WELL	TEST	TEST#4	NL	SWSENE1521S20E		
WELL	TEST	TEST#6	NL	SESWSW3520S20E		
WELL	TEST	TEST#7	NL	SESWNW1121S20E		
WELL	TEST	TEST#8	NL	NWNWSW1321S20E		
SPRING	DOMESTIC	SPRING1&2	HUACH CANY	NWSW1422S19E		
SPRING	DOMESTIC	SPRING3&3A	HUACH CANY	NENE2222S19E		
SPRING	DOMESTIC	SPRING 4	HUACH CANY	NENE2222S19E		
SPRING	DOMESTIC	PICNIC SPR	GARDEN CANY	NESW3122S20E		
SPRING	DOMESTIC	CHAIN SPR	GARDEN CANY	SESW3122S20E		
SPRING	DOMESTIC	SPRING 1	GARDEN CANY	SESE3622S19E		
SPRING	DOMESTIC	SPRING 1A	GARDEN CANY	NENE0123S19E		
SPRING	DOMESTIC	SPRING 1B	GARDEN CANY	NENE0123S19E		
SPRING	DOMESTIC	SPRING 2	GARDEN CANY	NESW0123S19E		

FMC002353

TABLE 45. FEDERAL RESERVED WATER RIGHTS SUMMARY SPREADSHEET
FT. HUACHUCA - #111-23-F1 CONTINUED

CLAIMED DATA

Adj.File#	Diversion	Uses	Name	Course	Location	Flow (GPM)	File Date Fee Pd.
3910774	SPRING	DOMESTIC	SPRING 3	GARDEN CANY	NESW0123S19E	NL	
3910774	SPRING	DOMESTIC	SPRING 4	GARDEN CANY	SWSW0123S19E	NL	
3910774	SPRING	DOMESTIC	CABIN SPR	GARDEN CANY	SESE0223S19E	NL	
3910775	SPRING	WL/GAME	SPRING#2	TINKER CANY	NESW3322S20E	NL	
3910775	SPRING	WL/GAME	SPRING#3	TINKER CANY	SWSW3322S20E	NL	
3910775	SPRING	WL/GAME	SPRING#4	SAWMILL CAN	SWSW0723S20E	NL	
3910775	SPRING	WL/GAME	SPRING#5	MCCLURE CAN	NESE3522S19E	NL	
3910775	SPRING	WL/GAME	SPRING#6	MCCLURE CAN	NWSW3622S19E	NL	
3910775	SPRING	WL/GAME	SPRING#7	MCCLURE CAN	SWNW3622S19E	NL	
3910775	SPRING	WL/GAME	SPRING#8	GARDEN CANY	SWNW3122S20E	NL	
3910775	SPRING	WL/GAME	SPRING#9	WOODCUTTERS	NWSE2522S19E	NL	
3910775	SPRING	WL/GAME	SPRING#10	WOODCUTTERS	SWSW1922S20E	NL	
3910775	SPRING	WL/GAME	SPRING#11	WOODCUTTERS	NESW2022S20E	NL	
3910775	SPRING	WL/GAME	SPRING#12	SOLDIER CK	NESE0722S20E	NL	
3910775	SPRING	WL/GAME	SPRING#13	SOLDIER CK	SWSW1322S19E	NL	
3910775	SPRING	WL/GAME	SPRING#14	HUACH CANY	NWNE2722S19E	NL	

DWR REPORTED DATA

Diversion	Uses	Name	Course	Location	Flow (GPM)	Remarks
SPRING	DOMESTIC	SPRING 3	GARDEN CANY	NESW0123S19E		
SPRING	DOMESTIC	SPRING 4	GARDEN CANY	SWSW0123S19E		
SPRING	NO USE FOUND	CABIN SPR	GARDEN CANY			
SPRING	WL/GAME	SPRING#2	TINKER CANY	NESW3322S20E		
SPRING	WL/GAME	SPRING#3	TINKER CANY	SWSW3322S20E		
SPRING	WL/GAME	SPRING#4	SAWMILL CAN	SWSW0723S20E		
SPRING	WL/GAME	SPRING#5	MCCLURE CAN	NESE3522S19E		
SPRING	WL/GAME	SPRING#6	MCCLURE CAN	NWSW3622S19E		
SPRING	WL/GAME	SPRING#7	MCCLURE CAN	SWNW3622S19E		
SPRING	WL/GAME	SPRING#8	GARDEN CANY	SWNW3122S20E		
SPRING	WL/GAME	SPRING#9	WOODCUTTERS	NWSE2522S19E		
SPRING	WL/GAME	SPRING#10	WOODCUTTERS	SWSW1922S20E		
SPRING	WL/GAME	SPRING#11	WOODCUTTERS	NESW2022S20E		
SPRING	WL/GAME	SPRING#12	SOLDIER CK	NESE0722S20E		
SPRING	WL/GAME	SPRING#13	SOLDIER CK	SWSW1322S19E		
SPRING	WL/GAME	SPRING#14	HUACH CANY	NWNE2722S19E		

FMC002354

TABLE 45. FEDERAL RESERVED WATER RIGHTS SUMMARY SPREADSHEET
FT. HUACHUCA - #111-23-F1 CONTINUED

CLAIMED DATA

Adj.File#	Diversion Uses		Name	Course	Location	Flow/Cap.	File Date Fee Pd.
3910775	SPRING	WL/GAME	SPRING#15	HUACH CANY	NWSE2222S19E	NL	
3910775	SPRING	WL/GAME	SPRING#16	HUACH CANY	NWSW1422S19E	NL	
3910775	SPRING	WL/GAME	SPRING#17	HUACH CANY	SENW1522S19E	NL	
3910775	SPRING	WL/GAME	SPRING#18	BLACKTAIL	NWNE1622S19E	NL	
3910775	SPRING	WL/GAME	SPRING#19	BLACKTAIL	SENE0822S19E	NL	
3910775	SPRING	WL/GAME	SPRING#20	SLAUGHTERHS	NWNE0422S19E	NL	
3910775	SPRING	WL/GAME	SPRING#21	SLAUGHTERHS	SWSW2621S19E	NL	
3910775	SPRING	WL/GAME	SPRING#22	SYCAMORE CY	NWSW3221S19E	NL	
3910775	SPRING	WL/GAME	SPRING#23	GARDEN WASH	NESW2122S20E	NL	
3910775	SPRING	WL/GAME	SPRING#24	SCHELLOTE	NWNW0723S20E	NL	
3910775	SPRING	WL/GAME	SPRING#25	MCCLURE CAN	SWSW3622S19E	NL	
3910775	POND	RC/WL	GRAVEL PIT	WOODCUTTER	NESE1722S20E	NL	
3910775	POND	EROSION	WOODCUTTER	WOODCUTTER	NWSW1622S20E	NL	
3910775	POND	EROSION	WOODCUTTER	WOODCUTTER	NWNE1622S20E	NL	
3910775	POND	EROSION	WOODCUTTER	WOODCUTTER	NENW1022S20E	NL	
3910775	POND	RC/WL	GOLF COURSE	SOLDIER CK	NWNE0922S20E	NL	

DWR REPORTED DATA

Diversion Uses		Name	Course	Location	Cap.(AC-FT)	Remarks
SPRING	WL/GAME	SPRING#15	HUACH CANY	NWSE2222S19E		
SPRING	WL/GAME	SPRING#16	HUACH CANY	NWSW1422S19E		
SPRING	WL/GAME	SPRING#17	HUACH CANY	SENW1522S19E		
SPRING	WL/GAME	SPRING#18	BLACKTAIL	NWNE1622S19E		
SPRING	WL/GAME	SPRING#19	BLACKTAIL	SENE0822S19E		
SPRING	WL/GAME	SPRING#20	SLAUGHTERHS	NWNE0422S19E		
SPRING	WL/GAME	SPRING#21	SLAUGHTERHS	SWSW2621S19E		
SPRING	WL/GAME	SPRING#22	SYCAMORE CY	NWSW3221S19E		
SPRING	WL/GAME	SPRING#23	GARDEN WASH	NESW2122S20E		
SPRING	WL/GAME	SPRING#24	SCHELLOTE	NWNW0723S20E		
SPRING	WL/GAME	SPRING#25	MCCLURE CAN	SWSW3622S19E		
POND	RC/WL	GRAVEL PIT	WOODCUTTER	NESE1722S20E	57.4	PIPE IN DAM(SURV.)
POND	FLOOD/ER CTRL	WOODCUTTER	WOODCUTTER	NWSW1622S20E	8.4	SURVEYED
POND	EROSION	WOODCUTTER	WOODCUTTER	NWNE1622S20E		<1 ACRE
POND	EROSION	WOODCUTTER	WOODCUTTER	NENW1022S20E		FLOOD CONTROL
POND	RC/WL	GOLF COURSE	SOLDIER CK	NWNE0922S20E	59.7	SURVEYED

FMC002355

TABLE 45. FEDERAL RESERVED WATER RIGHTS SUMMARY SPREADSHEET
FT. HUACHUCA - #111-23-F1 CONTINUED

CLAIMED DATA

Adj.File#	Diversion	Uses	Name	Course	Location	Flow/Cap.	File Date Fee Pd.
3910775	POND	RC/WL	OFFICERS CL	SOLDIER CK	NESE0122S19E	NL	
3910775	POND	RC/WL	PAN AM	HUACH CANY	SESW2421S19E	NL	
3910775	POND	RC/WL	HIDDEN	BLACKTAIL	SENW2821S19E	NL	
3910775	POND	RC/WL/ER	LOW SOLDIER	ROCK SP CK	NENE0722S20E	NL	
3910775	POND	EROSION	UPP SOLDIER	ROCK SP CK	SENE1322S19E	NL	
3910775	POND	RC/WL	FLY	SOLDIER CK	NENE1222S19E	NL	
3910775	POND	RC/WL	SYCAMORE	SYCAMORE	SESW2021S19E	NL	
3910775	POND	RC/WL/ER	SLAUGHTERHS	SLAUGHT CAN	SWSE2321S19E	NL	
3910775	POND	EROSION	LAND STRIP	COYOTE CAN	NENW3521S19E	NL	
3910775	POND	EROSION	BUFF CORRAL	COYOTE CAN	SWNE2621S19E	NL	
3910775	POND	RC/WL	BLACKTAIL	BLACKTAIL	SENE1622S19E	NL	
3910775	POND	RC/WL	W HUACHUCA	HUACH CANY	NWNW2222S19E	NL	
3910775	POND	EROSION	HUACH CORR	HUACH CANY	NWSE2222S19E	NL	
3910775	POND	RC/WL/ER	BOY SCOUT	GARDEN CAN	NWSE0223S19E	NL	
3910775	POND	EROSION	UWOODCUTTER	WOODCUTTER	NESW2022S20E	NL	
3910775	POND	EROSION	LWOODCUTTER	WOODCUTTER	SWNW1022S20E	NL	

DWR REPORTED DATA

Diversion	Uses	Name	Course	Location	Cap.(AC-FT)	Remarks
POND	RC/WL	OFFICERS CL	SOLDIER CK	NESE0122S19E		<15 ACRE FEET
POND	RC/WL	PAN AM	HUACH CANY	SESW2421S19E		DESTROYED(AIRPORT)
POND	RC/WL	HIDDEN	BLACKTAIL	SENW2821S19E	22.5	SURVEYED
POND	RC/WL/ER	LOW SOLDIER	ROCK SP CK	NENE0722S20E		<15 ACRE FEET
POND	WILDLIFE	UPP SOLDIER	ROCK SP CK	SENE1322S19E		<1 ACRE
POND	NO USE FOUND	FLY	SOLDIER CK			
POND	RC/WL	SYCAMORE	SYCAMORE	SESW2021S19E	38.8	SURVEYED
POND	WILDLIFE	SLAUGHTERHS	SLAUGHT CAN	SWSE2321S19E		<15 ACRE FEET
POND	NO USE FOUND	LAND STRIP	COYOTE CAN			
POND	FISH/WL	BUFF CORRAL	COYOTE CAN	SWNE2621S19E		<15 ACRE FEET
POND	RC/WL	BLACKTAIL	BLACKTAIL	SENE1622S19E		<15 ACRE FEET
POND	NO USE FOUND	W HUACHUCA	HUACH CANY			
POND	NO USE FOUND	HUACH CORR	HUACH CANY			
POND	NO USE FOUND	BOY SCOUT	GARDEN CAN			
POND	FISH/WL	UWOODCUTTER	WOODCUTTER	NESW2022S20E		<1 ACRE
POND	FLOOD CTRL	LWOODCUTTER	WOODCUTTER	SWNW1022S20E	20.7	SURVEYED

TABLE 45. FEDERAL RESERVED WATER RIGHTS SUMMARY SPREADSHEET
FT. HUACHUCA - #111-23-F1 CONTINUED

CLAIMED DATA

Adj.File#	Diversion	Uses	Name	Course	Location	Flow/Cap.	File Date Fee Pd.
3910775	POND	RC/WL/GM	ANTELOPE	BABOCOMARI	NWSW1621S19E	NL	
3910775	POND	GAME	POWER LINE	BLACKTAIL	NWSW2721S19E	NL	
3910775	POND	GAME	NORTH	BABOCOMARI	SWNE1521S19E	NL	
3910775	POND	EROSION	HUACH CANY	HUACH CANY	NWSW1422S19E	NL	
3910775	POND	EROSION	LOWER HUACH	HUACH CANY	SESE0721S20E	NL	
3910775	POND	RC/WL/GM	LOBLACKTAIL	BLACKTAIL	NWNE2221S19E	NL	
3910775	POND	RC/WL/GM	UNKNOWN WST	SLAUGHT WSH	SWNE1421S19E	NL	
3910775	POND	EROSION	LOW GARDEN	GARDEN CANY	SWSW2322S20E	NL	
3910775	POND	EROSION	LOWER FLY	SOLDIER CK	NWSW0622S20E	NL	
3910775	POND	EROSION	LO HORSE P	SOLDIER CK	SESW0622S20E	NL	
3910775	POND	EROSION	UP HORSE P	SOLDIER CK	SWSW0622S20E	NL	
3910775	POND	RC/WL	UPP GARDEN	GARDEN CANY	NWSE0223S19E	NL	
3910775	POND	EROSION	FAIRWAY	SOLDIER CK	SWNE0422S20E	NL	
3910775	POND	EROSION	SEDIMENT#1	SOLDIER CK	NESE3321S20E	NL	
3910775	POND	EROSION	SEDIMENT#2	SOLDIER CK	SESW2821S20E	NL	
3910775	POND	EVAP	SEDIMENT#3	SOLDIER CK	SESE2121S20E	NL	

DWR REPORTED DATA

Diversion	Uses	Name	Course	Location	Cap.(AC-FT)	Remarks
POND	WL/GAME	ANTELOPE	BABOCOMARI	NWSW1621S19E	26.4	SURVEYED
POND	NO USE FOUND	POWER LINE	BLACKTAIL			
POND	NO USE FOUND	NORTH	BABOCOMARI			
POND	NO USE FOUND	HUACH CANY	HUACH CANY			
POND	ER/WL	LOWER HUACH	HUACH CANY	SESE0721S20E		<1 ACRE
POND	RC/WL/GM	LOBLACKTAIL	BLACKTAIL	NWNE2221S19E		<1 ACRE
POND	NO USE FOUND	UNKNOWN WST	SLAUGHT WSH			
POND	ER/FISH	LOW GARDEN	GARDEN CANY	SWSW2322S20E		<1 ACRE
POND	NO USE FOUND	LOWER FLY	SOLDIER CK			
POND	ER/WL	LO HORSE P	SOLDIER CK	SESW0622S20E		<1 ACRE
POND	EROSION CTRL	UP HORSE P	SOLDIER CK	SWSW0622S20E		<1 ACRE
POND	WILDLIFE	UPP GARDEN	GARDEN CANY	NWSE0223S19E		<15 ACRE FEET
POND	WILDLIFE	FAIRWAY	SOLDIER CK	SWNE0422S20E		<1 ACRE
POND	NO USE FOUND	SEDIMENT#1	SOLDIER CK			
POND	NO USE FOUND	SEDIMENT#2	SOLDIER CK			
POND	EVAP	SEDIMENT#3	SOLDIER CK	SESE2121S20E		PIPE IN DAM

FMC002357

TABLE 45. FEDERAL RESERVED WATER RIGHTS SUMMARY SPREADSHEET
FT. HUACHUCA - #111-23-F1 CONTINUED

CLAIMED DATA

Adj.File#	Diversion Uses		Name	Course	Location	Flow/Cap.	File Date Fee Pd.
3910775	POND	EROSION	DAM	SOLDIER CK	NESW1021S20E	NL	
3910775	POND	EROSION	DAM	SOLDIER CK	SENW1021S20E	NL	
3910775	POND	EROSION	DAM	SOLDIER CK	SENE1021S20E	NL	
3910775	POND	EROSION	DAM	SOLDIER CK	SESE0321S20E	NL	
3910775	POND	EROSION	DAM	SOLDIER CK	NENE0921S20E	NL	
3910775	POND	ER/FISH	DAM	HUACH WASH	NWNE3621S19E	NL	
3910775	POND	ER/FISH	DAM	GARD WASHES	NENE2822S20E	NL	
3910775	POND	EROSION	DAM	SYCAMORE	SESE3121S19E	NL	
3910775	POND	EROSION	DAM	GARDEN CANY	NWNE1522S20E	NL	
3910775	POND	GAME	DAM	HUACH CANY	NWSE1821S20E	NL	
3910775	POND	GAME	DAM	SAN PEDRO	SENW2120S21E	NL	

DWR REPORTED DATA

Diversion Uses		Name	Course	Location	Cap.(AC-FT)	Remarks
POND	NO USE FOUND	DAM	SOLDIER CK			
POND	NO USE FOUND	DAM	SOLDIER CK			
POND	EROSION	DAM	SOLDIER CK	SENE1021S20E		<1 ACRE
POND	NO USE FOUND	DAM	SOLDIER CK			
POND	EROSION CTRL	DAM	SOLDIER CK	NENE0921S20E		<1 ACRE
POND	EROSION CTRL	DAM	HUACH WASH	NWNE3621S19E		<15 ACRE FEET
POND	ER/FISH	DAM	GARD WASHES	NENE2822S20E	16.9	SURVEYED
POND	NO USE FOUND	DAM	SYCAMORE			
POND	EROSION	DAM	GARDEN CANY	NWNE1522S20E		<1 ACRE
POND	GAME	DAM	HUACH CANY	NWSE1821S20E		<1 ACRE
POND	GAME	DAM	SAN PEDRO	SENW2120S21E		<1 ACRE
POND	UNCLAIMED		ROUGH CANY	NWSE2122S19E		<1 ACRE
POND	UNCLAIMED		BABOCOMARI	NENE0321S20E		<1 ACRE
POND	UNCLAIMED		SOLDIER CK	NWSE1021S20E		<1 ACRE
POND	UNCLAIMED		SOLDIER CK	SWSW1621S20E		<1 ACRE
POND	UNCLAIMED		SOLDIER CK	SWSE0422S20E		<1 ACRE (GOLF CRS.)
POND	UNCLAIMED		SOLDIER CK	SESW0622S20E		<1 ACRE
POND	UNCLAIMED		GARDEN WASH	NENE2822S20E	27.1	SURVEYED (MID GARD)
POND	UNCLAIMED		SAN PEDRO	SESE1021S21E		<1 ACRE
POND	UNCLAIMED		SYCAMORE	NESW2921S19E	10.5	SURVEYED
POND	UNCLAIMED		BABOCOMARI	NWSW1621S19E	14.9	SURVEYED
POND	UNCLAIMED		SOLDIER CK	SESW0622S20E		<1 ACRE
POND	UNCLAIMED		SOLDIER CK	SESE2121S20E	5.5	SURVEYED (EST.)
POND	UNCLAIMED		SOLDIER CK	SESE2121S20E	12.0	SURVEYED

FMC002358

FORT HUACHUCA
111-23-F1

Introduction

Fort Huachuca, currently the United States Army Communications Command Post, is located approximately sixty miles southeast of Tucson, Arizona, and about fifteen miles north of the Mexican Border. The fort is situated along the northern range of the Huachuca Mountains in Cochise County, just west of the City of Sierra Vista, and due south of Huachuca City along state highway 92 (Figure 39).

The fort was established on October 29, 1881, by Presidential Executive Order, although the United States Army installed an outpost at this location on March 3, 1877 (Camp Huachuca). The primary purpose of the post was to aid in the repression of Apache Indian attacks against the influx of settlements into the southern areas of the Arizona Territory. Following the surrender of the Apache Chief Geronimo in September of 1886, the primary purpose of the fort shifted to the Villista Campaign ("Pancho" Villa), although a few renegade bands of Apache Indians continued to raid settlers and settlements.

The Villista Campaign, which was designed to stop raids by Pancho Villa in the United States, eventually led to political friction between the United States and the Republic of Mexico, since the United States dispatched troops deep into Mexico. Although the U.S. Government claimed to pursue Villistas into Mexican territory only for the purpose of halting raids within U.S. boundaries, U.S. officials were concerned that the Mexican Government would view this "expedition" as unfriendly aggression. In 1917, the Villista expedition returned to the United States.

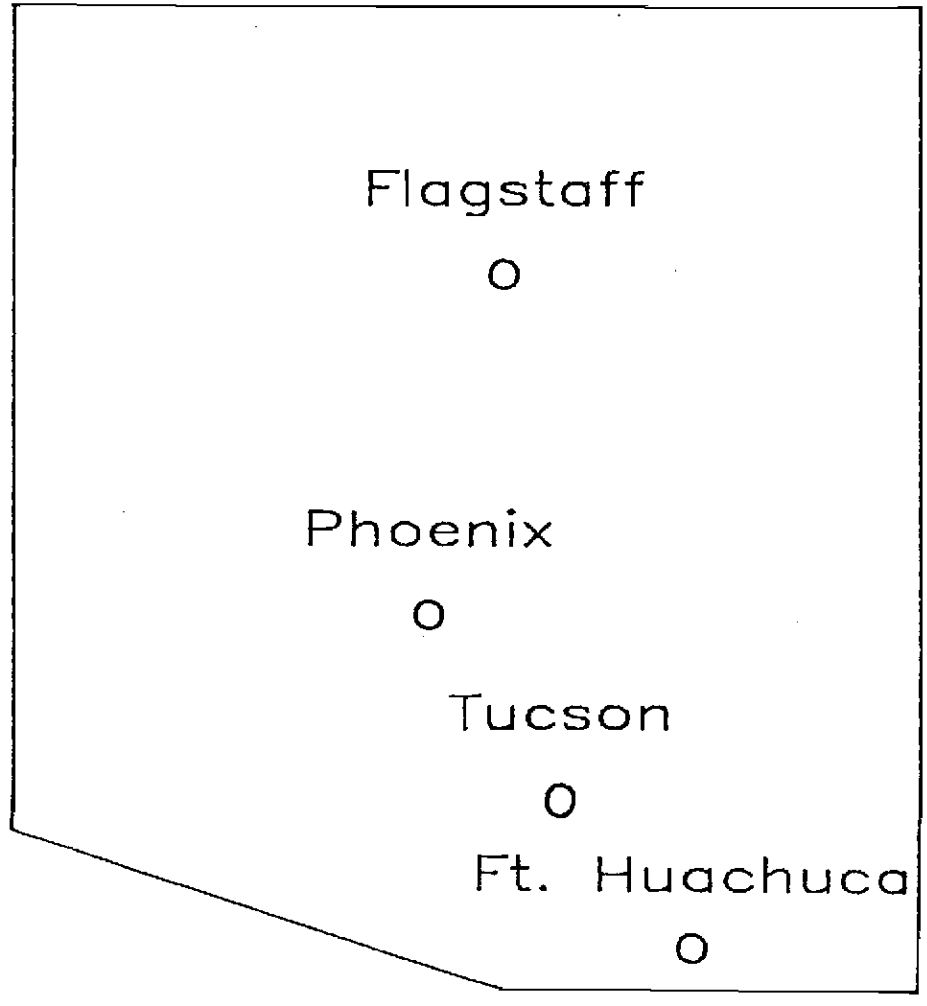
Following the punitive expedition against the Villistas in 1917, the United States declared war in Europe (World War I). At this time, the fort was primarily used to train troops, and during World War II, the fort was utilized to train full divisions. After the end of World War II (1945-1951), the fort was closed, and designated as surplus property by the U.S. Army. At the start of the Korean War, the fort was reactivated. However, at the close of the Korean Conflict (1953), the fort was once again deactivated, and reclassified as surplus. Fort Huachuca was reactivated on February 1, 1954, as the U.S. Army Electronic Proving Ground. In July of 1967, Fort Huachuca became the U.S. Army Strategic Communications Command, subsequently renamed the U.S. Army Communications Command. Fort Huachuca has remained in this status up to the present.

Hydrogeology

The primary water resources of Fort Huachuca are groundwater and surface water systems fed by precipitation on the land surface. The average annual precipitation for the fort (at 5,000 feet) is approximately 15.4 inches, where summer thunderstorms in July and August account for nearly fifty percent of the total annual rainfall (Figures 40 and 41).

Fig.39

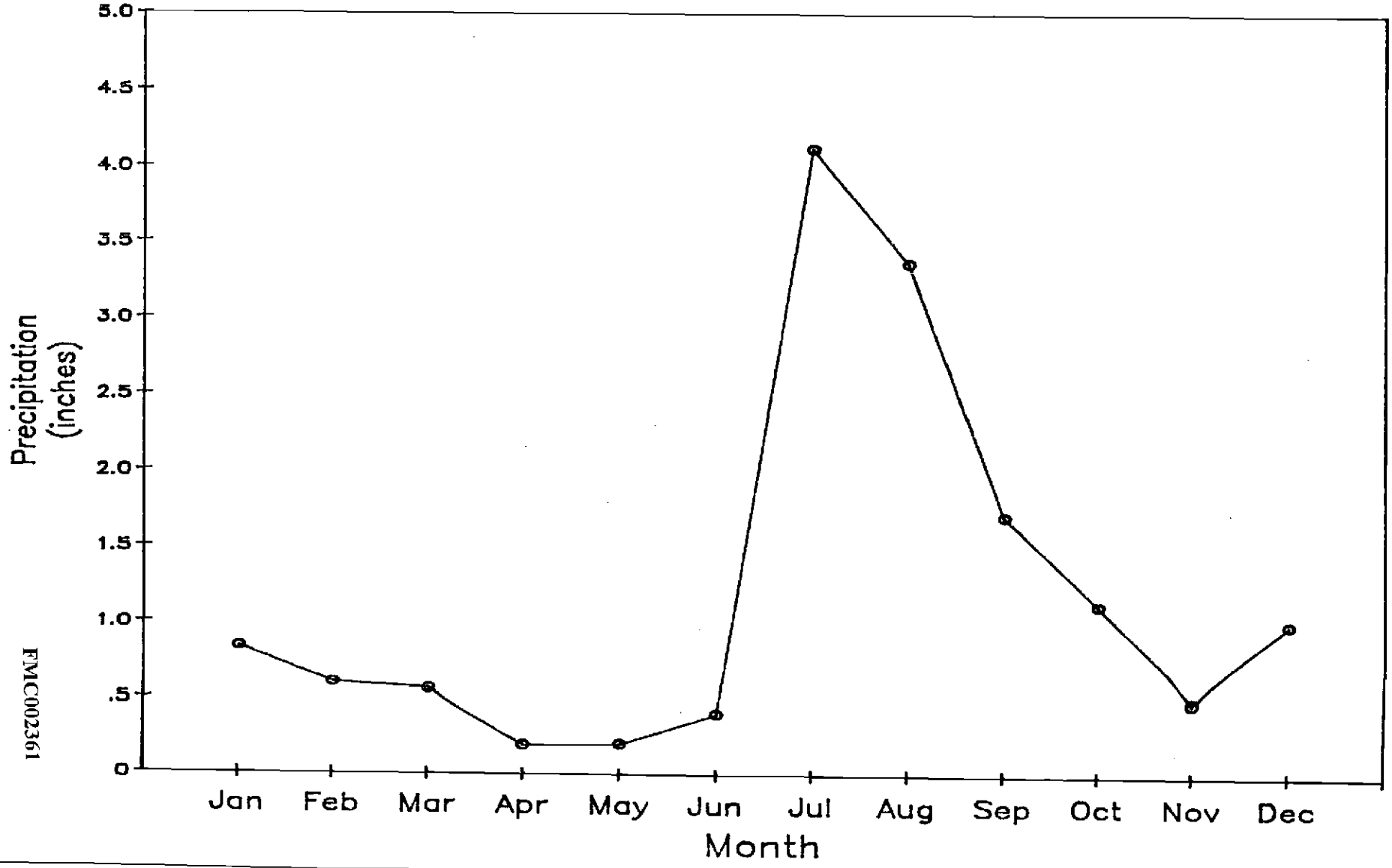
Location of Ft. Huachuca, Arizona



FMC002360

Fig.40

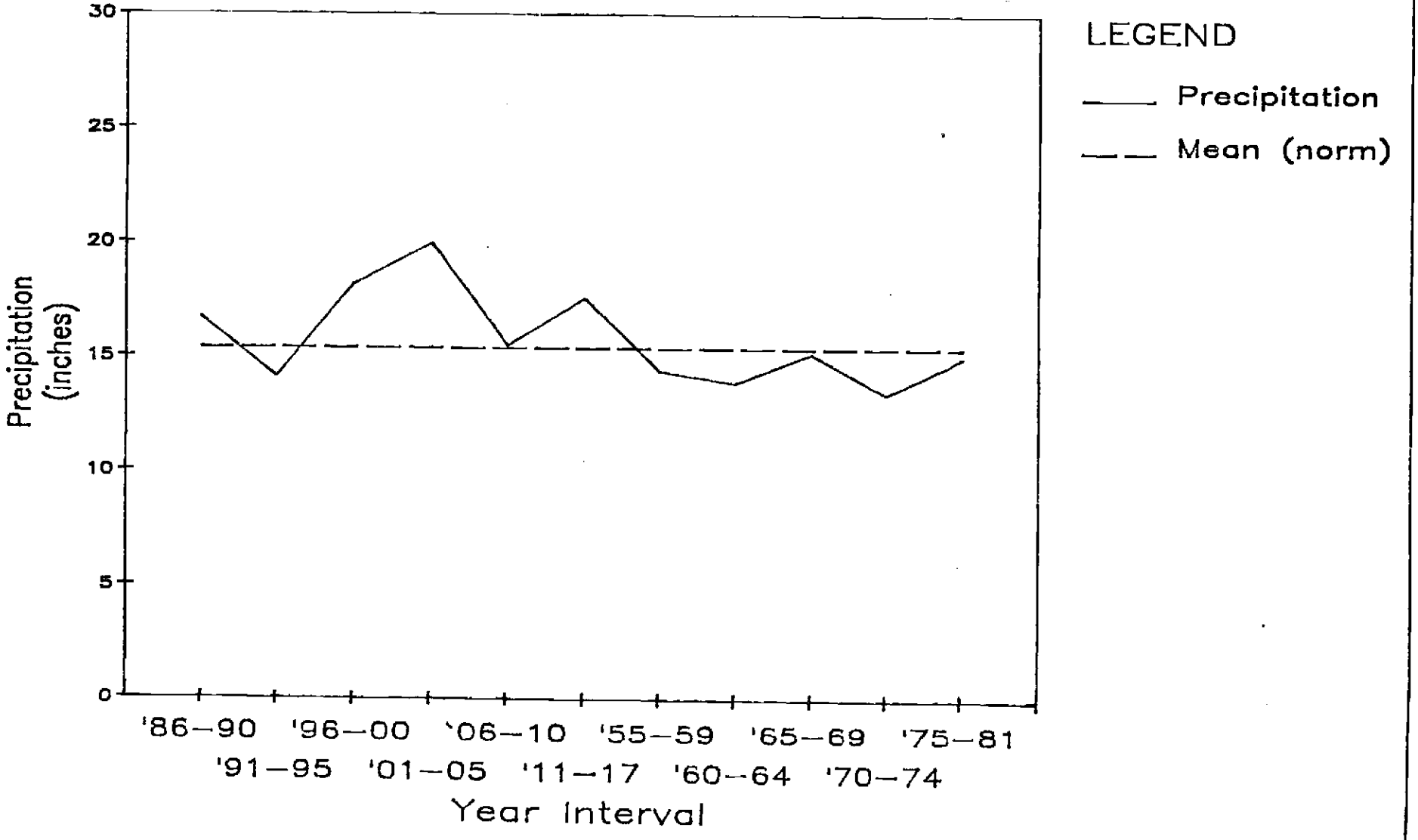
AVERAGE MONTHLY PRECIPITATION
FORT HUACHUCA, ARIZONA
1951 TO 1980
Source: Ariz. St. Univ. Climatology Laboratory



FMC002361

Fig.41

AVERAGE ANNUAL PRECIPITATION
FORT HUACHUCA, ARIZONA
1886 TO 1981*
Source: Ariz. St. Univ. Climatology Laboratory



*No data available for 1918–1954

FMC002362

The major water supplies for Fort Huachuca are from two primary sources located on the east side of the Huachuca Mountains. These are (1) groundwater from a regional aquifer, and (2) water from fracture and fault-controlled springs. The regional aquifer is recharged along the mountain fronts, and from flow from mountain washes. Flows from mountain washes rarely reach the San Pedro River, except during severe thunderstorms prevalent during the summer months. There is little or no groundwater recharge from soil percolation. Springs are recharged by surface runoff from rainfall and snowmelt. These waters are trapped by fractures in the mountain rock formations, where the water is rapidly discharged through the springs. The only springs capable of yielding sufficient quantity and quality of water usable by the fort for domestic purposes are located in either Garden Canyon or Huachuca Canyon (Figure 42).

Size and Growth

Fort Huachuca has claimed a post population of 9,304 (residents), with an additional 6,465 employees who work on the post (non-residents). The claim indicates no known future population increases. Mr. Tom Cochran, Chief Utilities Engineer for the fort, indicated a present full-time post population of about 9,000, with about 7,500 day-time residents. When calculating municipal needs for the installation (water requirements, refuge, etc.), an "effective population" of 11,400 is used. Effective Population (EP) is calculated by the following formula:

$$EP = DT/_{3} + FT \quad , \text{ where}$$

EP = Effective Population
DT = Daytime (non-resident) population
FT = Full-time (resident) population

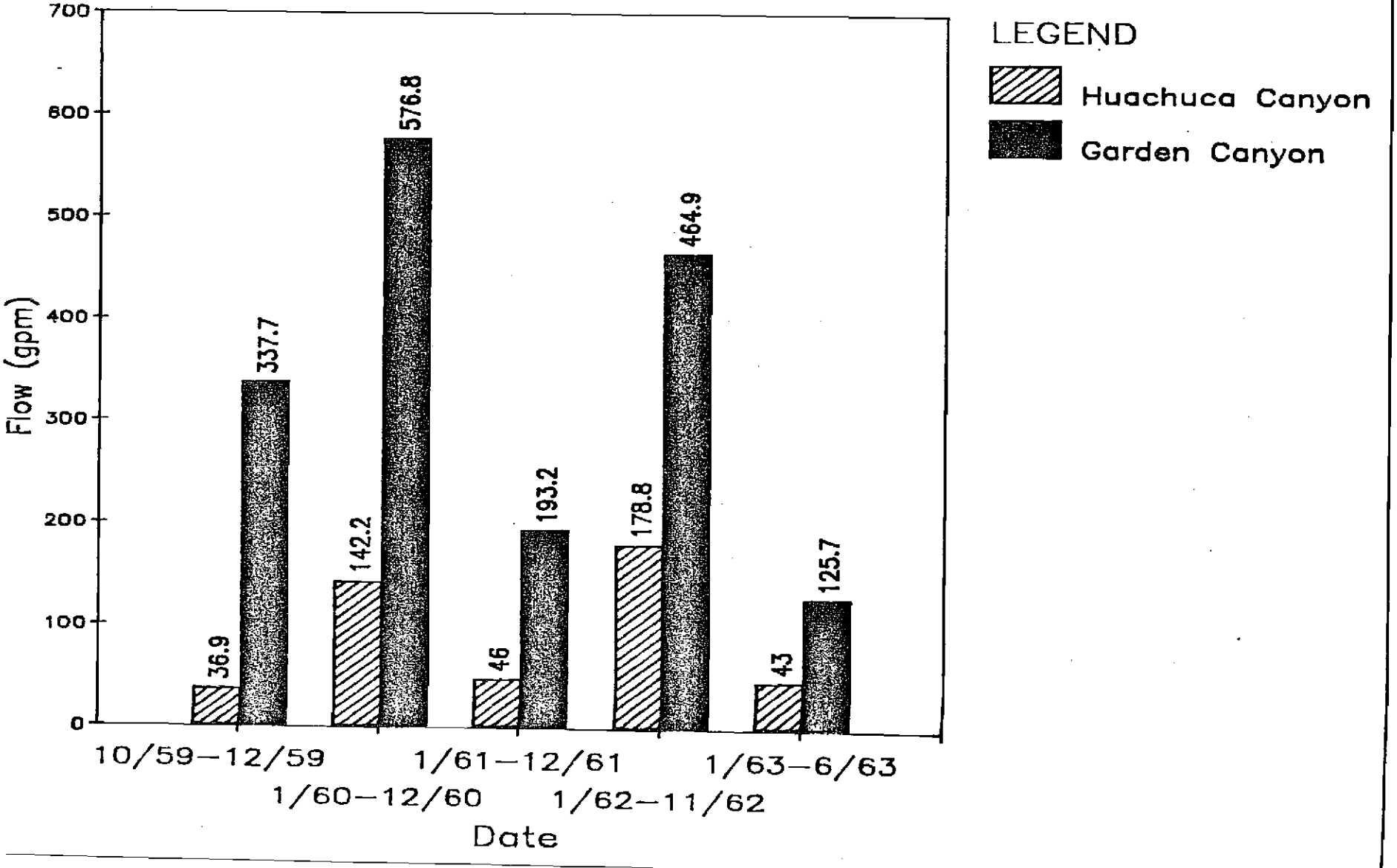
The Arizona Department of Commerce listed a 1985 post population of 9,022, including 6,231 military employees and 6,223 civilian workers.

Fort Huachuca was incorporated into the city limits of Sierra Vista on February 17, 1971. In 1970, the post population was 6,659, and in 1980, the population was 9,475. Sierra Vista currently has a population of 30,520. Projections by the Arizona Department of Economic Security indicates a population of 54,625 by the year 2000. This amounts to an annual growth rate of approximately 5.5 to 6.0%. The growth rate of the State of Arizona has been estimated at about 3.0% per year. Although Sierra Vista's economy is closely related to the installation, the post population has changed little within the past five years (±3%), despite the area's population boom (Figure 43). It should be pointed out that although the population of Fort Huachuca has not changed, the fort's well field is directly affected by well pumping from surrounding areas, since the aquifers tapped by Fort Huachuca, Sierra Vista, and developments just outside of Sierra Vista are hydraulically continuous. Therefore, any pumping of wells by Sierra Vista will, in time, cause drawdown in Fort Huachuca.

FMC002363

Fig.42

Average spring flow for Garden and Huachuca Canyons
Fort Huachuca, Arizona
1959 through 1963
Data based on U.S.G.S. Report #1819–D



FMC002364

The fort has claimed an on-post land area of 73,344 acres. When the post was first established in 1881, the size of the fort was 41,760 acres. On May 14, 1883, the fort boundaries were expanded by Presidential Executive Order to 44,800 acres. In the 1940's, Fort Huachuca was expanded again to include lands due east of the original boundaries. This area is now known as the East Range, and encompasses approximately 13,545 acres. This brought the total area of Fort Huachuca to about 58,345 acres. In August of 1957, 13,463 acres of Bureau of Land Management (BLM) land was removed from the public domain, and transferred to Fort Huachuca, bringing the fort's total acreage to 71,808 acres. The remaining acreage claimed by the fort (1,536 acres) is currently state trust land that is utilized by the fort pending exchange between the State of Arizona and the United States Government (Figure 44).

Fort Huachuca and the City of Sierra Vista share an airfield located within the west range of Fort Huachuca. Pursuant to the Airport and Airway Development Act of 1970, the Federal Aviation Administration (FAA) required Fort Huachuca to convey 29.0 acres to the City of Sierra Vista. This conveyance, deeded to Sierra Vista on December 12, 1982, reduced the fort's acreage to 73,315, the present size of Fort Huachuca. Sierra Vista began construction for a new air terminal on this newly acquired acreage on September 6, 1983, and it was completed on February 15, 1984.

Claimed Data

Fort Huachuca has claimed a total of twenty-~~four~~ six wells, thirty-eight springs, and sixty-five ponds. These diversions are summarized below (Table 39). Total amount of potable water claimed is 3,287 million gallons (10,087 af) per annum (see projected water use). The fort based these claims on (1) Federal Reserve Water Rights and (2) legitimate and authorized federal activities.

For the above diversions, the fort claimed approximate dates of first use. These dates (years) are shown below (Table 40).

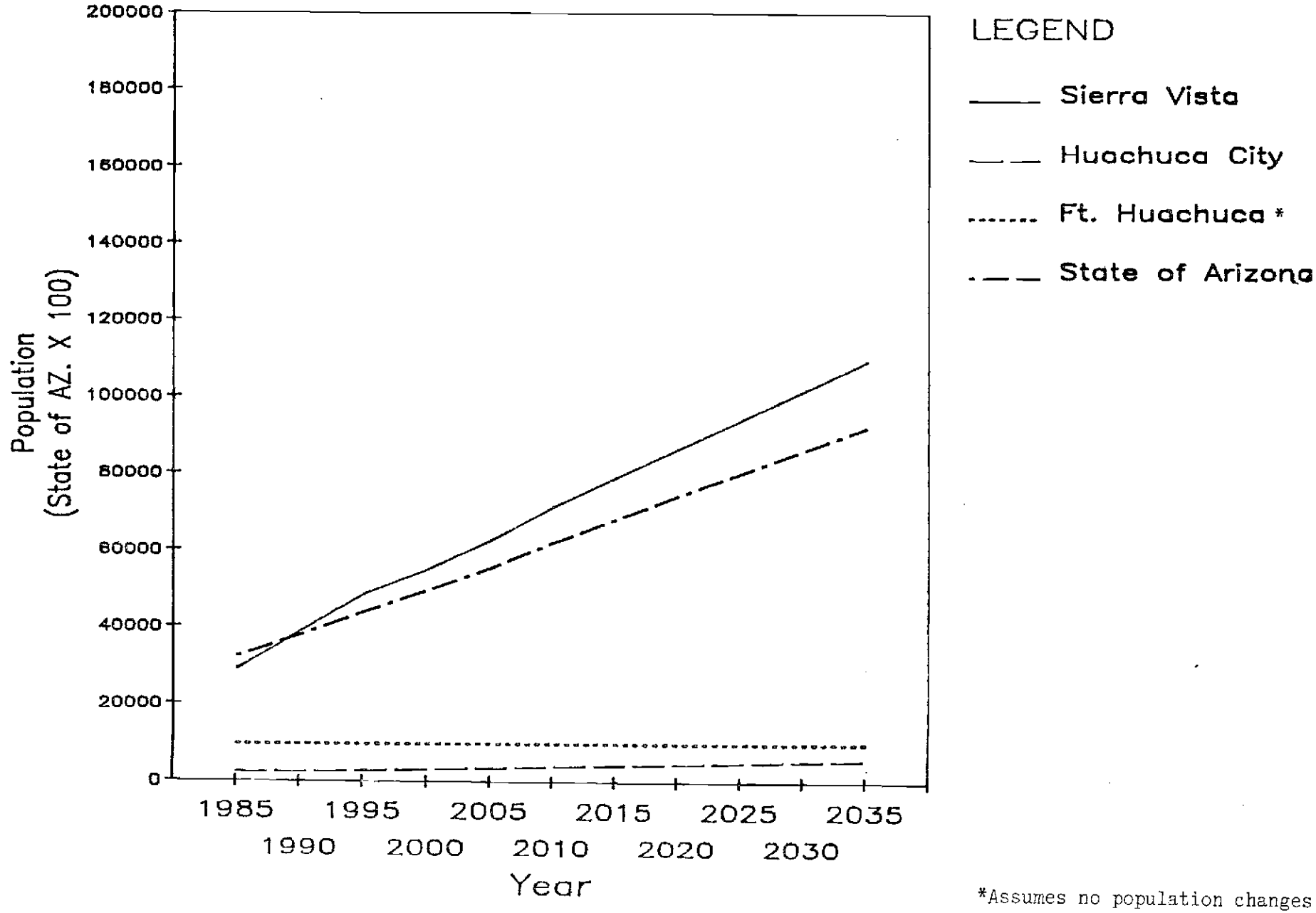
TABLE 39. SUMMARY OF DIVERSIONS CLAIMED BY FORT HUACHUCA

Wells	# Claimed	Quantity (annual)
Potable (~~Domestic~~)	10 ~~6~~	966,972,000 gal. (2967.6 AC-FT)
Non-potable	6 ~~5~~	58,161,900 gal. (178.5 AC-FT)
Test	8 ~~9~~	
Total	~~24~~ 24	1,025,133,900 gal. (3146.1 AC-FT)
Springs		
Potable	14	125.2 AC-FT
Non-potable	24	51.6 AC-FT
Total	38	176.8 AC-FT
Ponds		
Effluent evaporation	5	25.7 AC-FT
Game management	5	2.6 AC-FT
Wildlife, Recreation	17	72.1 AC-FT
Erosion control	38	65.4 AC-FT
Total	65	165.8 AC-FT

Fig.43

PROJECTED POPULATION GROWTH FOR THE SIERRA VISTA AREA

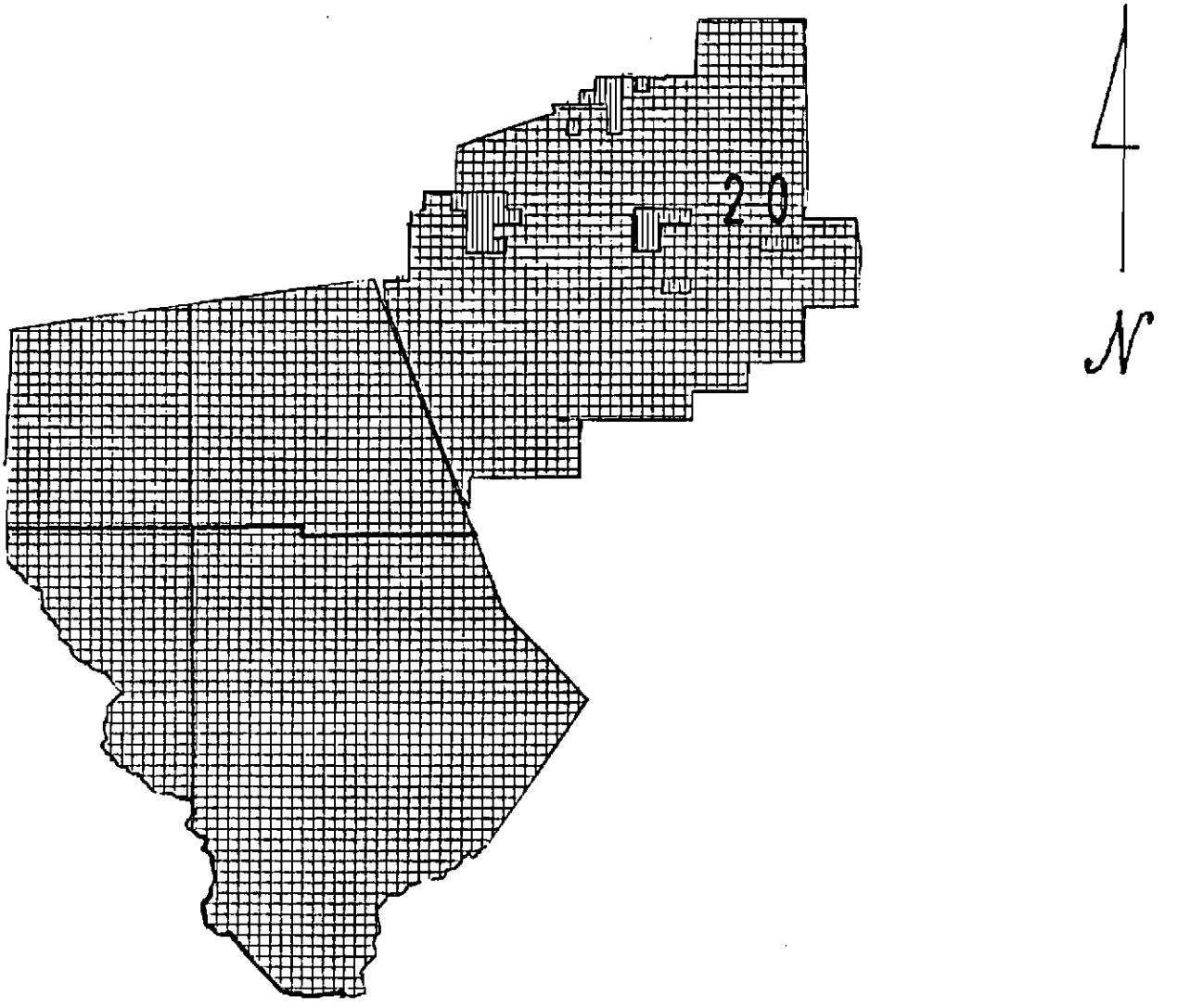
Source: Arizona Dept. of Economic Security, 3/86



*Assumes no population changes

FMC002366

STATE TRUST LANDS LOCATED WITHIN FORT HUACHUCA BOUNDARIES



Fort Huachuca

State Trust Land

SCALE

1 : 200,000
(1 in. equals approx. 3.2 mi.)

TABLE 40. DATES (YEARS) OF FIRST USE FOR CLAIMED DIVERSIONS

Wells	First Use
#1	1940
#2	1941
#3	1943
#4	1943
#5	1943
#6	1959
#7	1982
#8	1982
East Rg. Bunker	1958
Garden Canyon	1930(est).
Rembass #1	1978
Rembass #2	1978
Spatial Resolution	1964
Springs	
Potable	1877
Non-potable	1954
Ponds	
All, except as shown below	1954
Dam (SENW2120S21E)	1976
Dam (SWSE1821S21E)	1976
Dam (NESW1721S21E)	1977
Dam (SWNW2021S21E)	1977
Dam (NWNW2021S21E)	1977
Dam (SENE1921S21E)	1977
Dam (SESE1821S21E)	1977
Dam (NESW1021S20E)	1977
Dam (SENW1021S20E)	1977
Dam (SENE1021S20E)	1977
Dam (SESE0321S20E)	1977
Dam (NENE0921S20E)	1977
Sediment (NESE2121S20E)	1978
Sediment (SENE2121S20E)	1978
Sediment (NENE2121S20E)	1978
Sediment (NWNW1521S20E)	1978
Dam (NWNE3621S19E)	1979
Dam (NENE2822S20E)	1979

FMC002368

Analysis of Claim

DWR staff visited Fort Huachuca on several occasions. The purpose of these field trips was to (1) investigate claimed water uses by the fort, and (2) gather other pertinent data as necessary (documentation, mapping, etc.).

DWR staff verified the use of well #1 through #8, spatial resolution well, east range bunker well, and the Garden Canyon well (non-potable). The Garden Canyon well (no number given in claim) can be connected into the potable system. These wells are discussed in the summary spreadsheet (Table 45), and Table 41 below.

TABLE 41. DEPTH AND DISCHARGE OF SIX WELLS (POTABLE) LOCATED IN FORT HUACHUCA, ARIZONA

Claimed

Well #	Depth(ft.)[1]	Discharge(gpm)[2]
1	701	500/500
2	710	700/900
3	802	700/700
4	912	700/700
5	800	700/700
6	1,230	700/310
7		
8		

(1) Figures from U.S.G.S. Report #1819-D.
(2) Figures shown are claimed data by fort/data reported by U.S.G.S.

All potable springs were visited, except for Cabin Spring, which could not be found (Table 42). DWR staff did not visit any non-potable springs.

As stated previously, Fort Huachuca claimed sixty-five ponds. DWR staff was able to verify forty-two of these impoundments using aerial photography or field check. Of these forty-two impoundments, eleven were surveyed (Table 43); twenty-eight were too small to be surveyed (less than one surface acre in size, or a capacity less than 15 acre feet); two had pipes in the dam (flood control); and one was destroyed (Pan Am) due to airport expansion.

In addition to claimed ponds, DWR staff verified thirteen impoundments not claimed by Fort Huachuca (aerial photography). Of these thirteen impoundments, five were surveyed (Table 43); the remaining eight impoundments were less than one surface acre in size.

Storage and Distribution (Potable Water)

Fort Huachuca has claimed a total storage capacity of 5,630,000 gallons, and a distribution system totaling 1,256,148 lineal feet (see stock maps). There is also 104,560 lineal feet of non-potable water line which is used to irrigate the golf course and Chaffee Parade Field (see irrigation maps, vol. 5).

TABLE 42. SPRING FLOW MEASUREMENTS FOR GARDEN CANYON AND HUACHUCA CANYON, FORT HUACHUCA, ARIZONA

System	Spring #	Period	Number of Measurements	Discharge(gpm)
Garden Canyon	1	Jan.1962-June.1963	46	194
Garden Canyon	1a	Winter, 1960-1961	Not Listed	400 *
Garden Canyon	2	Jan.1960-Aug.1961	47	176
Garden Canyon	3	Mar.1960-Nov.1962	43	32.9
Garden Canyon	4	Mar.1960-Nov.1962	43	32.9
Garden Canyon	Cabin	Not Listed	Not Listed	15-25
Garden Canyon	Chain	Not Listed	Not Listed	150-250 **
Garden Canyon	Picnic	Not Listed	Not Listed	540 *
Huachuca Canyon	2	Feb.1960-Sep.1962	47	16.5
Huachuca Canyon	3	Apr.1961-Jan.1962	47	28.3

* Maximum flow measured (data not listed).

** Based on flow during wet weather; does not flow during the remainder of the year.

Source: USGS Report #1819-D.

TABLE 43. SUMMARY OF SURVEYED IMPOUNDMENTS (SEE STOCK MAPS FOR EXACT LOCATION.)

Map #	Name	Location	Capacity (AC-FT)	Area (acres)
PS1	Antelope	S.16 T.21S R.19E	26.4	2.6
PS2	Sycamore	S.20 T.21S R.19E	38.8	3.9
PS3	Hidden	S.28 T.21S R.19E	22.5	2.1
PS4	Golf Course	S.9 T.22S R.20E	59.7	7.6
PS5	Gravel Pit	S.17 T.22S R.20E	57.4	7.0
SP WL4	Unclaimed	S.16 T.21S R.19E	14.9	2.2
SP WL5	Unclaimed	S.29 T.21S R.19E	10.5	1.5
SP WL12	Sediment	S.15 T.21S R.20E	29.6	9.5
SP WL15	East #1	S.16 T.21S R.20E	6.0	2.5
SP WL16	Sediment	S.21 T.21S R.20E	11.0	3.5
SP WL18	Unclaimed	S.21 T.21S R.20E	12.0	2.8
SP WL19	Unclaimed	S.21 T.21S R.20E	5.5	3.3
SP WL29	Lower Woodcutter	S.9 T.22S R.20E	20.7	2.5
SP WL31	Woodcutter	S.16 T.22S R.20E	8.4	1.8
SP WL40	Dam	S.28 T.22S R.20E	16.9	2.4
SP WL41	Unclaimed	S.28 T.22S R.20E	27.1	4.1
	TOTAL		367.4 AC-FT	59.3 acres

FMC002370

Irrigation (outside municipal system)

The fort currently irrigates four areas that utilize non-potable water. Two areas are located in the east range; the other two in the west range. Together, total irrigation areas are 142.92 acres. These areas are summarized in Table 44.

TABLE 44. IRRIGATION SUMMARIZATION - FT. HUACHUCA

	Location	Source	Acres
IR 1	S.32 T.21S R.20E	Water Trt. Plt.#2	10.25
IR 2	S.26 T.21S R.20E	Rembass #1	5.67
IR 2	S.23 T.21S R.20E	Rembass #2	42.20
RC 1	S.4 T.22S R.20E	Water Trt. Plt's 1 & 2	84.80

Both IR1 and IR3 are irrigated using a sprinkler system. IR1 (Chaffer Parade Field) receives it's water supply from water treatment plant #2 (effluent). RC1 (golf course) receives water from water treatment plant #1 and #2 (see map). IR2 (Rembass well #1 and #2) is flood irrigated using groundwater.

Projected Water Use

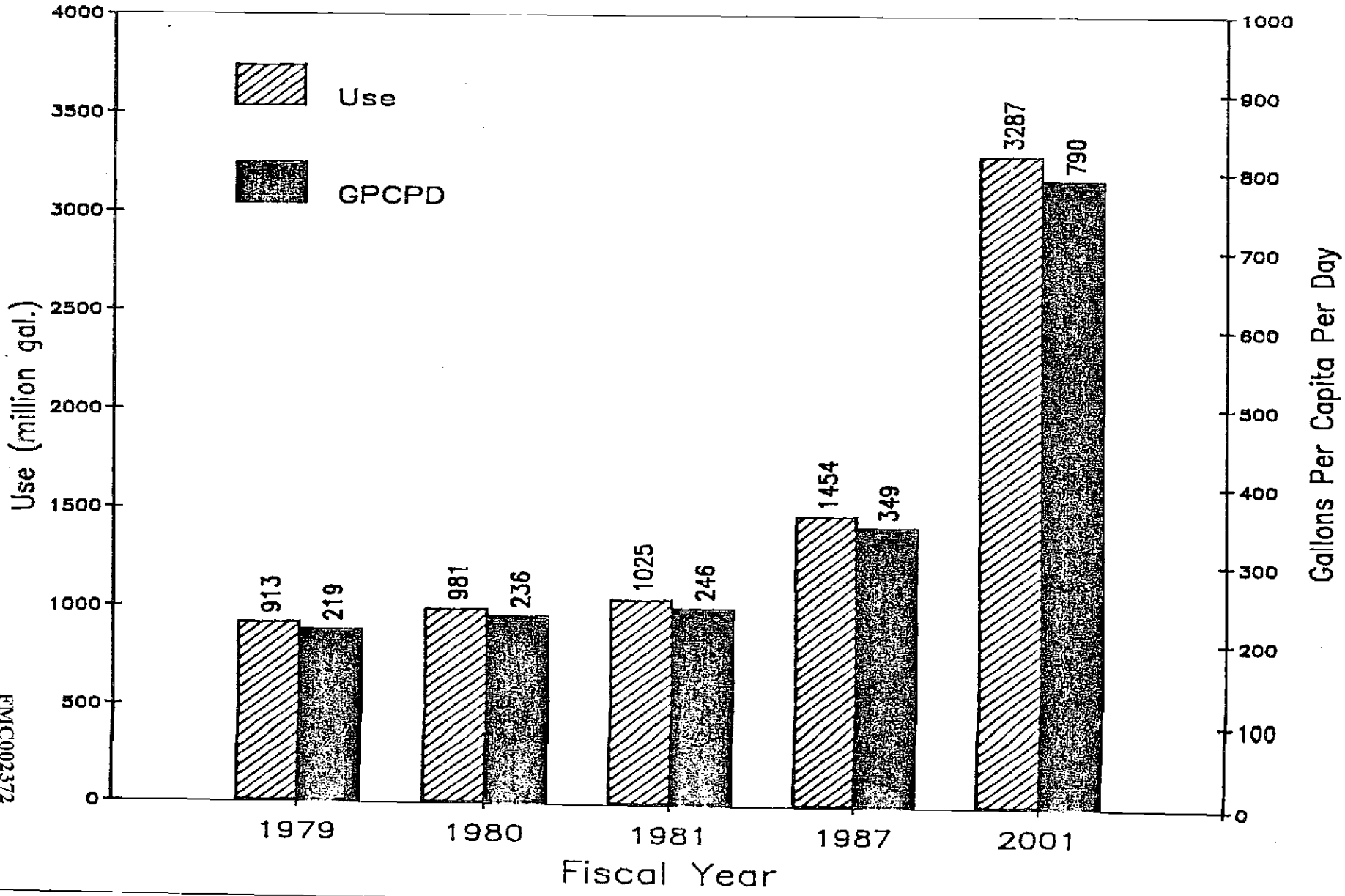
Fort Huachuca has projected a future potable water use of 3,287 million gallons for fiscal year 2001. This was based on an average of 6% increase per year for twenty years. The fort recommends this usage figure since (1) it is less than the present capacities of all potable wells currently developed, (2) allows for a reasonable margin for future expansion of the fort, and (3) ability to meet unusual water demands, such as 275,000 gallons per day for dust control during construction of the new runway at Libby Army Airfield (Sierra Vista Airport), which was completed in December of 1985 (Figure 45).

Non-Federal Claims Within Fort Boundaries

A claimant in the Sierra Vista subwatershed has claimed a well that is located within Fort Huachuca boundaries. The fort did not claim this well, nor did the fort claim a well within the same section:

Claimant: Hotter, Nancy
Statement of Claimant #39-005884
Watershed File #: 111-23-BBA-001
Dom. Well File #: 35-082899
Claimed Location: T.22S R.20E
SW¼ NE¼ NW¼ Sect. 8
[D(22-20)8CAB]
Filed: 6/25/80

Fig.45



FMC002372

Summary

Fort Huachuca is currently the United States Army Communications Command Post. It is comprised of 73,315 acres, with an estimated population of 9,000 full-time residents, and about 7,500 day-time residents. For the past five years, the population of the fort has changed only ± 3%. The fort does not know of any future population increases.

Fort Huachuca has claimed twenty-four wells, thirty-eight springs, and sixty-five ponds. For their domestic supply, the fort claimed 3,287 million gallons (3.287×10^6) per year, which is the projected water use by the installation in the year 2001. The fort also claimed a potable water storage capacity of 5,630,000 gallons, with a pipe distribution system totaling 1,256,148 lineal feet.

The Department of Water Resources (DWR) staff has verified ~~thirteen~~ Twelve wells (on-site inspection), thirteen domestic springs (on-site inspection), and forty-two ponds (personal inspection and aerial photography). DWR staff also verified thirteen unclaimed ponds. A total of sixteen ponds were surveyed. The total capacity of these ponds are 367.4 acre-feet. ~~Twenty-three~~ Twenty-one claimed ponds could not be located by aerial photography.

FMC002373

TABLE 45. FEDERAL RESERVED WATER RIGHTS SUMMARY SPREADSHEET

KEY	
DOM.	Domestic
ER	Erosion Control
IRR	Irrigation
MIL	Military Purposes
RC	Recreation
WL	Wildlife/Game Mgt.

FMC002374

FORT HUACHUCA

CONTACTS

East gate
Hat field two 1st lite
51102 Bldg #

Thomas Cochran 534-3335 Chief Utilities
William Deir Deputy Commander

Col Earl Neuhauser
Col Jules Hannagel 535-[illegible]
10 AM FAO office
East Gate [illegible]

Maj Sam Shelton - JAG Office 538-5617
-5035

Tom Cochran - 538-

Tony Leduc - Real Estate Off 538-3420

T.G. Thompson Deputy Director

Navy 533-3120

Dave Rikehart
Corp of Engineers
Ft. Huachuca
640 - 2016 if this doesn't work call 261-2016

Ann Jenson

Tom Cockran
Clark Dardine

Mike Shaughnessy
Ft Huachuca
533-1864

ORIGINAL DRAFT REPORT
AND
BACKUP INFORMATION

HYDROGRAPHIC SURVEY REPORT FOR

FORT HUACHUCA, ARIZONA

WATERSHED FILE
111-23-F1

San Pedro River Watershed
Sierra Vista Subwatershed

Prepared by the Arizona Department of Water Resources,
Adjudications Division, Federal Reserved Water
Rights Investigation Section

Is this necessary?

September, 1986

LEGAL RECORD

Introduction

Fort Huachuca, currently the United States Army Communications Command headquarters ~~Post~~, is located approximately sixty miles southeast of Tucson, Arizona, and about fifteen miles north of the International boundary ~~Mexican Border~~. The installation ~~fort~~ is situated along the northern range of the Huachuca Mountains in Cochise County, just west of the City of Sierra Vista, and ~~due~~ south of Huachuca City along state highway 92 (Figure 1).

The fort was established on October 29, 1881, by Presidential Executive Order[1], although the United States Army installed an outpost at this location on March 3, 1877 (Camp Huachuca).[2] The primary purpose of the post was to aid in the repression of Apache Indian raids ~~attacks~~ against the influx of settlements into the southern areas of the Arizona Territory. Following the surrender of the Apache Chief, Geronimo, in September of 1886, the primary purpose of the fort shifted to the Villista Campaign ("Pancho" Villa), although a few renegade bands of Apache Indians continued to raid settlers and settlements.

The Villista Campaign, which was ~~designed~~ to stop raids by Pancho Villa in the United States, eventually led to political friction between the United States and the Republic of Mexico, since the United States dispatched troops ~~deep~~ into Mexico. Although the U.S. Government claimed to pursue Villistas into Mexican territory only for the purpose of halting raids within U.S. boundaries, U.S. officials were concerned that the Mexican Government would view this "expedition" as unfriendly aggression. In 1917, the Villista punitive expedition returned to the United States.

Following the punitive expedition against the Villistas in 1917, the

FMC002380

United States declared war in Europe (World War I). At this time, the fort was primarily used to train troops, ~~and~~ but during World War II, the fort ~~was utilized to~~ train full divisions. ~~After the end of World War II~~ From (1945-1951), the fort was closed and designated as surplus property by the U.S. Army. At the start of the Korean War, the fort was reactivated. ~~However,~~ At the close of the Korean Conflict (1953), the fort was once again deactivated and reclassified as surplus. Fort Huachuca was reactivated on February 1, 1954, as the U.S. Army Electronic Proving Ground. In July ~~of~~ 1967, Fort Huachuca became the U.S. Army Strategic Communications Command, subsequently renamed the U.S. Army Communications Command. Fort Huachuca has remained in this status up to the present.

Hydrogeology

~~The primary water resources of Fort Huachuca are groundwater and surface water systems fed by precipitation on the land surface.~~ The average annual precipitation for the ~~fort~~ area (at 5,000 feet) is approximately 15.4 inches. ~~where~~ Summer thunderstorms in July and August account for nearly ~~fifty percent~~ 50% of the total annual rainfall (Figures 2 and 3).[9] to be consistent.

The major water supplies for Fort Huachuca are from ~~two primary~~ sources located on the east side of the Huachuca Mountains. These are (1) groundwater from a regional aquifer, and (2) water from fracture and fault-controlled springs. The regional aquifer is recharged along the mountain fronts ~~and~~ from flow ~~from~~ down mountain washes. Flows from mountain washes rarely reach the San Pedro River, except during severe summer thunderstorms ~~prevalent during the summer months~~. There is little or no groundwater recharge from soil percolation. Springs are recharged by surface runoff from rainfall and snowmelt. These waters are trapped by fractures in the mountain rock

Really?

formations, where the water is rapidly discharged through the springs. The only springs capable of yielding sufficient quantity and quality of water usable by the fort for domestic purposes are located in either Garden Canyon or Huachuca Canyon (Figure 4).

Size and Growth

Fort Huachuca has claimed a post population of 9,304 (residents), with an additional 6,465 employees who work on the post (non-residents). The claim indicates no known future population increases. Mr. Tom Cochran, Chief Utilities Engineer for the fort, indicated a present full-time post population of about 9,000, with about 7,500 day-time residents. When calculating municipal needs for the installation (water requirements, refuge, etc.), an "effective population" of 11,400 is used. Effective Population (EP) is calculated by the following formula:

$$EP = DT/_3 + FT \quad , \quad \text{where}$$

EP = Effective Population

DT = Daytime (non-resident) population

FT = Full-time (resident) population

The Arizona Department of Commerce listed a 1985 post population of 9,022, including 6,231 military employees and 6,223 civilian workers[4].

Fort Huachuca was incorporated into the city limits of Sierra Vista on February 17, 1971. In 1970, the post population was 6,659, and in 1980, the population was 9,475. Sierra Vista currently has a population of 30,520. Projections by the Arizona Department of Economic Security indicates a

FMC002382

population of 54,625 by the year 2000. This amounts to an annual growth rate of approximately 5.5 to 6.0%.[5] The growth rate of the state of Arizona has been estimated at about 3.0% per year. Although Sierra Vista's economy is closely related to the installation, the post population has changed little within the past five years (±3%),[6] despite the area's population ~~boom~~ increase (Figure 2). It should be ~~pointed out~~ noted that although the population of Fort Huachuca has not changed, the fort's well field is directly affected by ~~well~~ pumping from surrounding areas, since the aquifers tapped by Fort Huachuca, Sierra Vista, and developments just outside of Sierra Vista are hydraulically continuous. Therefore, any pumping of wells by Sierra Vista will, in time, cause drawdown in Fort Huachuca [9] (Figure 5).

The fort has claimed an on-post land area of 73,344 acres. When the post was ~~first~~ established in 1881, the size of the fort was 41,760 acres. On May 14, 1883, the fort boundaries were expanded by Presidential Executive Order to 44,800 acres.[7] In the 1940's, Fort Huachuca was expanded again to include lands ~~due~~ east of the original boundaries. This area is ~~now~~ known as the East Range and encompasses approximately 13,545 acres. This brought the total area of Fort Huachuca to about 58,345 acres. In August ~~of~~ 1957, 13,463 acres of Bureau of Land Management (BLM) land ~~was~~ were removed from the public domain and transferred to Fort Huachuca, bringing the fort's total acreage to 71,808 acres. The remaining acreage claimed by the fort (1,536 acres) is currently state trust land that is utilized by the fort pending exchange between the State of Arizona and the United States Government (Figure 6).[8]

Fort Huachuca and the City of Sierra Vista share an airfield located within the west range of Fort Huachuca. Pursuant to the Airport and Airway

Development Act of 1970, the Federal Aviation Administration (F.A.A.) required Fort Huachuca to convey 29.0 acres to the City of Sierra Vista. This conveyance, deeded to Sierra Vista on December 12, 1982, reduced the fort's acreage to 73,315, the present size of Fort Huachuca. Sierra Vista ~~began~~ completed ~~construction for~~ a ~~new air terminal~~ terminal building on this newly acquired acreage ~~on September 6, 1983, and it was completed~~ on February 15, 1984.[8]

EXISTING CONDITIONS

Claimed Data

Fort Huachuca has claimed ~~a total of~~ ~~twenty-four~~ 24 wells, ~~thirty-eight~~ 38 springs, and ~~sixty-five~~ 65 ponds. These diversions are summarized below: ~~(Table 1)~~

Table 1. Summary of diversions claimed by Fort Huachuca.

Wells	# Claimed	Quantity (annual)
Potable (Domestic)	6	966,972,000 gal. (2967.6 af)
Non-potable	9	58,161,900 gal. (178.5 af)
Test	9	---------- ---------
Total	24	1,025,133,900 gal. (3146.1 af)
Springs		
Potable	14	125.2 af
Non-potable	24	51.6 af
Total	38	176.8 af
Ponds		
Effluent evaporation	5	25.7 af
Game management	5	2.6 af
Wildlife, Recreation	17	72.1 af
Erosion control	38	65.4 af
Total	65	165.8 af

FMC002384

Total amount of potable water claimed is 3,287 million gallons (10,087 af) per annum (see projected water use). The fort based these claims on (1) Federal Reserved Water Rights and (2) legitimate and authorized federal activities.

For the above diversions, the fort claimed approximate dates of first use. These dates (years) are shown below:

Table 2. Dates (years) of first use for claimed diversions.

Wells	First Use
#1	1940
#2	1941
#3	1943
#4	1943
#5	1943
#6	1959
#7	1982
#8	1982
East Rg. Bunker	1958
Garden Canyon	1930(est).
Rembass #1	1978
Rembass #2	1978
Spatial Resolution	1964
Springs	
Potable	1877
Non-potable	1954
Ponds	
All, except as shown below	1954
Dam (SENW2120S21E)	1976
Dam (SWSE1821S21E)	1976
Dam (NESW1721S21E)	1977
Dam (SWNW2021S21E)	1977
Dam (NWNW2021S21E)	1977
Dam (SENE1921S21E)	1977
Dam (SESE1821S21E)	1977
Dam (NESW1021S20E)	1977
Dam (SENW1021S20E)	1977
Dam (SENE1021S20E)	1977
Dam (SESE0321S20E)	1977
Dam (NENE0921S20E)	1977
Sediment (NESE2121S20E)	1978
Sediment (SENE2121S20E)	1978
Sediment (NENE2121S20E)	1978

FMC002385

Sediment (NWNW1521S20E)	1978
Dam (NWNE3621S19E)	1979
Dam (NENE2822S20E)	1979

ANALYSIS OF CLAIM

DWR staff visited Fort Huachuca on several occasions. The purpose of these field trips was to investigate claimed water uses by the fort, and gather other pertinent data as necessary (documentation, mapping, etc.).

DWR ~~staff~~ verified the use of wells #1 through #8, spatial resolution well, east range bunker well, and the Garden Canyon well (non-potable). The Garden Canyon well (no number given in claim) can be connected into the potable system. These wells are discussed in the summary spreadsheet (Table 7), and Table 3 below; and can be seen in photo #1 through #11.

Table 3. Depth and discharge of six wells (potable) located ~~in~~ at Fort Huachuca, Arizona.

Well #	Depth(ft.)[1]	Discharge(gpm)[2]
1	701	500/500
2	710	700/900
3	802	700/700
4	912	700/700
5	800	700/700
6	1,230	700/310
7	762	800/
8	807	800/

(1) Figures from U.S.G.S. Report (Reference #9).
(2) Figures shown are claimed data by fort/data reported by U.S.G.S.

All potable springs were visited, except for Cabin Spring, which could not be found (Table 4). DWR staff did not visit any non-potable springs (see summary spreadsheet and photo #14 through #25).

FMC002386

Table 4. Spring flow measurements for Garden Canyon and Huachuca Canyon, Fort Huachuca, Arizona.

System	Spring #	Period	Number of Measurements	Discharge(gpm)
Garden Canyon	1	Jan.1962-June.1963	46	194
Garden Canyon	1a	Winter, 1960-1961	Not Listed	400 *
Garden Canyon	2	Jan.1960-Aug.1961	47	176
Garden Canyon	3	Mar.1960-Nov.1962	43	32.9
Garden Canyon	4	Mar.1960-Nov.1962	43	32.9
Garden Canyon	Cabin	Not Listed	Not Listed	15-25
Garden Canyon	Chain	Not Listed	Not Listed	150-250 **
Garden Canyon	Picnic	Not Listed	Not Listed	540 *
Huachuca Canyon	2	Feb.1960-Sep.1962	47	16.5
Huachuca Canyon	3	Apr.1961-Jan.1962	47	28.3

* Maximum flow measured (data not listed).
** Based on flow during wet weather; does not flow during the remainder of the year.

As stated previously, Fort Huachuca claimed ~~sixty-five~~ 65 ponds. DWR staff was able to verify ~~forty-two~~ 42 of these impoundments ~~using~~ by aerial photography or field check. Of these ~~forty-two~~ 42 impoundments, ~~eleven~~ 11 were surveyed (Table 3); ~~twenty-eight~~ 28 were too small to be surveyed (less than one surface acre in size, or a capacity less than 15 acre feet); two ~~bad~~ have pipes in the dam (flood control); and one was destroyed (Pan Am) due to airport expansion.

In addition to claimed ponds, DWR staff verified ~~thirteen~~ 13 impoundments not claimed by Fort Huachuca (aerial photography). Of these ~~thirteen~~ 13 impoundments, five were surveyed (Table 5); the remaining ~~eight~~ 8 impoundments were less than one surface acre in size.

STET

FMC002387

Table 5. Summary of surveyed impoundments

(see stock maps for exact location).

Map #	Name	Location	Capacity (af)	Area (acres)
PS1	Antelope	S.16 T.21S R.19E	26.4	2.6
PS2	Sycamore	S.20 T.21S R.19E	38.8	3.9
PS3	Hidden	S.28 T.21S R.19E	22.5	2.1
PS4	Golf Course	S.9 T.22S R.20E	59.7	7.6
PS5	Gravel Pit	S.17 T.22S R.20E	57.4	7.0
WL4	Unclaimed	S.16 T.21S R.19E	14.9	2.2
WL5	Unclaimed	S.29 T.21S R.19E	10.5	1.5
WL12	Sediment	S.15 T.21S R.20E	29.6	9.5
WL15	East #1	S.16 T.21S R.20E	6.0	2.5
WL16	Sediment	S.21 T.21S R.20E	11.0	3.5
WL18	Unclaimed	S.21 T.21S R.20E	12.0	2.8
WL19	Unclaimed	S.21 T.21S R.20E	5.5	3.3
WL29	Lower Woodcutter	S.9 T.22S R.20E	20.7	2.5
WL31	Woodcutter	S.16 T.22S R.20E	8.4	1.8
WL40	Dam	S.28 T.22S R.20E	16.9	2.4
WL41	Unclaimed	S.28 T.22S R.20E	27.1	4.1
	TOTAL		367.4 af	59.3 acres

Storage and Distribution (Potable Water)

Fort Huachuca has claimed a total storage capacity of 5,630,000 gallons and a distribution system totaling 1,256,148 lineal feet (see ~~stock~~ STOCKMAP/BATIB maps). There is also 104,560 lineal feet of non-potable water line which is used to irrigate the golf course and Chaffee Parade Field (see irrigation maps, vol. 5).

Irrigation (outside municipal system)

This is only for reference.

The fort currently irrigates four areas ~~that utilize~~ using non-potable water. Two areas are located in the east range; the other two in the west range. Together, total irrigation areas are 142.92 acres. These areas are summarized in Table 6 below.

FMC002388

Table 6. Irrigation summarization - Ft. Huachuca.

	Location	Source	Acres
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IR 2	S.26 T.21S R.20E	Rembass #1	5.67
IR 2	S.23 T.21S R.20E	Rembass #2	42.20
RC 1	S.4 T.22S R.20E	Water Trt. Plt's 1 & 2	84.80

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Watershed File #: 111-23-BBA-001
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SW¼ NE¼ NW¼ Sect. 8
[D(22-20)8CAB]
Filed: 6/25/80

SUMMARY

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The Department of Water Resources ~~(DWR)~~ staff has verified ~~thirteen~~ 13 wells (on-site inspection), ~~thirteen~~ 13 domestic springs (on-site inspection), and ~~forty-two~~ 42 ponds (~~personal~~ on-site inspection and aerial photography). DWR staff also verified ~~thirteen~~ 13 unclaimed ponds. A total of ~~sixteen~~ 16 ponds were surveyed. The total capacity of these ponds ~~are~~ is 367.4 acre-feet. ~~Twenty-three~~ 23 claimed ponds could not be located by aerial photography.

References

1. Photocopy of Executive Order, Office of the President dated October 29, 1881; obtained from the Bureau of Land Management.

2. Smith, Cornelius, 1976. Fort Huachuca: Story of a Frontier Post. Published by Fort Huachuca.

3. Fort Huachuca Historical Museum. Date not listed. Old Post Fort Huachuca, Arizona. Published by Fort Huachuca.

4. Arizona Department of Commerce. April, 1985. Community Profile of Sierra Vista.

5. Arizona Department of Economic Security, March, 1986. Arizona Population Projections: 1985 to 2035.

6. Personal communication with Tom Cochran, Chief Engineer, Fort Huachuca. September, 1986.

7. Photocopy of Executive Order, Office of the President, dated May 14, 1883; obtained from the Bureau of Land Management.

8. Review of Utilization of U.S. Army Real Property at Fort Huachuca for Fiscal Year 1986. Obtained from Mr. Tony LeDue, Realty Specialist, Fort Huachuca.

FMC002391

9. Brown, S.G., Davidson, E.S., Kister, L.R., and Thomsen, B.W.. 1966(?). Water Reserves of Fort Huachuca Military Reservation, Southeastern Arizona. U.S. Geological Survey Water Supply Paper #1819-D. 57 pp.

Figure 1. Location of Ft. Huachuca, Arizona

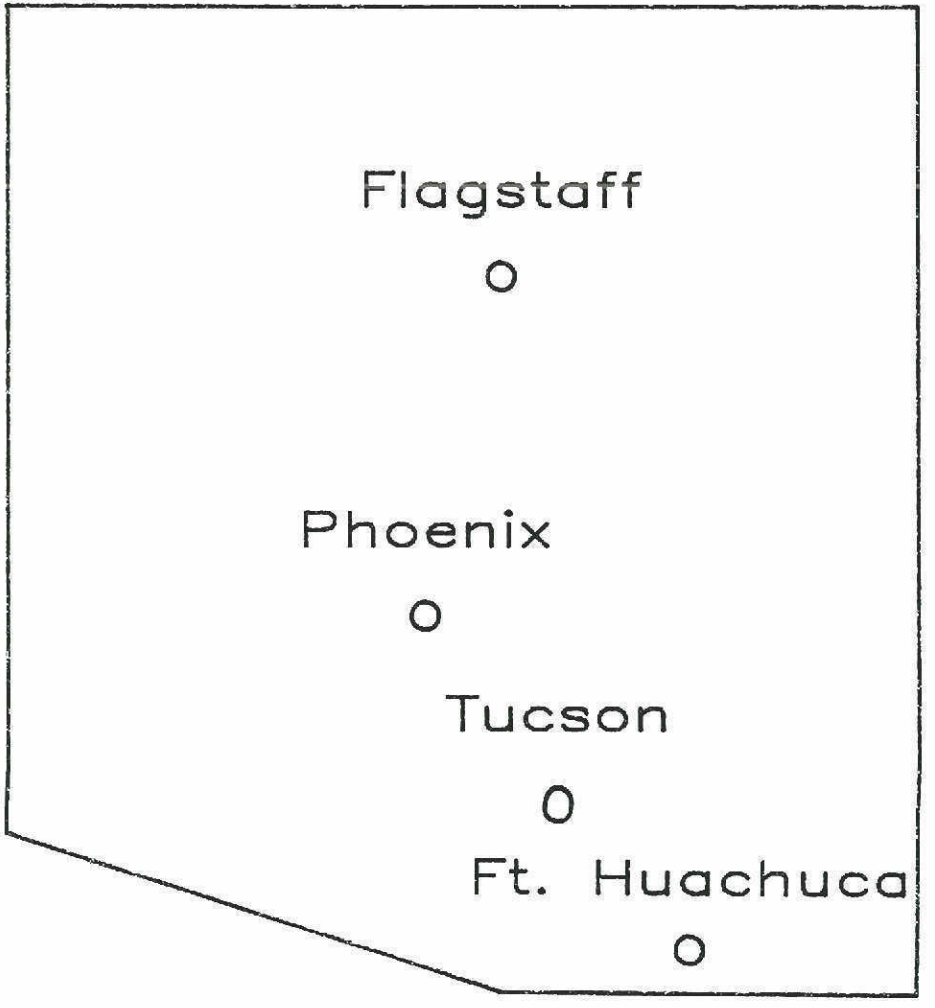
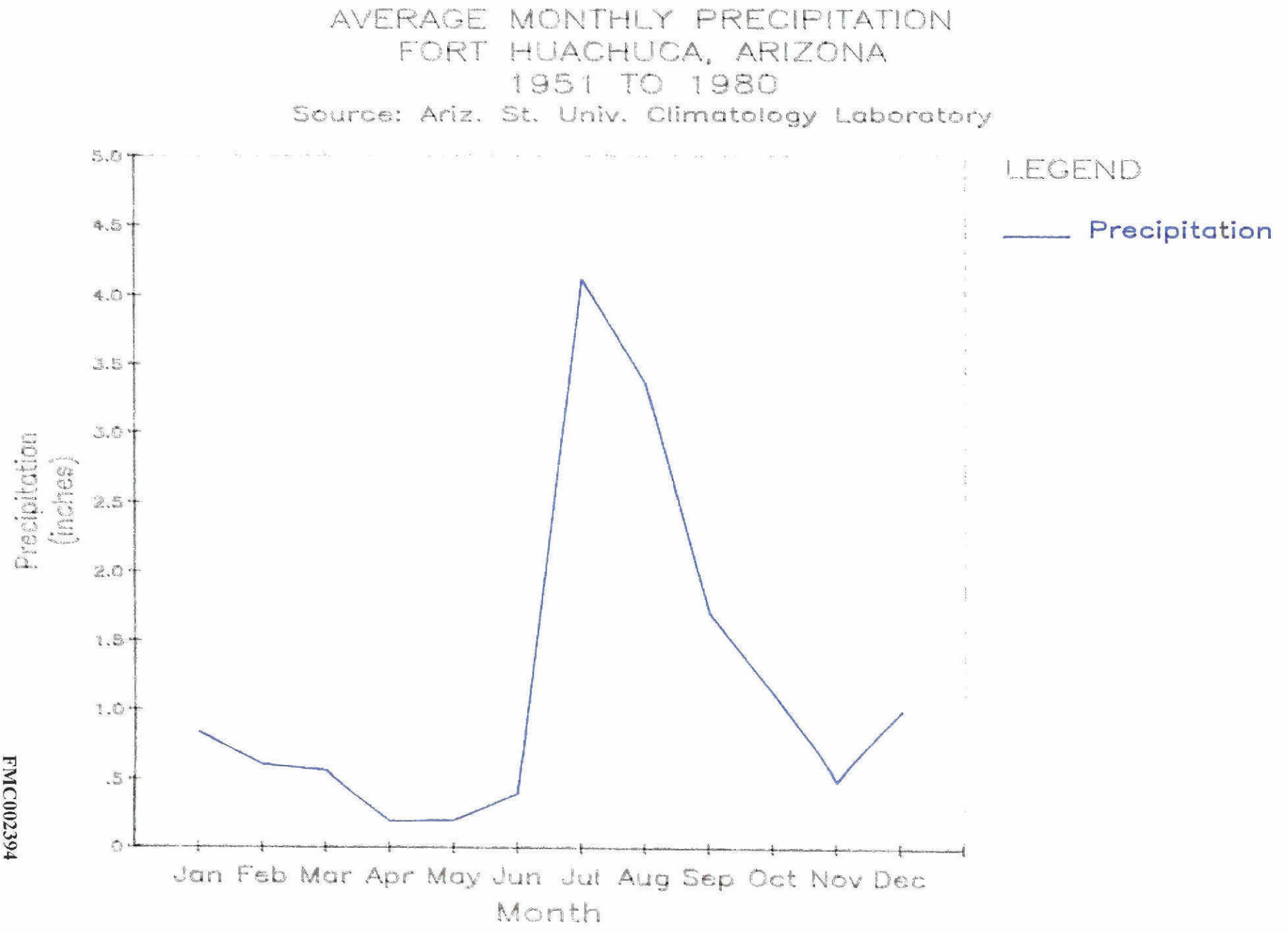
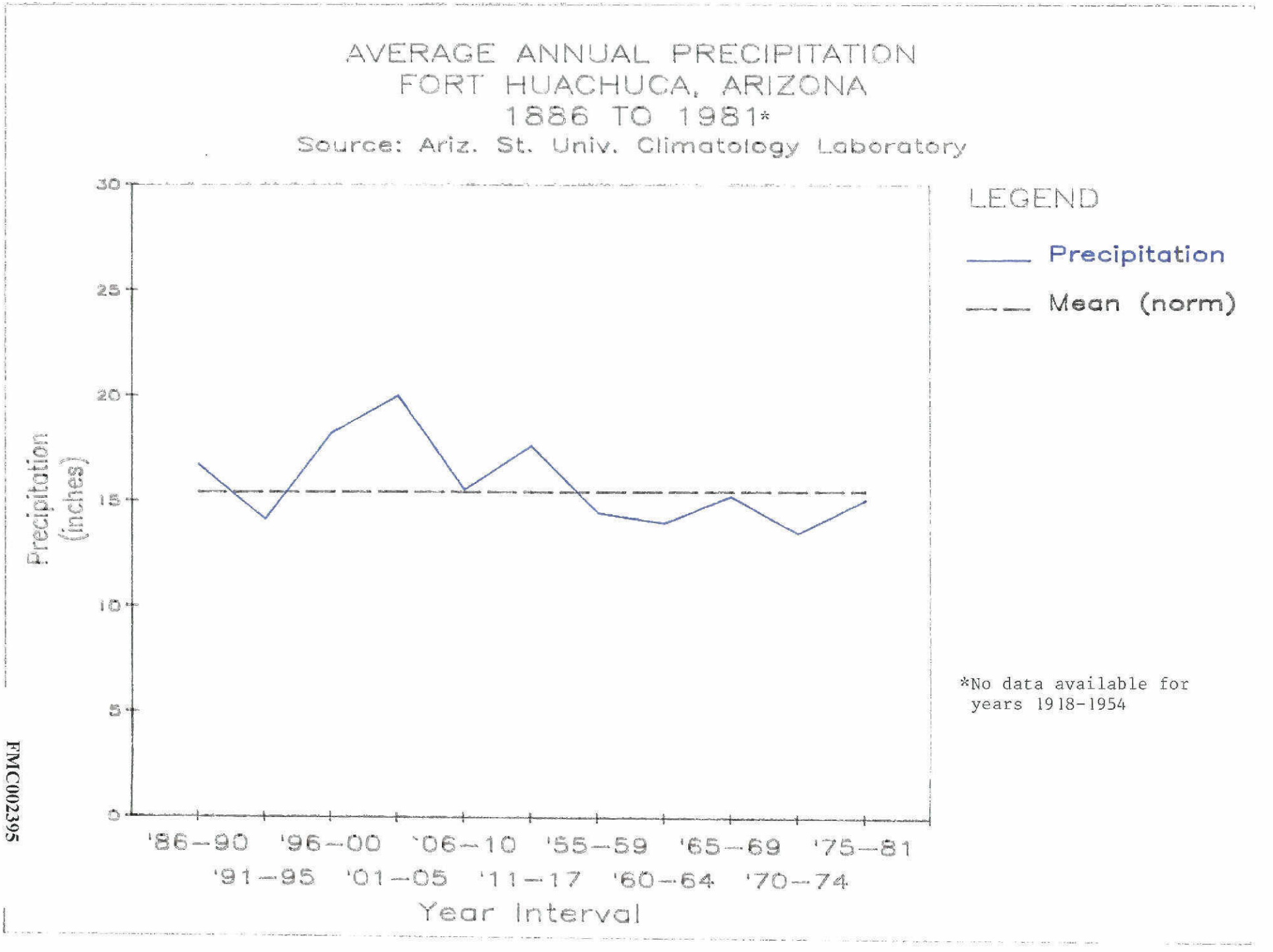


Figure 2



FMC002394

Figure 3



FMC002395

Figure 4

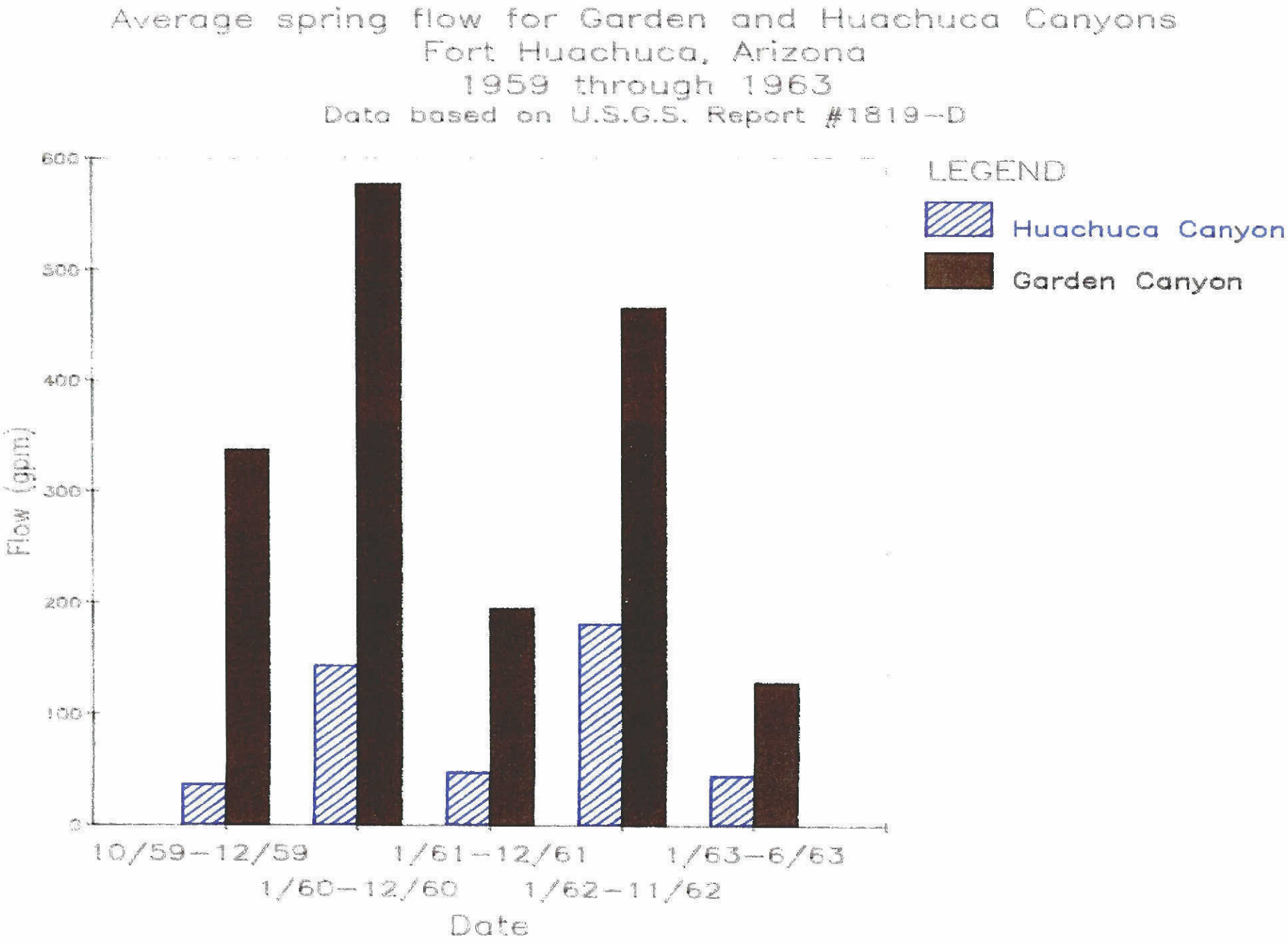

Average spring flow for Garden and Huachuca Canyons
Fort Huachuca, Arizona
1959 through 1963
Data based on U.S.G.S. Report #1819-D
LEGEND
Huachuca Canyon
Garden Canyon
Flow (gpm)
600
500
400
300
200
100
0
10/59-12/59
1/60-12/60
1/61-12/61
1/62-11/62
1/63-6/63
Date

Figure 5

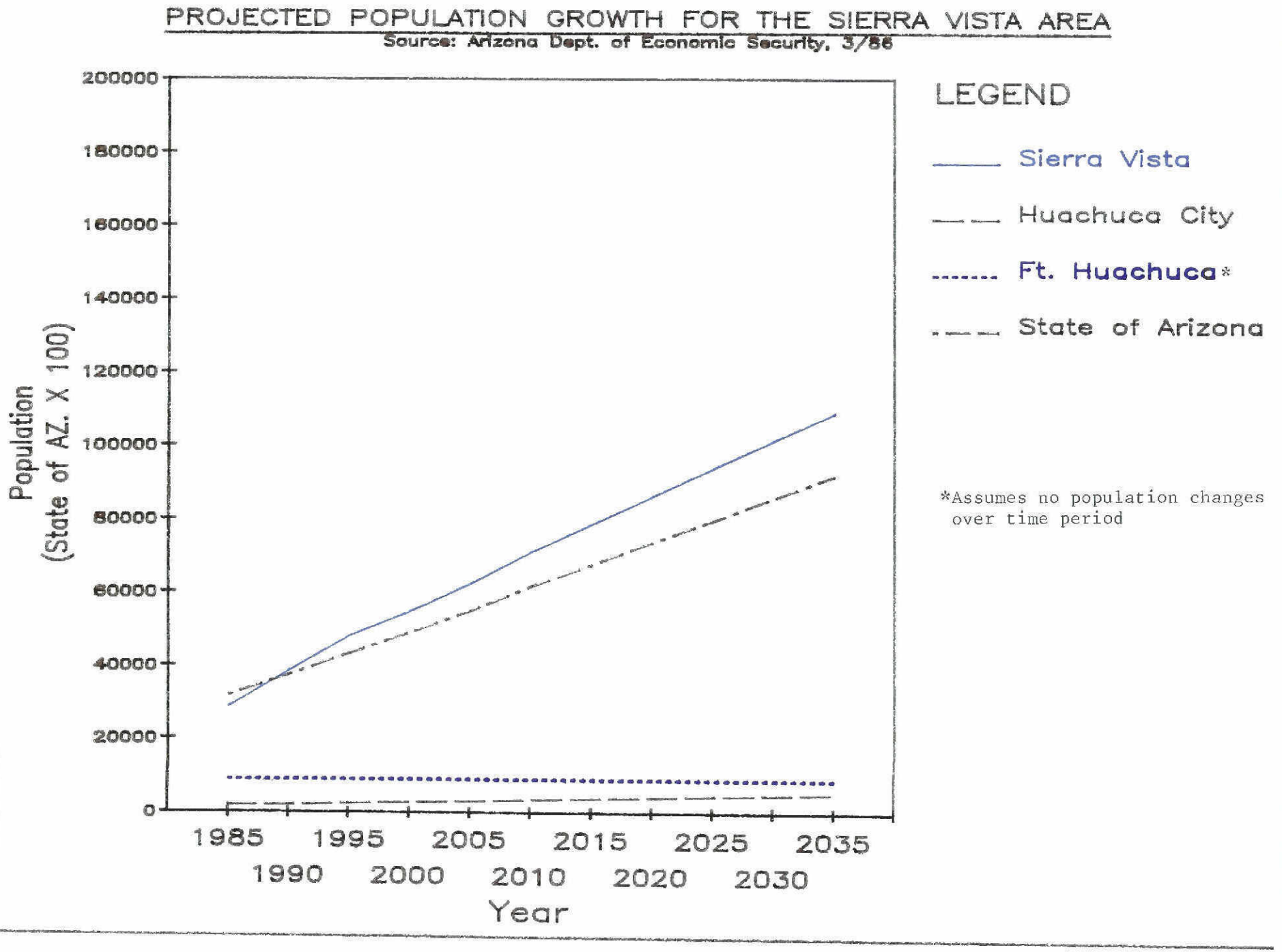
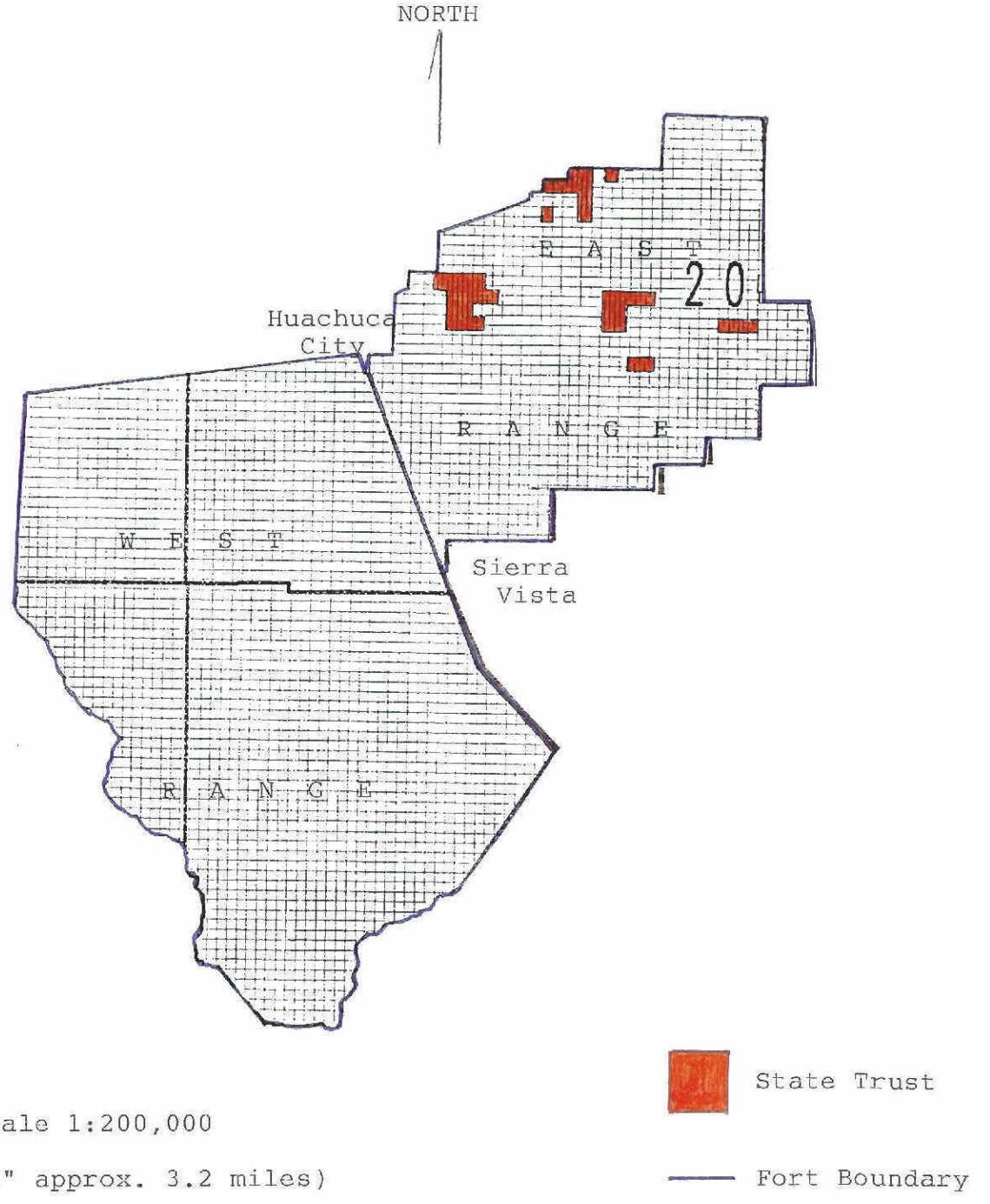

PROJECTED POPULATION GROWTH FOR THE SIERRA VISTA AREA
Source: Arizona Dept. of Economic Security, 3/86
Population
(State of AZ. X 100)
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
1985
1990
1995
2000
2005
2010
2015
2020
2025
2030
2035
Year
LEGEND
Sierra Vista
Huachuca City
Ft. Huachuca*
State of Arizona
*Assumes no population changes over time period

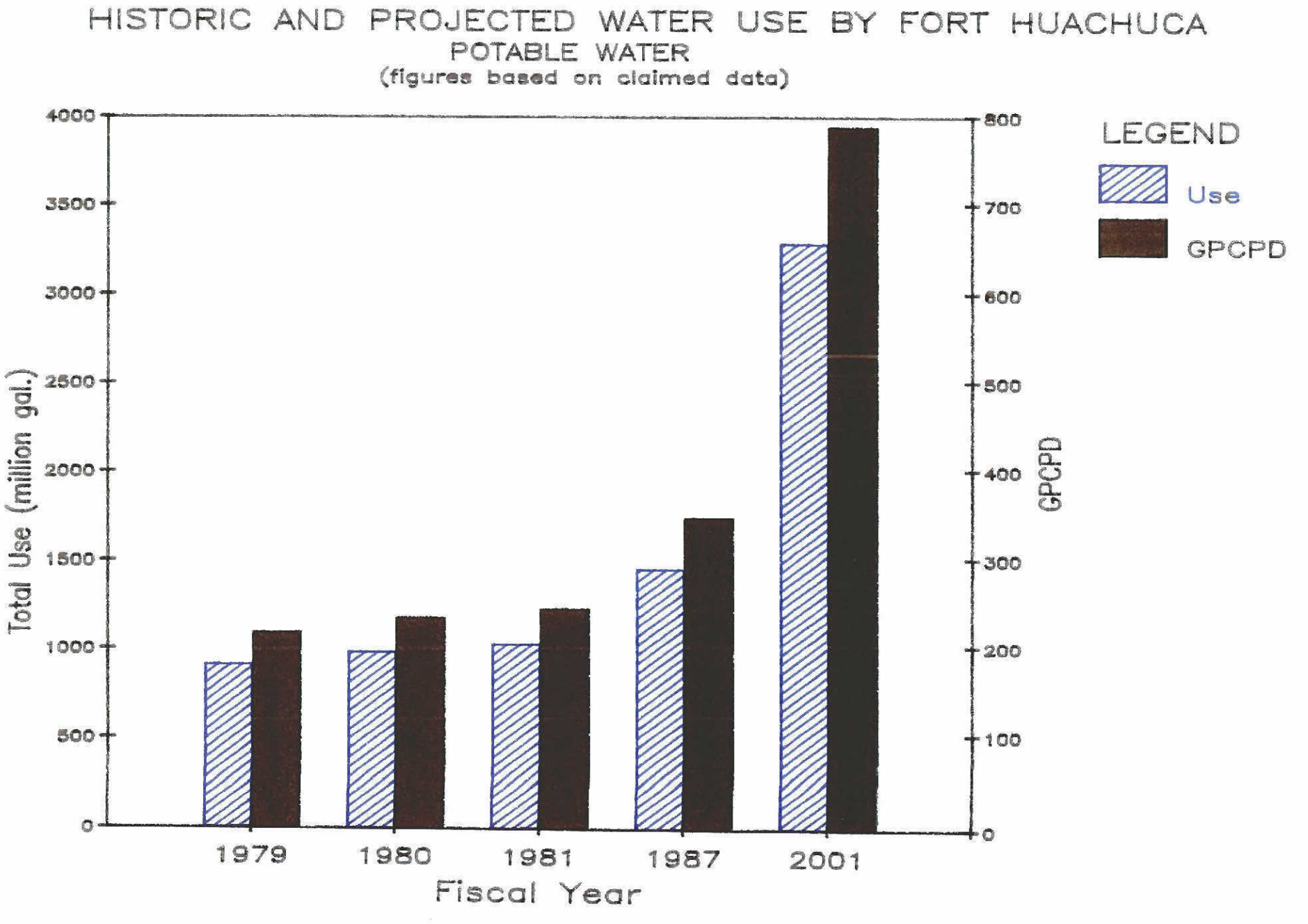
Figure 6. Map of Fort Huachuca and State Trust Lands



Scale 1:200,000

(1" approx. 3.2 miles)

Figure 7



GPCPD=Gallons Per Capita Per Day

FMC002399

TABLE 7

FEDERAL RESERVE WATER RIGHTS SUMMARY SPREADSHEET

Key

DOM	Domestic
ER	Erosion Control
IRR	Irrigation
MIL	Military Purposes
NL	Not Listed
RC	Recreation/Fishing
WL	Wildlife/Game Mgt.

FEDERAL RESERVE WATER RIGHTS SUMMARY SPREADSHEET FT. HUACHUCA #111-23-F1

Adj.File#	Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	File Date	Fee Pd.
	<-----CLAIMED DATA---->							
3910774	WELL	DOM/MIL	WELL#1	SOLDIER CK	NWNWNW0322S20E	500	6/3/82	$40.00
3910774	WELL	DOM/MIL	WELL#2	SOLDIER CK	NWNWNW0322S20E	700		
3910774	WELL	DOM/MIL	WELL#3	SOLDIER CK	NWNESE3321S20E	700		
3910774	WELL	DOM/MIL	WELL#4	SOLDIER CK	NENWNE3321S20E	700		
3910774	WELL	DOM/MIL	WELL#5	SOLDIER CK	SWNESW2821S20E	700		
3910774	WELL	DOM/MIL	WELL#6	SOLDIER CK	NWNWSE3321S20E	700		
3910774	WELL	NONE	WELL#7	SOLDIER CK	NWNWNW2221S20E	800		
3910774	WELL	NONE	WELL#8	SOLDIER CK	NESENE1621S20E	800		
3910774	WELL	TEST	WELL#9	SOLDIER CK	SWNWNW1021S20E	NL		
3910774	WELL	MILITARY	REMBASS#1	GRVYRD GLCH	NESWNE2621S20E	125		
3910774	WELL	MIL/IRR	REMBASS#2	GRVYRD GLCH	NENWNE2321S20E	125		
3910774	WELL	NL	WINDMILL#1	SOLDIER CK	NESESW3420S20E	NL		
3910774	WELL	NL	WINDMILL#2	SOLDIER CK	SWSESW2720S20E	NL		
3910774	WELL	NL	WELL	GARDEN CANY	NWSESE2922S20E	NL		

Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	Remarks
<-----DWR REPORTED DATA---->						
WELL	DOM/MIL	WELL#1	SOLDIER CK	NWNWNW0322S20E		
WELL	DOM/MIL	WELL#2	SOLDIER CK	NWNWNW0322S20E		
WELL	DOM/MIL	WELL#3	SOLDIER CK	NENESE3321S20E		
WELL	DOM/MIL	WELL#4	SOLDIER CK	NENWNE3321S20E		
WELL	DOM/MIL	WELL#5	SOLDIER CK	SWNESW2821S20E		
WELL	DOM/MIL	WELL#6	SOLDIER CK	NWNWSE3321S20E		
WELL	NONE	WELL#7	SOLDIER CK	NWNWNW2221S20E		
WELL	NONE	WELL#8	SOLDIER CK	NESENE1621S20E		
WELL	TEST	WELL#9	SOLDIER CK	SWNWNW1021S20E		
WELL	MIL/IRR	REMBASS#1	GRVYRD GLCH	NESWNE2621S20E		
WELL	MIL/IRR	REMBASS#2	GRVYRD GLCH	NWNENE2321S20E		
WELL	NO USE FOUND	WINDMILL#1	SOLDIER CK	NESESW3420S20E		
WELL	NO USE FOUND	WINDMILL#2	SOLDIER CK	SWSESW2720S20E		
WELL	NO USE FOUND	WELL	GARDEN CANY	NWSESE2922S20E		

Adj.File#	CLAIMED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	File Date Fee Pd.
3910774	WELL	NL	SPATIAL RES	SOLDIER CK	SWNWNW2221S20E	NL	
3910774	WELL	NL	E RNG BUNKR	GRVYRD GLCH	NWSENW0721S21E	NL	
3910774	WELL	NL	TEST#1	NL	NWSWSE2021S20E	NL	
3910774	WELL	NL	TEST#2	NL	SESWNW3021S20E	NL	
3910774	WELL	NL	TEST#3	NL	NENENE1621S20E	NL	
3910774	WELL	NL	TEST#4	NL	SWSENE1521S20E	NL	
3910774	WELL	NL	TEST#6	NL	SESWSW3520S20E	NL	
3910774	WELL	NL	TEST#7	NL	SESWNW1121S20E	NL	
3910774	WELL	NL	TEST#8	NL	NWNWSW1321S20E	NL	
3910774	SPRING	DOMESTIC	SPRING1&2	HUACH CANY	NWSW1422S19E	NL	
3910774	SPRING	DOMESTIC	SPRING3&3A	HUACH CANY	NENE2222S19E	NL	
3910774	SPRING	DOMESTIC	SPRING 4	HUACH CANY	NENE2222S19E	NL	
3910774	SPRING	DOMESTIC	PICNIC SPR	GARDEN CANY	NESW3122S20E	NL	
3910774	SPRING	DOMESTIC	CHAIN SPR	GARDEN CANY	SWSW3122S20E	NL	
3910774	SPRING	DOMESTIC	SPRING 1	GARDEN CANY	SESE3622S19E	NL	
3910774	SPRING	DOMESTIC	SPRING 1A	GARDEN CANY	NENE0123S19E	NL	

DWR REPORTED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	Remarks
WELL	NO USE FOUND	SPATIAL RES	SOLDIER CK	SWNWNW2221S20E		
WELL	NO USE FOUND	E RNG BUNKR	GRVYRD GLCH	NWSENW0721S21E		
WELL	TEST	TEST#1	NL	NWSWSE2021S20E		
WELL	TEST	TEST#2	NL	SESWNW3021S20E		
WELL	TEST	TEST#3	NL	NENENE1621S20E		
WELL	TEST	TEST#4	NL	SWSENE1521S20E		
WELL	TEST	TEST#6	NL	SESWSW3520S20E		
WELL	TEST	TEST#7	NL	SESWNW1121S20E		
WELL	TEST	TEST#8	NL	NWNWSW1321S20E		
SPRING	DOMESTIC	SPRING1&2	HUACH CANY	NWSW1422S19E		
SPRING	DOMESTIC	SPRING3&3A	HUACH CANY	NENE2222S19E		
SPRING	DOMESTIC	SPRING 4	HUACH CANY	NENE2222S19E		
SPRING	DOMESTIC	PICNIC SPR	GARDEN CANY	NESW3122S20E		
SPRING	DOMESTIC	CHAIN SPR	GARDEN CANY	SESW3122S20E		
SPRING	DOMESTIC	SPRING 1	GARDEN CANY	SESE3622S19E		
SPRING	DOMESTIC	SPRING 1A	GARDEN CANY	NENE0123S19E		

Adj.File#	CLAIMED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	File Date	Fee Pd.
3910774	SPRING	DOMESTIC	SPRING 1B	GARDEN CANY	SESE3622S19E	NL		
3910774	SPRING	DOMESTIC	SPRING 2	GARDEN CANY	NESW0123S19E	NL		
3910774	SPRING	DOMESTIC	SPRING 3	GARDEN CANY	NESW0123S19E	NL		
3910774	SPRING	DOMESTIC	SPRING 4	GARDEN CANY	SWSW0123S19E	NL		
3910774	SPRING	DOMESTIC	CABIN SPR	GARDEN CANY	SESE0223S19E	NL		
3910775	SPRING	WL/GAME	SPRING#2	TINKER CANY	NESW3322S20E	NL		
3910775	SPRING	WL/GAME	SPRING#3	TINKER CANY	SWSW3322S20E	NL		
3910775	SPRING	WL/GAME	SPRING#4	SAWMILL CAN	SWSW0723S20E	NL		
3910775	SPRING	WL/GAME	SPRING#5	MCCLURE CAN	NESE3522S19E	NL		
3910775	SPRING	WL/GAME	SPRING#6	MCCLURE CAN	NWSW3622S19E	NL		
3910775	SPRING	WL/GAME	SPRING#7	MCCLURE CAN	SWNW3622S19E	NL		
3910775	SPRING	WL/GAME	SPRING#8	GARDEN CANY	SWNW3122S20E	NL		
3910775	SPRING	WL/GAME	SPRING#9	WOODCUTTERS	NWSE2522S19E	NL		
3910775	SPRING	WL/GAME	SPRING#10	WOODCUTTERS	SWSW1922S20E	NL		
3910775	SPRING	WL/GAME	SPRING#11	WOODCUTTERS	NESW2022S20E	NL		
3910775	SPRING	WL/GAME	SPRING#12	SOLDIER CK	NESE0722S20E	NL		
3910775	SPRING	WL/GAME	SPRING#13	SOLDIER CK	SWSW1322S19E	NL		
3910775	SPRING	WL/GAME	SPRING#14	HUACH CANY	NWNE2722S19E	NL		

DWR REPORTED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	Remarks
SPRING	DOMESTIC	SPRING 1B	GARDEN CANY	NENE0123S19E		
SPRING	DOMESTIC	SPRING 2	GARDEN CANY	NESW0123S19E		
SPRING	DOMESTIC	SPRING 3	GARDEN CANY	NESW0123S19E		
SPRING	DOMESTIC	SPRING 4	GARDEN CANY	SWSW0123S19E		
SPRING	NO USE FOUND	CABIN SPR	GARDEN CANY			
SPRING	WL/GAME	SPRING#2	TINKER CANY	NESW3322S20E		
SPRING	WL/GAME	SPRING#3	TINKER CANY	SWSW3322S20E		
SPRING	WL/GAME	SPRING#4	SAWMILL CAN	SWSW0723S20E		
SPRING	WL/GAME	SPRING#5	MCCLURE CAN	NESE3522S19E		
SPRING	WL/GAME	SPRING#6	MCCLURE CAN	NWSW3622S19E		
SPRING	WL/GAME	SPRING#7	MCCLURE CAN	SWNW3622S19E		
SPRING	WL/GAME	SPRING#8	GARDEN CANY	SWNW3122S20E		
SPRING	WL/GAME	SPRING#9	WOODCUTTERS	NWSE2522S19E		
SPRING	WL/GAME	SPRING#10	WOODCUTTERS	SWSW1922S20E		
SPRING	WL/GAME	SPRING#11	WOODCUTTERS	NESW2022S20E		
SPRING	WL/GAME	SPRING#12	SOLDIER CK	NESE0722S20E		
SPRING	WL/GAME	SPRING#13	SOLDIER CK	SWSW1322S19E		
SPRING	WL/GAME	SPRING#14	HUACH CANY	NWNE2722S19E		

Adj.File#	CLAIMED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	File Date Fee Pd.
3910775	SPRING	WL/GAME	SPRING#15	HUACH CANY	NWSE2222S19E	NL	
3910775	SPRING	WL/GAME	SPRING#16	HUACH CANY	NWSW1422S19E	NL	
3910775	SPRING	WL/GAME	SPRING#17	HUACH CANY	SENW1522S19E	NL	
3910775	SPRING	WL/GAME	SPRING#18	BLACKTAIL	NWNE1622S19E	NL	
3910775	SPRING	WL/GAME	SPRING#19	BLACKTAIL	SENE0822S19E	NL	
3910775	SPRING	WL/GAME	SPRING#20	SLAUGHTERHS	NWNE0422S19E	NL	
3910775	SPRING	WL/GAME	SPRING#21	SLAUGHTERHS	SWSW2621S19E	NL	
3910775	SPRING	WL/GAME	SPRING#22	SYCAMORE CY	NWSW3221S19E	NL	
3910775	SPRING	WL/GAME	SPRING#23	GARDEN WASH	NESW2122S20E	NL	
3910775	SPRING	WL/GAME	SPRING#24	SCHELLOTE	NWNW0723S20E	NL	
3910775	SPRING	WL/GAME	SPRING#25	MCCLURE CAN	SWSW3622S19E	NL	
3910775	POND	RC/WL	GRAVEL PIT	WOODCUTTER	NESE1722S20E	NL	
3910775	POND	EROSION	WOODCUTTER	WOODCUTTER	NWSW1622S20E	NL	
3910775	POND	EROSION	WOODCUTTER	WOODCUTTER	NWNE1622S20E	NL	
3910775	POND	EROSION	WOODCUTTER	WOODCUTTER	NENW1022S20E	NL	
3910775	POND	RC/WL	GOLF COURSE	SOLDIER CK	NWNE0922S20E	NL	
3910775	POND	RC/WL	OFFICERS CL	SOLDIER CK	NESE0122S19E	NL	
3910775	POND	RC/WL	PAN AM	HUACH CANY	SESW2421S19E	NL	

DWR REPORTED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	Remarks
SPRING	WL/GAME	SPRING#15	HUACH CANY	NWSE2222S19E		
SPRING	WL/GAME	SPRING#16	HUACH CANY	NWSW1422S19E		
SPRING	WL/GAME	SPRING#17	HUACH CANY	SENW1522S19E		
SPRING	WL/GAME	SPRING#18	BLACKTAIL	NWNE1622S19E		
SPRING	WL/GAME	SPRING#19	BLACKTAIL	SENE0822S19E		
SPRING	WL/GAME	SPRING#20	SLAUGHTERHS	NWNE0422S19E		
SPRING	WL/GAME	SPRING#21	SLAUGHTERHS	SWSW2621S19E		
SPRING	WL/GAME	SPRING#22	SYCAMORE CY	NWSW3221S19E		
SPRING	WL/GAME	SPRING#23	GARDEN WASH	NESW2122S20E		
SPRING	WL/GAME	SPRING#24	SCHELLOTE	NWNW0723S20E		
SPRING	WL/GAME	SPRING#25	MCCLURE CAN	SWSW3622S19E		
POND	RC/WL	GRAVEL PIT	WOODCUTTER	NESE1722S20E	57.4	PIPE IN DAM(SURV.)
POND	FLOOD/ER CTRL	WOODCUTTER	WOODCUTTER	NWSW1622S20E	8.4	SURVEYED
POND	EROSION	WOODCUTTER	WOODCUTTER	NWNE1622S20E		<1 ACRE
POND	EROSION	WOODCUTTER	WOODCUTTER	NENW1022S20E		FLOOD CONTROL
POND	RC/WL	GOLF COURSE	SOLDIER CK	NWNE0922S20E	59.7	SURVEYED
POND	RC/WL	OFFICERS CL	SOLDIER CK	NESE0122S19E		<15 ACRE FEET
POND	RC/WL	PAN AM	HUACH CANY	SESW2421S19E		DESTROYED(AIRPORT)

Adj.File#	CLAIMED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	File Date Fee Pd.
3910775	POND	RC/WL	HIDDEN	BLACKTAIL	SENW2821S19E	NL	
3910775	POND	RC/WL/ER	LOW SOLDIER	ROCK SP CK	NENE0722S20E	NL	
3910775	POND	EROSION	UPP SOLDIER	ROCK SP CK	SENE1322S19E	NL	
3910775	POND	RC/WL	FLY	SOLDIER CK	NENE1222S19E	NL	
3910775	POND	RC/WL	SYCAMORE	SYCAMORE	SESW2021S19E	NL	
3910775	POND	RC/WL/ER	SLAUGHTERHS	SLAUGHT CAN	SWSE2321S19E	NL	
3910775	POND	EROSION	LAND STRIP	COYOTE CAN	NENW3521S19E	NL	
3910775	POND	EROSION	BUFF CORRAL	COYOTE CAN	SWNE2621S19E	NL	
3910775	POND	RC/WL	BLACKTAIL	BLACKTAIL	SENE1622S19E	NL	
3910775	POND	RC/WL	W HUACHUCA	HUACH CANY	NWNW2222S19E	NL	
3910775	POND	EROSION	HUACH CORR	HUACH CANY	NWSE2222S19E	NL	
3910775	POND	RC/WL/ER	BOY SCOUT	GARDEN CAN	NWSE0223S19E	NL	
3910775	POND	EROSION	UWOODCUTTER	WOODCUTTER	NESW2022S20E	NL	
3910775	POND	EROSION	LWOODCUTTER	WOODCUTTER	SWNW1022S20E	NL	
3910775	POND	RC/WL/GM	ANTELOPE	BABOCOMARI	NWSW1621S19E	NL	
3910775	POND	GAME	POWER LINE	BLACKTAIL	NWSW2721S19E	NL	
3910775	POND	GAME	NORTH	BABOCOMARI	SWNE1521S19E	NL	
3910775	POND	EROSION	HUACH CANY	HUACH CANY	NWSW1422S19E	NL	

DWR REPORTED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	Remarks
POND	RC/WL	HIDDEN	BLACKTAIL	SENW2821S19E	22.5	SURVEYED
POND	RC/WL/ER	LOW SOLDIER	ROCK SP CK	NENE0722S20E		<15 ACRE FEET
POND	WILDLIFE	UPP SOLDIER	ROCK SP CK	SENE1322S19E		<1 ACRE
POND	NO USE FOUND	FLY	SOLDIER CK			
POND	RC/WL	SYCAMORE	SYCAMORE	SESW2021S19E	38.8	SURVEYED
POND	WILDLIFE	SLAUGHTERHS	SLAUGHT CAN	SWSE2321S19E		<15 ACRE FEET
POND	NO USE FOUND	LAND STRIP	COYOTE CAN			
POND	FISH/WL	BUFF CORRAL	COYOTE CAN	SWNE2621S19E		<15 ACRE FEET
POND	RC/WL	BLACKTAIL	BLACKTAIL	SENE1622S19E		<15 ACRE FEET
POND	NO USE FOUND	W HUACHUCA	HUACH CANY			
POND	NO USE FOUND	HUACH CORR	HUACH CANY			
POND	NO USE FOUND	BOY SCOUT	GARDEN CAN			
POND	FISH/WL	UWOODCUTTER	WOODCUTTER	NESW2022S20E		<1 ACRE
POND	FLOOD CTRL	LWOODCUTTER	WOODCUTTER	SWNW1022S20E	20.7	SURVEYED
POND	WL/GAME	ANTELOPE	BABOCOMARI	NWSW1621S19E	26.4	SURVEYED
POND	NO USE FOUND	POWER LINE	BLACKTAIL			
POND	NO USE FOUND	NORTH	BABOCOMARI			
POND	NO USE FOUND	HUACH CANY	HUACH CANY			

Adj.File#	CLAIMED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	File Date Fee Pd.
3910775	POND	EROSION	LOWER HUACH	HUACH CANY	SESE0721S20E	NL	
3910775	POND	RC/WL/GM	LOBLACKTAIL	BLACKTAIL	NWNE2221S19E	NL	
3910775	POND	RC/WL/GM	UNKNOWN WST	SLAUGHT WSH	SWNE1421S19E	NL	
3910775	POND	EROSION	LOW GARDEN	GARDEN CANY	SWSW2322S20E	NL	
3910775	POND	EROSION	LOWER FLY	SOLDIER CK	NWSW0622S20E	NL	
3910775	POND	EROSION	LO HORSE P	SOLDIER CK	SESW0622S20E	NL	
3910775	POND	EROSION	UP HORSE P	SOLDIER CK	SWSW0622S20E	NL	
3910775	POND	RC/WL	UPP GARDEN	GARDEN CANY	NWSE0223S19E	NL	
3910775	POND	EROSION	FAIRWAY	SOLDIER CK	SWNE0422S20E	NL	
3910775	POND	EROSION	SEDIMENT#1	SOLDIER CK	NESE3321S20E	NL	
3910775	POND	EROSION	SEDIMENT#2	SOLDIER CK	SESW2821S20E	NL	
3910775	POND	EVAP	SEDIMENT#3	SOLDIER CK	SESE2121S20E	NL	
3910775	POND	EVAP	SEDIMENT	SOLDIER CK	NESE2121S20E	NL	
3910775	POND	EVAP	SEDIMENT	SOLDIER CK	SENE2121S20E	NL	
3910775	POND	EVAP	SEDIMENT	SOLDIER CK	NENE2121S20E	NL	
3910775	POND	EVAP/ER	SEDIMENT	SOLDIER CK	NWNW1521S20E	NL	
3910775	POND	ER/FISH	EAST#1	SOLDIER CK	SESE1621S20E	NL	
3910775	POND	EROSION	EAST#2	BABOCOMARI	NENE0421S20E	NL	

DWR REPORTED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	Remarks
POND	ER/WL	LOWER HUACH	HUACH CANY	SESE0721S20E		<1 ACRE
POND	RC/WL/GM	LOBLACKTAIL	BLACKTAIL	NWNE2221S19E		<1 ACRE
POND	NO USE FOUND	UNKNOWN WST	SLAUGHT WSH			
POND	ER/FISH	LOW GARDEN	GARDEN CANY	SWSW2322S20E		<1 ACRE
POND	NO USE FOUND	LOWER FLY	SOLDIER CK			
POND	ER/WL	LO HORSE P	SOLDIER CK	SESW0622S20E		<1 ACRE
POND	EROSION CTRL	UP HORSE P	SOLDIER CK	SWSW0622S20E		<1 ACRE
POND	WILDLIFE	UPP GARDEN	GARDEN CANY	NWSE0223S19E		<15 ACRE FEET
POND	WILDLIFE	FAIRWAY	SOLDIER CK	SWNE0422S20E		<1 ACRE
POND	NO USE FOUND	SEDIMENT#1	SOLDIER CK			
POND	NO USE FOUND	SEDIMENT#2	SOLDIER CK			
POND	EVAP	SEDIMENT#3	SOLDIER CK	SESE2121S20E		PIPE IN DAM
POND	NO USE FOUND	SEDIMENT	SOLDIER CK			
POND	EVAP	SEDIMENT	SOLDIER CK	SENE2121S20E	11.0	SURVEYED
POND	NO USE FOUND	SEDIMENT	SOLDIER CK			
POND	EVAP/ER	SEDIMENT	SOLDIER CK	NWNW1521S20E	29.6	SURVEYED
POND	ER/FISH	EAST#1	SOLDIER CK	SESE1621S20E	6.0	SURVEYED
POND	NO USE FOUND	EAST#2	BABOCOMARI			

Adj.File#	CLAIMED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	File Date Fee Pd.
3910775	POND	EROSION	EAST#3	SAN PEDRO	SENE1421S20E	NL	
3910775	POND	EROSION	EAST#4	SOLDIER CK	SESW2721S20E	NL	
3910775	POND	FISHING	NL	SYCAMORE	NWSW3221S19E	NL	
3910775	POND	EROSION	NL	SYCAMORE	SENE3121S19E	NL	
3910775	POND	GAME	DAM	GARDEN CANY	NENW3322S20E	NL	
3910775	POND	EROSION	DAM	GRAVEYARD	SWSE1821S21E	NL	
3910775	POND	EROSION	DAM	GRAVEYARD	NESW1721S21E	NL	
3910775	POND	EROSION	DAM	GRAVEYARD	SWNW2021S21E	NL	
3910775	POND	EROSION	DAM	GRAVEYARD	NWNW2021S21E	NL	
3910775	POND	EROSION	DAM	GRAVEYARD	SENE1921S21E	NL	
3910775	POND	EROSION	DAM	GRAVEYARD	SESE1821S21E	NL	
3910775	POND	EROSION	DAM	SOLDIER CK	NESW1021S20E	NL	
3910775	POND	EROSION	DAM	SOLDIER CK	SENW1021S20E	NL	
3910775	POND	EROSION	DAM	SOLDIER CK	SENE1021S20E	NL	
3910775	POND	EROSION	DAM	SOLDIER CK	SESE0321S20E	NL	
3910775	POND	EROSION	DAM	SOLDIER CK	NENE0921S20E	NL	
3910775	POND	ER/FISH	DAM	HUACH WASH	NWNE3621S19E	NL	
3910775	POND	ER/FISH	DAM	GARD WASHES	NENE2822S20E	NL	

DWR REPORTED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	Remarks
POND	EROSION	EAST#3	SAN PEDRO	SENE1421S20E		<1 ACRE
POND	EROSION	EAST#4	SOLDIER CK	SESW2721S20E		<1 ACRE
POND	FISHING		SYCAMORE	NWSW3221S19E		<15 ACRE FEET
POND	EROSION		SYCAMORE	SENE3121S19E		<1 ACRE
POND	GAME	DAM	GARDEN CANY	NENW3322S20E		<1 ACRE
POND	NO USE FOUND	DAM	GRAVEYARD			
POND	NO USE FOUND	DAM	GRAVEYARD			
POND	EROSION	DAM	GRAVEYARD	SWNW2021S21E		<1 ACRE
POND	EROSION	DAM	GRAVEYARD	NWNW2021S21E		<1 ACRE
POND	NO USE FOUND	DAM	GRAVEYARD			
POND	NO USE FOUND	DAM	GRAVEYARD			
POND	NO USE FOUND	DAM	SOLDIER CK			
POND	NO USE FOUND	DAM	SOLDIER CK			
POND	EROSION	DAM	SOLDIER CK	SENE1021S20E		<1 ACRE
POND	NO USE FOUND	DAM	SOLDIER CK			
POND	EROSION CTRL	DAM	SOLDIER CK	NENE0921S20E		<1 ACRE
POND	EROSION CTRL	DAM	HUACH WASH	NWNE3621S19E		<15 ACRE FEET
POND	ER/FISH	DAM	GARD WASHES	NENE2822S20E	16.9	SURVEYED

Adj.File#	CLAIMED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	File Date Fee Pd.
3910775	POND	EROSION	DAM	SYCAMORE	SESE3121S19E	NL	
3910775	POND	EROSION	DAM	GARDEN CANY	NWNE1522S20E	NL	
3910775	POND	GAME	DAM	HUACH CANY	NWSE1821S20E	NL	
3910775	POND	GAME	DAM	SAN PEDRO	SENW2120S21E	NL	

DWR REPORTED DATA Diversion	Uses	Name	Course	Location	Ir.Ac./Cap.	Remarks
POND	NO USE FOUND	DAM	SYCAMORE			
POND	EROSION	DAM	GARDEN CANY	NWNE1522S20E		<1 ACRE
POND	GAME	DAM	HUACH CANY	NWSE1821S20E		<1 ACRE
POND	GAME	DAM	SAN PEDRO	SENW2120S21E		<1 ACRE
POND	UNCLAIMED		ROUGH CANY	NWSE2122S19E		<1 ACRE
POND	UNCLAIMED		BABOCOMARI	NENE0321S20E		<1 ACRE
POND	UNCLAIMED		SOLDIER CK	NWSE1021S20E		<1 ACRE
POND	UNCLAIMED		SOLDIER CK	SWSW1621S20E		<1 ACRE
POND	UNCLAIMED		SOLDIER CK	SWSE0422S20E		<1 ACRE (GOLF CRS.)
POND	UNCLAIMED		SOLDIER CK	SESW0622S20E		<1 ACRE
POND	UNCLAIMED		GARDEN WASH	NENE2822S20E	27.1	SURVEYED (MID GARD)
POND	UNCLAIMED		SAN PEDRO	SESE1021S21E		<1 ACRE
POND	UNCLAIMED		SYCAMORE	NESW2921S19E	10.5	SURVEYED
POND	UNCLAIMED		BABOCOMARI	NWSW1621S19E	14.9	SURVEYED
POND	UNCLAIMED		SOLDIER CK	SESW0622S20E		<1 ACRE
POND	UNCLAIMED		SOLDIER CK	SESE2121S20E	5.5	SURVEYED (EST.)
POND	UNCLAIMED		SOLDIER CK	SESE2121S20E	12.0	SURVEYED

Arizona

Huachuca City

Phoenix

Tucson

HUACHUCA CITY

HUACHUCA CITY EMPLOYMENT STRUCTURE

	Percent of Total
Agriculture & Mining	2.4%
Construction	0.8
Manufacturing	1.1
Transportation, Communication & Public Utilities	3.3
Wholesale Trade	1.8
Retail Trade	17.6
Finance, Insurance & Real Estate	1.1
Services	29.2
Public Administration	33.8

Source: U.S. Bureau of the Census, 1980

LABOR FORCE DATA

	1980	1983	1984
Civilian Labor Force	586	612	588
Employed	513	517	531
Unemployed	73	95	57
Unemployment Rate	12.5%	15.5%	9.7%

Source: Arizona Department of Economic Security

GROWTH INDICATORS

	1982	1983	1984
Taxable Sales ($)	3,645,963	3,163,609	3,576,200
Postal Receipts ($)	57,589	68,791	76,353
Building Permits	73	50	23
School Enrollment	530	510	512
Net Assessed Valuation ($)	2,287,019	2,598,891	2,876,352

PROPERTY TAX RATE PER $100 ASSESSED VALUATION

	1982	1983	1984
Unified School District	$3.71	$3.43	$4.59
Community College	1.41	1.50	1.47
Cochise County	2.95	3.99	3.72
State of Arizona	.75	.75	.40
Total Outside City	8.82	9.67	10.18
Huachuca City	1.53	1.53	1.51
Total	10.35	11.20	11.69

Source: Arizona Tax Research Association

INTRODUCTION

Huachuca City is situated on AZ 90, 64 miles southeast of Tucson at an elevation of 4,245 feet. The community was first known as Campstone Station and originated as a stop on the now abandoned Southern Pacific Railroad between Tombstone and Patagonia, Arizona. Huachuca City, also known as the Sunset City, was incorporated in 1958.

WEATHER*

Month	Average Temperature (° F) Daily Max.	Daily Min.	Average Total Precipitation (Inches)
January	58.4	34.2	0.74
February	61.1	36.2	0.67
March	66.0	40.1	0.54
April	73.8	47.2	0.18
May	82.0	55.0	0.07
June	89.8	64.1	0.38
July	88.6	66.4	4.49
August	86.0	64.6	3.88
September	84.3	61.0	1.61
October	77.3	51.9	0.74
November	66.7	41.3	0.44
December	59.8	35.8	1.00
Year	74.5	49.8	14.64

Average Total Snow, Sleet and Hail Annually: 5.9 inches

*Fort Huachuca Reporting Station

Based on a thirty-year average.

PRINCIPAL HUACHUCA CITY ECONOMIC ACTIVITIES

The Huachuca City economy is closely related to the U.S. Army's Fort Huachuca. The base is headquarters for the Army's Information Systems Command, Intelligence Center and School, Electronic Proving Ground and Communications Electronic Installation Agency.

The Town of Huachuca City has a growing retail sales sector and some warehousing facilities. Residential construction is important to the economy, and retirement housing is increasing in importance due to the highly desirable location of Huachuca City.

Undeveloped land, with city utilities available, is abundant around Huachuca City. The town is just 40 miles from the Mexican border and has good potential for the "twin plant" concept in manufacturing and assembly operations.

POPULATION

	1980	1984	1980-1984 Compounded Percentage Change
Huachuca City	1,661	2,005	+4.8%
Cochise County	85,686	91,200	+1.5
Arizona	2,718,215	3,071,000	+3.1

Sources: Arizona Department of Economic Security
U.S. Bureau of the Census

FMC002409

Arizona
Department of Commerce
State Capitol Tower 1700 W. Washington Phoenix, Arizona 85007 (602) 255-5434

INANCE

nited Bank: 1 local branch

hree branches of the First Interstate Bank, 2 Valley National Banks, rizona Bank, United Bank of Arizona and Pima Savings and Loan ffice are located within 10 miles.

uachuca City businesses are eligible for assistance in financing fixed sets through the Development Finance Division, Arizona Department of Commerce. Information on availability of industrial development bonds within the City may be obtained from the same source r from the Industrial Development Authority of Huachuca City, o Huachuca City Town Hall, 500 North Gonzales Blvd., Huachuca ity, Arizona 85616.

RANSPORTATION

ighways:	AZ 82, AZ 90 (22 miles from Interstate 10)
ruck:	Jenney Freight, Hopper-ONC, Pacific Motor Trucking Co. (Interstate and Intrastate), United Parcel Service (Interstate)
us:	Greyhound, Nogales-Bisbee Stage Lines
irport:	1 - Sierra Vista Municipal; two lighted, new 12,000 foot runway to be completed in 1985. UNICOM radio. Fiesta Airlines 1 Tucson/Phoenix roundtrip. Charter services available Sierra Vista Airways and Golden Airways on demand.

OMMUNICATIONS

ewspapers:	Daily:	Campstone News (Huachuca City)
		Sierra Vista Herald Dispatch
		Arizona Republic (Phoenix)
		Phoenix Gazette (evening)
		Arizona Daily Star (Tucson)
		Tucson Daily Citizen (evening)
	Weekly:	The Paper (Classified)
adio:	12 stations via cable from Tucson and Phoenix.	
elevision:	12 channels via cable. 5 from Tucson, 2 from Phoenix, 4 from Los Angeles, 1 from Atlanta.	

JTILITIES

lectricity:	Sulphur Springs Valley Electric Co-op.
atural Gas:	Arizona Public Service Co.
elephone:	Mountain Bell, AT & T
ater:	Municipal
ewer:	Municipal
olid Waste:	Municipal

EDICAL FACILITIES

he following facilities are available within a 15 minute drive.

ospitals:		1 - 55 beds; 1 - military (110 beds)	
hysicians:	27	Dentists:	19
hiropractors:	5		

OVERNMENT SERVICES

ocal Government:	Mayor, 7 councilmembers
olice Protection:	
Town Police Dept.:	9 officers (3 reserves)
County Sheriff's Dept.:	2 sheriff's deputies
ire Department:	Chief, 18 volunteers
Underwriters Rating:	Grade 5

DUCATIONAL FACILITIES

	No.	Faculty	Enrollment
ublic Elementary	1	24	512

igh School students attend school in Tombstone.

CHURCHES

5 Protestant churches

Catholic services are held at the Antioch church on Wednesdays and Sundays.

COMMUNITY FACILITIES

Library:	1 - Huachuca City Library
Community Center:	1 - Meeting rooms, kitchen
Parks:	6 - facilities include: 1 Little League field, 3 practice fields, tennis, basketball and volleyball courts, and a soccer field.
Senior Citizens Center:	1

To the south of Huachuca City, Huachuca Recreation Area offers outdoor activities including water sports at Parker Canyon Lake. Patagonia Lake is a favorite recreational site for residents and visitors as well.

SCENIC ATTRACTIONS

Cochise County, in the southeast corner of Arizona, is unique in its historical, recreational and scenic features. The rugged mountains and broad grassy valleys were once dominated by the Apaches whose great chief gave his name to the county. The struggle between the Chiricahua Apaches and the U.S. Cavalry is reflected in numerous sites throughout the county. These same mountains offer the visitor to Cochise County many opportunities to hike and wander through lush stands of ponderosa pine, douglas fir and quaking aspen. The Coronado National Forest areas are noted for a variety of wildlife and offer the hunter and the nature lover many hours of excitement and pleasure.

Within a one-hour drive of Huachuca City visitors can enjoy an archive of Indian and pioneer artifacts and history: Cochise stronghold, ideal picnic grounds under large trees at the foot of the Stronghold where Cochise sought refuge from the U.S. Cavalry, the traditional burial place of Cochise; several ghost towns; Bisbee, picturesque 1890's mining town built on mountain sides, infamous "Brewery Gulch" once roared with saloons, sporting houses and gun-play; Lavender Pit, U.S. 80 tunnels through a mountain pass to the only open-pit mine on a major highway; Coronado National Memorial, recreational area in Huachuca Mountains with spectacular view into Mexico, commemorates the first European expedition into American Southwest; Fort Huachuca, established in 1877 as a cavalry post to safeguard settlers, now offers an excellent museum open to the public; Tombstone (national Historical Monument), "Town Too Tough To Die," site of historic gun fights, famous old Cochise County Court House, now a state Historical Museum; Amerind Foundation Museum, outstanding museum of Indian culture and artifacts; Agua Prieta, Nogales and Naco, Mexican cities across the international border which offer excellent curio shops, first-class restaurants, night clubs and (in Nogales), colorful and exciting bullfights.

LODGING AND MEETING FACILITIES

Motel:	2 - total of 47 units
Meeting Facilities:	9 - with seating for 700 in the largest facility.

AVAILABLE INDUSTRIAL PROPERTY

Campstone Development - 72 acre industrial park and office complex

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This profile was prepared in cooperation with the Sierra Vista Chamber of Commerce.

For further information, contact:

Sierra Vista Chamber of Commerce
77 Calle Portal, Suite 140
Sierra Vista, AZ 85635
(602) 458-6940

Town of Huachuca City
Huachuca City, AZ 85616
(602) 456-1354

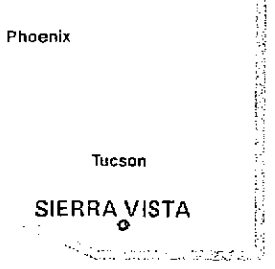
4/85

FMC002410

Arizona

Sierra Vista

Community Profile



SIERRA VISTA EMPLOYMENT STRUCTURE

	Percent of Total
Agriculture	1.0%
Mining	0.1
Construction	4.4
Manufacturing	4.3
Transportation, Communication & Public Utilities	4.7
Wholesale Trade	0.5
Retail Trade	19.9
Finance, Insurance & Real Estate	5.8
Services	26.5
Public Administration	32.8

Source: U.S. Bureau of the Census, 1980

SIERRA VISTA LABOR FORCE DATA

	1980	1983	1984
Civilian Labor Force	6,713	6,970	6,792
Employed	6,029	6,080	6,252
Unemployed	684	890	540
Unemployment Rate	10.2%	12.8%	8.0%

Source: Arizona Department of Economic Security

GROWTH INDICATORS

	1982	1983	1984
Taxable Sales ($)	117,326,318	143,253,700	179,144,000
Postal Receipts ($)	1,335,911	1,505,589	1,283,057
Building Permits	1,058	1,295	1,206
School Enrollment	6,807	6,854	5,585
Net Assessed Valuation ($)	38,328,976	41,523,138	52,779,738

PROPERTY TAX RATE PER $100 ASSESSED VALUATION

	1982	1983	1984
Elementary	$2.82	$3.43	$4.44
High School	1.44	2.01	2.38
Community College	1.41	1.50	1.47
Cochise County	2.95	3.99	3.72
State of Arizona	.75	.75	.40
Total Outside City	9.37	11.68	12.42
Sierra Vista	1.62	1.51	1.38
Total	10.99	13.19	13.80

Source: Arizona Tax Research Association

INTRODUCTION

Sierra Vista is located in the southwest corner of Cochise County, approximately 70 miles southeast of Tucson and 192 miles southeast of Phoenix at an elevation of 4,623 feet. Fort Huachuca, the home of several major Army activities, is situated within the city limits of Sierra Vista. The Fort was established in 1887 as a cavalry outpost and was named after the nearby Huachuca Mountains. The Spanish name Sierra Vista means "Mountain View" and is most appropriate because of the city's picturesque setting amidst the Whetstone, Dragoon, Mule and Huachuca Mountains. Sierra Vista was incorporated in 1956.

WEATHER

Month	Average Temperature (° F) Daily Max.	Daily Min.	Average Total Precipitation (Inches)
January	58.4	34.2	0.74
February	61.1	36.2	0.57
March	66.0	40.1	0.54
April	73.8	47.2	0.18
May	82.0	55.0	0.07
June	89.8	64.1	0.38
July	88.6	66.4	4.49
August	86.0	64.6	3.88
September	84.3	61.0	1.61
October	77.3	51.9	0.74
November	66.7	41.3	0.44
December	59.8	35.8	1.00
Year	74.4	49.8	14.64

Based on a thirty year average.

PRINCIPAL SIERRA VISTA ECONOMIC ACTIVITIES

Sierra Vista's economy is closely related to the U.S. Army's Fort Huachuca. Current Post population is 9,022 including 6,231 military and 6,223 civilian workers. Major organizations at Fort Huachuca include the U.S. Army Information Systems Command, the U.S. Army Intelligence Center and School, the U.S. Army Electronics Proving Ground and the tri-service (Army, Navy and Air Force) Tactical Communications Test Organization - TRI-TAC. Fort Huachuca had a total impact (wages, contracts and procurement) in Arizona of $330.2 million during Fiscal Year 1984.

POPULATION

	1980	1984	1980-1984 Compounded Percentage Change
Sierra Vista	25,968	32,130	+5.5%
Developed Area 10 Mile Radius*	36,692		
Cochise County	85,686	91,200	+1.6
Arizona	2,718,215	3,071,000	+3.1

Sources: Arizona Department of Economic Security
U.S. Bureau of the Census

FMC002411

Arizona
Department of Commerce
State Capitol Tower · 1700 W. Washington · Phoenix, Arizona 85007 (602) 255-5434

INANCE

rizona Bank:	1 office
irst Interstate Bank:	3 offices
alley National Bank:	2 offices
ima Savings & Loan:	1 office
nited Bank of Arizona:	2 offices
uachuca Federal Credit Union:	2 offices

ierra Vista businesses are eligible for assistance in financing fixed ssets through the Development Finance Division, ARizona Department of Commerce. Information on availability of industrial development bonds within the City may be obtained from the same ource or from the Industrial Development Authority of the City of 'erra Vista; c/o Frank T. Moro; P.O. Box 1826; Sierra Vista, Arona 85635.

RANSPORTATION

ighways:	Arizona 90 & 92, I-10 is 30 miles north
ruck:	Jenney Freight, Pacific Motor Trucking Co. (Interstate and Intrastate), United Parcel Service (Interstate), Consolidated Freight, and several moving and storage companies.
us:	Greyhound
irport:	Municipal, with 2 lighted and paved 5,300 foot runways, unicom radio, and ground transportation. Charter service available.

OMMUNICATIONS

ewspapers:	Daily:	Sierra Vista Herald Arizona Republic (Phoenix) Arizona Daily Star (Tucson) Tucson Daily Citizen
	Weekly:	The Paper (classified)
adio:		KZMK, KSVA-AM, KTAN-AM, KIOI-FM (12 additional FM stations are available via cable)
elevision:		1 local station, 12 via cable from Nogales, Tucson, Phoenix, Atlanta, Chicago, New York, Los Angeles, Denver and Bristol

TILITIES

lectricity:	Sulphur Springs Valley Electric Co-op., Inc.
atural Gas:	Southwest Gas
elephone:	Mountain Bell
'ater:	Bella Vista Water Company, Arizona Water Company, Southwest Water Company and Pueblo Del Sol Water Company
ewer:	Municipal

EDICAL FACILITIES

ospitals:	Sierra Vista Community Hospital (55 beds), Fort Huachuca (110 beds)
ursing Homes:	1
hysicians:	27
entists:	19
hiropractors:	5

OVERNMENT SERVICES

ocal Government:	Mayor, 6 council members
olice Department:	Chief, 30 officers
heriff's Department:	14 deputies, 5 dispatchers, 1 jailer
ire Department:	15 full-time, 9 volunteers
Underwriters Rating:	Grade 7

DUCATIONAL FACILITIES

	No.	Faculty	Enrollment
ublic Elementary	5	Total	2,613
ublic Junior High	1	229	910
ublic High School	1		1,982
ort Huachuca Elementary	3	74	1,349
rivate Elementary Schools	3	22	226
ochise College	1		2,600

ver 2,600 students attend the local branch of Cochise College. The niversity of Arizona also offers extension courses at Cochise ollege. Credits may be earned which are applicable towards Bachelor's Degrees in General Business and General Studies and a Master f Teaching Degree. There are also the University of Phoenix, Uniersity of Arizona and Golden Gate University.

CHURCHES

Catholic Church:	2	Jewish:	1
Church of Latter Day Saints:	2	Protestant Churches:	39
Chapels on Post:	4		

COMMUNITY FACILITIES

Bowling Alleys:	2 (1 military)
Community Center:	1
Golf Courses:	1-18 hole (military), 1-18 hole (public)
Indoor Theaters:	2 (1 military)
Libraries:	4 (2 military)
Little League Diamonds:	7 (3 military)
Museum:	1 (Fort Huachuca)
Parks:	9
Pools:	4 (3 military)
Public Ball Fields:	7
Racketball Club:	1
Riding Clubs:	2 (1 military)
Rodeo Arenas:	2 (1 military)
Tennis Courts (public):	8 (2 lighted)
Skeet/Archery range:	1 (military)
Tennis Clubs:	1 with 12 lighted courts, Therapy spa and 40 ft. pool

SCENIC ATTRACTIONS

Within a one-hour drive of Sierra Vista, visitors can enjoy an archive of Indian and pioneer artifacts and history. Cochise Stronghold, the burial place of Cochise, has ideal picnic grounds under large trees at the foot of the Stronghold where Cochise sought refuge from the U.S. Cavalry. Coronado National Memorial, commemorating the first European expedition into the American Southwest, is a recreational area in the Huachuca Mountains, having a spectacular view into Mexico. Fort Huachuca, established in 1877 as a cavalry post to safeguard settlers now has an excellent museum open to the public, as does Tombstone, the "Town Too Tough To Die," with its old Cochise County Court House - now a State Historical Museum. Another museum in the area is Amerind Foundation Museum, an outstanding museum of Indian culture and artifacts. Lavender Pit, the only open-pit mine on a major highway; Gleeson, a ghost town; and Bisbee, the picturesque 1880's mining town built on the mountain sides and home of the infamous "Brewery Gulch," which once roared with saloons, sporting houses and gunplay are all interesting places to visit. Agua Prieta, Nogales and Naco, Mexican cities across the international border, offer excellent curio shops, first-class restaurants, night clubs and, in Nogales, colorful and exciting bullfights. Mile Hi and Ramsey Canyon Preserve are also available to the public.

LODGING AND MEETING FACILITIES

Motels:	8, with 445 units There are several motels under construction with 200 rooms available in late 1985 and several hundred more available in 1986.
Meeting Facilities:	5, with the largest seating 300

INDUSTRIAL PROPERTIES AVAILABLE

Industrial Parks: Sierra Vista Industrial Development Authority (IDA), 40 acres, various size parcels available.

This profile was prepared in cooperation with the Sierra Vista Chamber of Commerce.

For Further Information, contact:

Sierra Vista Chamber of Commerce
416 Sherbundy
Sierra Vista, AZ 85635
(602) 458-3088

City of Sierra Vista
2400 E. Tacoma
Sierra Vista, AZ 85635
(602) 458-3315

Form No. 1078A—Met'l.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

Station, Fort Huachuca County, ~~Coconino~~ Cochise State, Arizona

Latitude $\bar{X}$ = 15.39 Longitude, Elevation, fe

Data, Total precip.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annu
1886	1.18	1.94	.20	T	0	0	1.44	4.24	1.46	.84	T	0	11.47
1887	0	1.30	0	0	0	.72	4.08	2.00	3.48	.74	1.46	1.88	15.28
1888	1.00	.30	.96	0	.60	1.06	1.96	2.75	.96	2.12	2.78	1.06	21.55
1889	1.90	1.55	2.71	.22	0	.16	3.66	1.80	2.46	.04	.14	.75	15.39
1890	1.50	.10	T	.34	0	T	4.38	.40	4.68	.37	1.04	2.70	19.60
1891	.05	1.80	.74	0	1.21	.18	1.34	4.05	1.12	0	T	.14	10.96
1892	1.44	1.59	.50	1.12	.06	.41	[illegible]	2.64	.24	.16	T	.43	11.50
1893	.13	.50	2.21	0	.36	T	4.42	8.99	2.62	.08	1.47	.28	20.16
1894	.32	2.06	1.12	0	T	T	1.85	5.61	.15	.58	0	2.26	13.95
1895	1.00	.08	.04	.03	.02	.87	2.75	2.80	2.93	.35	2.73	1.58	14.15
1896	.30	.15	.55	.04	0	1.81	3.73	6.05	3.70	3.86	.62	.40	21.24
1897	3.68	.32	.83	0	.26	0	3.05	3.68	3.59	.62	0	.65	16.68
1898	2.48	.39	1.26	.59	.12	.46	7.34	6.22	.68	0	1.90	.58	21.82
1899	.52	.43	.40	.25	0	1.30	5.14	5.77	.57	1.47	.14	T	18.83
1900	.45	1.15	.86	1.29	T	T	2.30	1.66	3.82	.20	.55	.15	12.43
1901	1.70	2.39	.72	.30	.90	0	4.17	4.79	.74	1.80	1.12	.01	18.64
1902	.17	0	.02	0	0	1.03	.89	4.43	1.21	.10	0.55	3.37	12.67
1903	.44	.95	1.47	0	0	.43	3.76	3.62	1.82	0	0	.28	12.68
1904	.15	.49	.14	0	1.39	.10	5.70	6.94	.92	1.50	0	1.80	18.03
1905	4.65	3.90	6.77	1.94	0	1.34	1.19	3.55	4.85	.21	6.85	1.34	36.97
1906	.30	2.42	1.10	.24	T	T	2.97	2.74	.54	1.07	1.00	3.15	16.13
1907	4.80	.70	.10	T	1.80	T	4.18	8.50	2.31	.33	1.72	0	24.44
SUMS													
MEANS													

REMARKS

U. S. GOVERNMENT PRINTING OFFICE 8—7

385.57

Total Precip.

934.14

FMC002413

Form No. 1078A—Met'l.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

Station, Fort Huachuca County, Cochise State, Arizona

Latitude _____ Longitude, _____ Elevation, _____ feet

Data, Total Precip.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1908	.45	2.28	.52	.36	.07	T	3.89	4.38	1.40	0	.07	2.18	15.6
1909	.30	1.27	1.75	0	0	.03	.99	3.32	1.65	0	.50	1.79	11.6
1910	.60	0	T	T	0	1.35	3.40	2.95	.02	.20	1.02	T	9.[illegible]
1911	.68	.73	.71	.20	T	1.[illegible]	2.15	.97	1.54	3.30	0	.44	12.[illegible]
1912	0	1.65	2.08	1.00	.20	.20	6.50	6.60	.65	T	.24	.68	19.5
1913	.78	4.69	.18	.12	.98	.01	1.16	3.18	1.04	[illegible]	3.79	1.50	16.[illegible]
1914	1.35	.31	.90	0	.30	2.76	4.06	2.87	3.37	2.24	.90	.64	25.[illegible]
1915	2.93	2.16	1.22	.71	T	0	4.98	1.55	.09	0	.44	.84	15.[illegible]
1916	2.92	T	1.02	T	1.30	0	1.59	3.62	2.76	.12	0	.[illegible]	13.[illegible]
1917	3.96	.70	T	.38	1.13	.17	8.78	3.31	.94	.04	0	0	19.[illegible]
1918	2.08	1.38	0	.10	0	.66	3.15	.90		.35	.55		
1919		.55	.40	.50	.45	2.47	1.27			.25	1.34		
1920		.30											
1[illegible]59												.[illegible]1	
1[illegible]45	.11	2.87	.90	.71	.37								
1954									2.79	1.79	0	.10	
1955	2.72	.10	[illegible]	[illegible]	T	T	4.91	7.67	.05	.65	.13	.22	[illegible]
1956	.76	.17	0	.20	.02	.77	6.86	1.88	.04	.71	.02	.75	12.18
1957	1.15	.13	.59	.02	.16	1.17	2.25	1.58	T	1.53	.20	.10	11.85
1958									14.15				
TOTALS													
MEANS													17.5

REMARKS

NO DATA → 1918–1954

218.88

Total Precip.

U. S. GOVERNMENT PRINTING OFFICE 8—751

FMC002414

WB Form 920-11A

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

Station, FORT HUACHUCA County, Cochise State, Arizona

Latitude Longitude, Elevation, feet.

Data, Total Precip.

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
959	.00	.81	T	.53	.00	.81	3.20	3.41	.03	1.63	1.22	1.22	12.86
960	1.49	.39	.07	.00	.01	.24	3.62	2.06	1.21	.85	.01	1.00	10.8
961	.56	T	.05	.00	T	1.10	3.79	6.98	1.16	2.06	.07	1.42	16.19
962	1.71	.15	.97	.00	T	.12	1.33	.39	.58	.51	.13	1.32	7.21
963	.26	.24	T	.20	.10	.00	3.88	3.78	.99	.41	2.10	.68	12.64
964	.44	.64	.82	.25	T	T	6.90	3.08	5.82	1.28	1.35	.06	22.3
965	.60	.50	.74	.14	.20	.29	3.60	3.26	1.51	T	1.32	4.09	14.5
966	1.11	1.87	.12	T	.01	.39	4.59	5.07	2.93	T	.40	1.44	16.93
967	.02	.32	.41	.34	.12	.33	7.32	1.14	4.13	.15	.26	4.78	19.92
968	.83	.91	.92	.61	0	.01	5.39	2.07	.37	.11	.35	1.00	12.5
969	.19	.72	.40	.06	.39	.13	4.95	3.05	.80	.03	.62	.39	11.73
970	T	.82	1.09	.11	T	.07	3.48	8.06	2.13	.04	.02	.50	16.32
971	.17	.70	T	.07	T	.27	2.63	4.40	1.96	2.01	.22	2.45	14.88
972	T	T	.01	T	.01	1.48	4.47	2.65	1.58	2.72	.30	.50	14.39
973	.68	2.10	1.55	.00	.07	.23	1.98	.42	.87	.00	.00	.6	7.90
974	1.13	0	.07	T	.07	.13	7.33	1.83	M	2.59	.01	.33	13.39
975	.46	.02	.85	.69	T	.03	4.04	.88	3.68	.06	.14	.33	11.98
976	D .30	.99	.37	1.01	.28	.15	5.80	1.69	1.04	.74	.66	.27	13.30
977	1.42	.03	.40	.11	.10	.29	3.80	4.06	2.35	5.48	.20	.78	19.02
978	2.31	1.49	.83	T	.51	.49	1.60	3.57	2.45	2.99	2.16	3.50	21.90
979	2.59	.23	1.17	.00	.49	.56	1.80	2.40	.62	.11	.22	.27	10.46
980	.70	1.28*	.42	.25	.01	.69	1.87	3.16	1.63	.10	.09	.46	10.77

REMARKS

* [illegible]

1975-81 14.95 14.01 312.45

34 22 56

Total Precipitation

FMC002415

Commerce-Weather Bureau, Washington, D. C.

Station Fort Huachuca County Cochise State

Latitude Longitude Elevation

Data Total Precipitation

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1981	1.62	.53	2.21	.77	.64	1.13	4.22	2.09	2.62	1.05	.36	.00	17.2[illegible]
1982	—												
1983													
1984													

REMARKS

FMC002416

TOTAL PRECIPITATION

Table . Average monthly precipitation for Fort Huachuca, 1951-1980.

Month	Avg. Prep. (in.)
Jan.	0.83
Feb.	0.59
Mar.	0.55
Apr.	0.19
May	0.20
Jun.	0.40
Jul	4.11
Aug	3.35
Sep	1.68
Oct	1.09
Nov.	0.48
Dec.	0.96
TOTAL AVG.	14.43

Source: A.S.U. Climatology Laboratory

ARIZONA DEPARTMENT OF WATER RESOURCES
ADJUDICATIONS DIVISION

M E M O R A N D U M

TO: Wayne Hood
Tom Perry

FROM: Richard Siegel

DATE: August 21, 1986

SUBJECT: Estimation of Water Use by Fort Huachuca

Municipal System

The primary sources of potable water for the fort are six wells, each operating an average 16 hours per day. The following table describes historic uses for these wells, along with their capacities.

Table 1. Water production from six wells on Fort Huachuca during October 1980 through September 1981.

Well	Capacity (gpm)/1	Production (x1000 gal.)
#1	500/500	70,139
#2	700/900	41,037
#3	700/700	299,645
#4	700/700	90,094
#5	700/700	204,697
#6	700/310	261,460
		$\Sigma \simeq$ 967,000 gal.

/1 Figures shown are claimed data by fort engineer/data reported by U.S.G.S.

Table 2 describes total potable water use for fiscal years 1979-1981.

Table 2. Potable water use by Fort Huachuca (claimed data).

Fiscal Year	Use (million gal.)	% Increase	GPCPD/3
1979	913	- -	219
1980	981	7.4	236
1981	1025	4.5	246
1987/2	1454	- -	349
2001/2	3287	- -	790

/2 Projection based on a 6% increase per year.

/3 Estimation based on a population of 11,400. Since 1981, this figure has changed very little (±3%).

Ponds

Fort Huachuca has claimed sixty-five ponds. Of these, fifty-five have been verified by either field check or aerial photography. Those ponds that are either less than one surface acre in size (e.g. wildlife ponds) or have a storage capacity less than fifteen acre-feet (e.g. small reservoirs) were not surveyed (34 out of 55). All others (21 out of 55) were field checked. If the field check determined the pond to be of significant size, then the pond was surveyed.

The DWR federal rights staff has also located eleven ponds not claimed by the fort, three of which required surveying. However, there were twenty-one ponds that the fort claimed, but cannot be verified by aerial photography, and therefore, cannot be surveyed or checked. Table 3 on the next page describes these ponds that have been surveyed.

Table 3. Surveyed Ponds - Fort Huachuca (to date)

Pond	Surface Acres (Spillway)	Capacity (AF)
Sycamore	3.9	38.8
Middle Garden Canyon	4.1	27.1
Lower Garden Canyon	2.4	16.9
Boston Site #1	1.8	8.4
Unclaimed	1.3	10.5
Antelope	2.6	26.4
Hidden	2.1	22.5
Golf Course	7.6	59.7
Sediment	9.5	29.6
Unclaimed	2.2	14.9
Sediment	3.5	11.0
East #1	2.5	6.0
Unclaimed	2.8	12.0
Lower Woodcutters	2.5	20.7
TOTAL	48.8	304.5

The following ponds have yet to be surveyed (estimates shown):

Gravel Pit	6.0	30-60
Unclaimed	2.0	10-20

Springs

The fort has claimed fourteen potable springs with an annual use of 125.2 acre-feet. Twelve have been verified.

Average spring flow has been estimated at 275 gpm (U.S.G.S.). However, these springs are currently not part of the potable/municipal water system.

Hook-ups

No data available at this time.

Please feel free to contact me if you need any other information.

RS/ag

FT. HUACHUCA, AZ

WELL #1

Constructed 1939, put into use 1940

Pump: Type and capacity - Trubine, 500 GPM

823 ft casing depth, 14" diameter, 823 ft total well depth

527 ft to water

70,039 Kgal pumped FY 81, used continuously, military-domestic purposes

Pipeline: cast iron, 12" diameter

100' pipeline to first place of use--total length of pipeline

WELL #2

Constructed 1940, put into use 1941

Pump: Type and capacity - Turbine, 700 GPM

710' casing depth, 14" diameter, 710' total well depth

523' to water

41,037 Kgal pumped FY 81, used continuously, military domestic purposes

Pipeline: cast iron, 12" diameter

100' pipeline to first place of use--total length of pipeline

WELL #3

Constructed 1942, put into use 1943

Pump: Type and capacity--Turbine, 700 GPM

802' casing depth, 16-18" diameter, 802' total well depth

488' to water

299,645 Kgal pumped FY 81, used continuously, military domestic purposes

Pipeline: cast iron, 12" diameter

200' to first place of use--total length of pipeline

WELL #4

Constructed 1942, put into use 1943

Pump: Type and capacity--Turbine, 700 GPM

912' casing depth, 18" diameter, 912' total well depth

488' to water

90,094 Kgal pumped FY 81, used continuously, military domestic purposes

Pipeline: Iron, 12" diameter

200' pipeline to first place of use--total length of pipeline

WELL #5

Constructed 1942, put into use 1943

Pump: Type and capacity - Turbine, 700 GPM

800' casing depth, 16"-18" diameter, 800' total well depth

468' to water

204,697 Kgal pumped FY 81, used continuously, military domestic purposes

Pipeline: cast iron, 12" diameter

200' pipeline to first place of use--total length

WELL #6

Constructed 1958, put into use 1959

Pump: type and capacity - Turbine, 700 GPM

803' casing depth, 16" diameter, 1,230' total well depth

516' to water

261,460 Kgal pumped FY 81, used continuously, military domestic purposes

Pipeline: cast iron, 12" diameter

200' pipeline to first place of use--total length of pipeline

WELL #7

Constructed 1971, put into use 1982

Pump: type and capacity--Turbine, 800 GPM

762' casing depth, 16" diameter, 762' total well depth

500' to water

Not in use presently

Pipeline: Steel cement coated, 24" diameter
6 miles to first place of use, 6 miles total length of pipeline.

Remarks: 24" water line runs 6 miles from East Range pump directly into the Post distribution system.

WELL #8

Constructed 1971, put into use 1982

Pump: type and capacity--Turbine, 800 GPM

807' casing depth, 16" diameter, 807' total well depth

500' to water

Not in use presently

Pipeline: Steel cement coated, 24" diameter

6 miles pipeline to first place of use, 6 miles total length of pipeline

Remarks: 24" water line runs 6 miles from East Range pumps directly into Post distribution system

Well #9, This is a test well and is presently capped.

WELL - REMBASS #1

Constructed 1977, put into use 1978

Pump: type and capacity - Submersible, 125 GPM

422' casing depth, 6" diameter, 422' total well depth

217' to water

Unmetered, 270.4 Kgal estimated annual usage. Used as required, military purposes.

Pipeline: Steel, 1 1/4" diameter

50' pipeline to first place of use, 50' total length of pipeline, unknown grade

WELL - REMBASS #2

Constructed 1977, put into use 1978

Pump: type and capacity - Submersible, 125 GPM

420' casing depth, 8" diameter, 420' total well depth

217' to water

Unmetered, 416 Kgal estimated annual usage, used as required, military purposes - irrigation sensor field

Pipeline: Steel, 2 1/2" diameter

20' pipeline to first place of use, 20' total length of pipeline, unknown grade

WELL - WINDMILL #1

Constructed 1910, put into use 1910

Pump: type and capacity - windmill

80' casing depth, 4" diameter, 80' total well depth

30' to water

Not presently in operation.

Pipeline length and grade N/A

Remarks: First well going north discharges into tank and out to water trough.

WELL - WINDMILL #2

Constructed 1905, put into use 1905

Pump: Type and capacity - Windmill

125' casing depth, 4" diameter, 125' total well depth

40' to water

Not presently in operation.

Pipeline length and grade N/A

Remarks: Second well going north discharges into water trough.

WELL - EAST RANGE BUNKER

Constructed 1957, put into use 1958

350' casing depth, 4" diameter, 350' total well depth

225' to water

Unmetered, usage estimated as 175.5 Kgal, used as required, military domestic purposes

Pipeline: Steel, 1 1/4" diameter

60' pipeline to first place of use, 60' total [illegible] of pipeline

WELL - GARDEN CANYON

Constructed 1930 (est), put into use 1930 (est)

Pump: type and capacity - Submersible, 80 GPM

202' casing depth, 8" diameter, 202' total well depth

17' to water

Unmetered, 35.5 Mgal estimated annual usage; military, fishing and wildlife usage

Pipeline: Steel, 4" diameter

Unknown length of pipeline and grade

Remarks: Well pumps into water line from Garden Canyon Springs. Water is used as potable water supply for installation and recreation ponds for fishing and wildlife.

WELL - SPATIAL RESOLUTION

Constructed 1963, put into use 1964

Pump: type and capacity - Turbine 350 GPM

750' casing depth, 8" diameter, 750' total well depth

329.5' to water

Unmetered, 21.8Mgal estimated annual usage, used as required, military purposes - washing down photo pad and vehicles

Pipeline: Steel and plastic, 6" diameter

400' pipeline to first place of use, 3,500' total length of pipeline, unknown grade

Remarks: East Range

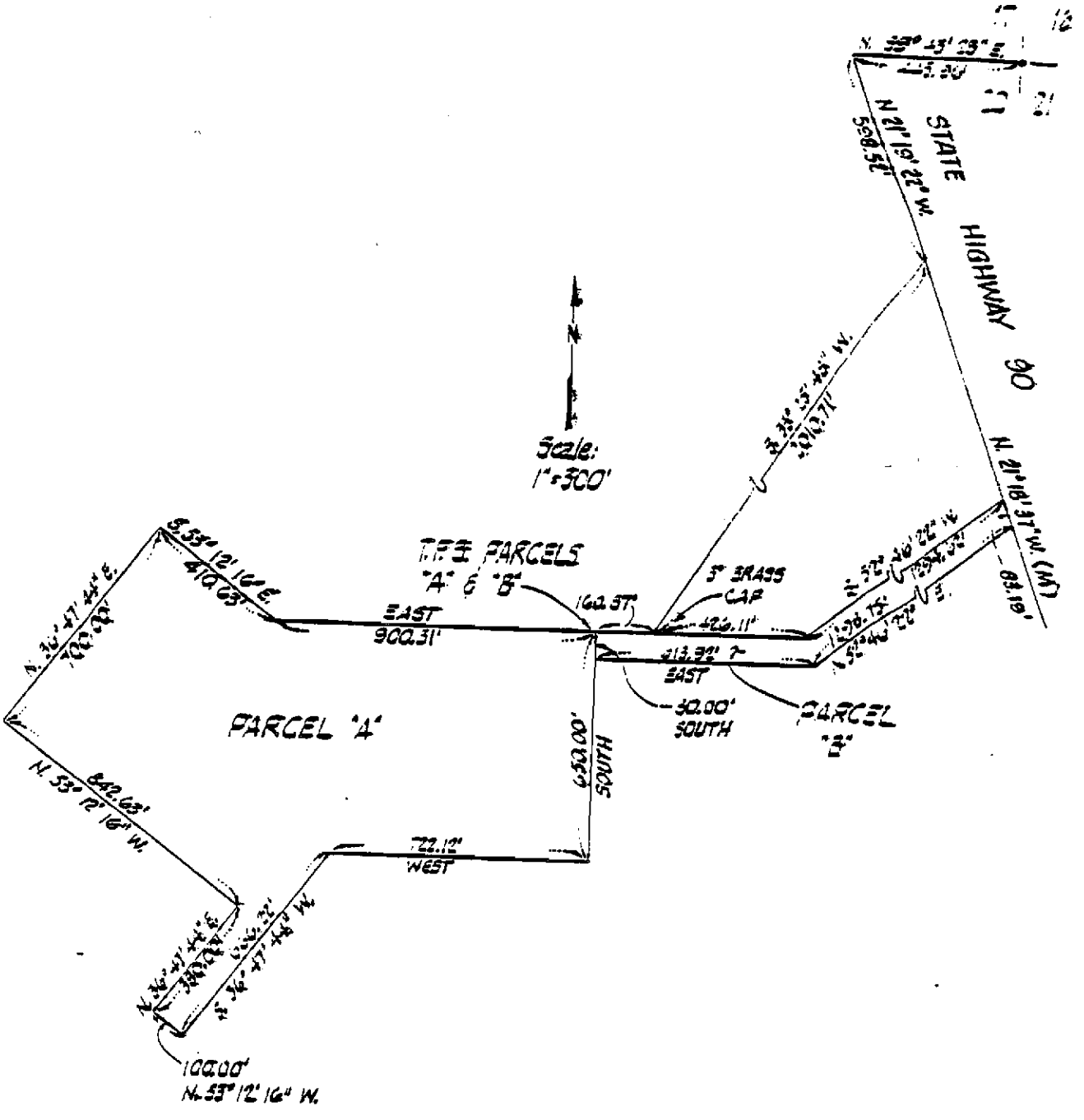
LAND ACREAGE FY 86
FORT HUACHUCA & NON-CONTIGUOUS AREAS

AREA	OWNED	PUBLIC DOMAIN WITHDRAWAL	PUBLIC DOMAIN PERMIT/AGREEMENT	OTHER FED. AGENCIES	LEASED STATE LAND	OTHER PERMITS AND LEASES	TOTAL
FORT HUACHUCA:							
West Reservation	44,771	-0-	-0-	-0-	-0-	-0-	44,771
East Reservation	13,545	13,463	-0-	-0-	*1,536	-0-	28,544
Total	58,316	13,463	-0-	-0-	*1,536	-0-	73,315
Off-Post	-0-	-0-	4	29	114	115	262
TOTAL FORT HUACHUCA	58,316	13,463	4	29	1,650	115	73,577
Total Douglas (USAR)	-0-	-0-	-0-	-0-	-0-	2	2
Total Phoenix (USAR)	12	-0-	-0-	-0-	-0-	3	15
Total Tucson (USAR)	-0-	-0-	-0-	-0-	4	-0-	4
Total Gila Bend	-0-	640	4,905	-0-	-0-	-0-	5,545
Total Willcox	-0-	27,387	-0-	-0-	1,287	3	28,677
TOTAL	58,328	41,490	4,909	29	2,941	123	107,820

NOTE: Not included are approximately 13,440 acres of land authorized for limited Army use by the Bureau of Reclamation.

* Implied lease, with State of Arizona, land is located in the East Range Impact Area. In the process of acquiring fee title to state land.

FMC002430


STATE
HIGHWAY
90
N. 21° 19' 22" W.
508.52'
N. 21° 19' 37" W. (M)
Scale:
1" = 300'
THE PARCELS
"A" & "B"
5" BRASS
CAP
160.37'
426.11'
EAST
900.31'
S. 53° 12' 16" E.
410.63'
N. 36° 47' 44" E.
PARCEL "A"
N. 53° 12' 16" W.
842.63'
722.12'
WEST
650.00'
SOUTH
30.00'
SOUTH
PARCEL
"B"
100.00'
N. 53° 12' 16" W.

FMC002431

REVIEW OF UTILIZATION
OF U.S. ARMY REAL PROPERTY AT
FORT HUACHUCA, FY 86

1. PURPOSE: "This survey of Department of the Army, United States Army Garrison, Fort Huachuca, Arizona 85613-6000, was conducted pursuant to provisions of section 2 of Executive Order 12512 and as prescribed by Subpart 101-47.8 of the Federal Property Management Regulations (FPMR). This survey was made to identify as appropriate, those areas of real property which were found to be not utililzed, underutilized, or not being put to optimum use, as defined in FPMR 101-47.801 (a), at this activity."

2. UTILIZATION:

a. Land: The number of acres of fee-owned land, easments, and other interests in real property is shown at TAB A. Fort Huachuca is considered a rural location in the state of Arizona. It is situated along the foothills and north plateau of the Huachuca Mountain Range in Cochise County located in the southeast portion of the State of Arizona. The land adjacent to Fort Huachuca is used primarily for residential, business property, and cattle raising. Fort Huachuca is the main source of income for the communities adjacent to the post. Other major sources of income are construction and other light industry, tourism, cattle raising, retail and services trade. Sierra Vista is the largest community adjacent to Fort Huachuca and its development to the east and south of the military installation has had no adverse effect upon the development of the post. The town of Huachuca City is the other community adjacent to Fort Huachuca and adjoins the installation on the north. Shown also in TAB A is an extract from the 1982 Real Estate Planning Report showing the value of the outstanding interests of the east range of Fort Huachuca, and also land sales in the area of the subject property.

b. Outgrants: Shown at TAB B is a list of all current outgrants, including leases, permits, easements, licenses, and agreements granting temporary and/or long-term use of real property at Fort Huachuca.

c. Mineral Activity: There is no mineral development on Fort Huachuca, nor any located close to Fort Huachuca. Located approximately 30 miles from Fort Huachuca is the city of Bisbee which is a copper mining town. The mines are in an inactive status at this time. Located approximately 20 miles from Fort Huachuca is the town of Tombstone which has several silver mines which are back in production. There is little or no development of oil and gas resources in this area.

d. History:

(1) Fort Huachuca is an old Cavalry and Infantry post dating from 1881. The initial mission of the Fort was to support Army troops in the Apache Indian Wars, and in 1916 it played an important role in the Villa Punitive Expedition into Mexico. During World War II the installation was expanded as a training center for a full division. After the war, (1945-1951), the post was closed and declared surplus to military needs; however, in 1951 the installation was reactivated for training of aviation engineer troops. In May 1953, Headquarters, Sixth Army placed the installation on an inactive status, but reactivated it in February 1954 for establishment of the U.S. Army Electronic Proving Ground. In July 1967, Fort Huachuca became the Headquarters of the U.S. Army Strategic Communications Command, subsequently renamed the U.S. Army Communications Command, and again renamed 15 June 1984 as the U.S. Army Information Systems Command (USAISC).

FMC002433

(2) The original reservation acquired by the U.S. Army in 1883, plus additional acreage obtained in support of World War II mobilization, was transferred to the State of Arizona in 1949 when Fort Huachuca was closed. On 18 January 1951, the Secretary of the Air Force recovered possession, control, and use of the built-up area of the reservation, as well as approximately 3,000 acres in the East Artillery Range. Full title to the built-up area of the reservation, together with approximately 3,000 acres in the East Artillery Range, was received by the United States through a quit claim deed, executed 9 September 1954, by the Governor of Arizona. This deed included cemetery and access road (49.95 acres) which had been quit claimed by the United States to the State of Arizona on 26 March 1949. On 28 May 1957, the State of Arizona conveyed to the United States by quit claim deed ~~deed~~ 10,200 acres located in the East Artillery Range. On 22 August 1957, an additional 13,463 acres, located in the East Artillery Range, were withdrawn from public land for Department of Army use by Public Land Order Number 1471. The remaining 1,536 acres of State of Arizona land on the East Artillery Range has been utilized pending exchange with the State of Arizona for other Government land. However, it has since been determined that the proposed exchange cannot be accomplished, due to conflicting laws governing land and associated interests. To resolve the problem, Fort Huachuca requested the Corps of Engineers prepare a real estate planning report that would help provide the method and costs to acquire a portion of the outstanding real estate interests in the East Range. This action resulted in 25 acres of land being declared excess. The remaining costs to acquire the state lands and interests will be accomplished through the FY 87 appropriations bill in which 200 acres of land located at Libby Army Airfield will be sold to the highest bidder for construction of an Industrial Airpark.

FMC002434

(3) On 25 June 1963, the Department of Health, Education and Welfare conveyed a quit claim deed to Huachuca City for 33.38 acres on the north boundary of the East Artillery Range for construction of sewage treatment facilities. On 1 August 1975, GSA issued a quit claim deed to a private party for the service club and two acres of land located in Sierra Vista. The loss of these two parcels, declared excess by the Army, reduced Fort Huachuca to 73,344 acres. The town of Huachuca City requested use of land on the East Range for expansion of their sewage treatment plant. The area requested, approximately 22 acres, is located adjacent to the 33.38 acres mentioned above. The additional 22 acre parcel was determined available and a 50 year easement was granted in June 1981. This land is not considered excess to Army requirements at this time; however, its proposed use is compatible with the military use as a buffer zone.

(4) Under the provisions of Section 23 of the Airport and Airway Development Act of 1970, the Federal Aviation Administration (FAA) requested that DA grant to the City of Sierra Vista a deed for approximately 29 acres of land on Fort Huachuca for airport purposes. The 29 acres deeded to Sierra Vista 12 December 1982, reduced Fort Huachuca to 73,315 acres, its present size. A portion of the land excessed to accomodate the request was previously leased to the City of Sierra Vista and was utilized for airport purposes. The balance of the deeded land is located contiguious to the previously leased land. The City of Sierra Vista is one of the more rapidly developing cities in Arizona. The population is expected to reach in excess of 54,000 by 1990. It is anticipated that the City's need for an airport will increase with its growth. The potential increase in air traffic as a result of the city growth is a concern to military operations at Fort Huachuca. Because of the military air traffic at Libby Army Airfield, Fort Huachuca, it is considered in the best

FMC002435

interest of air safety that Sierra Vista be allowed to utilize Army land and runway facilities in lieu of constructing a separate airport nearby. Further, the development of adequate civilian air facilities and the growth of the City may cause commercial air service to the area with sufficient capabilities to provide transportation benefits to the military at Fort Huachuca. The land was considered excess for the express purpose of maintaining control of local air traffic and to enhance development of civilian air facilities to the benefit of the government and the public (TAB C). The City of Sierra Vista started construction of new air terminal facilities on the newly acquired land on 6 September 1983. The facilities consist of a 3000 SF terminal building, 60,000 SY of paved aircraft ramp, taxiway and parking together with lighting, fencing, drainage and access roadway at a cost of approximately 1.4 million dollars. Construction was completed 15 February 1984, and the terminal was officially open and dedicated 16 March 1984.

(5) As previously mentioned, Fort Huachuca has under its control approximately 35,000 acres off-post. This land, available through leases and permits with other Federal agencies, the State of Arizona, private individuals, and public land withdrawals is located in four general areas: Fort Huachuca, Tucson, Willcox Dry Lake Bombing Range, and Gila Bend. A summary of land controlled by the post and its sources is included at TAB A. The leases and permits in these areas are generally 1 to 650 acres in size and are required for tests conducted by the US Army Electronic Proving Ground (USAEPG), Joint Test Element, Joint Tactical Communications Office (TRI-TAC), U.S. Army Intelligence and Security Board, and the 11th Signal Brigade. The larger leases and permits used by USAEPG are located near Gila Bend, Arizona. These areas were obtained from the Department of the Interior on a joint use basis with private individuals having grazing privileges, and contain numerous test

FMC002436

sites utilized entirely by USAEPG as an electro-magnetic test range and other electronic testing. In addition to the above, Fort Huachuca is responsible for the real estate occupied by the Army Reserves in Douglas, Tucson, and Phoenix, (21 acres).

(6) There are two areas of land obtained by Public Land Withdrawal, the Willcox Dry Lake, 27,387 acres, located south of Willcox, Arizona, and the Oatman Mountain Site, 640 acres, located northwest of Gila Bend, Arizona. (See TAB A).

(a) The Willcox Dry Lake contains the USAEPG Radar Geometric Fidelity Complex and Radar Geology Test Area and is used for determining the fidelity of large area mapping airborne radar systems and making radar penetration tests. The complex covers 35 square miles on a land surface which is level to within 10 inches, free of any vegetation and is generally dry except during rainy seasons. The complex consists of 65 concrete pads with adjustable reflectors for desired azimuth and elevation angle. The location of the total system is accurate to first order, class 3, determined by National Survey. The Radar Geology Test Area consists of one square mile within the Radar Geometric Fidelity Complex containing patches of various man placed minerals and materials, both exposed and buried at various depths, in order to test and measure radar penetration. This facility is unique due to the large flat land area with minimal deviation in land elevation, making it ideal for radar testing. The cost to the Government for construction of this facility, excluding electronic equipment, is $239,184. An additional 1,287 acres of state and privately owned land is held by permits and leases for access to the facility within the Dry Lake Area. The Willcox Dry Lake is also utilized by USAEPG for equipment testing and has four surveyed sites in the north portion.

FMC002437

The Willcox Dry Lake was used as an Air Force Bombing Range during World War II. The east and south portions outside the USAEPG complex is still used by the Air Force as an emergency drop area for bombs, fuel tanks and a crash site. A Rejustification Statement was prepared by Fort Huachuca in March 1983 in consonance with the Department of Interior Withdrawal Review Program.

(b) The Oatman Mountain Site is a key facility in the Instrumented Service Range which lends itself primarily to support of engineering, design, service and initial production tests of communication-electronics, navigational and surveillance systems or devices involving aircraft or missiles. The range is controlled from Fort Huachuca with other key sites at Mt. Lemmon, (near Tucson) and Willcox, Arizona. The range assists the Pacific Missile Range, White Sands Missile Range, and Edwards Air force Base in providing support with collective resources of several ranges. The Oatman Mountain Site is also a terminal for the USAEPG Microwave System. This system is used for relaying radar acquisition data, automatic supervisory systems, command control function, real time composit telemetry signals and voice communications between Fort Huachuca and intermediate sites. Cost to the Government for this facility, excluding electronic equipment, is $101,900. The cost of the electronic system is estimated at 5 million dollars. A Rejustification Statement was prepared by Fort Huachuca in June 1983 in consonance with the Department of Interior Withdrawal Review Program.

e. Improvements: Attached at TAB D is a list of all buildings, structures, and improvements, which includes utilities. The information was taken from the June 1986 Real Property Inventory (RPI). A current listing of MCA projects which is ongoing and proposed is attached also as TAB D. Location of existing and proposed improvements is attatched at Appendix 2.

FMC002438

f. Mission or Purpose:

(1) The current mission of Headquarters, Fort Huachuca, is to provide, in accordance with AR 10-7, or as directed by the Commanding General, USAISC, logistic and administrative support to the USAISC and tenant organizations, provide resources and assistance to area Army commanders in support of Army emergency plans and training support to active Army and reserve component units in accordance with AR 210-20, or as directed by the Commanding General, USAISC.

(2) Major tenant activities and their missions are:

(a) The mission of the Commanding General, USAISC, a major field commander of the Department of the Army, is to engineer, install, operate and maintain defense communication systems and assigned Army communications worldwide in accordance with AR 10-13.

(b) The mission of the U.S. Army Electronic Proving Ground at Fort Huachuca is to operate an electromagnetic environment test facility and a systems test facility; to plan, conduct, evaluate and report on engineering tests of communications-electronics and avionics equipment and systems; service testing of communications-electronics equipment and systems used above division level; and provide technical and logistical consultation service.

(c) The primary mission of the U.S. Army Intelligence Center and School (USAICS) is to plan and develop the necessary doctrine, organization and material requirements to structure the military intelligence support for the Army in the field; train Army personnel in combat, counter and strategic intelligence; train selected DoD personnel and allied officers in

intelligence operations; conduct professional education courses for officers and noncommissioned officers. Plan, develop and conduct instruction and training for individuals and units in the employment, operation and maintenance of combat surveillance and electronic warfare equipment in concepts and resources.

(d) The mission of the U.S. Army Communications Security Logistics Agency (USACSLA) is the management of the COMSEC logistics and related matters.

(e) The Medical Department Activity (MEDDAC) is the main Army medical activity for the State of Arizona. It includes the Raymond W. Bliss Army Hospital, which is a Class I activity, and the Veterinary Activity. In and out patient medical care and treatment is provided to active duty and retired military personnel, their dependents and other personnel, as authorized by DA. This organization also provides veterinary services, food inspections and zoonotic control. MEDDAC provides medical staff support to the installation commander.

(f) The Dental Activity (DENTAC) is the main Army dental activity for the State of Arizona. It includes the Runion Clinic and one other dental facility. This activity provides services for prevention and treatment of disease conditions to active duty personnel, their dependents, and other personnel, as authorized by DA. DENTAC provides dental staff support to the installation commander.

(g) The U.S. Army Information Systems Command provides support to operate and maintain all communications electronic equipment, to include ATC/NAVAIDS, as required by activities located at Fort Huachuca.

(h) The Atmospheric Sciences Laboratory (ERADCOM), Meteorological Team, provides meteorological services for Army research, development, test and evaluation activities at Fort Huachuca.

(i) The U.S. Army Intelligence and Security Command (USAINSCOM) conducts CI activities to provide timely information and OPSEC support to maintain and insure the security of the Army commands, activities and agencies within the assigned geographical area of responsibility.

(j) The Joint Test Element, Joint Tactical Communications Office (TRI-TAC) operates, maintains, and manages the Joint Test Facility. It insures testing in accordance with approved test plans and Detailed Test Procedures (DTP), and prepares TRI-TAC independent evaluation reports.

(k) The USACIDC Field Office provides criminal investigation support to all U.S. Army activities located within the geographical area of the State of Arizona. It establishes and maintains effective liaison with federal, state and local law enforcement agencies on matters pertaining to criminal investigation in which the US Army has vested interest.

(l) Other support services and activities are shown at TAB E.

g. Number and Type Personnel: The number and type of personnel is furnished at TAB F.

h. Requirements:

(1) The existing major functional areas of Fort Huachcua are listed at TAB G. In general, the permanent facilities located in the functional areas were designed and constructed for their current use. The Master Plan proposes

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several major changes to these existing functional areas including the consolidation of the post support maintenance facilities into an industrial area, and a new academic area for the U.S. Army Intelligence Center and School. The airfield has been expanded to include the safety zones and new runway. There are no current proposals to alter the existing functional areas outside the main post. A comparison of the existing and proposed functional areas by acreages is contained in TAB G.

(2) As indicated by TAB G, training areas and installation ranges constitute the largest functional areas on post. Over 35 separate activities conducted training and testing during FY 86. These activities had a total strength in excess of 10,000 personnel (TAB J.)

(3) Shown at TAB D is a listing of facilities required to support the current mission of Fort Huachuca.

i. Current Utilization of Property:

(1) All areas of Fort Huachuca are being utilized except the two parcels of land shown at TAB H. An analysis on the utilization of administrative, storage, and other space is provided at TAB I. This study was done by Daverman & Associates, Inc. of Tucson, AZ. This study does not include the utilization of family housing and billet space. The utilization of billet space and family housing is also provided at TAB I. The current disposal plan of WW II buildings is provided at TAB I. Individual utilization of building space by separate users is on file in the Real Property Office. Utilization of all buildings and facilities is on a full time basis.

(2) The utilization of all range areas is provided at TAB J.

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(3) Minimal safety zones along the post boundary are required for protection of the civilian community. There are no local zoning restrictions which provide this safety zone. The safety zones also serve as access roads to the test and training areas. The Huachuca Mountains serve as a backstop for firing ranges, a primary and vitally needed water catchment area, and one of the installation's main recreational areas. With the very limited civilian recreational facilities in the vicinity of Fort Huachuca, the recreational activities related to the mountains on post are important for the morale of the military activity.

(4) The Old Post area of Fort Huachuca comprises approximately 100 acres located in the mouth of Huachuca Canyon and consists of 48 existing structures still in use and the purported former site of the first heliograph station located on the adjacent ridge. This area is designated as a National Historic Landmark. There are also two sites on the National Register of Historic Places. The first site is located adjacent to the south of Garden Canyon Road and contains five pit houses, four compound rooms, a cremation area, and various artifacts. The second site is located within a limestone outcrop further up the canyon and situated approximately 170 feet north of Garden Canyon Road. The site consists of Indian petroglyphs of unknown origin cut into the roof of a cave-like rock formation.

j. Prospective Utilization of the Property:

(1) There currently is a project ongoing which will outgrant 20-25 acres of land to the U.S. Customs Service for construction and operation of the southwest radar balloon (aerostat). This parcel of land is located on the south range near the installation boundary. Funding for the project is by the

Department of the Treasury. This action has been ongoing since September 1985.

(2) The Arizona National Guard has requested use of approximately 10 acres of land for a motor park area. This has been tentatively approved subject to approval by the Master Plan Board and submittal of construction plans. This action started with a request on 25 June 1986. All funding for this project will be done by the Arizona National Guard.

(3) On 13 August 1986, a request from the State of Arizona, Department of Emergency and Military Affairs was received to locate the Arizona National Guard Joint Operations Training Site (JOTS) at Libby AAF. Anticipated uses of the JOTS include National Guard annual training, special training, MUTA'S, OCS and NCO Military Academy, Armory, year-round flight training deployments, winter training of tactical fighter units (Snowbird), and other flight or ground training as scheduled and coordinated. If approved, this would require approximately 330 acres be licensed to the State for National Guard purposes. Direct improvement costs incurred will be borne by the National Guard. The current National Guard training site, located in the "old hospital area", will be disposed of upon completion and use of the new training facilities.

(4) Forestry programs and Natural Resource Management Plan is provided at TAB K.

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3. FINDINGS

a. That the 26 acres of land declared excess is not utilized and in the process of special legislation being passed to trade for state owned land on the East Range. That the 203 acres of land located at Libby Army Airfield be excessed and sold to the highest bidder for development into an industrial airpark. This parcel of land is considered as not being put to optimum use.

b. Various WWII buildings are not being utilized and are in the process of disposal. The recent guidance on disposal of asbestos contaminated buildings has slowed the process of demolition.

c. All property is being put to its highest and best use.

d. All property is essential to program requirements with the exception of the two parcels of excess land.

e. Zoning by adjoining land does not provide for sufficient protection for necessary buffer zones.

4. EXCESS RECOMMENDATION

a. There are two parcels of land recommended for excess action. Parcel 1 consists of 26 acres which has a Report of Excess completed. Parcel 2 has 203 acres of land which is in the process of being declared excess.

b. Special legislation is being proposed in FY 87 as Section 2187 of the Senate Authorization Act. This legislation will authorize the exchange of the 26 acres of land for 1536.47 acres of land owned by the State of Arizona and mineral rights of 12,943 acres of land also owned by the state. All land and mineral rights owned by the state are located within the East Range. The 203 acres of land will be sold to the highest bidder and the proceeds of the sale will be utilized to pay the difference in value of the state land with remaining proceeds going into the general fund of the treasury.

c. The estimated value of the 203 acres of land is $3.6 - $40 million. The 26 acres is valued at $2.1 million. The state owned land and mineral rights is valued at $2.1 million.

d. There are no government improvements located on the two parcels of land. Relocation or new fencing will be at no cost to Fort Huachuca. The excess land will not be utilized in any way that will jeopardize the government's use of adjoining land and operation of facilities controlled by Fort Huachuca.

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6. CERTIFICATION

SURVEY TEAM			NEXT LEVEL OF SUPERVISION		
ORG	NAME/TITLE	DATE	ORG	NAME/TITLE	DATE
OCE					
Corps of Engrs					
GSA					
MACOM					
INSTALLATION					

6. PERSONNEL CONTACTED

NAME/TITLE	ADDRESS/OFFICE SYMBOL	PHONE
Mr. Ray Spencer Space Mgt Officer	U.S. Army Garrison ASH-DEH-R Fort Huachuca, AZ 85613	602-538-3420 AV 879-3420
Mr. Tony LeDuc Realty Specialist	U.S. Army Garrison ASH-DEH-R Fort Huachuca, AZ 85613	602-538-3420 AV 879-3420
Mr. Wayne Fordham C, Environmental Div	U.S. Army Garrison ASH-DEH-B Fort Huachuca, AZ 85613	602-538-3120 AV 879-3120
Mr. Ron Shillito Master Planner	U.S. Army Garrison ASH-DEH-E Fort Huachuca, AZ 85613	602-538-5529 AV 879-5529
Mr. Barrera	U.S. Army Garrison ASH-DEH-H Fort Huachuca, AZ 85613	602-538-3054 AV 879-3054
SGT Lewis	U.S. Army Garrison ASH-PCA-A Fort Huachuca, AZ 85613	602-538-5010 AV 879-5010
MAJ Vennum AO, USAG	U.S. Army Garrison ASH-AO Fort Huachuca, AZ 85613	602-538-2244 AV 879-2244
Mr. David Reichardt C, AZ Real Est Ofc	LA District Corps of Engineers Arizona Real Estate Office 3636 North Central Avenue, Rm 770 Phoenix, Arizona	602-261-2016 FTS 241-2016

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REPORT ON WATER SUPPLY
FORT HUACHUCA AND VICINITY, ARIZONA

SUMMARY OF FINDINGS

Adequate ground water is available in the upper San Pedro River basin to support present and forseeable future growth at Fort Huachuca and in surrounding areas. Production wells can be located in the East Range of Fort Huachuca. The capital costs of modifying the existing water supply system to meet present deficiencies of the system, plus inclusion of provisions for future expansion, were estimated at $920,000 (1974 prices). The total capital cost of modifying the existing water supply system to meet present deficiencies and of expanding the Post's water supply system to meet assumed daytime Post populations of 25,000 and 50,000, are estimated at $2,330,000 and $6,180,000, respectively, under 1974 prices. An alternative supply of water would result from construction of Charleston Reservoir, as authorized under the Central Arizona Project. However, the Bureau of Reclamation has assigned a relatively low priority to this work; construction is not expected prior to 1985.

The District Engineer recommends that this report be used as a basis for future planning for Fort Huachuca.

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2	Fort Huachuca Area - Location of Wells
3	Water level contours and thickness of alluvium
4	Cross section showing simulated water level declines

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(Under separate cover)

No.	Title
1	Consultant's Report on Water Development
2	Arizona Water Commission's Status Report of a Study of the Adequacy of the Water Supply for the Fort Huachuca Area
3	Concept Design Report for Proposed Water System Expansion
4	Test Well Drilling and Study of Hydrogeologic Conditions

REPORT ON WATER SUPPLY
FORT HUACHUCA AND VICINITY, ARIZONA

AUTHORITY

The survey of water resources for Fort Huachuca and surrounding areas in the upper San Pedro River basin, Arizona, was authorized by TWX dated 20 June 1972, Subject: "Water Resources, Fort Huachuca" from the Department of the Army to STRATCOM, which stated that future master planning of activities at Fort Huachuca is dependent on water consumption and growth rate of both the installation and the surrounding community. It further stated that it is essential to obtain additional data on the water situation and that technical assistance will be provided by the District Engineer, Los Angeles. South Pacific Division letter dated 15 November 1972, Subject: "Water Supply Study, Fort Huachuca, Arizona," assigns to the Los Angeles District "primary responsibility for providing assistance to STRATCOM in support of its efforts to determine the impact of available water resources in the Fort Huachuca area on its long-range developments. This assistance is to include all necessary interagency coordination and preparation of appropriate studies and reports needed by STRATCOM. The Sacramento District is assigned technical responsibility in support of the Los Angeles District in all engineering-geological aspects of the effort."

SCOPE

This report presents the following:

a. An evaluation of the water supply needs for Fort Huachuca and vicinity under various population projections.

b. An overall assessment of the ground-water resources in the San Pedro River basin in the reach between the International Boundary on the south (upstream limit) and the Babocomari River on the north (downstream limit).

c. Results of a test well drilling program in the East Range of Fort Huachuca.

d. Results of a digital model analysis by the Arizona Water Commission showing the effect of increased pumpage in the region on the ground-water resources in the Fort Huachuca area, under various population projections.

e. Concept designs and cost estimates for expanding the Post's water supply system.

HISTORY OF POST

a. Fort Huachuca was established in 1881 for the support of Army troops in the Apache Indian Wars, and played a prominent part in the

Villa Punitive Expedition into Mexico in 1916. Various troops of cavalry and infantry regiments occupied the Post from 1888 to 1942.

b. In 1942 the installation was expanded to serve as an Army training center during World War II.

c. In the post World War II period, from 1947 to 1951, the installation was closed, and a small crew of civilian employees was housed on the Post for fire protection and custodial maintenance.

d. From 1951 to 1953 the U. S. Air Force reoccupied the Post and utilized it for training engineer aviation troops.

e. From 1953 to 1954 the Post was again placed in an inactive status with custodial maintenance.

f. In 1954 the Post was again activated and was known as the U. S. Army Electronic Proving Ground. In 1967, Fort Huachuca became the headquarters of the U. S. Army Communication Command, under which it is functioning as of this date.

GENERAL DESCRIPTION OF AREA

Fort Huachuca is located in Cochise County in the southeast portion of Arizona, about 75 miles southeast of Tucson. The base is within the San Pedro River drainage basin, which is a narrow southeast-northwest trending area running from the headwaters in the Mexican State of Sonora to its confluence with the Gila River at Winkelman, Arizona. The total drainage area comprises 4,483 square miles, of which 696 square miles are in Mexico. The Fort Huachuca Military Reservation is irregularly shaped and comprises 115 square miles (73,379 acres), of which one-third lies in the rugged terrain of the Huachuca mountains and its foothills in the southwesterly portion of the reservation. The remainder of the area slopes northerly to the Babocomari River and northeasterly to the San Pedro River. Elevations within the reservation vary from 3,900 to 8,700 feet above sea level. The reservation is climatically dominated by mild winters and relatively warm summers. Average annual rainfall is about 16 inches at Post Headquarters and as much as 26 inches in the mountain range.

The portion of the San Pedro River basin that is of primary concern is the area between the Mexican border on the upstream, or south end, and the Babocomari River at the downstream, or north end (see plate 1). The drainage area of the San Pedro River at a point downstream from the Babocomari River is 1,910 square miles.

HYDROLOGIC SYSTEM

The ultimate source of all ground water and surface water is from precipitation on the land surface. This precipitation infiltrates into

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the soil, unless the infiltration capacity of the soil is exceeded. If the infiltration capacity of the soil is exceeded, the excess precipitation becomes runoff and flows overland to stream channels. Significant amounts of water infiltrate to the ground-water reservoir in certain parts of the San Pedro basin. The processes by which infiltration occur are: (1) direct infiltration from rainfall into underlying materials; (2) infiltration from runoff that originates in the mountains and seeps into the alluvial materials adjacent to the mountain front; and (3) infiltration from streamflow along the channel course.

The magnitude of direct infiltration from rainfall is not considered to be significant. The major sources of replenishment to the ground-water reservoir are mountain front recharge and channel infiltration.

The ground-water basin is mostly recharged along the mountain fronts and along the upper reaches of washes where water flows from the mountain canyons onto the valley slopes. Streamflow in washes originating near the mountain front seldom reaches the San Pedro River, except during torrential summer storms or exceptionally prolonged cyclonic winter precipitation. A portion of the streamflow infiltrates into the permeable material underlying the stream channels and percolates to the ground-water reservoir, but much of the surface flow emerging from the mountain canyons is lost by evapotranspiration. The ground-water reservoir occurs in the subsurface and the water level gradient generally parallels the topographic gradient, except near pumping centers. Groundwater emerges as base flow in the San Pedro River and to a minor extent in the Babocomari River, where it is again subject to evapotranspiration loss.

Along the San Pedro River, ground water is forced to the surface by a ground-water barrier formed by consolidated volcanic and sedimentary rocks which crop out near Charleston. Ground-water discharge to the river channel thus maintains a short reach of perennial flow at this location.

An additional source of ground-water input, to the area of interest, is ground-water underflow northward along the axis of the San Pedro River valley. The total underflow has been estimated to be 3,400 acre-feet per year at the international border and 2,800 acre-feet per year at Palominas, located about 4.5 miles north of the International Boundary. The difference of 600 acre-feet is lost through evapotranspiration by crops and phreatophytes.

GROUND WATER

A 1973 water level contour map of the Fort Huachuca area was prepared based on data from the Corps of Engineers, the Arizona Water Commission, and the U. S. Geological Survey (see Plate 3). The data indicate the presence of a perched mountain front ground-water body and a regional ground-water body.

Perched Mountain Front Groundwater. The perched ground-water body extends northwestward from the vicinity of Carr Canyon toward the Fort

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Huachuca Military Reservation boundary, and extends northeastward toward the San Pedro River. This occurrence is indicated by unusually high water levels in wells in the area where the steep ground-water gradient is approximately 300 feet per mile. In contrast, the average gradient in the regional ground-water aquifer is about 25 feet per mile.

This perched ground-water body probably receives recharge from streams and springs which drain the adjacent portion of the Huachuca Mountains. Downward leakage from this perched zone recharges the regional ground-water body in limited amounts.

Regional Ground Water Body. The regional ground water body is made up of two parts - a regional aquifer and a flood plain aquifer. The regional aquifer comprises the saturated portions of alluvial deposits, except that portion along the principal streams. The water level contour map indicates that water enters this aquifer as mountain front recharge from the Huachuca Mountains and moves in a northeasterly direction toward the Babocomari and San Pedro Rivers. The water level contours comprise prominent lobes pointing in an upstream direction in both of these drainages, indicating that ground water discharges into the drainage channels. These two rivers act as drains for effluent flow from the ground-water system.

Two significant cones of depression have developed in the area due to pumping in the Fort Huachuca-Sierra Vista area and the Huachuca City area, which includes the former community of Huachuca Vista. The depression cone in the Fort Huachuca-Sierra Vista area is centered about the military post well field and appears to extend for approximately 4 miles, elongating in a northwest-southeast direction along the mountain front. The cone of depression is approximately 1.5 miles wide.

The depression cone in the Huachuca City area extends approximately 3 miles along Babocomari River, elongating in a southwest-northeast direction along the river channel. Heavy pumping in the Huachuca Vista area has apparently reversed the direction of ground-water flow along the reach of the Babocomari River for several miles downstream from Huachuca City. Ground water that formerly followed the Babocomari River to the northeast has been diverted to the southwest and enters the depression cone around Huachuca City.

The water level contours indicate that the flood plain alluvium receives recharge from ground-water underflow in the regional aquifer system, as well as from streamflow. In some reaches, ground water is discharged from the stream alluvium and comprises base flow to the Babocomari and San Pedro Rivers.

ECONOMIC DEVELOPMENT

The economy of the area surrounding the base has been predominantly agricultural. In recent years, the economy has been directly tied to the activities and population of Fort Huachuca. Since World War II,

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satellite communities, such as Sierra Vista and Huachuca City, catering to the needs for services, recreation, housing, and a source of civilian labor have risen outside the base boundaries. The present population on the base and in the surrounding communities is estimated at 12,000 and 10,000, respectively. A new subdivision is proposed at the eastern boundary of Fort Huachuca by Tenneco, Inc., which owns much of the land along San Pedro River. The subdivision, to be called Pueblo del Sol, has been submitted to the State of Arizona for a determination on the adequacy of the water supply. The development is proposed to support a population of about 40,000.

PRESENT WATER SUPPLY

Presently, water for the Post is obtained from six deep wells clustered in an area about 1/4 mile wide and 1-1/2 miles long, between the Post's main gate and east gate (see Plate 2), and from collection systems in the Huachuca Canyon and the Garden Canyon spring areas.

The water supply in the area off the Post is principally from wells. The satellite community of Sierra Vista, just outside the Post's main gate, has experienced an expansion in recent years that saw its population increase from 3,100 in 1960 to nearly 7,800 in 1970; future growth will be geared to the needs of the Post. Huachuca City to the north of the Post is of more recent origin and, due to its geographical location, will probably not experience the rate of growth enjoyed by Sierra Vista. Water for all of these communities is obtained from wells tapping the same aquifer as the Post wells. The major water production wells for the Post and Sierra Vista, about 15 in number, are all clustered in an area near the main gate of the Post and can be contained in a circle of about 3 miles in diameter. The high concentration of wells in this locality has resulted in a substantial lowering of the water table under the wells. A similar situation has developed in the Huachuca City area.

The total present water consumption at Fort Huachuca, exclusive of sewage effluent irrigation, is about 3,000 acre-feet per year. The present six wells are capable of producing 3,500,000 gallons per day (16-hour operation) or 4,000 acre-feet per year. The canyon springs produce additional water; however, because of limited data, no average annual yield was determined. Records indicate that for one period (July 1971-July 1972) water production from the springs amounted to about 40 million gallons or 120 acre-feet. An additional 1,500,000 gallons per day, or about 1,600 acre-feet per year, of treated sewage effluent is available for irrigation.

The total present water consumption for the surrounding communities of Huachuca City and Sierra Vista is estimated at about 500,000,000 gallons per year, or about 1,500 acre-feet per year. All of this water is obtained from wells. The total water consumption for the Post and the two communities is therefore about 4,500 acre-feet under present conditions.

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Water levels fluctuate seasonally in response to pumping and recharge in the San Pedro River valley, but in the last 25 years the net change has been small except in the Sierra Vista-Fort Huachuca, and Huachuca City areas. In these areas, cones of depression have developed and the water levels at the various Post wells have been dropping at a rate ranging from one to two feet per year, with a maximum decline of nearly 60 feet in 29 years in one of the wells. As withdrawal continues in excess of recharge, the cones of depression will expand and deepen. From 1965 to 1969, the water level in a well about 6 miles east of Sierra Vista declined 9 feet, owing to the expansion of the cone of depression. The depth to the water level at the six wells in Fort Huachuca averages about 500 feet.

WATER PROBLEMS

Fort Huachuca is withdrawing water from a ground-water basin that also serves the surrounding communities. This pumping has lowered the ground-water table 60 feet in 29 years in one of the Post wells. As withdrawals continue in excess of recharge, existing cones of depression will expand and deepen. Major developments are being proposed in the Sierra Vista area that might have a substantial impact on the ground-water situation. It is necessary to evaluate the water supply available to the base to determine its adequacy based on present and projected conditions.

In addition, although the existing six wells are capable of producing water to meet the present demand on an average annual basis, the six wells do not meet the criteria as set forth in Army TM 5-813 series manuals. The manuals require that the daily demand be met by operating the pumps for not more than 16 hours per day and that the well field should be capable of delivering the total daily demand while the highest capacity well pump is temporarily out of service. At present, the entire six wells cannot deliver the daily design demand of 4.613 million gallons per day in the maximum-use month of May, even if pumping were continuous for the entire 24 hours.

The Huachuca and Garden Canyons springs contribute an appreciable amount of good quality water to the Post water supply system. Since 1969, when these facilities were developed, the greatest daily production was recorded as 1,190,000 gallons and the minimum was 9,000 gallons. Inasmuch as these springs are not a reliable source of water during the dry season when maximum use occurs, they do not contribute appreciably to meeting the daily requirement. However, these springs provide a valuable resting period for the wells during the rainy season and during snow-melt conditions.

Two wastewater plants at the Post provide treated sewage effluent to irrigate the 18-hole golf course and Chaffee Parade Grounds. About 1,500,000 gallons per day, or over 1,600 acre-feet per year, of this water is available. If approval can be obtained from the medical department to use wastewater to irrigate some of the other areas now being irrigated with potable water, some relief in well production could be provided.

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FUTURE WATER REQUIREMENTS

POPULATION

Four alternative population levels were considered for Fort Huachuca and the surrounding area for the period 1974-2060. They are used in the report to assess the effects of different levels of demand on the groundwater system. These projected levels for Fort Huachuca do not reflect anticipated strength at the Post. Populations were projected from 1974-2030 and were then assumed constant to the end of the study period, 2060. These alternatives reflect different assumptions of population levels at Fort Huachuca. Alternative I assumes a daytime population at the Post of 25,000 and a nighttime population of 20,500. Alternative II assumes that the present Fort complement of 12,000 would remain. Alternatives III and IV assume nighttime population levels of 40,000 and 50,000, respectively, at the Fort by the year 2000.

The population estimate for the study area reflects the personnel at Fort Huachuca, the communities of Sierra Vista and Huachuca City, and the surrounding area in the upper San Pedro River basin. Alternative population levels examined in this report are as follows:

Alternative Population Levels

	Year			
	1974	1980	2000	2030
Alternative I				
Study area	22,000	33,500	42,500	55,000
Fort Huachuca	12,000	20,500*	20,500*	20,500*
Alternative II				
Study area	22,000	25,000	34,000	46,500
Fort Huachuca	12,000	12,000	12,000	12,000
Alternative III				
Study area	22,000	38,000	72,000	84,000
Fort Huachuca	12,000	25,000	40,000	40,000
Alternative IV				
Study area	22,000	38,000	94,000	106,500
Fort Huachuca	12,000	25,000	50,000	50,000

* Nighttime population. Daytime population is estimated at 25,000.

FUTURE WATER DEMANDS

Projected annual water demands for Fort Huachuca and the remainder of the study area were developed by applying average daily per capita water use to the projected population levels. Projected water demands

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for Fort Huachuca were computed on the basis of an average daily per capita consumption of 200 gallons and the assumption that golf course and parade ground irrigation would be accomplished using sewage effluent. All other projected water demands in the study area are based upon an average daily per capita consumption of 160 gallons. The daily consumption levels at Fort Huachuca reflect the historically higher water consumption levels experienced at the Fort relative to the surrounding areas. A summary of estimated annual water demand in acre-feet for each alternative level of population in the study area is as follows:

Estimated Annual Water Demands

	1974	1980	2000	2030
Alternative I				
Study area	4,500	7,000	8,600	10,800
Fort Huachuca	3,000*	4,600	4,600	4,600
Alternative II				
Study area	4,500	5,100	6,600	8,900
Fort Huachuca	3,000*	2,700	2,700	2,700
Alternative III				
Study area	4,500	8,000	14,700	16,900
Fort Huachuca	3,000*	5,600	9,000	9,000
Alternative IV				
Study area	4,500	8,000	19,100	21,300
Fort Huachuca	3,000*	5,600	11,200	11,200

* Present water use averages about 220 gallons per capita per day. Future demands were reduced to 200 gallons per capita per day to reflect the experiences of the Arizona Water Commission, which indicates that 200 gallons per capita per day should be sufficient to meet the Post's needs.

WATER QUALITY

Water quality analyses were made at the test wells on the East Range, as discussed under a subsequent heading. These analyses indicated that the quality of ground water in the East Range is suitable for domestic use and public supply.

POTENTIAL WATER SUPPLY - AVAILABILITY OF GROUND WATER

The U. S. Geological Survey has made preliminary studies to determine the amount of water in the underground basin along the San Pedro River between the International Boundary and the Babocomari River. Data from existing wells indicate the following:

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(1) That the existing water table is conservatively estimated to average at about 175 feet below ground surface. (The water level at 110 wells averaged about 159 feet below the ground surface.)

(2) That ground water extends to a depth of at least 1,200 feet in the area bordering the river.

The thickness of alluvium in the San Pedro River valley is estimated to vary from about 300 feet near the foot of the mountains to over 1,200 feet at the valley floor. Lines showing equal depths of alluvium of 300 feet, 700 feet, and 1,200 feet below the existing ground surface were drawn by the U. S. Geological Survey on map (Plate 3). The areal extent of such thickness of alluvium is as follows:

Depth of Alluvium (feet)	Areal Extent: Entire Drainage Basin (Sq. mi.)	Areal Extent: West of San Pedro River (Sq. mi.)
300	405	270
700	318	222
1,200	175	133

On the basis of the thickness of alluvium and on the measured water levels in 110 wells, and applying appropriate specific yields for the underground basin, determined from drill-cuttings, geophysical logs, and aquifer pump tests, the U. S. Geological Survey estimates that there are presently about 19,500,000 acre-feet of water in storage in this reach, of which about 13,400,000 acre-feet of water are stored on the west side of the river.

Under Alternative Water Demand I, which assumes a nighttime Post population of 20,500 and a study area population of 55,000 in year 2030, about 810,000 acre-feet of water would be required in the study area during the period 1974-2060. The total water in ground-water storage on the west side of the valley is conservatively estimated at 13,400,000 acre-feet. Assuming no recharge to the ground-water basin, assuming water use after year 2060 at the same rate as for year 2060, and assuming that producing wells can be located in the area, it would take over 1,200 years to deplete the ground-water basin on the west side. Or stated another way, the total volume of water in storage in the study area is conservatively estimated to be over 15 times the projected demand to year 2060. In addition, about 6,000,000 acre-feet of water is available on the east side.

Under Alternative Water Demand IV, which assumes an optimistic Fort population of 50,000 and a study area population of 106,500 in year 2030, about 1,560,000 acre-feet of water would be required in the study area during the period 1974-2060. Again, making the same assumptions as for Alternative I, it would take about 640 years to deplete the ground-water basin on the west side. Or stated another way, the total volume of storage in the study area is conservatively estimated to be over eight times the projected demand to year 2060.

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Only a portion of the total projected demand will be withdrawn from ground-water storage. Significant amounts of ground water are presently lost from the area via evapotranspiration by phreatophytes, ground-water discharge to surface flow which leaves the area via San Pedro River and subsurface underflow. Lowering of the ground-water table would result in the interception of some of these flows, which would prolong the life of the ground-water basin.

In addition, if the ground-water table were lowered along the San Pedro and Babocomari Rivers (which might occur subsequent to year 2060), part of the surface flows during storms would infiltrate the stream channel and recharge the ground-water basin.

The total amount of flow that might be salvaged at such times as the ground-water table were lowered along the San Pedro and Babocomari Rivers is roughly estimated at 14,300 acre-feet. This amount is greater than the total demand in the study area at year 2030 under Alternative I and is roughly two-thirds the total demand in the study area at year 2030 under Alternative IV. This recharge would extend the life of the ground-water basin indefinitely under Alternative I and would substantially prolong the life of the ground-water basin under Alternative IV.

TEST WELL DRILLING PROGRAM

Four distinct areas of Fort Huachuca were considered as potential locations for new wells: (a) North of the Post proper and west of Highway 90, (b) the Post Well Field-Sierra Vista area, (c) the strip of alluvial apron extending southeast of the Post Well Field to the mouth of Garden Canyon, and (d) the East Range area. As discussed in Appendix 4, the East Range offers the best prospects for future well production. The East Range is an extensive area of 44 square miles, mostly isolated from private developments that might compete with the Post for water. The areal extent permits sufficient spread between production wells to minimize interference of wells with each other. A test well drilling program on the East Range was therefore conducted by the Sacramento District to obtain conclusive evidence as to whether hydrogeologic conditions are such that production wells could be expanded into that area in the future, as required. The drilling program resulted in an affirmative determination; it disclosed that production wells adequate to meet the demands of the Fort can be located in the East Range. The program also provided factual data which were used by the Arizona Water Commission in developing the underground basin parameters used as input to the digital model analysis. In addition, the Sacramento District, on the basis of data obtained from the drilling program, identified on a preliminary basis the locations of proposed production wells (see Plate 2) so that concept designs and cost estimates for expanding the water supply system could be developed. More detailed information regarding the test well drilling study is contained in Appendix 4.

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STUDIES OF THE ARIZONA WATER COMMISSION

A digital model analysis was made by the Arizona Water Commission to simulate the ground-water basin to permit an evaluation of the long-term effects of pumping under a variety of basin conditions and water demands (see Appendix 2).

Two alternative projections were modeled: Alternative I, which assumes a nighttime population of 20,500 (and a daytime population of 25,000), and Alternative IV, which assumes an optimistic Fort population of 50,000. The total water demands for the entire study area were used in the model to determine the total impact on the ground-water reservoir. The report by the Arizona Water Commission, however, depicts the situation only within the Fort Huachuca Reservation. The Commission is continuing the study of the water resources of the upper San Pedro valley in connection with its evaluation of the adequacy of water supply for proposed subdivision development (see preceding heading "Economic Development"). Additional data are expected to become available in portions of the study area outside of Fort Huachuca, which will enable the computer model to be further refined. This refinement, which may change some of the details, will not, however, affect the conclusions in the report regarding the adequacy of water at the Fort.

An important aquifer characteristic used in the digital model is the storage coefficient of the ground-water reservoir. There are limited data available to permit an accurate determination of this value. Because of the large impact of the storage coefficient on the drawdown that might be expected from long-term pumping, two sets of storage coefficients were used - one reflecting a very conservative range of values (5 and 10 percent), and the other representing an average value determined for nearby alluvial basins (12 percent), which is considered to be the more reasonable value. Use of the smaller values results in greater drawdown than under the larger value.

The digital model analyses indicate that maximum drawdowns would range from about 50 feet to 80 feet by year 2060 under Alternative I and from about 110 feet to 160 feet by year 2060 under Alternative IV. Inasmuch as the saturated thickness of alluvium in the East Range varies from 650 to 1000 feet, only 10 to 25 percent of the available thickness would have been utilized even under the largest demand. (Plate 4, presenting a cross section of the ground-water basin under the base, depicts the ground-water table under Alternatives I and IV at year 2060, using the conservative storage coefficients, as well as the estimated bottom of the saturated deposits).

The above declines are modest by Arizona standards. However, it is probable that the large withdrawals for Alternative IV (as well as Alternative III), as specified in the model, would dewater portions of the aquifer underlying the present Post well field, as well as portions of the aquifer underlying Sierra Vista, by year 2060. The severity of this impact would depend on the actual thickness of the aquifer in these areas. However, it would be possible in actual operations to moderate this impact

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by shifting pumpage to the East Range well field where a greater thickness of saturated alluvium is available. Thus, it can be concluded that the ground water supply is adequate to meet even the largest demand.

The digital model also predicts reductions in the aquifer discharge to the San Pedro and Babocomari Rivers from 20 percent to about 50 percent for the four runs (two sets of alternatives with two sets of storage coefficients). As a result, base flows, as well as the water supply available to vegetative growth along portions of the rivers, possibly would be reduced.

The average maximum declines in ground-water levels predicted by the model would range from 0.6 to 1.8 feet per year. These rates of decline are considerably smaller than the 5-foot average annual rate of decline of ground-water levels in Central Arizona. Records also indicate that total ground-water declines in Central Arizona exceed 300 feet.

Unlike those areas in the United States possessing an adequate surface water supply, the mining of ground water in Arizona is a commonly accepted practice and does not necessarily lead to disaster. Although the annual renewable supply may be small relative to demand, the volumes of water in storage are truly vast and, with proper management and use, can provide a sustained yield for extended periods of time.

CONCEPT DESIGN AND COST ESTIMATES

The Sacramento District retained the services of Blanton and Co., Architects and Engineers, of Tucson, Arizona to develop concept designs and cost estimates for meeting present-day water needs and for expanding the Post's water supply system to meet the needs of populations of 25,000 and 50,000, respectively (daytime figures), at the Post. Detailed information regarding the alternatives considered is given in Appendix 3. All costs presented are capital costs. They do not include costs for engineering and design and for supervision and administration of the construction work. The following material summarizes the conclusions of Blanton and Co.

REQUIREMENTS FOR PRESENT-DAY OPERATION

Under present-day operations (Post population, 12,000), the equipment delivers about 3,090 gallons per minute (gpm). This is not sufficient to deliver the 4.613 million gallons per day (mgd) presently used during the month of May even when pumping is continuous for the entire 24 hours. Changes are recommended in the existing well system and pumping equipment, and pumping and other operating equipment are recommended for Test Well #5, which currently exists only as a drilled, cased, and capped well. A water transmission line would then be constructed to connect Test Well #5 with existing line and electric power would have to be provided. These additions and modifications, which would satisfy the present demand requirements, would cost $810,000 at 1974 prices. The above work would meet the minimum requirements of the Post at this time. If, however, expansion of the Post is contemplated, the proposed water transmission line from Test Well #5 and the electric power line should be sized to meet future requirements. This addition would increase the cost to $920,000 at 1974 prices.

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Costs for construction subsequent to 1974 would have to reflect price levels at that time.

The above work and estimates reflect minimum modification to the existing water system for providing a potable water supply for the present Post population. Other additions were suggested by Blanton and Co. for improving the system. Consideration should be given to these suggestions prior to final adoption of a specific program.

REQUIREMENTS FOR A POPULATION OF 25,000

Four wells on the East Range, in addition to Test Well #5, would be placed in service to meet the water requirements for a daytime Post population of 25,000. The cost of adding these four wells with complete pumping equipment and connections to transmission mains and power lines, plus required other modifications in the system to serve the new population, is estimated at $1,410,000 under 1974 prices. This cost assumes that the water transmission line from Test Well #5 and the electric power line were sized for future requirements. The total cost of modifying the existing system to meet present-day requirements and additions and modifications to meet the increased population needs would therefore be $2,330,000 under 1974 prices. Again, costs for construction subsequent to 1974 would have to reflect price levels prevailing at that time.

REQUIREMENTS FOR A POPULATION OF 50,000

Six additional wells on the East Range, in addition to the four East Range wells and Test Well #5 recommended in the preceding paragraph, would have to be placed in service to meet the water requirements for a daytime Post population of 50,000. The cost of adding these six wells with subsidiary equipment plus other required modifications in the system to serve the new population is estimated at $3,850,000 under 1974 prices. The total cost of modifying the existing system to meet present-day requirements and modifications and additions to meet the increased population needs would therefore be $6,180,000 under 1974 prices. Costs for construction subsequent to 1974 would have to reflect price levels prevailing at that time and, in addition, if work were accomplished after 1980, would have to consider replacement of wells and pumping equipment that had served their useful life.

CHARLESTON DAM PROJECT

The Central Arizona Project, authorized for construction by the U. S. Bureau of Reclamation, includes a multiple-purpose reservoir at the Charleston site, which is located just downstream from the old town site of Charleston. The dam proposed for the site would be about 160 feet high and impound a reservoir with a capacity of 238,000 acre-feet, including 116,000 acre-feet for water conservation, 90,000 for flood control, and 32,000 in the inactive pool, including storage for sediment. The reservoir would develop a new supply of 12,000 acre-feet annually. The Arizona Water Commission contemplates that this new water supply could be available for

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use in the Fort Huachuca area. Charleston Reservoir, if constructed, could then supply all the projected demands (assuming a Post population of 50,000) in the Fort Huachuca area, including the needs of Sierra Vista and Huachuca City, except for approximately 1,000 acre-feet.

The Bureau of Reclamation has assigned a relatively low priority to the construction of Charleston Dam. Construction of the dam and reservoir is not expected prior to 1985.

DISCUSSION

An appraisal of the ground-water conditions in the upper San Pedro valley, based on data developed by the U. S. Geological Survey, indicates that there is an adequate amount of water in ground-water storage along the upper San Pedro River to meet the forseeable needs of the area. For a nighttime population of 20,500 (and a daytime population of 25,000) at Fort Huachuca, and a study area population of 55,000 in year 2030, assuming no recharge to the ground-water basin, and assuming that producing wells can be located in the area, it would take over 1,200 years to deplete the ground-water basin on the west side. For an assumed Post population of 50,000 and a study area population of 106,500 in year 2030, under the same assumptions as above, it would take about 640 years to deplete the same ground-water area. In addition, about 14,300 acre-feet of water annually, now flowing out of the area or now being consumed by phreatophytes, would either recharge the ground-water basin or could be diverted from the river at such times as ground-water levels were substantially lowered along the river. Such recharge would meet all the demands for a nighttime Post population of 20,500 and study area population of 55,000, (this could extend the life of the ground-water basin indefinitely) and would substantially prolong the life of the ground-water basin under a Post population of 50,000 and study area population of 106,500.

Test well drilling conducted by the Sacramento District concluded that the East Range of Fort Huachuca offers the best potential for the location of new wells and that production wells could be expanded into the East Range as required.

A digital model analysis made by the Arizona Water Commission evaluated the long-term effect of pumping under two alternative projections of population. For a nighttime Post population of 20,500, maximum drawdowns in the area would range from 50 to 80 feet by year 2060; and for a Post population of 50,000, maximum drawdowns would range from 110 to 160 feet by the same year. Such drawdowns are modest by Arizona standards. There is up to 1,000 feet of saturated thickness of alluvium available in the East Range well field. Even with the largest water demands used in the study, the saturated alluvium thickness would have been reduced by only 10 to 25 percent by year 2060.

Concept designs and cost estimates were made by Blanton and Co., an Architect and Engineering firm in Tucson, Arizona, retained by the

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Sacramento District. Changes were recommended in the existing water supply system and Test Well #5 was recommended to be brought on line to meet existing deficiencies, at a cost of $810,000 (1974 prices). Such costs would increase to $920,000 (1974 prices) if new lines to be constructed were sized to meet future requirements. Four wells on the East Range, in addition to Test Well #5, would be required to meet the requirements of a daytime Post population of 25,000. The cost of adding these new wells plus required subsidiary equipment and facilities is estimated at $1,410,000 (1974 prices), assuming that the new lines under the deficiency work were sized to meet future requirements. The total cost of the deficiency and expansion program to meet a Post daytime population of 25,000 would amount to $2,330,000 under 1974 prices.

Six additional wells on the East Range, in addition to the four East Range wells and Test Well #5 recommended in the preceding subparagraph, would have to be placed in service to meet the water requirements for a Post population of 50,000. The cost of adding these six wells with subsidiary equipment plus required other modifications in the system to serve the new population is estimated at $3,850,000 under 1974 prices. The total cost of modifying the existing system to meet present-day requirements and modifications and additions to meet the increased population needs of 50,000 would therefore be $6,180,000 under 1974 prices.

All costs presented are capital costs. They do not include costs for engineering and design and for supervision and administration of the construction work. In each case, costs for construction subsequent to 1974 would have to reflect price levels prevailing at that time and, in addition, if work were accomplished after 1980, would have to consider replacement of existing wells and pumping equipment that had served their useful life.

An alternative supply of water would result from construction of Charleston Reservoir, as authorized under the Central Arizona Project. This project would develop a new supply of 12,000 acre-feet annually, which could meet all projected demands for water in the Fort Huachuca area, including the needs of the surrounding communities under a Post population of 50,000, except for approximately 1,000 acre-feet. However, the Bureau of Reclamation has assigned a relatively low priority to construction of Charleston Reservoir and construction of the reservoir is not expected prior to 1985.

The studies presented herein are feasibility scope studies. Upon approval of a desired program, detailed studies will be required before implementation of the upgrading or expansion recommendations.

The proposed expansion programs would involve pumping at greater depths than now being experienced. Recognizing the critical energy shortages and the increased costs of pumping at greater depths, every effort should be made to implement conservation features in future planning. It is noted that the per capita demand on the base is appreciably larger than the use off base.

FMC002466

CONSULTANT'S REPORT

The firm of Harshbarger and Associates, Tucson, Arizona, consultants in hydrogeology, was hired as a consultant in the study effort. Their report is included as Appendix 1. The conclusions reached by the consultant firm are as follows:

1. Adequate volumes of recoverable ground water are present in the regional aquifer to satisfy the maximum projected water demand. It is conservatively estimated that the volume of recoverable ground water in storage in the regional aquifer is 8 to 15 times greater than the total projected water demand.

2. Projected water requirements for a military population of 50,000 could be satisfied by construction of the proposed well field on the East Range. Drawdown in the proposed well field after 80 years of pumping would be on the order of 60 to 110 feet.

3. Future interference effects with civilian ground-water users in the area are of acceptable magnitude, with a proper management plan. The depression cone developed by the proposed East Range well field would not cause significant infiltration of water in the channel of the San Pedro River.

4. Future refinement of the digital model will improve the agreement between simulated and measured water levels in some areas. The magnitude of predicted drawdown in the regional aquifer will not be significantly affected by these future model refinements.

CONCLUSIONS

The District Engineer concludes that:

1. Adequate ground water is available in the upper San Pedro River basin to support future growth in Fort Huachuca and surrounding areas.

2. Production wells can be located in the East Range of Fort Huachuca.

3. The capital costs of modifying the existing water supply system to meet present deficiencies, plus inclusion of provisions for future expansion, are estimated at $920,000 (1974 prices).

4. The total capital cost of modifying the existing water supply system to meet present deficiencies and of expanding the Post's water supply system to meet an assumed daytime Post population of 25,000 is estimated at $2,330,000 (1974 prices).

5. The total capital cost of modifying the existing water supply system to meet present deficiencies and of expanding the Post's water supply system to meet an assumed daytime Post population of 50,000 is estimated at $6,180,000 (1974 prices).

6. All costs presented are capital costs. They do not include costs for engineering and design and for supervision and administration of the construction work. In each case, costs for construction subsequent to 1974 would have to reflect price levels prevailing at that time and, in addition, if work were accomplished after 1980, would have to consider replacement of existing wells and pumping equipment that had served their useful life.

7. An alternative supply of water would result from construction of Charleston Reservoir, as authorized under the Central Arizona Project. This project would meet all projected demands in the Fort Huachuca area under a Post population of 50,000, except for approximately 1,000 acre-feet. However, the Bureau of Reclamation has assigned a relatively low priority to construction of Charleston Reservoir and construction of the reservoir is not expected prior to 1985.

RECOMMENDATIONS

The District Engineer recommends that this report be used as a basis for future planning for Fort Huachuca. The District Engineer further recommends that detailed studies be made to implement any Post expansion program and that such studies should be made in cooperation with the Arizona Water Commission, the U. S. Geological Survey, and other interested agencies.

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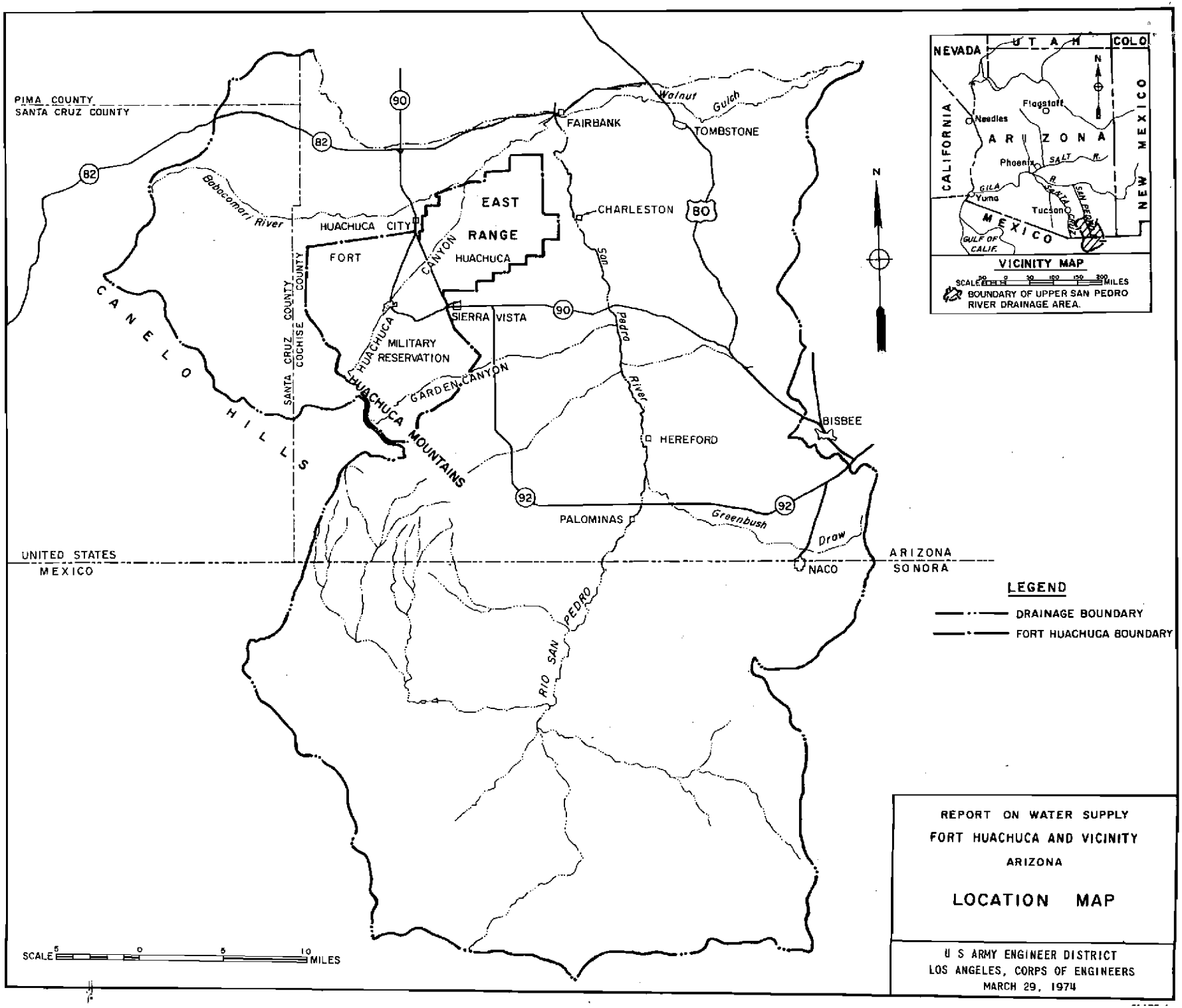
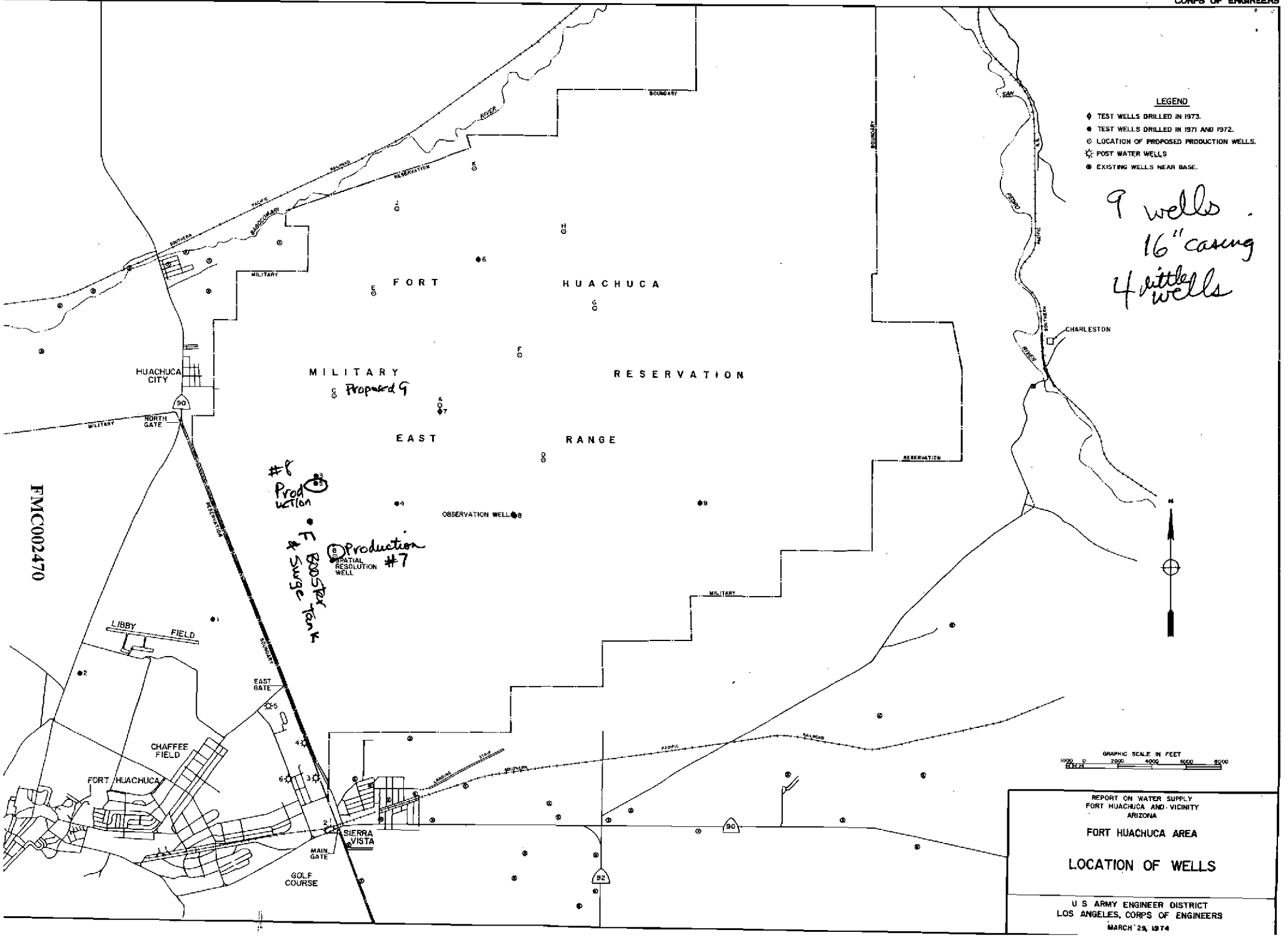


REPORT ON WATER SUPPLY
FORT HUACHUCA AND VICINITY
ARIZONA

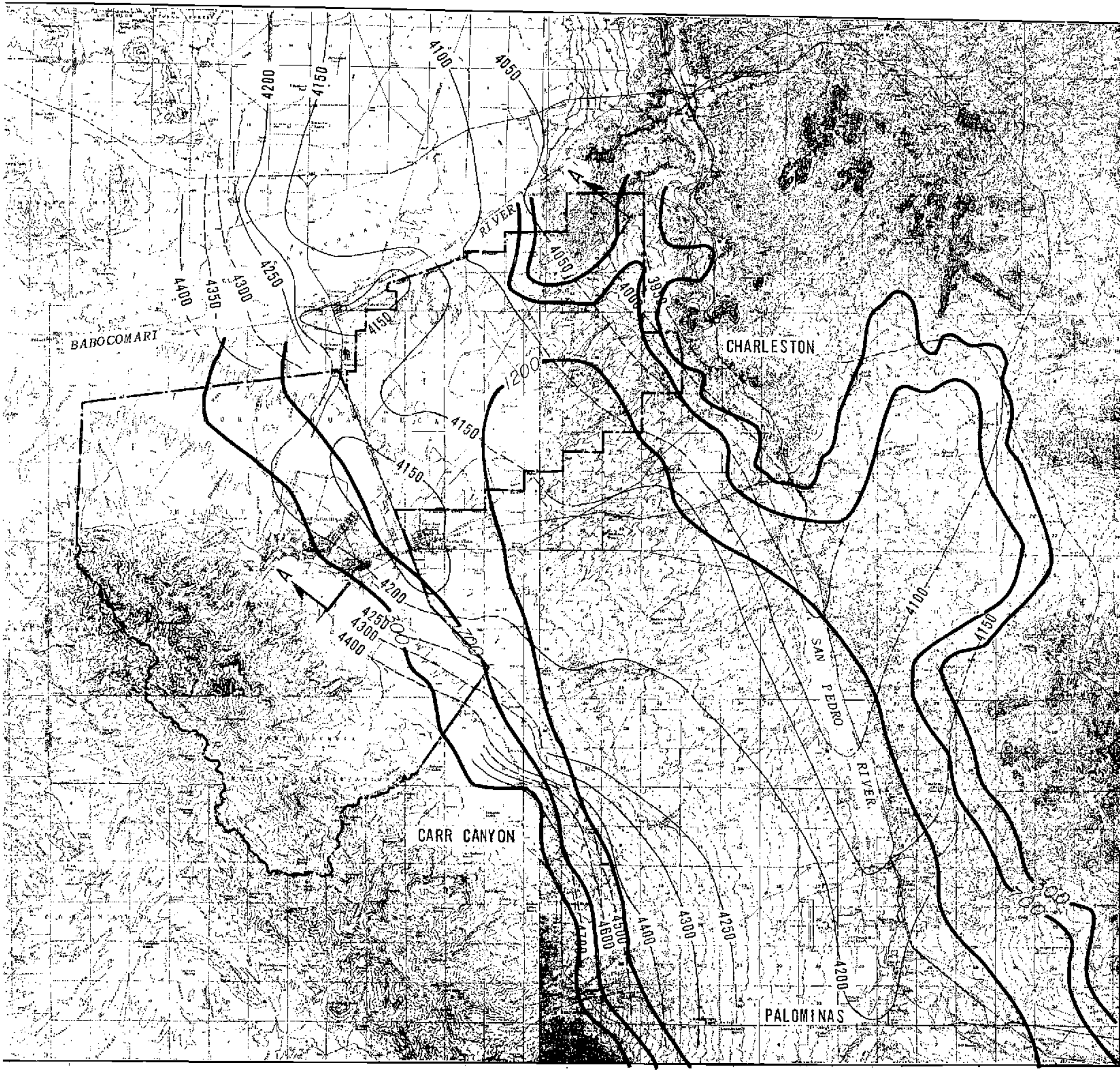
LOCATION MAP

U S ARMY ENGINEER DISTRICT
LOS ANGELES, CORPS OF ENGINEERS
MARCH 29, 1974

FMC002469


LEGEND
TEST WELLS DRILLED IN 1973.
TEST WELLS DRILLED IN 1971 AND 1972.
LOCATION OF PROPOSED PRODUCTION WELLS.
POST WATER WELLS
EXISTING WELLS NEAR BASE.
9 wells.
16" casing
4 little wells
FORT HUACHUCA
MILITARY RESERVATION
Proposed 9
EAST RANGE
HUACHUCA CITY
NORTH GATE
CHARLESTON
#8 Production
#7 Production
Booster & Surge Tank
OBSERVATION WELL
SPATIAL RESOLUTION WELL
LIBBY FIELD
EAST GATE
CHAFFEE FIELD
FORT HUACHUCA
SIERRA VISTA
MAIN GATE
GOLF COURSE
GRAPHIC SCALE IN FEET
REPORT ON WATER SUPPLY
FORT HUACHUCA AND VICINITY
ARIZONA
FORT HUACHUCA AREA
LOCATION OF WELLS
U S ARMY ENGINEER DISTRICT
LOS ANGELES, CORPS OF ENGINEERS
MARCH 29, 1974

FMC002470



LEGEND

—4200— WATER LEVEL CONTOUR IN FEET ABOVE MEAN SEA LEVEL. DASHED WHERE INFERRED.

FORT HUACHUCA BOUNDARY

—300— THICKNESS OF ALLUVIUM IN FEET

NOTE:
FOR SECTION A-A' SEE PLATE 4.

N

SCALE IN MILES
1 0 1 2 3 4

REPORT ON WATER SUPPLY
FORT HUACHUCA AND VICINITY
ARIZONA

WATER LEVEL CONTOURS AND
THICKNESS OF ALLUVIUM

U S ARMY ENGINEER DISTRICT
LOS ANGELES, CORPS OF ENGINEERS
MARCH 29, 1974

PLATE 3

FMC002471

[redacted]

FMC002472

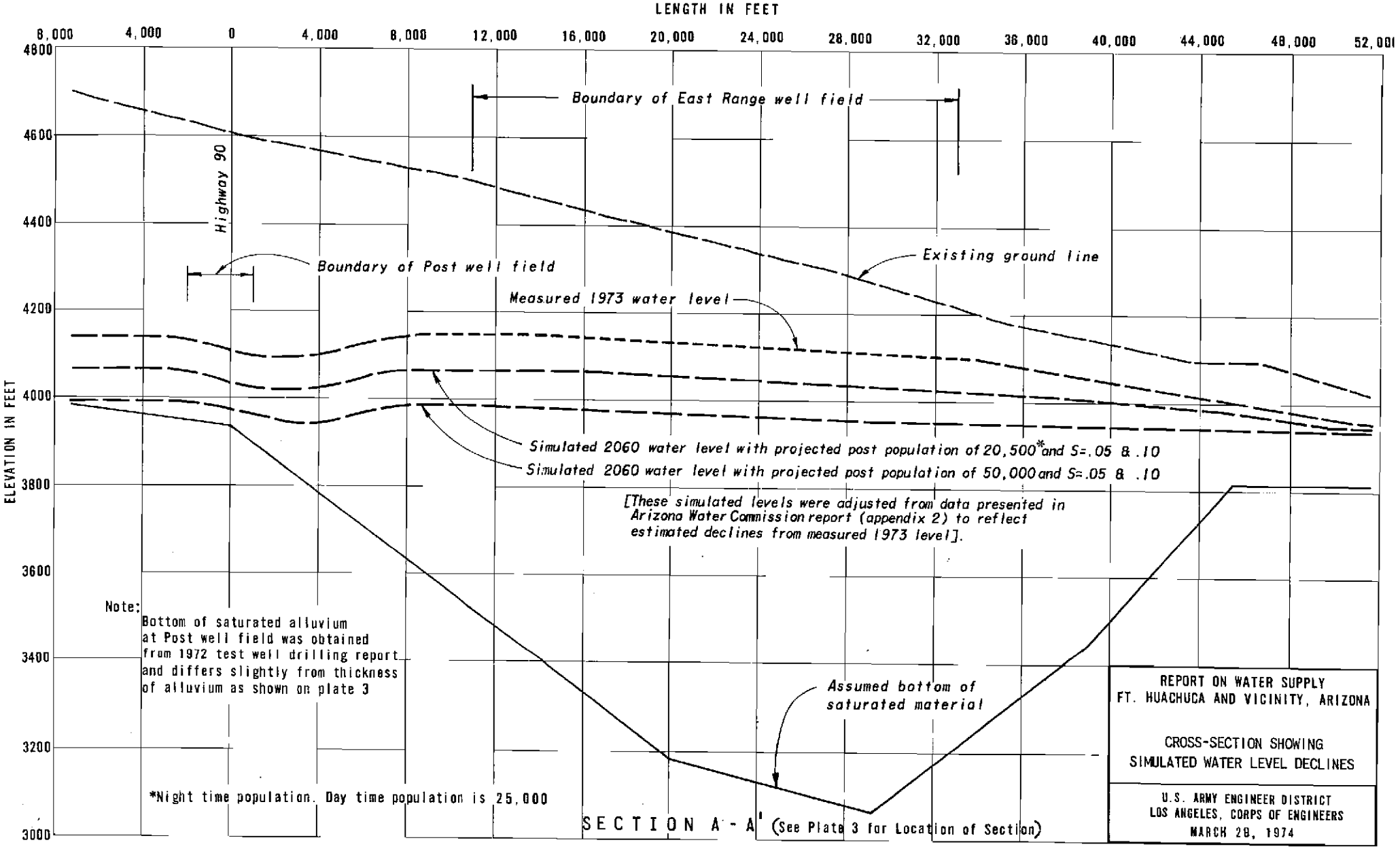


PLATE 4

for G/.

W

H29
N 29 - 72
V-29-72

H 29 - H72
B29 - B75

WATER PRODUCTION
IN THOUSANDS OF GALLONS
FORT HUACHUCA WELL FIELDS

FY 83	954419		
82	846,316		
81	976,376		
80	922,974		
79	854887		
78	758,130		
77	695,475	> 935402	1977
76	239,927		
76	901,333		
75	846,266		
74	1091,870		
73	906,175		
72	1025,758		
71	1034,146		
70	1081,377		
69	1063,013		
68	947,762		
67	984,262		
66	880,762		
65	858,923		
64	805,298		
63	940,754		
84	1,011,654		

FMC002473

Average annual Pumpage: 900 million gallons/yr for the years 1963 - 1983

Encl 3

Ft Huachuca – F.R.R.

I Irrigation Base Maps

A. Non-Potable System

1. Effluent P.O.D.'s
2. Golf Course
3. Chaffee field

} pipeline? NO

4. non-potable wells ? NO

A. Spatial Resolution

B. Bunker

II Stock Map

Irrigation wells / Irrigation acres

A. Potable System

1. wells (storage Reservoirs ?)
2. Springs
3. pipeline to storage Reservoirs for springs

B. PS and SR P.O.U.'s

1. All P.S. + SR ponds
2. spring pipeline to golf course pond and gravel pit pond
3. All springs for above pipeline

C. All WL Ponds

SWs

FORT HUACHUCA-
FEDERAL RESERVED WATER RIGHT-

THE FOLLOWING TABLE HAS BEEN DEVELOPED BASED UPON PUMPAGE FIGURES AND POPULATION ESTIMATES SUPPLIED BY BASE PERSONEL FOR 1982-1988(SEE * BELOW).

IT SHOULD BE NOTED THAT PUMPAGE FIGURES INCLUDE DAYTIME CIVILIAN AND PERMANENT MILITARY POPULATIONS BUT ONLY MILITARY POPULATION IS INCLUDED IN THE GPCD CALCULATIONS. THE DEPARTMENT IS ASSUMING THAT AS THE PERMANENT BASE POPULATION EXPANDS SO WILL THE DAYTIME CIVILIAN POPULATION.

EXPANDING RIGHT BASED UPON INCREASED COMSUMPTIVE USE DUE TO ANNUAL POPULATION INCREASES OF 6%.

GPCD FIGURES WERE DETERMINED BY AVERAGING THE REPORTED INFORMATION(1982-1988)AND FIXING THE RATE FOR THE REMAINING YEARS.

AF/YR USE WAS THEN DETERMINED USING THE POPULATION AND GPCD FIGURES.

*ACTUAL VALUES AS REPORTED BY BASE PERSONEL(EXCLUDING GPCD RATE).

	YEAR	POPULATION	GPCD	AF/YR USE
*	1982		ERR	2736
*	1983		ERR	2876
*	1984		ERR	3071
*	1985		ERR	2986
*	1986		ERR	2898
*	1987		ERR	2273
*	1988		ERR	3201
	1989	0	ERR	ERR
	1990	0	ERR	ERR
	1991	0	ERR	ERR
	1992	0	ERR	ERR
	1993	0	ERR	ERR
	1994	0	ERR	ERR
	1995	0	ERR	ERR
	1996	0	ERR	ERR
	1997	0	ERR	ERR
	1998	0	ERR	ERR
	1999	0	ERR	ERR
	2000	0	ERR	ERR
	2001	0	ERR	ERR
	2002	0	ERR	ERR
	2003	0	ERR	ERR
	2004	0	ERR	ERR
	2005	0	ERR	ERR
	2006	0	ERR	ERR
	2007	0	ERR	ERR
	2008	0	ERR	ERR
	2009	0	ERR	ERR

FMC002475

2010	0	ERR	ERR
2011	0	ERR	ERR
2012	0	ERR	ERR
2013	0	ERR	ERR
2014	0	ERR	ERR
2015	0	ERR	ERR
2016	0	ERR	ERR
2017	0	ERR	ERR
2018	0	ERR	ERR
2019	0	ERR	ERR
2020	0	ERR	ERR
2021	0	ERR	ERR
2022	0	ERR	ERR
2023	0	ERR	ERR
2024	0	ERR	ERR
2025	0	ERR	ERR

FORT HUACHUCA FEDERAL RESERVE RIGHT PHOTOS

Photo #	Date Taken	Comments
1-1	7/14/86	Well #1
1-2	7/14/86	Well #1
1-3	7/14/86	Well #2
1-4	7/14/86	Well #3
1-5	7/14/86	Well #4
1-6	7/14/86	Well #6
1-7	7/14/86	Pump for effluent
1-8	7/14/86	Well #5
1-9	7/14/86	Well #8
1-10	7/14/86	Well #7
1-11	7/14/86	Spatial Resolution Well (non-potable)
1-12	7/14/86	Bunker Well
2-1	7/14/86	Garden Canyon non-potable well (can be connected into potable system)
2-2	7/14/86	Old Post Reservoir, Huachuca Canyon Springs (1/2 m)
2-5	7/14/86	30,000 gal. reservoir at Black Ridge
2-6	7/14/86	?
2-7	7/14/86	Blow hole near Picnic Spring, Garden Canyon
2-8	7/14/86	Picnic Spring, Garden Canyon
2-9	7/14/86	Picnic Spring, Garden Canyon
2-10	7/14/86	Chain Spring, Garden Canyon
2-11	7/14/86	Spring pipe (not connected with modern system)
2-12	7/14/86	Spring #1a, Garden Canyon
3-1	7/15/86	Spring #1b, Garden Canyon
3-2	7/15/86	Spring #2, Garden Canyon
3-3	7/15/86	Spring #2, Garden Canyon
3-4	7/15/86	Flowing pipe, Garden Canyon
3-5	7/15/86	Old and new pipeline, Garden Canyon
3-6	7/15/86	Old and new pipeline, Garden Canyon
3-7	7/15/86	Spring #3, Garden Canyon
3-8	7/15/86	Spring #3 with pipeline

Photo #	Date Taken	Comments
3-9	7/15/86	Sand trap, Huachuca Canyon
3-10	7/15/86	Spring #1 and 2, Huachuca Canyon
3-11	7/15/86	Spring #3, Huachuca Canyon
4-1	7/15/86	Spring water from Garden Canyon flowing via pipe system into gravel pit pond
4-2	7/15/86	Lower Woodcutter Pond
4-3	7/15/86	Shut-off valve for spring pipeline into golf course pond
4-4	7/15/86	Pipeline from Garden Canyon flowing into golf course pond

Extremely Urgent

FMC002479

From: (480) 222-1116
Julia Mendoza
Thomas Title & Escrow
16435 N Scottsdale Rd
Ste 405
Scottsdale, AZ 85254

Origin ID: SCFA

FedEx Express

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Delivery Address Bar Code

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Invoice #
PO #
Dept #

Arizona Department of Water Resourc
3550 N CENTRAL AVE

PHOENIX, AZ 85012

MON - 04 JUN A1
STANDARD OVERNIGHT

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0201

98 ZSYA

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Robbie Robbins
Michael Baker Corp.
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SUITE 200
LAKEWOOD, CO 80228

Origin ID: TADA

FedEx Express

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Ship Date: 01JUN12
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BILL SENDER
Brian Cosson, State Floodplain Mgr
AZ Dept. of Water Resources
3550 N CENTRAL AVE
PHOENIX, AZ 85012

Delivery Address Bar Code

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PO #
Dept # AZ025BKR ODC

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MON - 04 JUN A1
PRIORITY OVERNIGHT

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AZ-US
PHX

512G3/61A4/A278

RT 268 4 B
B10 6187
06.04
FZ

FORT HUACHUCA — Approx. Location

T21SR19E

S½S½ 12, 13, 14, 15(exc. NWNW), 16(exc. N½N½), N½ 17, E½SE¼ 18, E½E½ 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, E½E½ 30, E½E½ 31, 32, 33, 34, 35, 36.

T22SR19E

1, 2, 3, 4, 5, E½NE¼ 6, 8(exc. W½W½, SW¼), 9, 10, 11, 12, 13, 14, 15, 16(exc. SW¼), NE¼NE¼ 17, E½ 21, 22, 23, 24, 25, 26, 27(exc. SW¼SW¼), NE¼NE¼ 28, SE¼NE¼ 34, 35(exc. SW¼SW¼), 36.

T23SR19E

1, 2(exc. NW¼NW¼, SW¼SW¼SW¼), NE¼NE¼ 11, 12(exc. SW¼SW¼SW¼), N½NE¼ 13.

T20SR20E

25, S½ 26, SE¼SE¼ & S½S½ 27, 33(exc. W½W½), 34, 35, 36.

T21SR20E

1, 2, 3, 4, E½SE¼ 5, S½ 7, 8(exc. NW¼, W½NE¼), 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, N½ 25, 26, 27, 28, 29, 30, 31, 32, 33(exc. NE¼).

T22SR20E

W½W½ 3, 4, 5, 6, 7, 8, 9, 10(exc. NE¼), SW¼SW¼SW¼ 11, SW¼SW¼SW¼ 13, 14(exc. NE¼), 15, 16, 17, 18, 19, 20, 21, 22, 23(exc. SE¼), NW¼NW¼NW¼ 24, NW¼ 26, 27(exc. SE¼SE¼), 28, 29, 30, 31, 32, 33(exc. SE¼SE¼), NW¼ 34.

T23SR20E

NW1/4NW1/4 4, 5(exc. SE1/4), 6, 7, W1/2W1/2 8, NW1/4NW1/4NW1/4 17, N1/2N1/2 18.

T20SR21E

E1/2 19, 20, W1/2 21, W1/2 28, 29, 30, 31, 32, W1/2 33.

T21SR21E

S1/2 3, 4, 5, 6, 7, 8, 9, 10, 16, 17, 18, 19, N1/2 20.

4 = 56

	FORT [illegible]					
	[illegible]		[illegible]		O	
DONE	FRSR	✓	8-15		PR	FC empty @ Survey
DONE	FRSR	✓	7-15		PR	FC
DONE	[illegible]	✓	9-15		PR	FC
	[illegible]	✓	9-15		PR	—
	[illegible]	✓	9-15		PR	—
DONE	[illegible]	✓	8-15		PR	FC
	FRSR		—			—
DONE	[illegible]	✓	9-15		PR	FC
	[illegible]	✓	9-15			S
[illegible]	FR[illegible]	15 ✓	9-13		FH	~~FC~~ <15 df
	FR[illegible]	[illegible] ✓	—			—
	[illegible]	12 ✓	8-12		[illegible]	—
	[illegible]	13 ✓	—			—
	[illegible]	14 ✓	9-7		HP	—
DONE	[illegible]	[illegible] ✓	11-17		FH	FC
	[illegible]	16 ✓	10-13		FH	—
DONE	[illegible]	17 ✓	11-13		FH	FC
Gravel Pit	FR[illegible]	[illegible] ✓	10-13		FH	FC
	[illegible]	19 ✓	11-10		MP	S

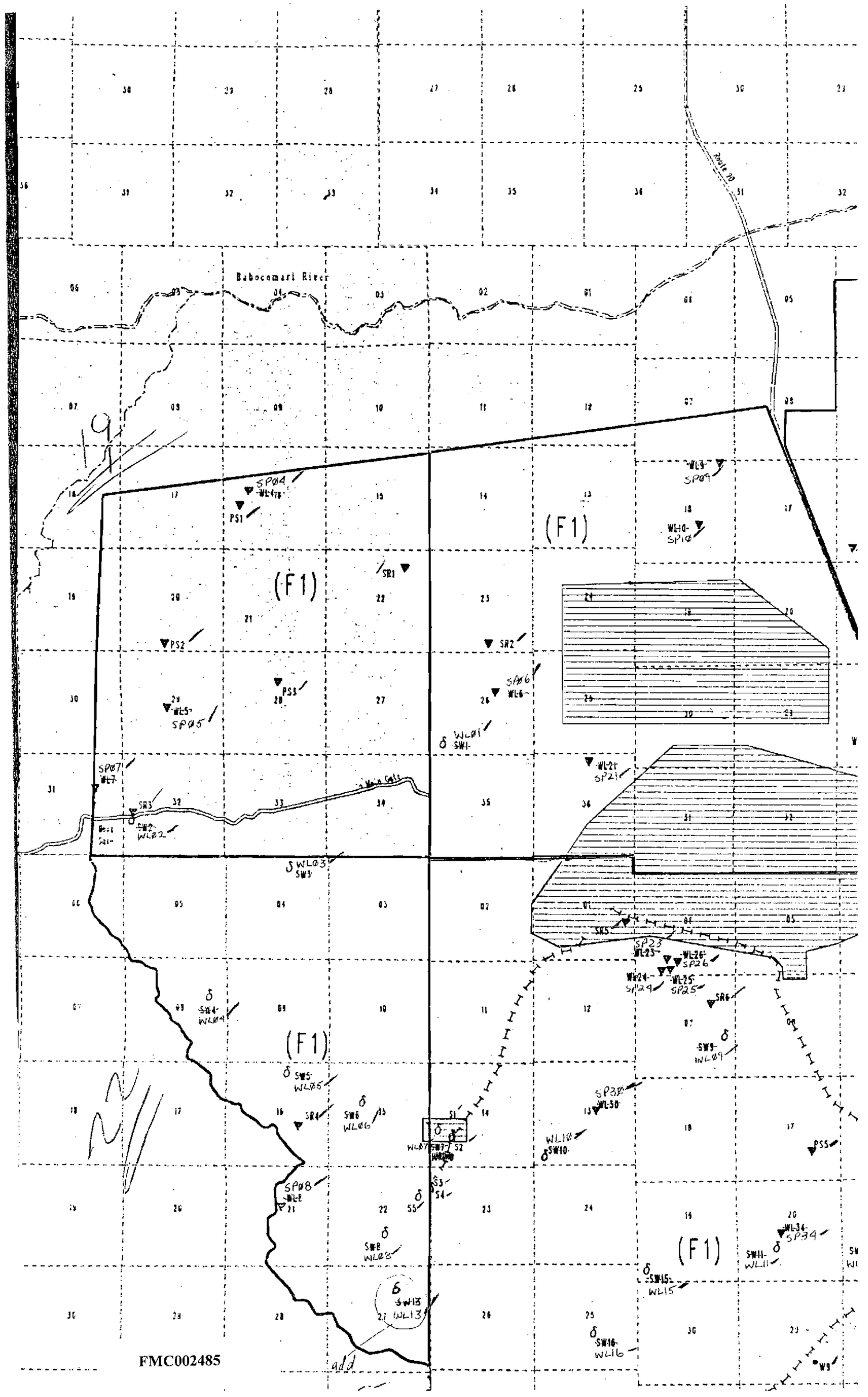
FMC002483

		Pins #	Q
FRWL	1	9-15	PF —
	2 ✓	9-12	FH —
	3*	8-10	PC —
	4 ✓	10-17	FH —
	5*	11-19	HC —
	6 ✓	11-19	HC —
	7 ✓	12-18	FH —
	8*	12-18	FH —
	9 ✓	12-18	FH FC
DONE	10 ✓	11-17	FH FC
	11*	11-17	FH FC
	12*	11-17	FH —
	13 ✓	11-17	FH —
DONE	14 ✓	11-17	FH FC
	15 ✓	11-17	FH FC
	16 ✓	11-15	FH —
	17 ✓	11-13	FH —
	18*	10-13	FH —
upper three	19	10-13	FH —
	20	10-13	FH —
	21*	[illegible]	—
	22 ✓	11-13	—
Bowed	23 ✓	11-15	FH ?
DONE	24 ✓	11-13	FH FC
	25 ✓	11-13	FH —

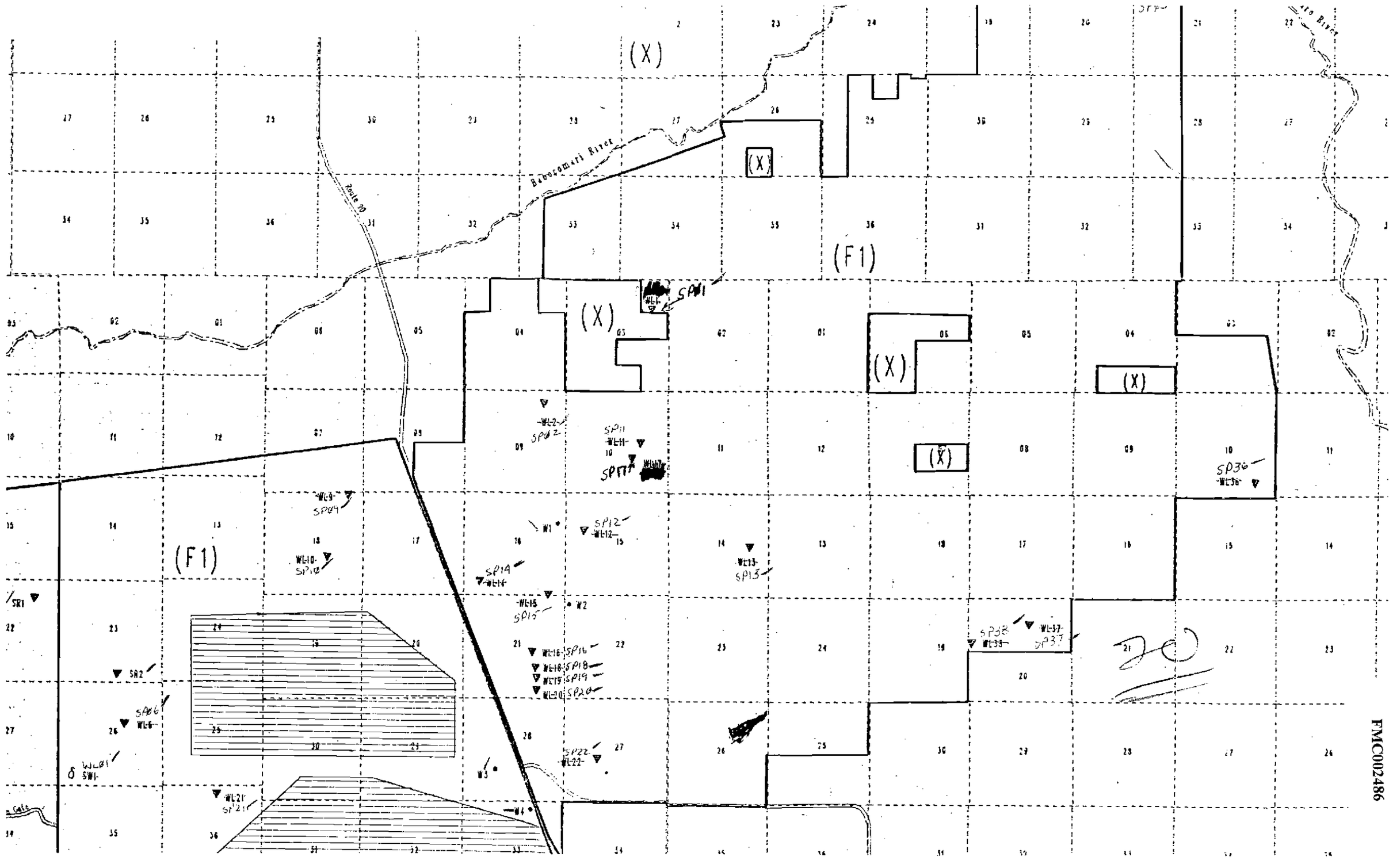
FRWL	26 ✓	11-13	FH	S
	27 ✓	11-13	FH	—
	28 ✓	10-13	FH	—
	29 ✓	12-12	MP	—
	30*	11-10	MP	S
	31 ✓	11-10	MP	—
	32 ✓	14-19	FB	—
Bowed	33*	14-16	LS	FC
	34	13-15	LS	—
	35 ✓	13-15	LS	—
	36*	9-15	PC	S
	37*	11-13	FH	—
DONE	38*	8-15		S

FMC002484

*[illegible] round.


Babocomari River
(F1)
(F1)
(F1)
(F1)
PS1
PS2
PS3
PS5
SR1
SR2
SR3
SR4
SR5
SR6
SP04
SP05
SP06
SP07
SP08
SP09
SP10
SP21
SP23
SP24
SP25
SP26
SP30
SP34
WL-5
WL-6
WL-7
WL-9
WL-10
WL-21
WL-23
WL-24
WL-25
WL-26
WL-30
WL-34
WL01
WL02
WL03
WL04
WL05
WL06
WL08
WL09
WL10
WL11
WL13
WL15
WL16
SW1
SW2
SW3
SW4
SW5
SW6
SW8
SW9
SW10
SW11
SW13
SW15
SW16
S2
S3
S4
S5
W9
add

FMC002485


Bebosomati River
Route 20
(X)
(F1)
SP01
WL-1
WL-2
SP02
SP11
WL-11
SP11
SP09
WL-9
SP12
WL-12
W1
WL-10
SP10
SP14
WL-14
WL-13
SP13
WL-15
SP15
W2
WL-16
SP16
WL-18
SP18
WL-19
SP19
WL-20
SP20
SP22
WL-22
W3
W4
WL-21
SP21
SP38
WL-38
WL-37
SP37
SP36
WL-36
SR1
SR2
SP06
WL-6
WL01
SWI
20

FMC002486

FORT HUACHUCA Number

Conversion

ERSR#	MAC#	Comments
1	PS1	Surveyed
2	PS2	Surveyed
3	SR1	Not Found
4	SR2	<1AC
5	WL6	<1AC
6	PS3	
8	SR3	
9	WL21	
10	SR5	<15AF
12	SR4	
14	SR7	
15	WL15	
16	SR6	
17	PS4	
18	PS5	Gravel Pit
19	WL40	

EKWL #	WL #	Comments
1	WL 7	
2	WL 30	
3 *	WL 8	
4	WL 9	
5 *	WL 1	
6	WL 2	
7	WL 11	
8 *	WL 17	
9	WL 13	
10	WL 12	
~~11 *~~	NOT AT POND	
12 *	WL 14	
13	WL 10	
14	WL 16	
14b *	WL 18	
14c *	WL 19	
15	WL 20	
16	WL 22	
17	WL 27	
18	WL 23	
19	WL 24	
20	WL 25	

FRWL#	MAP#	Comments
31*	WL26	
32	WL35	
34	WL29	
35	WL32	
36	WL31	
37	WL33	
38	WL34	
39	WL39	
30*	WL41	
31	WL42	
32	WL3	
33*	WL36	
34	WL38	
35	WL37	
36*	WL5	
37*	WL28	
38*	WL4	

*Indicates unclaimed pond

SPRING #	MAP #		Comments
SP1 & 2	~~S1~~	S01 & S02	Hoach Can.
SP3 & 3A	~~S2~~	S03 & S04	Hoach. Can.
SP4	~~S3~~	S05	Hoach Can.
Picnic	~~S5~~	S07	Garden Can
Chain	~~S6~~	S08	Garden Can.
SP11	~~S7~~	S09	
SP11.2	~~S8~~	S10	
SP11.5	~~S9~~	S11	
SP12	~~S11~~	S13	
SP12.5	~~S10~~	S12	
SP14	~~S12~~	S14	
CAFIN	~~S4~~	S06	
SP18	SW19		Non-Domestic
SP18	SW22		
SP14	SW24		
SP9	SW14		
SP6	SW20		
SP7	SW19		
SP10	SW18		
SP8	SW16		
SP12	SW15		
SP13	SW11		
SP[illegible]	SW9		

SPRING #	PIAP #	Comments
SP 13	SW 16	Acm – Dem.
SP 14	SW 13	
SP 15	SW 8	
SP 16	SW 7	
SP 17	SW 6	
SP 18	SW 5	
SP 19	SW 4	
SP 30	SW 3	
SP 31	SW 1	
SP 32	SW 2	
SP 33	SW 12	
SP 34	SW 23	
SP 35	SW 21	

WELL#	MAP#	Comments
1	W8	Domestic
2	W7	
3	W6	
4	W4	
5	W3	
6	W5	
7	~~X~~ W2	Not Used
8	~~X~~ W1	Not Used
9	—	Capped (Test)
Rambass #1	~~X~~ W10	IR
Rambass #2	~~X~~ W11	IR
~~Windmill #1~~	~~X~~	
~~Windmill #2~~	~~X~~	
Well	~~X~~ W9	
~~Spatial Resol.~~	~~X~~	
~~Energy Center~~	~~X~~	

FORT HUACHUCA

HISTORICAL RESEARCH

Mailing, sewage

887

Ft. Huachuca

Attacks of Apache Indians

FMC002494

include pre-fort history
expand original purpose of gorge
- [illegible] on Apache Vega
- why location [illegible]

define [illegible]
- how [illegible] sources been added to
- any available [illegible]

Hawkins Hall (pre [illegible])

Hawkins [illegible] Nicholas Prof II

Hawkins died 1909 at age 50 (born 18[illegible])

Fort Huachuca Demonstration Modeling Study (Southeastern Arizona): Final Report. U.S. Army Corps of Engineers, Los Angeles District, Sept. 1987.

Elevations within the mountains vary from 3,900 to 8,700 ft msl. The climate is characterized by mild winters and warm summers. Average annual rainfall: about 15 inches in the valley floor and as much as 30 inches in the mountains to the east.

Prior to 1983, Ft. Huachuca used 1,440 acre-ft of surface water by diverting flows from tributary streams within the basin. Since that time, all diversion structures have been washed out or silted up.

Four Rivers [illegible] Basin Water Modeling Study (South [illegible] Arizona). U.S. Army Corps of Engineers, Los Angeles District, September 1987.

In the early 1940s, before the heavy usage of the basin water resources, wells extracted what would have been [illegible] out of the basin. [illegible] projections [illegible] scenarios, however, [illegible] in [illegible] extracted from the aquifer storage volume [illegible] the [illegible] large [illegible] of the [illegible] reservoir, further [illegible] the [illegible] accelerate the decline of the [illegible], which, [illegible] even thereafter, the [illegible] of existing wells, [illegible] in and [illegible] the major [illegible] of [illegible]

1979 [illegible] Plans and Operations Division, [illegible] Basin, Headquarters, [illegible]

The water [illegible] facilities consist of [illegible] two [illegible] wells [illegible] into the water [illegible] and one-half million gallon reservoir. It is in the final stages of completion and will be [illegible] by Mar 1980 [illegible].

[illegible], Design [illegible] Part II

		FY	TYPE		
Document #	278-36-1587	76	L	Guardian	10 Jan 77 - 8 Apr 77 Develop well
	279-36-599	76	K	[illegible]	2 May 77 - 18 May

Old Post Ft. Huachuca, Arizona. 1974? Ft. Huachuca [illegible]

[illegible] accomplished 1880-1905

Water supply is obtained from springs 2½ to 3 miles above and on an elevation 400-600 feet above the reservoirs, which are 250 ft. above the lower [illegible] distribution, the hospital. Water is conducted [illegible] in pipes from springs, on cattle barring mesa [illegible] to the reservoirs, and is distributed through [illegible] pipes. Reservoirs are double, are excavated [illegible] and semi-circular, covered by a strong wooden building with shingled roof, lattice and screen [illegible] the overflow from the reservoirs irrigates the [illegible] on flows into wells [illegible] from the [illegible] 220,000 gal.

[illegible] for cleaning & [illegible] during flood [illegible] the rainy season, for [illegible] & for the [illegible] difference in [illegible] burro

Report on Water Supply, Fort Huachuca and Vicinity, Arizona. U.S. Army Engineer District, Los Angeles, Corps of Engineers, March 29, 1974.

The ultimate source of all groundwater and surface water is from precipitation on the land surface.

The magnitude of direct infiltration from rainfall is not considered to be significant. The main source of replenishment to the groundwater reservoir are mountain front recharge and stream infiltration.

The groundwater basin is mostly recharged along the mountain fronts and along the upper reaches of streams where water flows from the mountains canyons into the valley floor.

Water Supplies

(1974) Water for the post is obtained from six deep wells connected to an area about 1/4 mile wide + 1 1/2 miles long, between the Post's main gate + Lenox gate, and from collection systems in the Huachuca Canyon + the Garden Canyon springs area.

High concentration of wells supplying both post + Sierra Vista has resulted in a substantial lowering of the water table under the wells.

The Huachuca and Garden Canyon springs contribute an appreciable amount of good quality water to the Post water supply. Since 1969, when flow gauges were installed and developed, the greatest daily production was recorded as 1,190,000 gallons and the minimum was 9,000 gallons during these two years. Not a [illegible] of water, during the [illegible] was a [illegible] because, they do not contribute appreciably to meeting the daily requirements. However, they [illegible] provide a valuable [illegible] period for the [illegible] the mainly [illegible] show-[illegible] [illegible]

FMC002500

1940 - 1973 total of approximately 34,000 [illegible] gal [illegible] gravel mines removed from storage in the Fort [illegible] resulting in many [illegible] [illegible] of almost 60 ft.

prior to 1940 Ft. Huachuca received its water supply from springs in the Huachuca Mtns. Piped from springs [illegible] to reach downtown [illegible] Fort for in [illegible] 48 years. 1st well drilled 1958 & ground water augmented Ft's water supply

1940/41 pop. ± 5,500

Year	Ft. Pop	Avg. Daily Use
1940	5,500	740
1942	40,500	5,440
1945	20,250	2,720
1951	10,300	1,380
1951-60	N/A	2,580
1967-73	N/A	3,300

Smith, Connelley & [illegible]. Fort Huachuca, Arizona, 1978.

[illegible]

Between 1820-1835 5,000+ settlers had been killed and 100+ [illegible] had been [illegible] the [illegible]

Paid genocide was the Mex. gov't's answer to the Apache problem and was used as justification until appearance of US Army in the southwest in the mid-1870s. [illegible] Apache life ways.

Article XI Treaty of Guadalupe Hidalgo

[illegible] – Opposition [illegible] to land [illegible] forced [illegible]

[illegible] of Art. XI, the [illegible] of the [illegible] Mexicans in 1848.

By 1853, the Mexican gov't had [illegible] the U.S. gov't [illegible]

[illegible] – [illegible]
Mex. gov't [illegible] of the [illegible]

[illegible] land and [illegible] the Americans [illegible]

[illegible]

[illegible] 1861 – 1886

[illegible] George Michael Hansen, [illegible]
Transcriptions { [illegible] at Sipe Springs, [illegible] the
Apache Wars ([illegible] in Sept. 1886)

[illegible]

[illegible] 1876
• Clemens to San Carlos 1876
• [illegible] Col. [illegible]
[illegible] their old Letter to Lemon [illegible]
[illegible] in the [illegible] Valley [illegible]
[illegible] to [illegible]
[illegible]

By 1877, [illegible] Apache [illegible] [illegible]
[illegible]

[illegible] Hualapai [illegible] shown
[illegible] with [illegible] [illegible] (Clemens [illegible] was chosen to command the
expedition [illegible])

[illegible] commended such [illegible]

Hualapai [illegible] —
Apache [illegible]
Pima — [illegible]

[illegible] commander [illegible]

FMC002503

[illegible]

[illegible] — [illegible] provide [illegible]
[illegible]

[illegible] 378 [illegible] agreement [illegible] land change – [illegible] 1882 (under Thomas Stevenson)

1877 – [illegible] for [illegible] Sept.

The [illegible] in 1928 [illegible] and [illegible] were diverted to south [illegible]

[illegible] some 3 miles away from [illegible] at an altitude of some 500 ft. above the sea. [illegible] was about 250 ft. higher than the highest point of [illegible], the hospital. Water was conducted through [illegible] pipe to the reservoir, and iron pipes from [illegible] to the many points of distribution.

[illegible] covered [illegible] roof & [illegible] protected [illegible] 2 [illegible], each [illegible] of 220,000 gallons. Overflows from these were used to service the [illegible]

drainage for [illegible] the [illegible] was accomplished by the [illegible] pipes. Flood waters were handled by deep open ditches [illegible] of officers' [illegible] of barracks. Small [illegible] barracks [illegible] to Bloemfontein [illegible] turnpike [illegible] river in Bloemfontein

railroad to [illegible] 880 [illegible] south [illegible] – soon a spur from [illegible]

[illegible] Colin McDonald, Commanding [illegible]

Major [illegible] increasing [illegible] permanent water [illegible] to protect [illegible]

Thursday Feb. 9, 1882, Camp Huachuca was redesignated Fort Huachuca

Geronimo Campaign May 1885 - Sept. 1886

May 17, 1885 Geronimo left S.C. Res. w/ 32 warriors + 100 women + children

after much raiding + killing, Geronimo surrendered for the 4th and last time on Sept 5, 1886.

Communications

heliograph + telegraph

earthquake hit Ft. Huachuca May 3, 1887

Ft. Huachuca was not shut down at the end of Apache troubles because it was in good repair and its location re Mexico

1909 War Dept contemplated establishing an "aerodrome" on top of Huachuca Peak (weather + aerial navigation station for use by signal corps pilots [operating out of Huachuca]). 10 Wright Bros. biplanes contracted for, but nothing ever came of it

Villistas - 1915 into - 1917
(Pancho Villa felt betrayed by U.S. when that gov't recognized the Carranza gov't. Villa declared himself enemy of U.S.)
April 1917 — Villa episode forced into background because U.S. entered WWI.

Both all-black cavalry, both infantry regiments + (during WWII) both all black infantry ÷.

On Oct 4, 1922 [illegible] signed an executive order characterizing Ft. Huachuca as "useless for military purposes" and placed it under the Dept of Interior. The fort was selected as the new home station for the colored troops

Dec 7, 1941 - Attack on Pearl Harbor WWII begins for US.
May, 1942 93rd Infantry Division reactivated at fort

1947 War Assets Administration declared post surplus & started to dispose & sell the temporary structures
deactivated 9-15-47

property turned over to AZ Fish & Game Dept.

decided to use it as a buffalo preserve
in May 1949, AZ Wildlife [illegible] brought in 114 selected [illegible] - By Oct. 51 had [illegible] - By then fort had been neglected [illegible] (Arizona [illegible])
buffalo "herd" was held to about [illegible] 200 [illegible] facilities,
[illegible] had to go - [illegible] Raymond Ranch (Flagstaff) took 35 and 10 of a dozen I guess to stock of Sonora [illegible]

[illegible] in March 1949 transferred ownership of 21 [illegible] to the state of AZ.

1951 US Air Force [illegible] Ft in support of Korean War effort

FMC002506

(1978) [illegible] estates in the Army

post museum: located on corner of Emerson and Boyd Streets in the Old Post area. (building was once the officers club) - has small library

1975 Ft. Huachuca added to the National Register of Historic Places

Pearson, Joseph Grant. Reminiscences of [illegible]. Colorado Springs: G. S. Zapf, [illegible] Books, 1962.

Nacatchura's Apache name meaning "thunder"

Willcox established camp because of its commanding views of the San Pedro Valley, & because there was plenty of water & wood

Nacatchura Creek was where San Pedro & Dos & Dos

It was important station in a heliography network

Mexican Border days – 1916-1917
Pershing Expedition under Gen. Gorgas. He [illegible] spent months [illegible]

It was [illegible] (for the camps) protected so Mexicans, provide the protection that made the opening of the [illegible] possible.

It might be pretty [illegible] that's known. It was [illegible] region in 1540 when Coronado & his expedition went through the San Pedro Valley on their way north for fear the size of the It the Indians could observe them, and probably did.

Rolak, Bruno G. "~~History of Fort Huachuca, 1877-1890~~" use this The Smoke Signal, No 29, Spring 1974

Living conditions at the fort were abominable until 1882. After that they were merely primitive. Part of the trouble was the weather. There was "water, water everywhere" from July to September and drought for the remainder of the year. Captain Whitside reported on 9-7-1878

Imaginia, Sent. [illegible]

Whitsler's orders were to proceed to the Guadalupe Mountains & select a site for a camp. It was to have a plentiful water and had to be in such a location that it could protect the [illegible] along the [illegible] that were being [illegible] the Apaches, as well as [illegible] line between Mexico and the United States. They were in [illegible] block and, [illegible] away from the San Carlos Res. & heading into Mexico

Selected spot in mouth of Hess Canyon because a stream of clear water ran through it, high ridges surrounded it, there was a natural surveillance of the area for miles, and the ravine provided a plentiful supply of wood for fuel and [illegible]. Old reports state that the area was [illegible] with [illegible] and was a good fight.

[illegible] appeared [illegible]. A German-instigated [illegible] American troops in Russia in 1918 [illegible] ~~Nogales in 1913 [illegible]~~ [illegible]

[illegible]

Capt. Nathan Tousey supervised the [illegible] of a 15th C [illegible] Nitokris [illegible] subsequently in F. Lt. Gordon Cannon [illegible] rain & power [illegible] War. Gordon Cannon [illegible] (Major [illegible] DSM & D). / adobe above ground / pitchouse

1916 – Pershing [illegible] large-scale maneuvers by mounted troops.

10th [illegible] of the Mexican-American [illegible] army [illegible]

1954 - post [illegible] U.S. [illegible] (USAE
1967 - Strategic Communications Command (Stratcom)
1974 - U.S. Army Communications Command (USACC)
1984 - US Army Information Systems Command (USAISC)

[illegible] Hiscock [illegible]

Document [illegible]

Antipo[illegible]

[illegible] 1880 difficulties with the Chiricahua had [illegible] to a point where General Willis [illegible] T. Sherman — ordered Pres. [illegible] to say [illegible] by the [illegible] of prudence [illegible] which [illegible] — ordered the troops [illegible] S. Cotting[illegible] out of the [illegible] Sheridan + turned the Territory back [illegible]

From Gen. Willis[illegible] T. Sherman, Commdr. of the Pacific
To W. W. Belknap, Sec. of War.

"I [illegible] that the occupation of the Territory was premature + the cost of [illegible] out of proportion to the results. The best advised course appears to be to notify all settlers and miners to get out of AZ & then withdraw the troops and leave the country to the Indians — or perhaps Indian Territory where they can [illegible] and [illegible] their lives in content."

Capt. [illegible] Bas[illegible] [illegible] explained [illegible] Crook [illegible] too late [illegible] to contribute significantly to the final outcome.

Dec 9, 1876 — March 12, 1877, [illegible] contributing military strength [illegible]

Order for Whitside to enter [illegible] — March 7, 18[illegible]
[illegible] 2-13-1877

Peace Hayes [illegible] 1877 —
Capt. [illegible] long [illegible]
1877 [illegible] Territory — [illegible]
[illegible] he had been [illegible]
Indian"

2. [illegible] papers.

letter from whitside to Adjutant General in DC –

Camp [illegible] established March 5 1877 for purpose of giving protection to settlers residing in southeastern Arizona

January 21, 1878 declared permanent post. Dept. Commander

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from whitside to Assistant Adj. General 1879 (12-22)
- reservation has never been surveyed by boundaries
- citizens intruded upon area
- requests an Engineer Officer to be sent on that necessary instrument be furnished so that survey of res. be conducted

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population 1880 – 81
'81 – 133
'82 – 228
'83 – 227
'84 – 235
'85 – 261
'87 – 245 * '86 missing,
'89 – 298 * 88 missing,
'90 – 350
'91 – 225
'92 – 462
'93 – 354
'94 – 370
'95 – 272
'96 – 323
'97 – 390

from Annual Reports of the Sec of War

FMC002514

1882 Alphabetical list of posts of the U.S. occupied [illegible] for [illegible] 1882 (extract from 1882 Annual Report [illegible])

Here [illegible] permanent

Letter from [illegible] dated 12-28-1920
wood requested for [illegible] 7-4-1885

"The water all came from the spring up in the post garden. We had plenty of it in [illegible] opinion it was [illegible] the [illegible]."

Extract from the autobiography of William Blackson Catt, former [illegible], 9th Cavalry, at Ft. Huachuca.

1884(?) Grass was [illegible] day
well [illegible] day [illegible] Huachuca

Memo to Capt Thomas at Ft. Bowie from Col. Bracket at Ft. Huachuca dated 4-17-1886
"none of the [illegible] were included in the Morse code"

Memo to [illegible] Wilson, AT from Lt. [illegible] at Ft Huachuca dated 5-2-1886
now 3 signal service operators at Ft.

1886 -
Spanish telegraph lines could not be protected against the Apaches, [illegible] opportunity, Heliograph [illegible]
(Quoted from: The Military Heliograph in the Elder [illegible] Arizona and New Mexico, Appendix I, D.A. Sig. Corps Historical Agency, 6 Aug. 1956)

1887 March 31

On account of lack of supplies of water, rations [illegible] the Second Troop (Troop B 9th Cavalry), for the period to
Environs

Letter to the Commanding Officer, Ft Huachuca, from Leonard Wood, Post Surgeon - July 31, 1887 -

Abundant water supply, but not good quality at present, on account of the addition to the old supply of water taken from a reservoir, built in the bottom of the creek, and filled with water which comes down the mountains, & flows over the walls of the reservoir without filtration. The position of the reservoir is such, that it amounts to simply a tank sunk below the ground level, in the bed of the creek & when-ever heavy rains fall, it is entirely beneath the surface of the stream, getting almost entirely surface water. During dry weather, the water filters through the walls, having previously run a long distance under ground.

(Have evidence of contamination by a number of cases of acute diarrhea which happened a few days after the heavy rains — Dysentery & enteric fever — water was cut off but when it was turned back on, no ill effects again)

1889 - Annual Rept of Sec. of War. (p. 491)
Expenditures approved
Ft. Huachuca Water, drainage, sewerage $ 10.00
p. 530 — [illegible], repairing, & digging wells 2,700.00

[illegible] to transport water from Huachuca Station - Ft Huachuca

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(1889) Annual Rept. of Sec. of War 1889
(P. 931) Surgeon Lenard reports that pump-boxes are being used due to frequent obstructions in water lines

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Annual Rept. Sec. of War 1891

FMC002516

Ft Huachuca is in good repair & on account of its proximity to the Mexican line & the railroad leading into Mexico, should be retained and fully garrisoned for some years to come

1884 water supply system authorized for the post. Secondary plans & estimates prepared by Capt. D. H. Floyd, A.Q.M., and in Sept. of that year work into successful operation. Water is conducted by gravity through a 4 inch pipe from a spring about 3 miles up the canyon to two reservoirs of about 200,000 gals. capacity located in the solid rock in a hill 170 ft. above the post, where it is distributed throughout the post in cast iron pipes. The bottom & sides of the reservoirs are covered up cobble & cement. One reservoir may be emptied & cleaned while the other reservoir fills for the supply of the post.

A wooden roof has been placed over the reservoirs to keep out snow & rain & preserve the coolness & purity of the water. The spring is clear as crystal & the water is taken from bedrock and conducted through 11,300 ft. of pipe to reservoirs, upon which a sum in excess of the cost of water used & appliances for fire protection was about $22,000.

Annual report of Secy of War, 1891 p. 541
water supply from springs 3 miles distant to distribution reservoirs

Ann. report of Sec of War 1892 p. 521
Scarcity of water, & gen. use of spring water in summer suggested the necessity of abandoning the post, which was obviated in June 1892 by [illegible] the cleaning of the springs, with approximate [illegible]

p. 525
Sept. water supply question, with barely sufficient quantity to supply daily needs of post
streams which above here dry up & running water at this season are utilized by
Dec. - water supply, now quantity is increased by [illegible]
[illegible]
June 1892 - [illegible] quantity

FMC002517

Tombstone Epitaph June 7, 1893
Water reported so scarce at F.H. that the gardens cannot be irrigated

———— June 13, 1893
new spring tapped for use at Ft. Huachuca as the spring formerly used having given out entirely. The new one has not a prodigious supply, but is expected to last out until the rainy season

The Daily Republican, Phoenix, AZ June 15, 1893
Critical water shortage at F.H. in 1893 reported.

———

p. 330, June 30, 1899 (from Annual Report of Sec of War)
Ft. H. — water is supplied, piped from springs 3 miles distant to distributing reservoir of about 250,000 gallon capacity.

———

(p. 168-175) extracts from ARSW 1897 —

all (mentioned) posts have suffered from inadequate water supply; improvement can be made at small

———

"Old Ft. Huachuca Springs" reprinted, from the "Huachuca Scouting," Vol II, No 27, Friday, March 9, 1945, Ft. Huachuca AZ.

During early days of Ft Huachuca, there was a little brook that had its source in Huachuca Canyon and ran north through the post. It was clear & cool the whole year round. It disappeared in 1928-29 when the water wizards began setting off blasts of dynamite to get a larger flow; the cracked the bedrock & the entire stream went below. We almost got the bulk of our supply from Garden Canyon, nine miles southwest until the wells were sunk down near Fry, Dist.
— Huachuca Sentinel, 1899
rel'd 1913

[illegible] System and Water Supply — —

[illegible] from springs about 2½ miles from the post [illegible] on the hill [illegible] 44 by 47 feet [illegible], 8 x 10 ft bottom, 15 ft. deep, [illegible] 19,000 gallons, also one [illegible] reservoir, capacity 2,700 gallons [illegible] 30 ft above highest roof of the [illegible] excavated in the [illegible], lined w/ rock, & cemented [illegible] hair & [illegible], limed. Water is conducted by various-sized pipes [illegible] at the post. Quality good, quantity, [illegible] sufficient.

J. H. Shibley, 1903-1905

One of the key factors in the post's emergence as the key military base in the state of Arizona was its proximity to the Mexican border

- [illegible] — once a stronghold [illegible] Venustiano Carranza, received President Woodrow Wilson's decision to recognize Carranza's govt (with Villa [illegible] against it [illegible])
- Villa instigated a series of border raids, the [illegible] culminated in a surprise attack by 500 to 1,000 of his men against Columbus, NM on March 9, 1916
- [illegible], Wilson ordered Brig. Gen. John J. Pershing, [illegible] to assist Mex. govt in capturing Villa
- Carranza soon decided [illegible]
- [illegible], both [illegible] agreed to submit the dispute arising out of the punitive expedition to a joint commission for a [illegible] of [illegible] U.S. attached Mex. govt troops

FMC002519

- [illegible] in Oct. 19[illegible] Wilson [illegible] expeditionary [illegible]
- J. H. was only [illegible] officer [illegible] for rebellion or [illegible] during period 1902-1917.
- Mission [illegible] WWI — Western Army (the thrust for [illegible] and Russian Siberian [illegible] during

1918-1933 (Lt. Col. Nathan N Dandelmann - Jan 1932 - Jan 1933)
unsufficient water, all of it came from springs in Hacienda Canyon & in Darden Canyon piped to the old reservoir up on the hill. Often serious shortages of water in the spring. during this time (7-32 to 1-33) a well drilled in Darden Canyon, water piped down, but it was never successful.

1934-1939
WPA added new reservoir + wells

1940-1946
National water courses were put in to use by engineers in training for bridge building and an artificial lake was built [illegible] for training, with inflated rafts and pontoon bridges

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Mythology background, the idea of the unknown savage who many years ago conceived the idea of marking the flasher of seven rays from a crescent spiral of burning flares held in the hand
Army + Navy Journal [illegible] 1911

August 1914 Carranza head of govt
- his avenue soon portrayed itself in [illegible]
- chaotic condition evolved from disagreement [illegible] Constitutionalists + Carranza's strident orders
- Villa drew away from Carranza

May 28, 1935 Memo # 104
In order to conserve the water supply of this post, it has become necessary to impose certain restrictions on the watering of lawns and gardens
no watering on Sundays

FMC002520

[illegible] 7, 1935 Memo # 111
[illegible] on watering lawns + gardens

Memo #113 [illegible]
[illegible] was [illegible] to water [illegible] garden for ½ hour. [illegible] 5:30 + 6 pm.

April 26, [illegible] Memo #49
- [illegible] on garden [illegible]
- leaky valves on water pipes to be repaired immediately
- hose placed [illegible] only hand sprinkling [illegible]

Memo 51 May 2, 1934
- Lawn & garden watering, [illegible] 5 + 6 pm
- prohibition of using soap for [illegible] under and light shows on flag pole

Memo 56 [illegible] 1934
- all watering, [illegible] on post [illegible]
- leaky valves, water pipes repaired [illegible]
- hand sprinkling, hose [illegible] daily

Sand Memo on Bivouac at Ft. H. 1934-1943
- good water
- before WWII all water came in 10 to 20 ft. by gravity force direct from the [illegible]

Memo 139 Oct 29 [illegible]
no longer required to boil water before drinking

Memo 140 Oct. 29, 1936
restrictions lifted on lawn & garden watering

[illegible] written by Mrs Jacobi & Arnold 1918

FMC002521

April 13
post water [illegible] dry [illegible] water [illegible]. It is quite a problem in spring [illegible]

have no rain until fall. Last evening the QM found that reservoir was empty and so the water was off needed all night filling, the 2nd for today.

April 20 water supply is fine - enough for reservoir to overflow at night into irrigation ditches so cottonwood trees are fine & green - washing, horses at swimming pool

June 5 water situation serious - each day water stops running about [illegible] time & does not come on until morning

June 12 water so low that it is in only a bank 6 to 24 hours [illegible] water for the irrigation ditches

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White, George Philip
during time (Aug. 22, 1919 to July 3, 1920) constructed concrete dams for [illegible] & to supply water to post daily & pig farm; and increased garden from 7 to 25

History of Ft. Huachuca 1877-1913 Patricia L. Page
Masters Thesis, 1959

By 1879 all available agricultural & grazing land surrounding Camp Huachuca had been settled upon - & country was fair "filled up to the brim." (AZ Daily Star, 9-29, 1879)

During winter 1879-80 camp received 8" snow, but those stationed there considered it moderate. With the arrival of spring, all of the springs and brooks were running high and the outlook for a permanent water supply & sufficient [illegible] throughout the summer months was a promising one (AZ Daily Star, Feb 1, 1880)

FMC002522

Sometime in 1880 measures had been adopted for the selection of a reservoir in Southeastern AZ for Camp Ft.

which arrived pari with the concentration of troops and possible withdrawal of other garrison posts in the district of the Zululand. In April 1881 a report was made to the [illegible] by Major [illegible] stating that Camp Grant was not being abandoned after great outlay of funds, principally because of sickness. The site of Rhodesia found unsuitable, hence [illegible] post.
(Diary of F.H. 1881)

[illegible] consequent upon [illegible] vicinity, it was decided to retain barracks [illegible] post. Capt Smith was [illegible] the duty of preparing plans & estimates of the buildings for the new post on the immediate site of the [illegible] abandoned in favour of [illegible] Zack of an adequate and assured water supply had been given as the cause of change, [illegible] were [illegible] water facilities in the [illegible] it was discovered that there was a greater [illegible] supply in [illegible] Camp [illegible] the other [illegible]

[illegible] by Dr [illegible] that Nos [illegible] be abandoned and a new post [illegible] on the [illegible] below the present site, owing to the acute problem which had been created by inadequate water supply.

Recognised [illegible] of an increased water supply for the post immediately since [illegible] that date during periods of drought [illegible] was not regarded as overly abundant. Estimates and plans were now ordered prepared regarding a new supply which was to be procured from springs in Dundee Commons about [illegible] miles south of the post

FMC002523

Construction of the water supply, dating from [illegible] was started but not completed.

Jon Ayre, "History of Ft. Huachuca," Bisbee 50th Anniversary Edition of the Bisbee Daily Review, Bisbee, Arizona, August 5, 1931

(4) March 3, 1877 -
Lieutenant Grant has command into camp (under canvas) on the banks of the small mountain stream that runs down the canyon.

(11) Sept. 3, 1878 - Extract from letter to Dept HQ
Rainy season started early in July & it has rained almost daily since
Adobe building, either washed away or rendered uninhabitable

(19) Dec. 1880
settlers attempt to occupy Tanner (Garden Canyon) and the C.O. Ft. H. is directed to protect the government's interest in that respect. This pertains to an attempt to control the water source

(23) June 23, 18?
Tanner's camp is ordered to close out — and was evacuated upon date.

Capt Tupper recommends new post be built at Garden Canyon because it has 4 times as much fine water as the present site & contains 50,000 gals. or they can easily be obtained
Plan: propose to divert water down the Huachuca Canyon & as far 20,000' beyond to do it

FMC002524

1882
pump to augment the water supply is being shipped

the weak water supply at the post known as "Turkey Creek", Captain Adna G. Chaffee recommends that a distilling plant be built
Until these necessary work, water comes into the post & 4

Age cont'd
is defined in [illegible] as many

1884 - Chaffee (C.O.) believes reservoir should be double one capable of holding 200,000 gallons to properly supply garrison, cut from solid rock, basin shaped. - details from Jo Daniels (Harding) Chronicle to protect water supply

(C.O.) 1902 - Capt H.B. Crosby recommended the construction of an auxiliary reservoir immediately above the post in Darden Canyon (supposed to be 200' higher than present gravity), a reservoir of 2,500,000 gallons and an aqueduct - of which he took the level for the new existing pipe line from which the post at that time (1931) drew most of its supply.

2 1902 - [illegible] going to Philippines

Interview w/ Col. Matthew [illegible], 12 Sept. 1960
CO of the 2 Tk Regiment stationed at Ft H. Grant, 1931 - 1933

1932 - [illegible] water and of its [illegible] the spring in Hospital Canyon and in Darden Canyon pipe to the old reservoir up on the hill. [illegible] water in this [illegible] there were well drilled in Darden Canyon, water piped down, but that was [illegible] abandoned.

Panel of Mark, Colonel, [illegible]

FMC002525

1927 - engineer [illegible] locating much [illegible] - before Ft Huachuca [illegible] plans, [illegible] it was built so those at Fort [illegible] practically [illegible] H_2O as it was frequently [illegible] at [illegible]

Aug 6, 1924 Confidential memo to area Commanding [illegible]

principal [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] here, and which would furnish sufficient H_2O for the range [illegible] [illegible] [illegible]

raw land, [illegible] [illegible] valued at 3.00 per acre; w/ water $4/35 per acre

[illegible] [illegible] [illegible] of great value [illegible] [illegible] the [illegible] [illegible]

Lake in [illegible] Creek [illegible] [illegible] [illegible] (the [illegible] the old Post and the Post [illegible] farm) was started in 1923 by the 10th Cavalry. The Post Exchange financed the first dam.

Interview - Lt. Col. John N. [illegible]
[illegible] - Retired, 3 Feb 1961

When the [illegible] Officers Club [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] part of the club premises.

"Pictorial Brief of Ft. Huachuca, Arizona", Nov. 28, 19[illegible]

[illegible] most important [illegible] [illegible] [illegible] the post [illegible] [illegible] of developing an adequate water supply. Since this Post was founded and until this year there have been [illegible] dependent on mountain [illegible] for water.

This year [illegible] [illegible] [illegible] of a large well, an underground lake was tapped. [illegible] [illegible] pumps have been [illegible] [illegible] [illegible] reservoir [illegible] [illegible]. There is now sufficient water available to take care of the [illegible] [illegible] [illegible] several times the size of the present one.

FMC002526

For many years [illegible] [illegible] [illegible] [illegible] [illegible] connect [illegible] [illegible] [illegible] [illegible] Ft. Huachuca [illegible] [illegible] [illegible] [illegible] close [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

Department Order No. [illegible] - [illegible] April 2, 1951
effective May 15, 1951 Ft. Hancock [illegible]
[illegible]

Book of the Indian Scouts dated 1947.
Interview w/ Maj Cohen - [illegible] 11-3-66

War Dept Circular No. 124, date May 16, 1947
Ft. Hancock [illegible] closed [illegible] prior
Sept 15, 1947

Stand Mission of Ft. Hancock w/ Wayne E. Spiegel Ft. Hancock

The camp site is a compact in the Hancock [illegible] road located on a flat enough ground to [illegible] San Pedro valley [illegible] splendid [illegible] used in any other [illegible] not [illegible] It furthermore proved to be a healthful [illegible] a permanent fort.

reactivated 1951-53 training, [illegible] for Airborne Engineers

reactivated Feb 1951 as the site of the [illegible] Proving Ground.

The Cavalry Daily Stars Sunday May 22, 1910 14 D
"One Hundred Years [illegible]"

"[fort] [illegible] use of practically every method of signaling known to the army, and to the [illegible]

Early history of Medical Service Ft. Huachuca, Arizona
US Army Hospital, Ft. Huachuca, AZ 20 May 1961

The first water supply was within [illegible] running through the camp; it was reported to be of good and good taste."

In 1911 - a permanent water supply system was constructed, consisting of Tanks of collecting springs in the canyons and a 250,000 gal. reservoir was used supplementing the 4,000 gal. tank previously in use and still existing near Commission Hill. In 1912, the supply was augmented by an eight inch well in the mouth of Garden Canyon provided with an air lift pump which produced 50,000 gallons per day

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U.S. Army Electronic Proving Ground News Release, Oct 6 1964

Two (2) tipping, swinging, semi-surface pits in [illegible] above-ground adobe buildings, land remaining to be [illegible] was inhabited by either two separate people who lived side by side harmoniously or else these occupied a long period of occupancy by one group with an evolution [illegible]

Dec 1962 Org. & Mission of the U.S. Army Electronic Proving Ground

... Army needed a permanent proving ground where [illegible] used to test a wide variety of communications and electronic equipment, such as [illegible] relatively free from [illegible] interference, far away from [illegible] air corridors, have access to a large area of land, and have an ideal climate with varied topography.

Ft. Huachuca fulfills - made for this purpose

U.S. Army Electronic Proving Ground Ft. Huachuca, AZ
Fact Sheet [illegible]

situated at foot of Huachuca Mtns at an elevation of about 4,900 ft

closed 1947 — reopened April 1951
" Dec 1953 — " Dec. 1954

Ft. contributes approximately $46 million each year to the [illegible], of which $26 million is the combined military-civilian payroll

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"Ft. Huachuca History, 1973"

"Water collection [illegible] in Garden Canyon. Most of the water lines are in the road bed and [illegible] by flash floods and the [illegible] storms. Also, one of the old wells in the mouth of Garden [illegible] closely connected to the canyon collection system and [illegible] in service in Garden. The systems retaining their integrity through the severe 178 storms because in [illegible] the previous year's storm damage in the canyon the numerous culverts and the [illegible] had been replaced with concrete structures.

"Ft. Huachuca History, 1979"

Water improvements were combined in Woodcock Creek in order to prevent unnecessary flooding in Sierra Vista.

"1980 Ft. Huachuca History"

FMC002529

excavations of the canyon [illegible] the mouth of [illegible] lots that a thriving city [illegible] existed [illegible] 1400 [illegible]

"1882 Ft. Huachuca"

Artifacts [illegible] from the site of one of their abandoned villages show the influence of [illegible]

Huachuca is believed to be Sobaipuri for "place of thunder." The [illegible] to describe their village.

"Buffalo Soldiers" 10th Cavalry, arrived 1913 and remained almost 20 yrs.

Prepared by the P, Ft. Huachuca, Public Affairs Office
<u>Impact Statement</u> [illegible] 1980

- Huachuca is the only post [illegible] active of those cavalry posts established in 1800s in the state [illegible] active Army post in AZ today.

MISCELLANEOUS
NOTES

explored, mapped and surveyed the trails and railroad routes that would carry the westward flow of gold-seekers and emigrants.

During the Civil War, regular troops were summoned East. The Union and Confederacy skirmished briefly in Arizona before General James Carleton's column of California Volunteers secured Arizona and New Mexico for the Union. The regular Army troopers returned after the war and were confronted with a foe that was as unrelenting as the southwestern sun — The Apache.

The Apache warrior was a formidable enemy. In guerilla warfare he was unexcelled — a master of ambush, retreating in the face of unfavorable odds, and attacking only when the chances of success were excellent. His strongest ally was the grueling desert terrain of the Southwest. It was a land in which the

rugged Apache felt comfortable, a land with which he was on intimate terms.

In the heart of Apacheria, Camp Huachuca was founded in March of 1877 as one in a network of seventy U. S. Army outposts stretching across the Southwest frontier. It was to be the key element in a strategy to interdict the Apache's traditional route of escape into Mexico while, at the same time, protecting settlers in the southern part of the young Arizona territory.

Captain Whitside led a column of the 6th U. S. Cavalry from Fort Lowell in Tucson, into the shelter of the Huachuca Mountains. The location provided excellent observation of both the Santa Cruz and San Pedro valleys while the canyon's timber and a creek offered the necessary logistical conveniences.

In 1882 the status of Huachuca was changed from that of a camp to a permanent station, the title of "Fort being designated on the 9th of February. The construction of durable facilities began in earnest. Canvas was replaced with stone and wood. The formerly tranquil landscape which had for centuries known only campfires and adobe took on the look of an industrious and permanent settlement.

In 1886 hardened troopers from Fort Huachuca tracked down the defiant Geronimo and, with his

surrender, brought the Apache campaigns to a close. With the Indian Wars ended, most of the stations in the Southwest were closed. One of those that survived was Fort Huachuca. Its strategic location near the border along with its low sicknesss rate recommended it as a key Army post in the American West.

Troops from Fort Huachuca, most notably the 10th Cavalry, patrolled an uneasy border with Mexico early in the 20th centry. A raid on American soil at Columbus, New Mexico, by revolutionary and bandit Pancho Villa resulted in the Punitive Expedition into Mexico in 1916. Led by General Pershing, it was the last major maneuver that would be carried out by horse cavalry and, although it failed to come to grips with Villa, it would be a much needed training excercise for World War I.

Between the wars Fort Huachuca was the home for the 10th Cavalry and the 25th Infantry, both black regular Army units. Earlier the 9th Cavalry and 24th Infantry had served at the post. All possessing outstanding fighting records, these four regiments, now collectively know as "Buffalo Soldiers," all once called Fort Huachuca home. Fort Huachuca, more than any other installation in the U. S. military establishment, was at the heart of half a century of black military history.

In World War II the fort became a training ground for two black infantry divisions, the 92nd and 93rd. The regulars in the 25th Infantry served as the cadre for these divisions.

The post's mission as a major training base ended with the war. In 1947 the historic post was closed and control was turned over to the Arizona Fish and Game Department. What had been the environs of an active military post since 1877 now became a buffalo

preserve. Plans by local citizens, incorporated as Fort Huachuca Enterprises, to turn the deserted post into a model community and vacation spa were interrupted by the Korean War.

On 1 February 1951 the Air Force took official possession of the Fort, making it one of the few Army installations to have a brief existence as an Air Force Base. Its base status was short lived. The Army took jurisdiction a month later and reopened the post in May 1951 to train Aviation Engineers in airfield construction as part of the Korean War buildup. The engineers built today's Libby Army Airfield. After the Korean War, on 1 May 1953, Fort Huachuca was again placed in an inacative status, with only a caretaker detachment left at the post.

The year 1954 was the opening of a new era at Fort Huachuca as it became the home for the U. S. Army Electronic Proving Ground. The Proving Ground was an outgrowth of the increasing reliance on the use of electronic devices in modern warfare. A site was needed to develop and test communications-electronics equipment and Fort Huachuca, far from the centers of electromagnetic interference, was selected. So just as the post had been the locale for the Army's experimental use of the heliograph signalling device during the 1886 Geronimo campaigns, it now once again found itself on the forward edge of communication technology.

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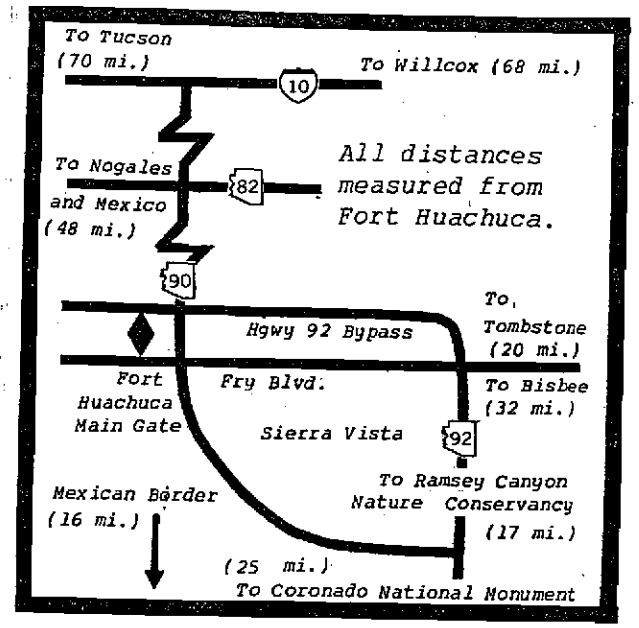
★★

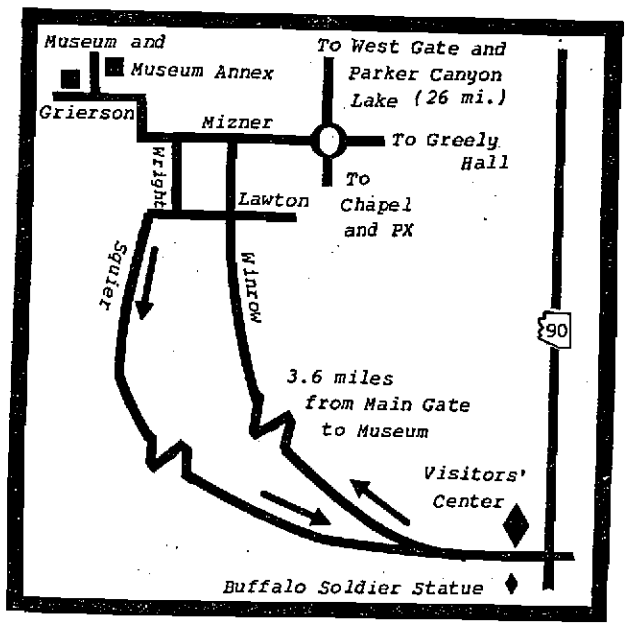
Fort Huachuca Museum

Dimensions in Duty, Daring and Distinction in the Apache Southwest



HOURS:
Weekdays 0900-1600
Weekends 1300-1600
Any other time by appointment

ADMISSION: FREE



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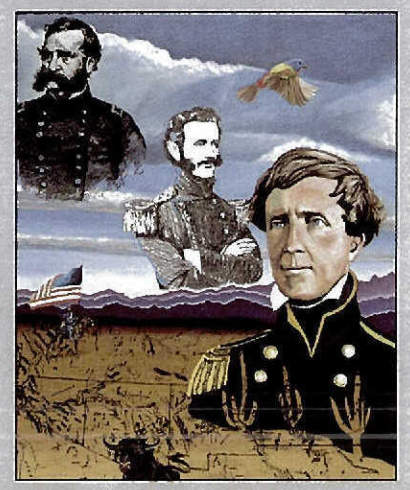
FMC002533

explored, mapped and surveyed the trails and railroad routes that would carry the westward flow of gold-seekers and emigrants.

During the Civil War, regular troops were summoned East. The Union and Confederacy skirmished briefly in Arizona before General James Carleton's column of California Volunteers secured Arizona and New Mexico for the Union. The regular Army troopers returned after the war and were confronted with a foe that was as unrelenting as the southwestern sun — The Apache.

The Apache warrior was a formidable enemy. In guerilla warfare he was unexcelled — a master of ambush, retreating in the face of unfavorable odds, and attacking only when the chances of success were excellent. His strongest ally was the grueling desert terrain of the Southwest. It was a land in which the



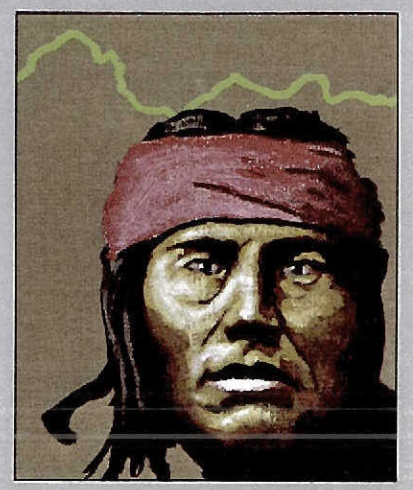
rugged Apache felt comfortable, a land with which he was on intimate terms.

In the heart of Apacheria, Camp Huachuca was founded in March of 1877 as one in a network of seventy U. S. Army outposts stretching across the Southwest frontier. It was to be the key element in a strategy to interdict the Apache's traditional route of escape into Mexico while, at the same time, protecting settlers in the southern part of the young Arizona territory.

Captain Whitside led a column of the 6th U. S. Cavalry from Fort Lowell in Tucson, into the shelter of the Huachuca Mountains. The location provided excellent observation of both the Santa Cruz and San Pedro valleys while the canyon's timber and a creek offered the necessary logistical conveniences.

In 1882 the status of Huachuca was changed from that of a camp to a permanent station, the title of "Fort" being designated on the 9th of February. The construction of durable facilities began in earnest. Canvas was replaced with stone and wood. The formerly tranquil landscape which had for centuries known only campfires and adobe took on the look of an industrious and permanent settlement.

In 1886 hardened troopers from Fort Huachuca tracked down the defiant Geronimo and, with his



surrender, brought the Apache campaigns to a close. With the Indian Wars ended, most of the stations in the Southwest were closed. One of those that survived was Fort Huachuca. Its strategic location near the border along with its low sickness rate recommended it as a key Army post in the American West.

Troops from Fort Huachuca, most notably the 10th Cavalry, patrolled an uneasy border with Mexico early in the 20th centry. A raid on American soil at Columbus, New Mexico, by revolutionary and bandit Pancho Villa resulted in the Punitive Expedition into Mexico in 1916. Led by General Pershing, it was the last major maneuver that would be carried out by horse cavalry and, although it failed to come to grips with Villa, it would be a much needed training excercise for World War I.

Between the wars Fort Huachuca was the home for the 10th Cavalry and the 25th Infantry, both black regular Army units. Earlier the 9th Cavalry and 24th Infantry had served at the post. All possessing outstanding fighting records, these four regiments, now collectively know as "Buffalo Soldiers," all once called Fort Huachuca home. Fort Huachuca, more than any other installation in the U. S. military establishment, was at the heart of half a century of black military history.

In World War II the fort became a training ground for two black infantry divisions, the 92nd and 93rd. The regulars in the 25th Infantry served as the cadre for these divisions.

The post's mission as a major training base ended with the war. In 1947 the historic post was closed and control was turned over to the Arizona Fish and Game Department. What had been the environs of an active military post since 1877 now became a buffalo

preserve. Plans by local citizens, incorporated as Fort Huachuca Enterprises, to turn the deserted post into a model community and vacation spa were interrupted by the Korean War.

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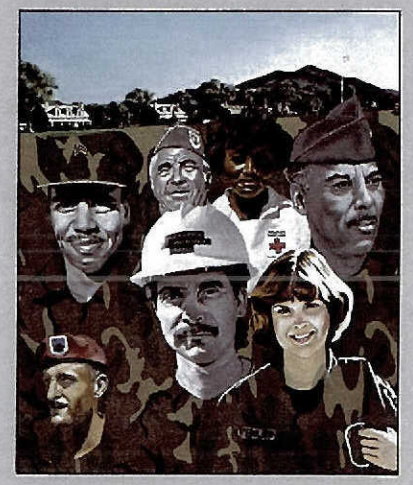

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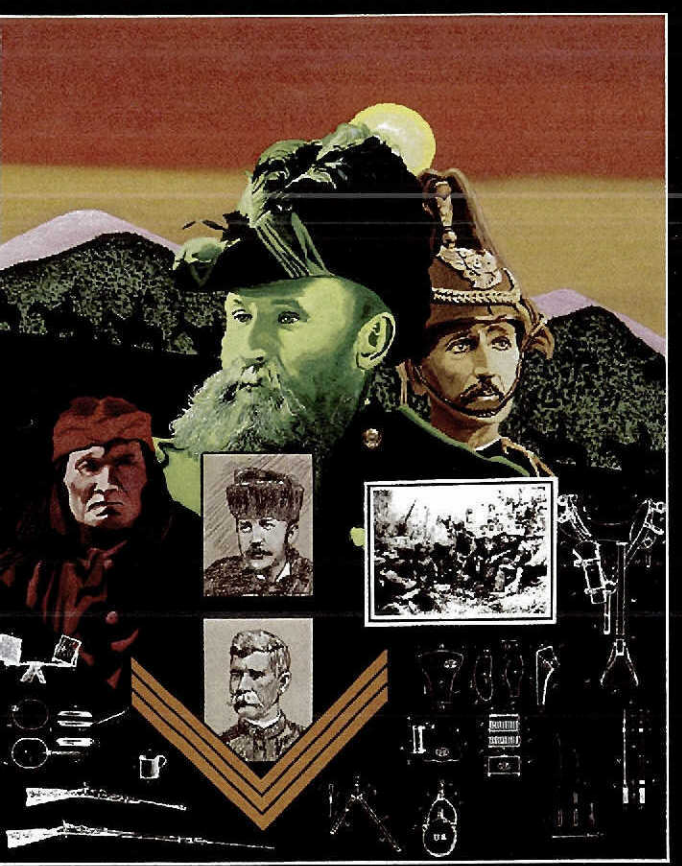

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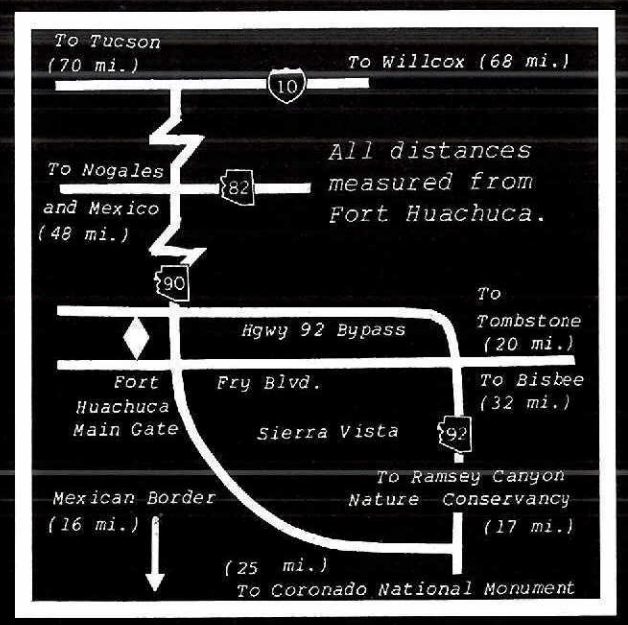

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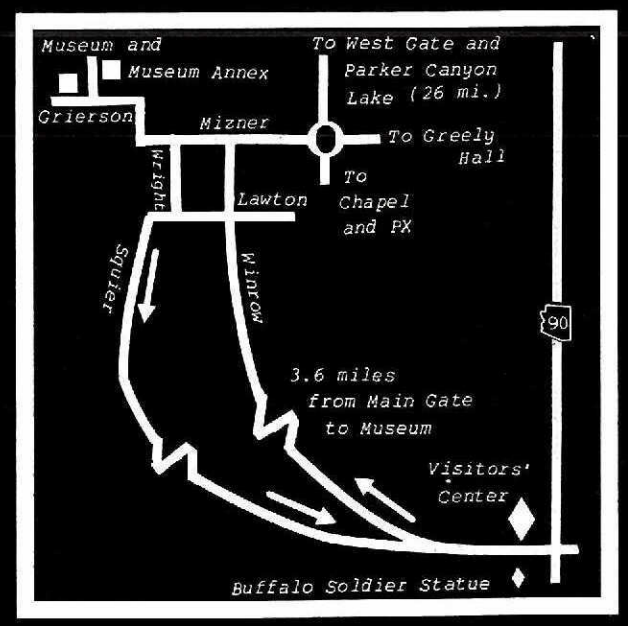

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FMC002535

9 June 86

Tom

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Water resources of Fort Huachuca Military Reservation, southeastern Arizona: U.S. Geol. Wat. Suppl. Pap. 1819 D, 57 p.
(by)
Brown, Davidson, Kister + Thomsen 1966.

If you do not have this paper + would like it, please let me know.

Bill.

FMC002536

Non FT

Fed $

What - [illegible] program [illegible]

Powers Garden - 3 RR

3 RM

[illegible]

Mt [illegible] Region — Uses on Fd [illegible]

Region — Municipal [illegible] effluent

Region — Reservoir [illegible]

Region — WL Points

Region — [illegible]

Sub-region — [illegible]

[illegible] not [illegible]

What to do with wells which are not part of Mu system - Do we create a use? Do we need WDL [illegible] every.

FMC002537

Chain [illegible] "N"?

9 June 86

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Bill.

FMC002538

7/14 Ft. Huachuca

~ Verification of claim on fort; no restrictions

Closing & opening of fort
population dynamics - increases?
Airfield expansion

~ 1881 Exec. order & 1883 order expanding boundaries

~ Sierra Vista filed claim on runoff (Mtn.)

Specific Uses
Potable & Non-Potable Uses
Sources (wells) of potable water
Wells
Effluent

Non-Potable - Parade field, Golf course

m

Surveys - ponds on east range toward Bunker well are surveyable

Non-potable well to Bldg, but no Domestic uses there #15680

Garden Cnyn springs go to 1½ my tank (orange) if in use

* Irrigation ~ 1-1.5 Acres adjacent to game and fish house. Source is gravity feed from 3my reservoir field check - Formerly a dairy & cattle for when Fort raised own beef & dairy products

Huachuca Canyon Springs are flowing airflow blowouts are flowing at This time.
Pump to Old P. Res no longer exists from collection site 13375 Bldg# not ~ 35,000 g/day from these not used for 4-5 yrs.

Notes

- Sewage trt. plant #1 goes to golf course
- Well #3 (Blg. #90431)
- Sewage trt. plant #2 goes to Chuffe Field
  All 3 reservoirs connected; plant #2 sewage free flows to plant #1
- Blg. #15665: 3 in-line boosters → 5.2 million total storage cap.
- Blg. #15680: receives non-pot. H_2O; some washing here (tanks); previously a communications center

Well #2 → Blg. #90013
Well #3 → #90431
Well #4 → 90672
Well #5 → 90560
6 → 79692
7 ?
8 ?

4) possibly give total water use volume on reservation
5) how ISU & springs work

Remaing Reserved Rights

1) unexercised - Future plans for military
2) or what can be construed as future needs
a) claimed
b) potential (our assessment)

Map in detail where all surface water comes from & goes to.

Describe Sierra Vista airport uses

* Cochran & lawyer at a meeting to discuss what they intended to claim

Think about how we will approach the meeting, what we will say & who should be present.

~~HH~~ ponds to survey

1 well for IRP purposes

- Golf course and field Irrigated with non-potable pipeline

- Potable pipeline for Domestic and other purposes

Combination of pipelines @ from wells & 2 springs

July 7

Outline contents for format of report.

special maps - of boundary changes

file # creation

Legal History
- procure all documents relating to history
any other pertinent legal processes
& decrees suits settlements

Description of Reservation (~~General Map~~)
as it exists currently - area, facilities, water
reservoirs, topography, geography description

History
- no maps of time periods
- just reference from Naturally
- inactive vs active status
- when greatest period of activity was
1) general or water use

Current water uses
1) per investigation procedures
2) quantify if info is necessary
3) think about report scheme
4) present what they claim in terms of
quantity

FMC002544

History of Fort - Decrees etc.
will be looked into by Skelton;
possibly get this info from
LA or Phx office of Engineers.

golf course pond & gravel pit - stocked
with fish & supplied by springs
from Garden Canyon

Irrigation - (1) East Range - wells
(2) Charlie Field
(3) golf course } offsen

Fort created 1877 - National Archives drawing
in Real Estate office

Fort Reserved 1881
Exec Order

Air Guard / Air Force Base project
for airfield - may increase
population at base.

City filed claim for runoff coming
from mountains

Brief History from Shelter Cove

1951 > Real Estate land swapping
1954

Golf course & Parade field

— Airport is still officially part of
fort. A swap is underway
It has its own water supply

Test Range ... test program from corps
test wells etc re production of water

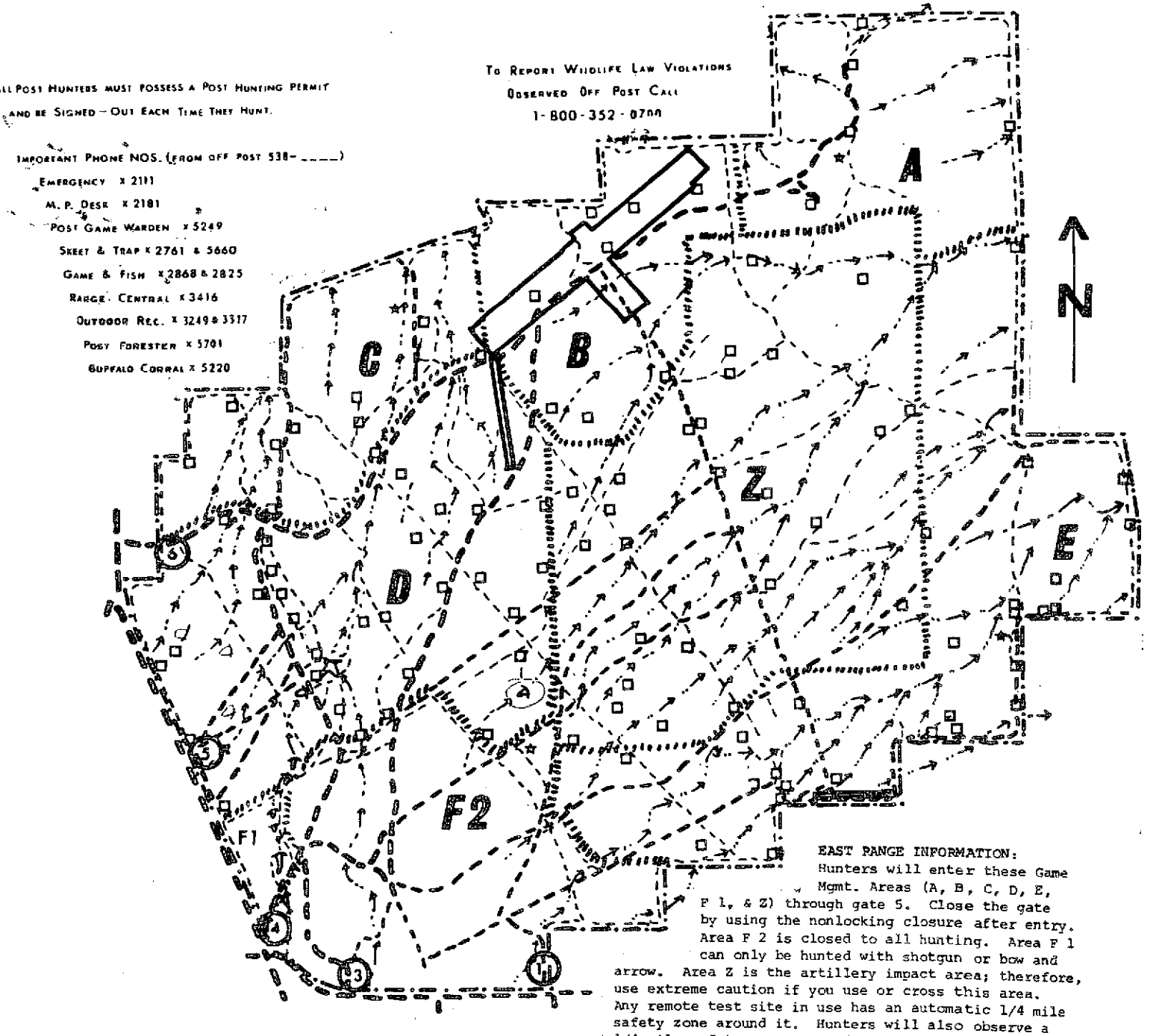
8:00 AM Thursday - with Deputy Director

MISCELLANEOUS MAPS

GAME MANAGEMENT AREAS

Fort Huachuca, Arizona

sheet 2



EAST RANGE INFORMATION: Hunters will enter these Game Mgmt. Areas (A, B, C, D, E, F 1, & Z) through gate 5. Close the gate by using the nonlocking closure after entry. Area F 2 is closed to all hunting. Area F 1 can only be hunted with shotgun or bow and arrow. Area Z is the artillery impact area; therefore, use extreme caution if you use or cross this area. Any remote test site in use has an automatic 1/4 mile safety zone around it. Hunters will also observe a 1/4 mile safety zone around any building, permanent test site, military or civilian personnel, houses near the post boundary, etc. In addition, there is a 100 yard wide safety zone on the east side of highway 90. Weapons will be unloaded during transportation and during the time a hunter is in the safety or closed zones.

Post Boundary

Game Mgmt. Area Boundary

Game Mgmt. Area Designation A

Remote Test Sites

Major Roads

Main Roads

Roads or Trails

Ponds

Gate Numbers (1)

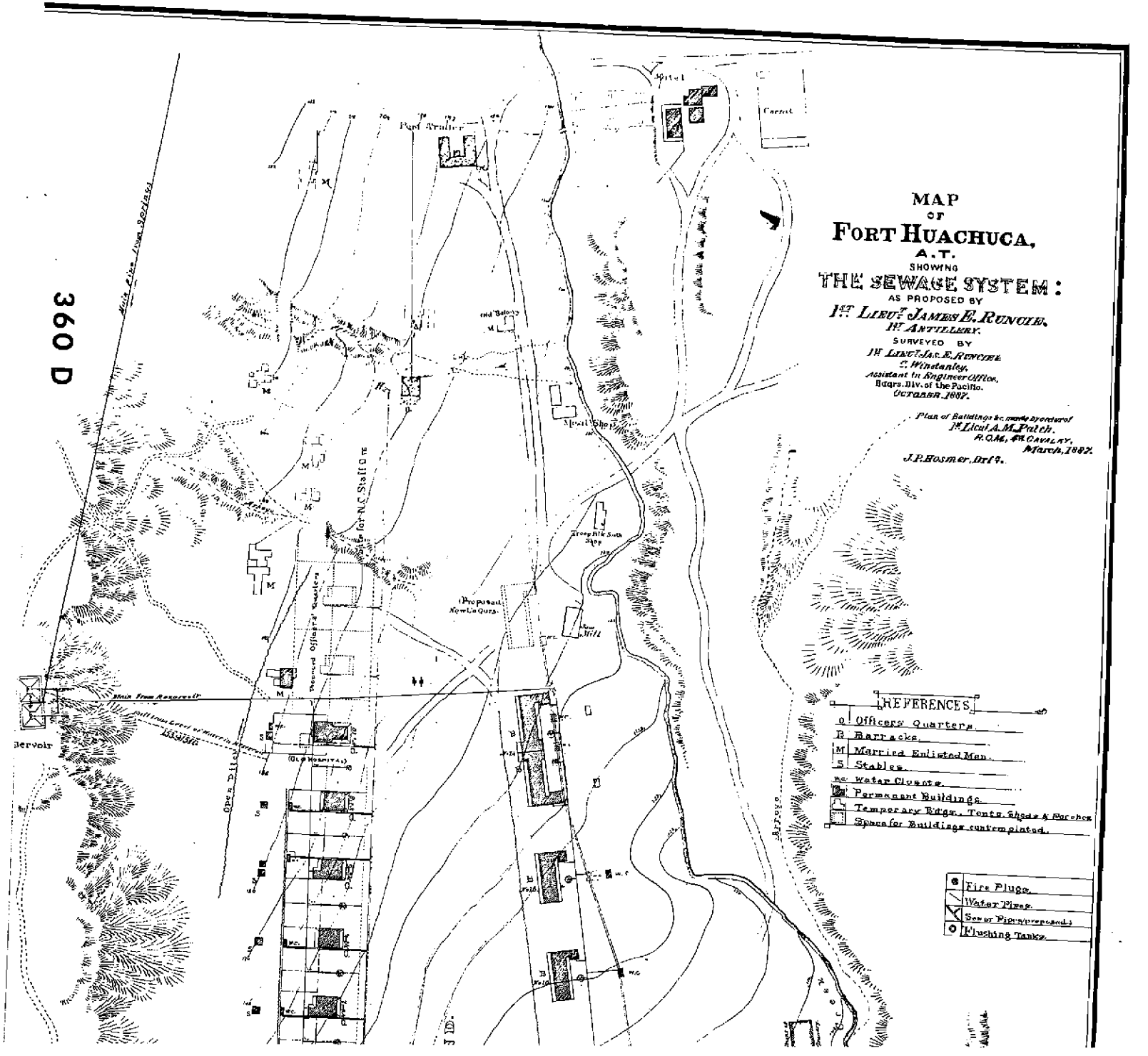
Main Drainages

Wildlife Watercatchment

Scale: (in miles)

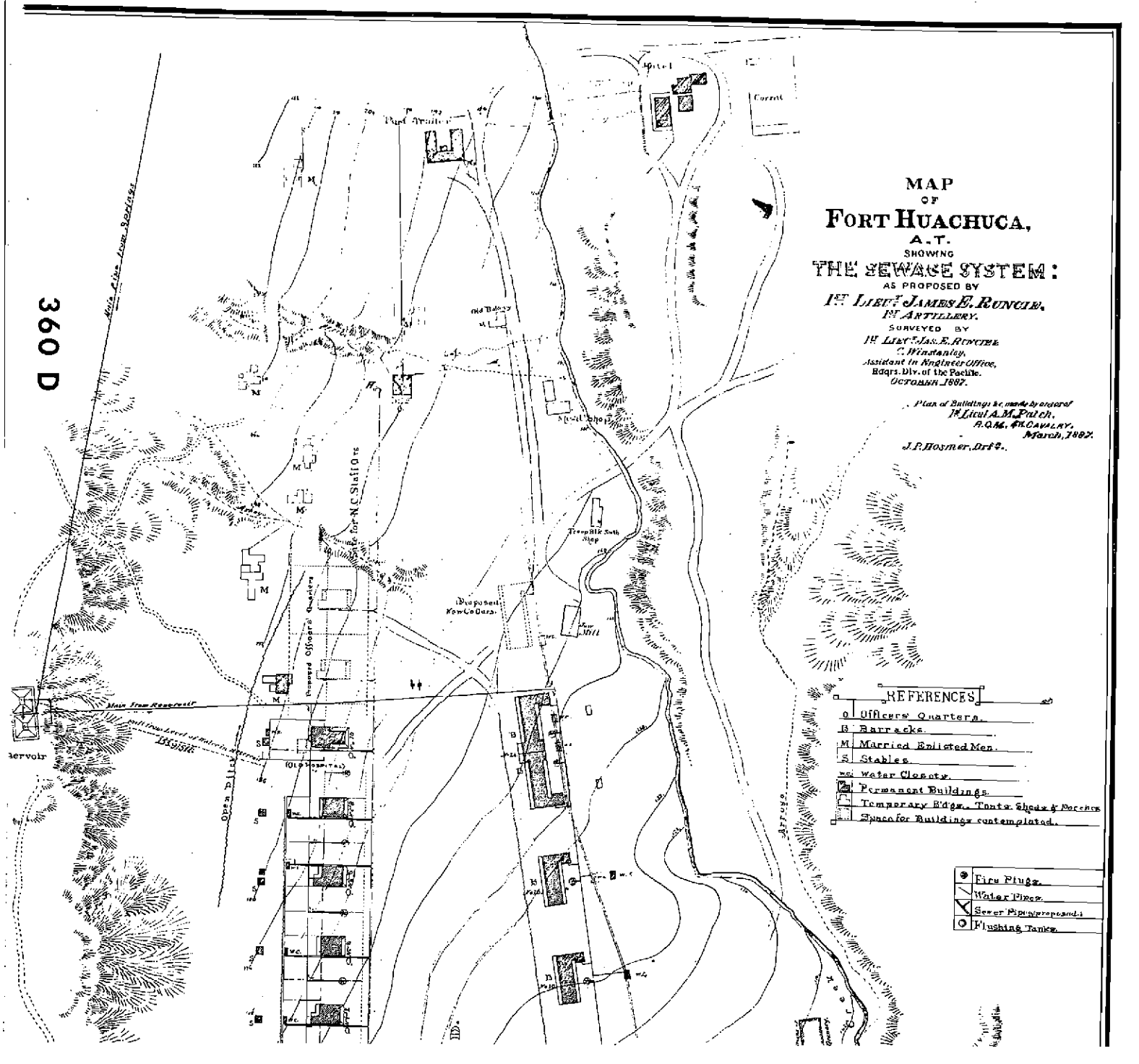
1 ½ 0 1

FMC002548



360 D

FMC002549



360 D

FMC002550

Legend.

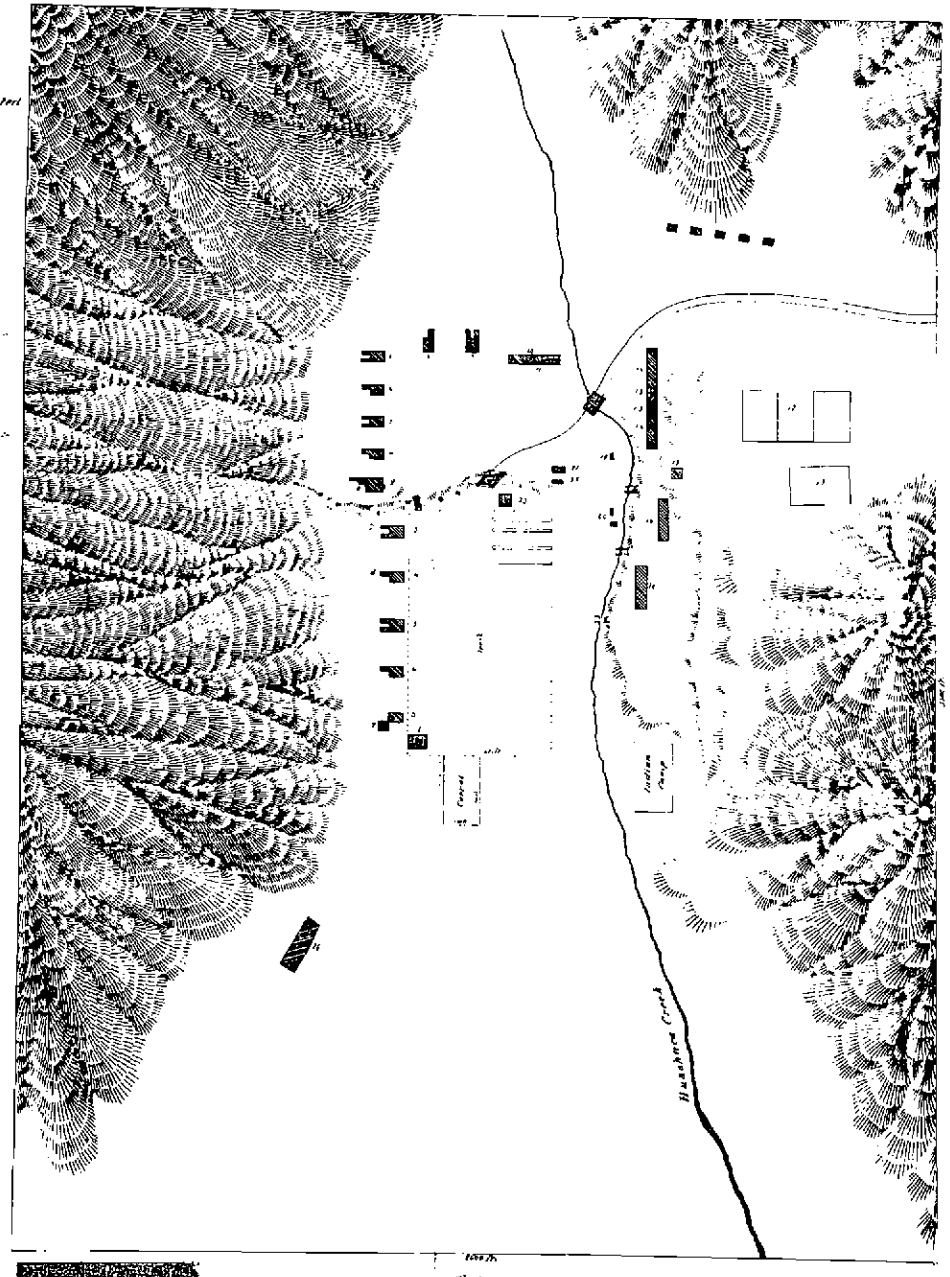
No 1. Hospital for two Companies, easily converted into a four Company Hospital.
No 2. Chapel, to be incorporated with.-
No 3. Quarters for Field Officers or Post Surgeon.
No 4. Quarters for one Captain.
No 5. " " two Lieutenants.
No 6. Small Adobe to be used as a Kitchen for a Captains Quarters.
No 7. Small Adobe to be used as Kitchen & Servant's room for Quarters for two Lieutenants.
No 8. Small Adobe to be used as a Kitchen for.-
No 9. Post Commanders Quarters.
No 10. Post Trader's, to be converted into.-
No 11. Q. M. & Commt Store House.
No 12. Laundress' Quarters.
No 13. Boarding house, to be incorporated with.-
No 14. Cavalry Barracks.
No 15. Guardhouse.
No 16. Barracks.
No 17. Cavalry corrals.
No 18. Q.M. Corral, Hay & Wood.
No 19. Store.
No 20. Kitchens.
No 21. Granary.
No 22. Bakery.
No 23. Post Adjutant's Office.
No 24. Boarding house.
Existing Buildings.
Proposed new Buildings.

Area :- 208.907 Acres.

ENGINEER OFFICE,
Hdqrs. Mil. Div. of the Pac. and Dept. of Cal.
PRESIDIO OF SAN FRANCISCO, CAL.
NOVEMBER 1881.

W. A. Jones
Captain & Engineers.
Resident Officer.

Traced by C. Wiertanley, Topographical Assistant.



360 C

MAP
—OF—
CAMP HUACHUCA,
—A.T.—

As proposed to be laid out
—by—
Colt J. C. Kelton,
Assistant Adjutant General,
Mil. Div. of the Pac. and Dept. of Cal.

from sketches by,
1st Sergeant Ryan,
Co K 12th Infantry.

OCTOBER 1881.

FMC002551

Legend.

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- Nº 9. Post Commanders Quarters.
- Nº 10. Post Traders, to be converted into:-
- Nº 11. Q. M. & Comm.ᵗ Store House.
- Nº 12. Laundress' Quarters.
- Nº 13. Boarding house, to be incorporated with:-
- Nº 14. Cavalry Barracks.
- Nº 15. Guardhouse.
- Nº 16. Barracks.
- Nº 17. Cavalry corrals.
- Nº 18. Q.M. Corral, Hay & Wood.
- Nº 19. Store.
- Nº 20. Kitchens.
- Nº 21. Granary.
- Nº 22. Bakery.
- Nº 23. Post Adjutant's Office.
- Nº 24. Boarding house.
- Existing Buildings.
- Proposed new Buildings.

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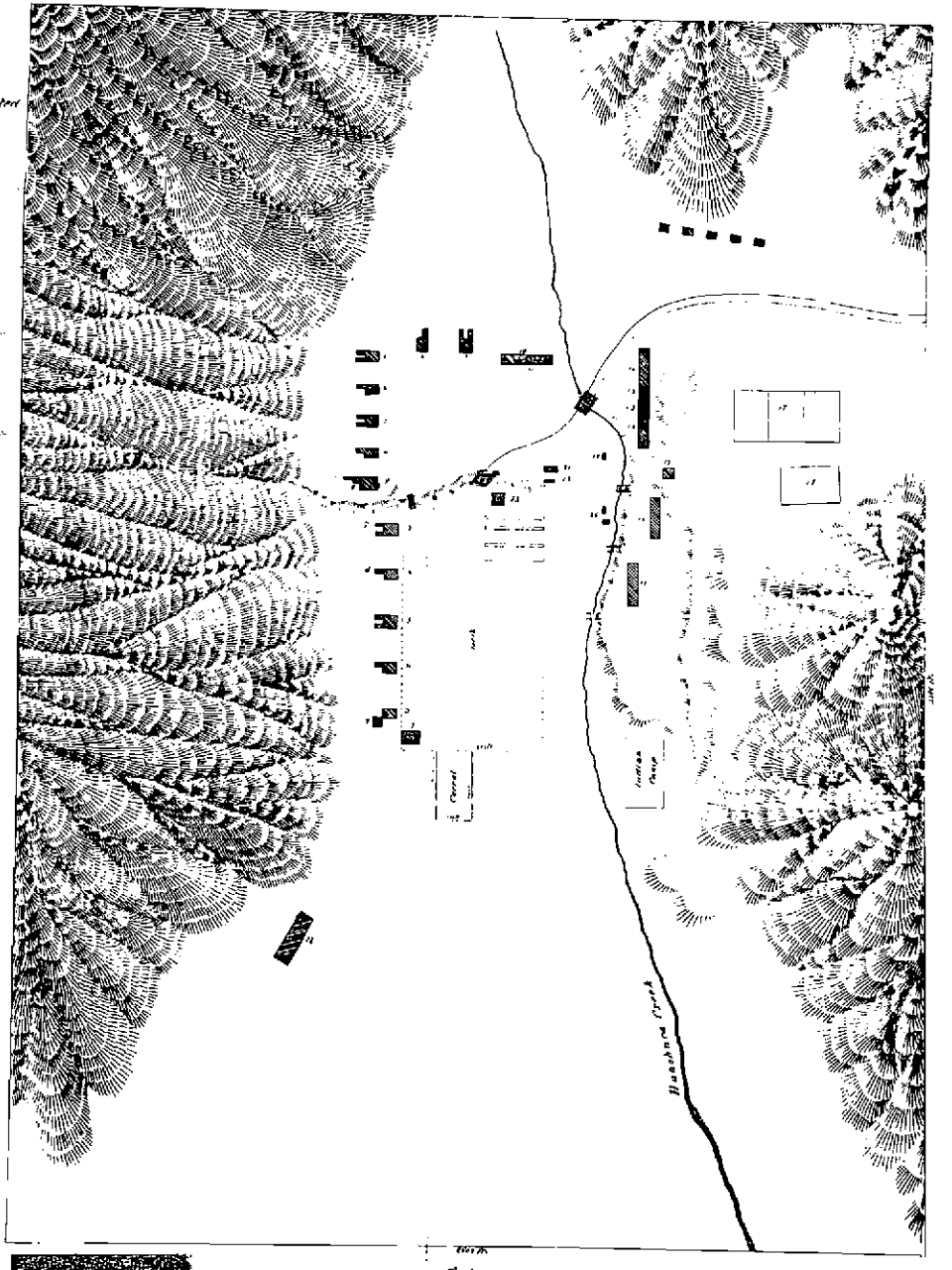

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from sketches by,
1ˢᵗ Sergeant Ryan,
Cᵒ "K" 12ᵗʰ Infantry.

October 1881.

360 C

FMC002552

FORT HUACHUCA, ARIZONA, U.S.A.

LAST OF THE OLD ARMY OUTPOSTS ...STILL ACTIVE

TO BUFFALO CORRAL, SENTINEL HILL, WREN RODEO ARENA, WEST GATE, ELGIN, CANELO, PARKER CANYON LAKE, SAN RAFAEL VALLEY, HARSHAW AND OTHER GHOST TOWNS.

EDUCATION CENTER
BLDG 2m2
Bonnie Blink

POST CEMETERY

Cavalry Park
HISTORICAL AREA

Signal Village

Coronado Villag.

De Anza Village

Hardy Plaza

Pershing Plaza West

Miles Manor

Gatewood Housing

GREELY HALL
BLDG 61801

CHAFFEE FIELD
PARADE GROUND

ACADEMIC SERVICE SCHOOL AREA

BARNES FIELD HOUSE

BUJALSKI FIELD

CHEEVER COMMISSARY

COCHISE THEATER

GIRL SCOUT CENTER

WHITSIDE HALL

BROCK FLD

OFFICERS OPEN MESS

RAYMOND W. BLISS ARMY HOSPITAL

GEN. MYER SCHOOL

COL. JOHNSON SCHOOL

COL. SMITH MIDDLE SCHOOL

CHILD DEVELOPMENT CENTER BLDG 48101

FOSTER FIELD

PAULEY FIELD

LITTLE LEAGUE FIELD

MUSIC AND THEATER CENTER

SMILEY FIELDS

GARDEN PLOTS

GAME MANAGEMENT

EAST GATE

SEWAGE DISPOSAL PLANT

TO LIBBY ARMY AIRFIELD

PREPARED BY VISUAL INFORMATIO
REVISED AS OF

FMC002553

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ENL RETIRE. 41330 F3
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137. NEALIS BARRACKS 52204 E-4
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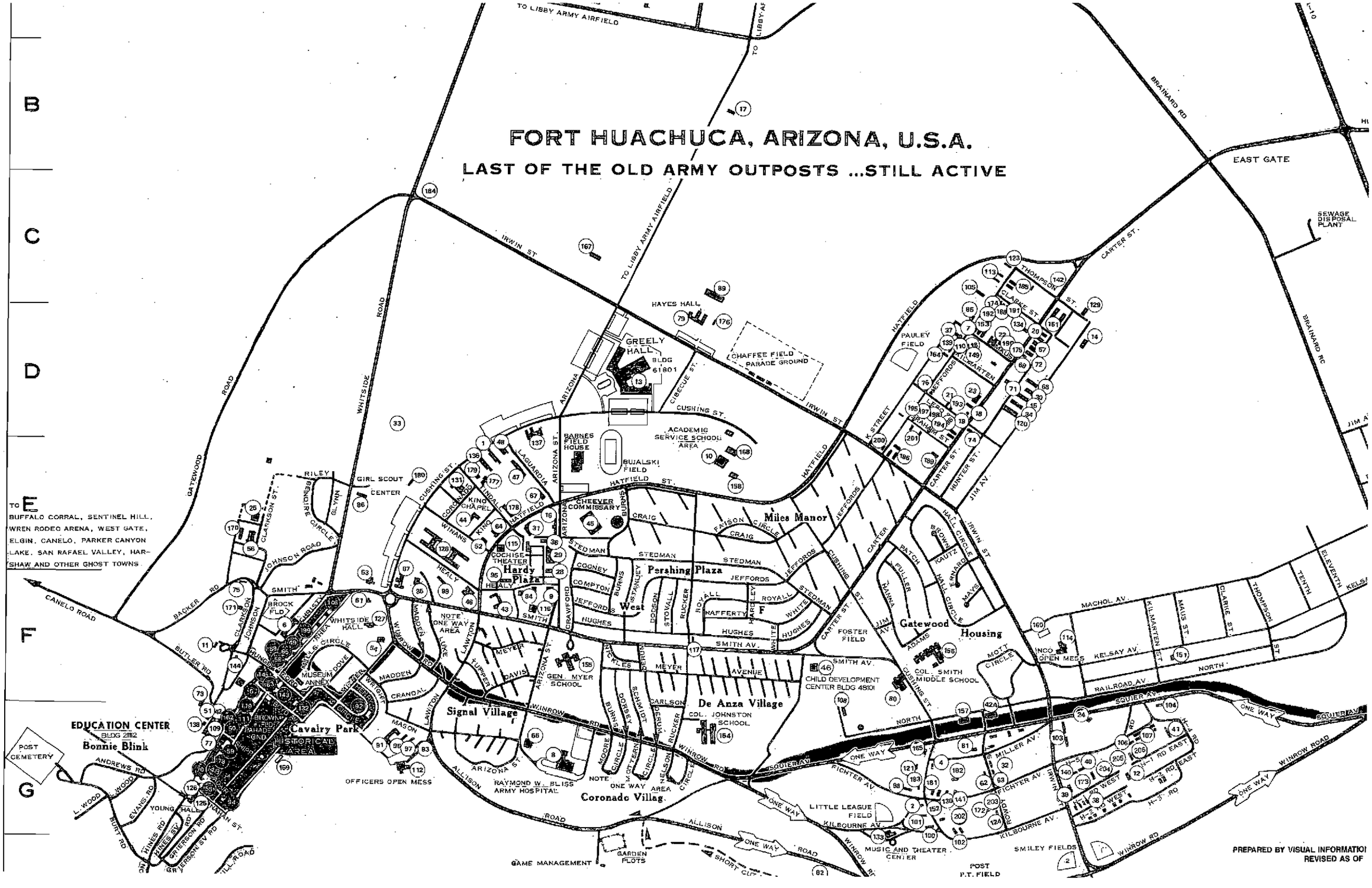

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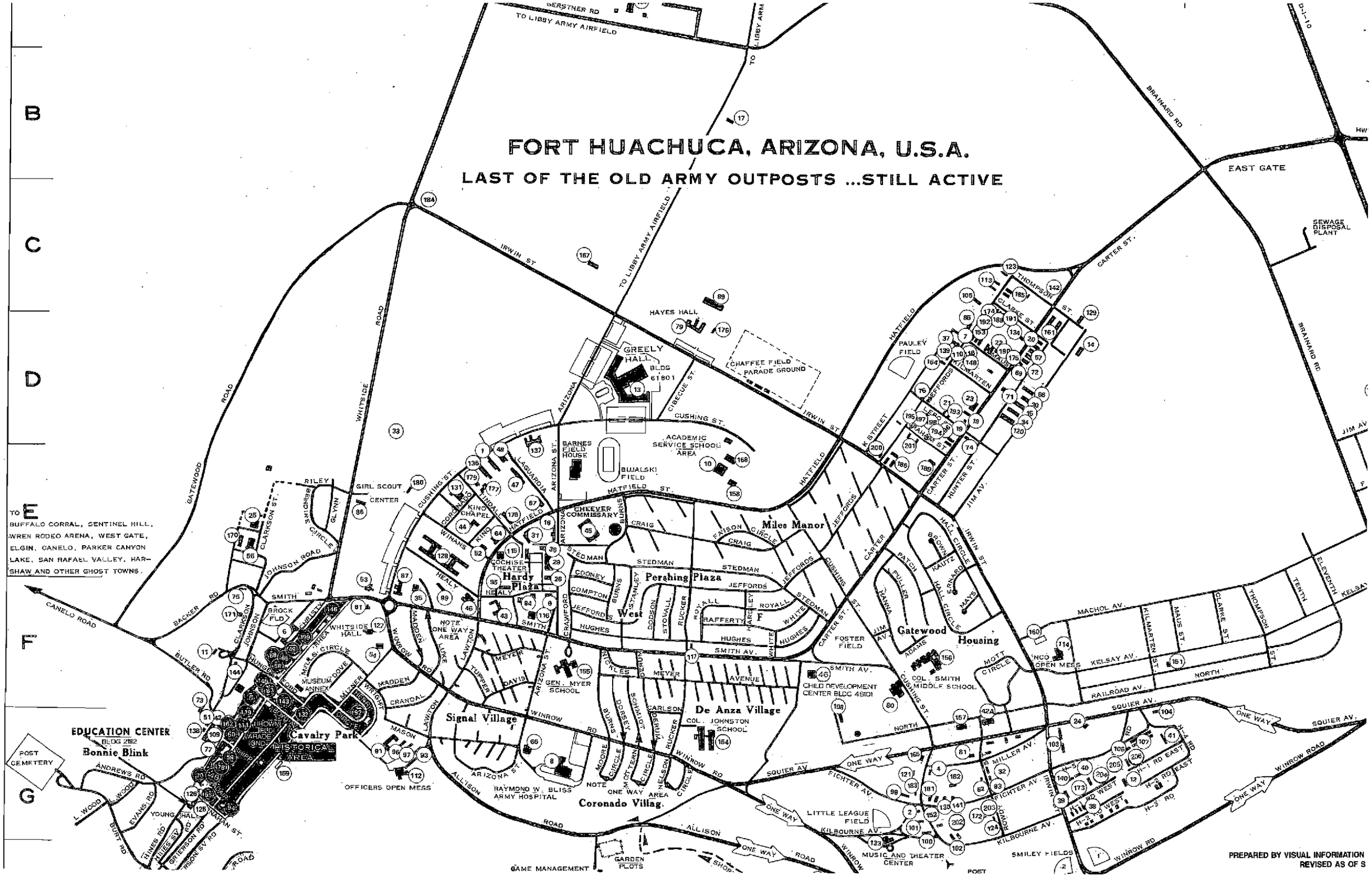

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53. HAYDEN HALL, ACS	50010	F-3
79. HAYES HALL, INSBD	80706	D-6
90. HAWTHORNE AVIATION	31114	A-7
7. HORIZON HOUSE	84009	D-8
8. HOSPITAL	45001	G-5
5. HOUSEHOLD GOODS	22332	F-2
127. HSING REFERRAL OFC	41330	F-3
55. HSING SVC PERM PARTY/FAMILY	41415	F-3
94. HAZEN HOUSE	22104	G-2
95. HOLMAN GUEST HOUSE	52064	F-4
57. HOLMSTED HALL	43085	G-4
108. HOUSING SUP (FURNISHINGS)	48060	F/G-7
109. HOUSING (FAMILY)	41415*	F-3
134. HUACHUCA MTN PER. ARTS CNT	68050*	G-7

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110. INSCOM, FLD OFC, F.H.	83013	D-8
111. INSP. GENERAL USAG	22326	G-2
113. INSP. GENERAL, ISC	61801	D-5
109. INSTAL. PROP. OFC (BSMT)	22406	G-2
78. INTEL & SCTY, POST	22214	G-2
79. INTEL & SCTY, INSBD	80708	D-8
110. INTEL & SCTY COMD, LN OFC	83013	D-8
65. INVES SVC, DEF RES. AGCY	41415	F-3
56. ISC-A MAINT DIV	30120	E-2

J

50. JOB INFO CEN,(BSMT CPO)	22320	G-2
84. JUDGE ADVOCATE, POST/ISC	51102	E-4
82. JUNIOR RIFLE CEN, FYA	1470	H-7
JOINT MGT OFC (JMO-TCSIP)	65155	G-8
165. JOINT TEST ELM JTC 3 A DOD	68159	G-8
166. JOINT TEST ELM CEN TEST FAC	57428	A-5
167. JOINT TEST ELM LOG SPT TEST FAC.	54322	C-5

K

125. KINDERGARTEN	21111	G-2

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114. LA HACIENDA ENL. CLUB	70525	F-9
112. LAKESIDE OFFICERS' CLUB	43202	G-4
10. LANGUAGE LAB, ICS	51005*	F-4
16. LAPIDARY SHOP	52008	E-5
9. LAUNDROMAT, FAB CARE CEN	52046	F-5
115. LAUNDRY & DRY CLN, POST	90201	E-11
LAUNDRY & DRY CLN, BRANCH	52025	E-4
LEARNING CEN, ICS	51005	E-4
64. LEGAL SVS CEN, POST/ISC	51102	E-4
3. LIBBY ARMY AIRFLD	91251	A-6
116. LIBRARY, MAIN	52265	F-5
117. LIBRARY, CHILD.	63001	F-6
13. LIBRARY, AG REF, RM 1020	61801	D-5*
19. LIBRARY, FILM, AV MEDIA	82201	D-8
8. LIBRARY MEDICAL	45001	G-5
103. LIBRARY, MOS & AR REF	22408	G-2
10. LIBRARY, ICS	62711	E-6
13. LIBRARY, TECH.	80112	D-6
LIT SPT BR, MI MAG.	81001*	D-6
LITTLE LEAGUE BALLFLD	66046	G-7
13. LOG. ASST OFC, AMC	61801	D-5
89. LOG. BLDG (BEHIND HAYES HALL)	81701	C-6

M

120. MAINT SHOP/WASH/DRYER REPAIR	72908	D-8
15. MAINT., DOL	73902	D-8
MGT EMP. REL. INCEN. AWDS	22320*	G-7
121. MARINE CORPS TEST SPT ELM. (TRI-TAC)	66164	G-7
68. MARION G. RUNION DEN. CLINIC	45005	G-5
122. MARS RADIO STATION	90551	D-11

ENL. RECORDS	41421	F3
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28. ENL RETIRE. APPL.	41421	F-3
ENL ASSIGN.	41421	F-3
ENL EVAL.	41421	F-3
ENL PROMO.	41421	F-3
ENL MGT	41421	F-3
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28. OFF RETIRE. APPL.	41330	F-3
PASSPORT	41421	F-3
I.D. CARDS (MIL & CIV)	41421	
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49. MIL. POLICE STATION	41416	F-3
42. MIL. CLOTHING SALES (PX)	22414	G-2
120. MOTOR POOL, POST (PAN AM)	76911	C-9
130. MULTI SV COMM SYS FLD OFC	67203	G-8
131. MURR REC CEN	51301	E-4
132. MUSEUM, POST	41401	F/G-3
MUSEUM ANNEX	41305	F-3
133. MUSIC & THEATER CEN, MAIN	66050	G-9

N

60. NON APPROP FUND JOB INFO	22320	G-9
136. NANASADDIE BARRACKS	52109	E-4
12. NATL GUARD, AZ ANNUAL TNG	71118	G-9
121. NAVY/MARINE TEST SPT ELM	66164	G-7
57. NBC, TNG PTS DIR	74914	G-9

O

140. OCCUP. HEALTH CIV	70219	G-9
112. OFFICERS' CLUB, LAKESIDE	43002	G-4
29. OPTICAL SHOP, MAIN PX	52030	E-6
141. OTEA FLD OFFICE	57205	G-8
37. OUTDOOR REC EQUIP CEN	83106	D-8

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PLNING & COORD OFC	66158	G-7
62. PACK 431, CUB SCOUTS	67223	G-8
PAULEY FLD BALLPARK	82201	F-7
PERSHING PLAZA		F-5,6,7
11. PET HOSP	30022	F-2
20. PHOTOGRAPHIC BR., TASC	74915	D-8
140. PHYS. TNG FLD		H-8
37. PICNIC & CAMPSITE RESER.	83106	D-8
78. PLANS, TNG, MOBIL. DIR	22214	G-2
6. PLANS & OP DIV (BASEMENT)	31122	F-3
142. POL STATION, MIL.	86001	C-8,D
29. POST EXCHANGE, MAIN PX	52030	E-5
70. PROCUREMENT OFC	22208	G-2
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13. QLTY ASSURANCE DIR	70118*	G-9
15. QLTY ASSURANCE & SAFETY	72909	D-8

R

11. RABIES CONTROL	30022	F-2
78. RACE REL. RR/EO, MIL	22214	G-2
67. RANCH HOUSE, DINING FAC.	52104	E-5
150. RANGE CONTROL, POST	15425	G-7
131. REC. CEN, MURR	51301	E-4
37. REC EQUIP CEN, OUTDOOR	83106	D-8
53. RED CROSS	50010	F-3
76. RETENTION POST	71251	G-9
89. RELIABILITY & LOG SPT BR	73902	D-8
9. RENTAL EQUIP	52045	F-5
41. RESOURCE MGT DIR	22334	G-2
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RESOURCE POLICY & SYS.	41412	F-3
109. RETIREMENT SVC OFC, MIL	41330	F-3
RIDING STABLES		E-1
128. RILEY BARRACKS	31001	E-4
ROD & GUN, SKEET/TRAP CEN GARDEN CANYON ROAD		H-9
66. RUNION, MARION G., DEN CLINIC	45005	G-6

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153. SAFETY DIV., POST	84013	D-8
78. SCTY DIV., POST	22214	G-2
154. SCHOOL, COL JOHNSTON	47120	G-8
155. SCHOOL, GEN MYER	45103	F-5
156. SCHOOL, SMITH MIDDLE	67601	F-7,8
125. SCHOOLS, F.H. ACCOMM ADMIN	21110	G-2
21. SELF HELP (VID)	82014*	D-8
157. SELF HELP STORE	87361	G-8
34. SHOPPETTE & GARDEN SHOP	52033	F-4
109. SIDPERS SECTION	22403	G-2
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177. 11TH SIG BDE HQ	52111	E-4
11TH SIG BDE S1/S2/S4 PAO BUDGET	52120	E-4
177. 11TH SIG BDE S3	52111	E-4
178. HHC 11TH SIG BDE/HHD 40TH SIG BN	52101	E-4
179. HHD 86TH SIG BN	52110	E-4
180. 19TH SIG CO	51450	E-4
158. SISLER HALL, ICS	62712	E-6
SKEET & TRAP CEN GARDEN CAN. RANGE ROAD		H-9
16. SKILL DEV CEN, ARTS/CRAFTS	52008	F-5
109. SKILL QUAL TEST BR (SQT)	22408	G-2
11. SMALL ANIMAL CLINIC	30022	F-2
SMILEY FLD BALLPARK	68036	H-9
10. STAFF & FACULTY, ICS	62711	E-6
64. STAFF JUDGE ADV.	51102	E-4
STEEP-MTOS (EMETS)	55350*	
128. STU. PERS. SEC ENL/OFC (ICS)	51005	E-4
159. SWIM POOL, GRIERSON AVE	22010	G-3
160. SWIM POOL, IRWIN ST	70560	G-8
SWIM INDOOR, BARNES FLD HSE	61701	E-6

T

161. TACT. VEH. SHOP	75803	D-8
4. TEST OFC, U.S. AIR FORCE	67224	G-6
81. TEEN CLUB, YOUTH CEN	67131*	G-8
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162. TELEPHONE EXCGE OFC	22324	G-2
TEST & EVAL MGT DIV	66155	G-7
121. TEST SPT ELM NAV/MAR JTC3A	66154	G-7
THEATER, COCHISE	52026	E-4
133. THEATER, MSA.	88050	G-7
183. THRIFT SHOP	90012	F-12
164. TRADOC SYS MGRS (TSM)	82106	D-8
SP LECT MSN ACFT (SEMS) SYS	82108	D-8
SP GND TAC EW/INTEL SYS	82106	D-8

4. USAF TAC COMM TEST OFC	67224	G-8
U.S. IMM. & NAT. RES. & DEVEL. FLD OFC	82024*	D-8

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68. VEH./WPNS REGIST.	41414	F-3
11. VETERINARIAN, POST	30022	F-2
23. VIS INFO DIV	82010	D-8
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GRAPHICS	82008	D-8
PHOTO	74915	D-8
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88. VOUCHER EXAM	41407	F-3

W

168. WALKER HALL, ICS	82704	E-6
120. WASH/DRYER REPAIR, MACH SHOP	72908	D-8
29. WATCH REPAIR, MAIN PX	52030	E-5
127. WHITSIDE HALL	41330	F-3
169. WIDOWED SPT CEN	90018	F-12
170. WOODCRAFT SHOP	30123-A	E-2
WREN RODEO ARENA		E-1

Y

125. YOUNG HALL	21112	G-2
125. YOUNG HALL ANNEX	21114	G-2
80. YOUTH ACT., FYA	49013	F7

MILITARY UNITS

76 EXPL. ORD. DET. (772)	82009	D-8
143. ARMY GARRISON	41402	F-3
6. HHC, USAG	31122	F-3
8. HQ CO, CO A USAG	31122	F-3
87. 36TH ARMY BAND	51001	F-3,4
171. HONOR GUARD	30026	F-2
7. ASL FH MET TEAM	95846	B-6
171. 8 TRP, 4TH CAV (MEM.)	30026	F-2
8. MEDDAC HQ	45001	G-5
55. DENTAL COMPANY	45005	G-5
8. MEDICAL COMPANY	45001	G-9
40. CEI BN	70220	G-9
172. HQ CO	67122	G-8
152. CO A, CEI	57124	G-8
202. CO B, CEI	67111	G-8
203. HHC, CEI	67121	G-8
182. HHC, ISEC	67228	G-8
204. TNG DET, CEI	71210	G-9
205. BIC, CEI	71117	G-9
206. MINI BIC, CEI	71211	G-8
173. CO A & B	70234	G-9
47. EPG, HQ	61801	D-5
47. HHC	52106	E-4
47. DIGITAL COMM SYS TEST CO	52106	E-4
41. OTEA FLD OFC	67205	G-8
13. LOG ASST OFC, DARCOM	61801	D-5
185. 40TH AR,8TH BN HC(USAR)	85024	C-8
185. HHC & CS	85017	C-8
185. CO'S A, B & C	85015	C-8
14. AREA MAINT SPT ACTV 16(63RD ARWN)	75801	D-9
12. ARNG, AZ, ANNUAL TNG SITE	71118	G-9
128. INTEL CENTER & SCHOOL	51005	E-4
186. DIR TNG & DOCTRINE	80009	E-7
186. ACADEMIC RECORDS BR	80013	E-7
186. ACADEMIC SPT BR	80009	E-7
186. DOCTRINAL LIT DIV	80008	E-7
187. GND SURV DIV	15550	C-11
10. LANG. LAB	62711	E-6
10. LIB & LEARN. RESR BR	62711	E-6
10. STAFF & FACUL. TNG DIV	62711	E-6
10. ALVARADO Hall, LIBRARY,BOOKSTORE	62711	E-6
186. TNG MGT BR	80013	E7
188. COUNTERINTEL DIV (CID) DHI	80014	E-8
190. CI SVS SEC, CID	84003	D-8
191. EXPLTN DIV, DHI	84026	C-8
191. CLASSRM, EXPLTN DIV	84027	C-0
191. CLASSRM, EXPLTN DIV	84026	V-8
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200. DEPT OF SURVL & SYS MAINT	80102	E-7
192. DEPT OF TACT INTEL & MIL SCI	84007	D-8
192. DIVEX FAC.	84015	D-8
189. DIR COMBAT DEV	41418,9	F-3
113. AUD. VIS. BR(MOPIC FAC)	85103	C-8
185. COLLECTIVE TNG DIV	81009	D-7
118. MI MAG.	83007	D-8
197. NEW SYS. BR	81017	D-7,8
113. DIR EVAL & STANDARD.	85102	C-8
190. SENIOR USAF REP	84008	D-8
72. COMPUTER SYS MGT OFC	74912	D-8
72. SIM SYS MGT OFC	74911	D-8
164. TRADOC SYS MGRS (TSM)	82106	D-8
164. SP ELCT MSN ACFT(SEMA)SYS	82106	D-8
164. SP GND TAC EW/INTEL SYS	82106	D-8
110. TRADOC SYS MGR	83013	D-8
110. ALLSOURCE ANAL SYS (ASAS)	83013	D-8
110. INSCOM LSO	83013	D-8
138. USMC ADMIN DET	83102	D-8
4. USAF TEST OFC	67224	G-8
13. USMC LIAISON OFFICER	61801	D-5
128. ICS, SCHOOL BDE HQ	51005	E-4
128. 1ST SCHOOL BN	51005	E-4
128. CO'S A, B & C	51005	E-4
128. 2D SCHOOL BN	51005	E-4
128. CO'S D & E	51005	E-4
174. CO F	84017	C,D-8
176. INSBD, HHC	80713	D-6
177. 11TH SIG BDE HC	52111	E-4
178. 40TH SIG BN,HHC,A&B CO'S	52101	E-4
178. 86TH SIG BN,HHD	52101	E-4
179. 505TH,521ST,526TH CO'S	52110	E-4
180. 19TH SIG CO	51450	E-4
76. 77TH ORD DET(EOD)	82009	D-8
ISC ACTIVITIES:		
13. ATC	61801	D-5
13. ESEIA	61801	D-5
13. CSA	61801	D-5
13. ARCCO	61801	D-5
177. 11TH SIGNAL BDE	52111	E-4
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128. ICS	51005	E-4
8. MEDDAC	45001	G-5
66. DENTAC	45005	G-6
13. FPG	61801	D-5

181. INT OP TEST & EVAL	67202	G-6
121. USMC TEST OFC	68154	G-7
121. USN TEST OFC	68154	G-7
4. USAF TEST OFC	67224	G-8
182. JOINT DATA MGT OFC	67213	G-8
183. CONFERENCE ROOM	68153	G-7
166. CEN TEST FAC.	57428	A-5
167. LOG SPT TEST FAC.	54322	C-5
184. RADIO PARK	—	C-4

BUILDINGS BY NAMES:

1. ABBEY BARRACKS	52108	E-4
6. ALCHESAY BARRACKS	31122	F-3
47. CHIQUITO BARRACKS	52106	F-4
87. GOSSELIN BARRACKS	51001	F-3,4
135. NANNASADDIE BARRACKS	52109	E-4
137. NEALIS BARRACKS	52704	F-4
128. RILEY BARRACKS	51005	E-4
143. RODNEY HALL	41402	F-3
46. THUNDERBIRD DIN. FAC.	52107	E-4
67. RANCH HSE DIN. FAC.	52104	E-5

UNITS BY BLDG NO.

14444	H-5		GAME MGT
14470	H-7	82.	JR RIFLE CEN (FYA)
15423	H-9		SKEET & TRAP SHOOTING
15425	H-7	150.	RANGE CONTROL
15476	G-11		GOLF COURSE
15544			IMAGERY EXPLOT DIV
15550	C-11	187.	GND RADAR COMPLEX
21110	G-2	125.	FH ACCOM SCHOOLS ADMIN
21111	G-2	125.	KINDERGARTEN
21112	G-2	70.	EDUCATION CENTER
21115	G-2	55.	POST PAO, ISC AGENCY
22310	G-3	168.	SWIM POOL, GRIERSON AVE.
22104	G-2	94.	HAZEN HOUSE
22208	F-3	70.	DIR OF CONTRACTS
22214	G-2	78.	PT&S, EO, POST I&S, RE-ENL
22216	G-2	58.	DOL, TRP SPT AGCY
22320	G-2	50.	CIVILIAN PERSONNEL OFC
22324	G-2	50.	TELEPHONE EXCH/OFC.
22326	G-2	111.	POST INSP GEN OFC
22328	G-2	119.	CPO, MGT EMPL REL
22328	G-2	119.	CPO, POS & PAY MGT
22332	F-2	5.	TRANSPORT OFC, AIR TICKETS
22334	F-2,3	41.	RESOURCE MGT DIR
22404	G-2	77.	EQ EMPL OPPOR OFC (CIV)
22406	G-2	77.	EQ EMPL OPPOR OFC (CIV)
22408	G-2	109.	SIDPERS, SELF HELP WISE SQT, INSTL PROP OFC
22414	G-2	42.	CEN ISSUE FAC. TROOP ISSUE CLOTHING SALES STORE (MIL)
22418	G-2	138.	DIR, RESERVE COMPONENT
22420	G-2	51.	CPO TNG & DEV BRANCH
22422	F, G-2	73.	POST ENGINEERS
30022	F-2	11.	POST VETERINARIAN
30026	F-2	171.	HONOR GUARDS TROOP (MEM)
30033	F-2	75.	FORESTRY/ENTOMOLOGY
30113	F-2		TRAINING SPT CO (CEWI)(ICS)
30120	E-2	56.	ISC AGENCY DIR MAINT DIV
30123	E-2	170.	WOODCRAFT SHOP
30126	E-2	25.	AUTO CRAFT SHOP
	F-2		TRAINING SUPT CO
30143	F-2		AAFES HQ BLDG
31013	F-2	144.	POST PUBLICATIONS
31122	F-3	6.	ALCHESAY BKS,BROCK FLD,BRARK
31210	F-3	26.	GAS & SERVICE STATION, PX
31211	F-3	28.	FOUR SEASONS SHOPPE/TOYLAND
31114	F-2		MOTOR POOL CONTRACTOR, EPG
41305	F-2		MUSEUM ANNEX
41329	F-3	54	COMMUNITY ACTIVITIES BLDG
41330	F-3	127	WHITSIDE HALL
41331	F-3	61.	CREDIT UNION MAIN OFC
41401	F/G-3	132.	POST MUSEUM
41402	F-3	143.	POST HQ, USAG
41407	F-3	83.	MILITARY PAY
41408	F-3	83.	FINANCE & ACCOUNTING (MIL)
41409	F-3	83.	ACCTG PLCY & INT REV DIV
41410	F-3	83	ACCTG PLCY & INT REV DIV
41411	F-3	145.	POST PRINTING PLANT
41412	F-3	58.	RESOURCE MGT ACT
41414	F-3	88.	WEAPONS/VEHICLE REGISTRATION
41415	F-3	65.	HOUSING SVC, PERM PARTY/FAMILY
41416	F-3	49.	MP PROVOST MARSHAL CIC
41418	F-3	199.	DIR CBT DEV (ICS)
41419	F-3	199.	DIR CBT DEV (ICS)
41420	F-3	116.	MAIN POST LIBRARY
42017	G-3	92.	ALLEN HOUSE
43002	G-4	112.	LAKESIDE OFFICERS' CLUB
43083	G-3	91.	GLASSFORD HALL
43083	G-3	91.	GUEST HSING & KENNEL OFC
43084	G-3,4	96	MAUBORGNE HALL
43085	G-4	57.	OLMSTEAD HALL
43086	G-4	93.	FISHER HALL
45001	G-5	8.	R.W. BLISS ARMY COMM. HOSPITAL
45005	G-5	66.	M.G. RUNION DENTAL CLINIC
45103	F-5	155.	MYER SCHOOL
47120	G-6	154.	JOHNSTON SCHOOL
48060	F/G-7	108.	HOUSING SUP (FURNISHINGS)
48101	F-7	46.	NEW BEGINNINGS CHILD DEVELOP. CEN
48220	F7		FOSTER FIELD BALLPARK
49013	F7		YOUTH CENTER TEEN CLUB
50010	F-3	53.	ARMY COMMUNITY SERV CE
50042	E-3	80.	GIRL SCOUT CENTER
51001	F-3,4	87.	GOSSELIN BARRACKS
51002	G-4	35.	CACTUS CANTEEN (PX)
51005	E-4	128.	RILEY BKS, ICS HQ
51024	F-4	99.	BEQ
51026	F-4	46.	CLASS VI STORE
51101	E-4	52.	TROOP MEDICAL CLINIC-3
51102	E-4	64.	DAVIS BLDG, LEGAL SVC CENTER
51201	E-4	44.	KINO AVENUE CHAPEL
51301	E-4	131.	MURR RECREATION CENTER
51450	E-4	180.	19TH SIG CO
52008	E-5	16.	CRAFT SHOP: ART, PHOTO, LAP.
52010	E-4	31.	POST BOWLING ALLEY
52026	E-5		COCHISE THEATER
52028	E-5	36.	MAIN PX CAFETERIA
52030	E-5	29.	MAIN PX
52035	E-5	28.	1ST INTERSTATE BANK OF AZ
52036	F-4	34.	SHOPPETTE & GARDEN SHOP
52040	F-6	84.	U.S. POST OFC., F.H. 85613
52045	F-6	9.	FABRIC CARE CEN, LAUNDROMAT
52046	F-5	9.	MILITARY ALTERATIONS (AAFES)
52045	F-5	8	ELEC EQUIP REPAIR/RENTAL
52054	F-4	95.	HOLMAN GUEST HOUSE
52060	F-4	43	POST CHAPEL CENTER
52065	F-5	116.	MAIN LIBRARY
52101	E-4	178.	40TH SIG BN, 86TH SIG BN
52104	E-5	67.	RANCH HOUSE DINING FACILITY
61807	D-5		AMC LOG ASST OFC
62702	D-6		DEPT OF HUMAN INTEL
62703	D-6		DEPT OF HUMAN INTEL HQ
62704	E-6	168.	WALKER HALL (ICS)
62711	E-6	10.	ALVARADO HALL, LIB,BKSTR (ICS)
62712	E-6	158.	SISLER HALL (ICS)
62715			STRATEGIC DEBRIEFER BR (ICS)
62723	E-6		TRAINING MAT SUP BR (ICS)
63001	F-6	117.	CHILDREN'S LIBRARY
63850	E-6		INTEL ELEC WARFARE SOFTWARE SUP FAC
66048	G-7		LITTLE LEAGUE BALLFIELD
66050	G-7	133.	MUSIC AND THEATER CENTER
66055	G-8	100.	BEQ (BYRD HOUSE)
66056	G-7,8	101.	BEQ
66057	G-7,8	2.	AFGE 1662 UNION OFFICE
66151	G-7	93.	BOQ
66153	G-8	183.	TRI-TAC CONFERENCE ROOM
66154	G-7	121.	TRI-TAC USMC TEST OFFICE
66159	G-8	155.	TRI-TAC HQ, JOINT TEST ELM
67102-67103	G-8	102.	BEQ's
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21111 G-2 125. KINDERGARTEN
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FMC002558

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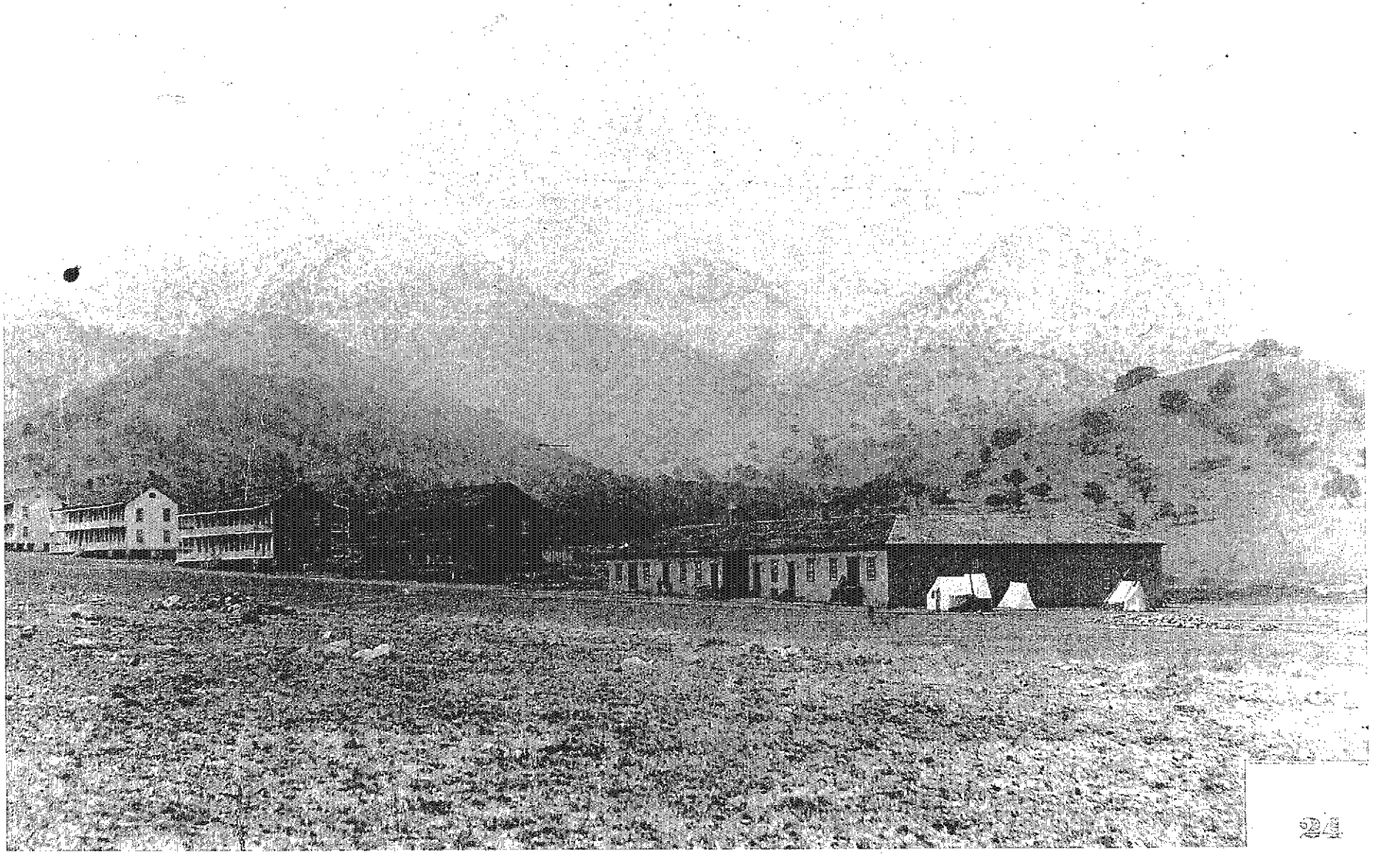

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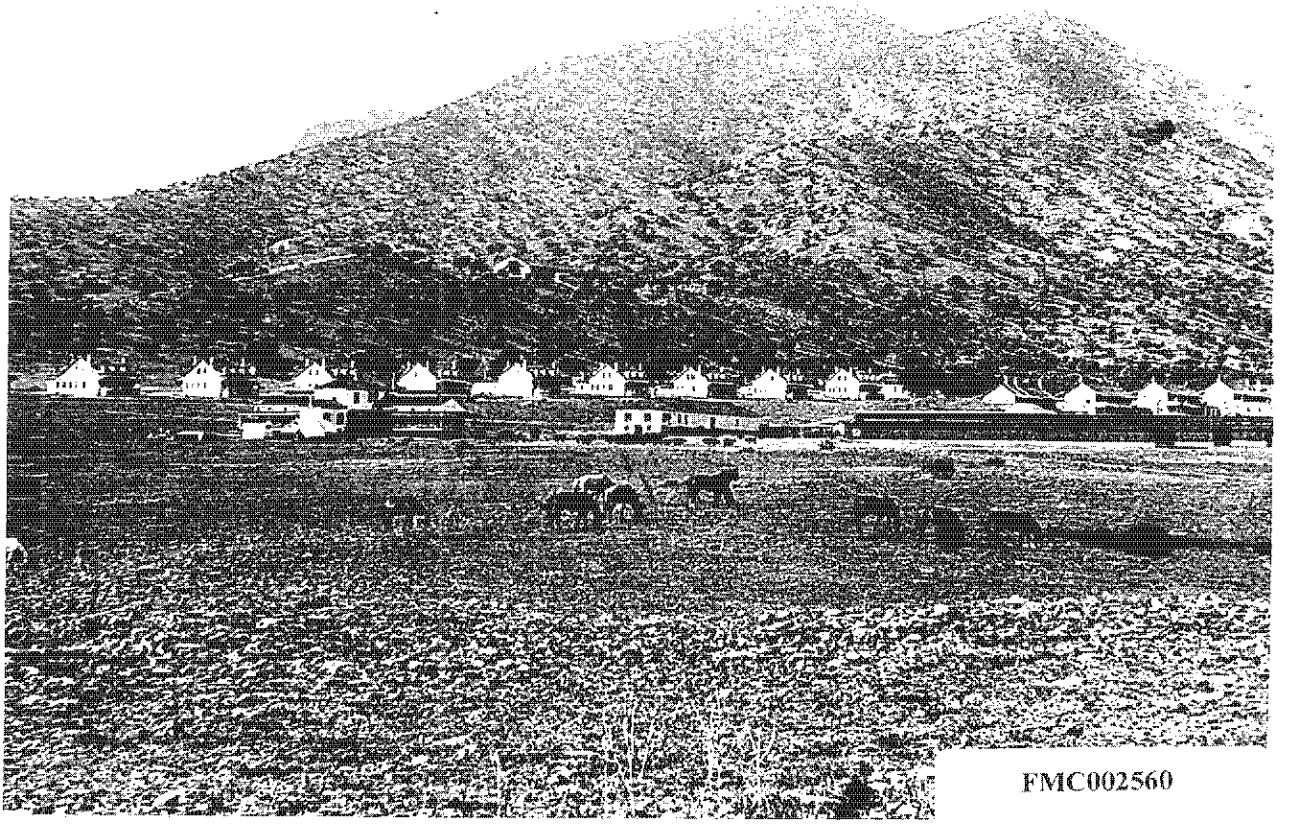
APPEN-1

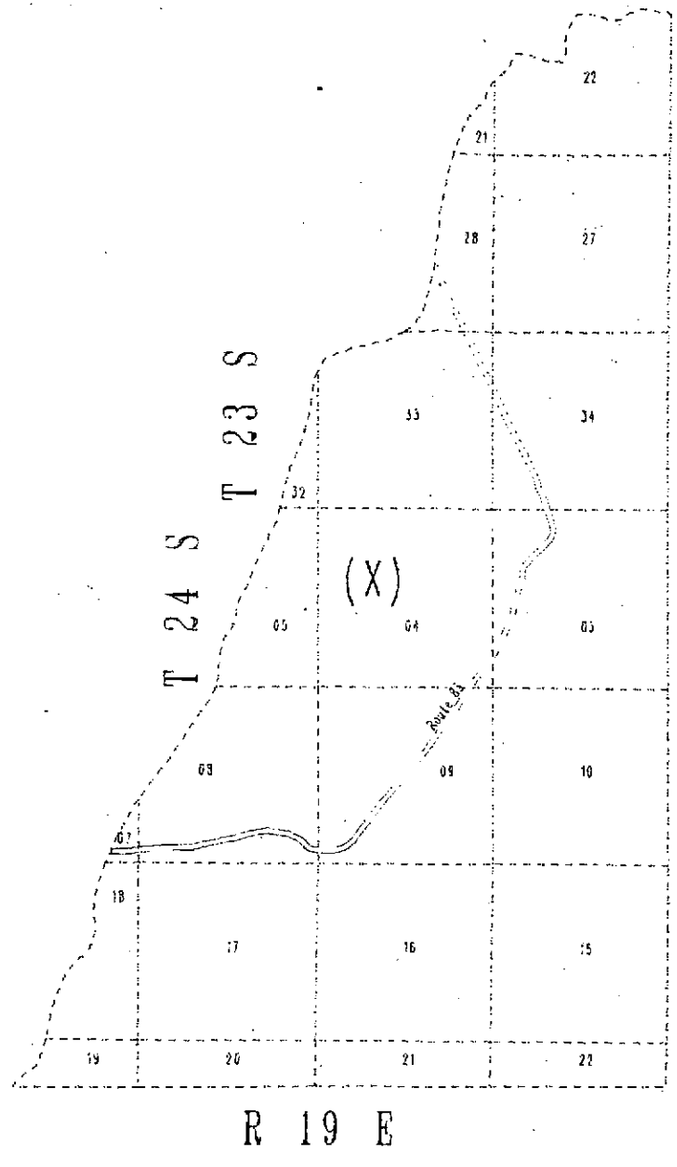


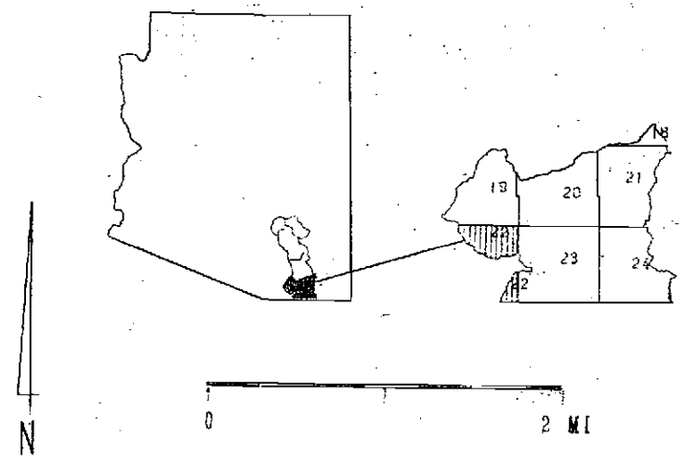
FMC002560

Fort Huachuca, Arizona.

From hill on west of town adjt. -
-looking east - officers' & ne. fort
nearly west.

FMC002561





State of Arizona
Department of Water Resources
ADJUDICATIONS DIVISION

MAP OF WATER USES

Watershed: SAN PEDRO
Subwatershed: SIERRA VISTA
Region: 22
Date: July 1986
Revisions:

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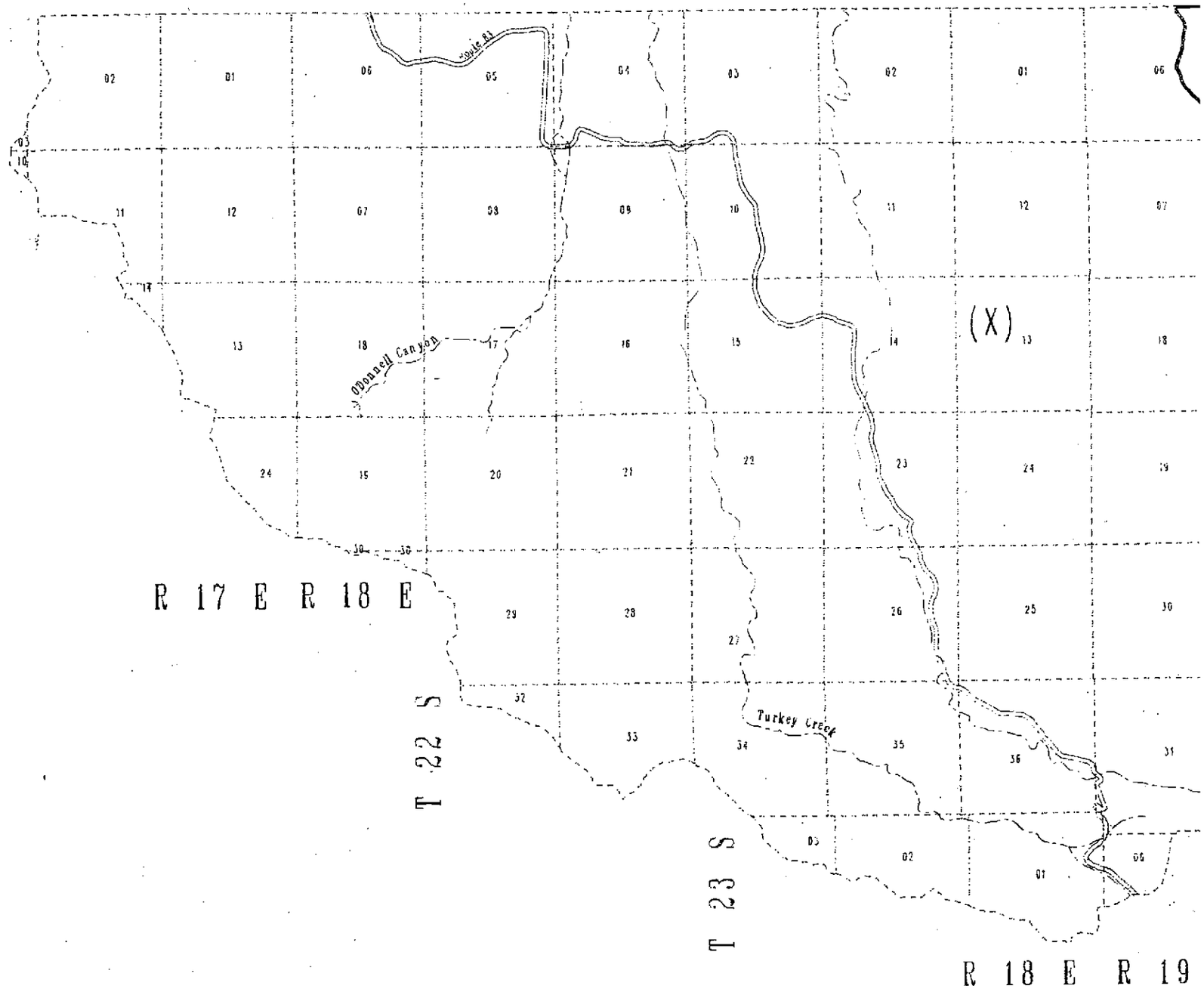
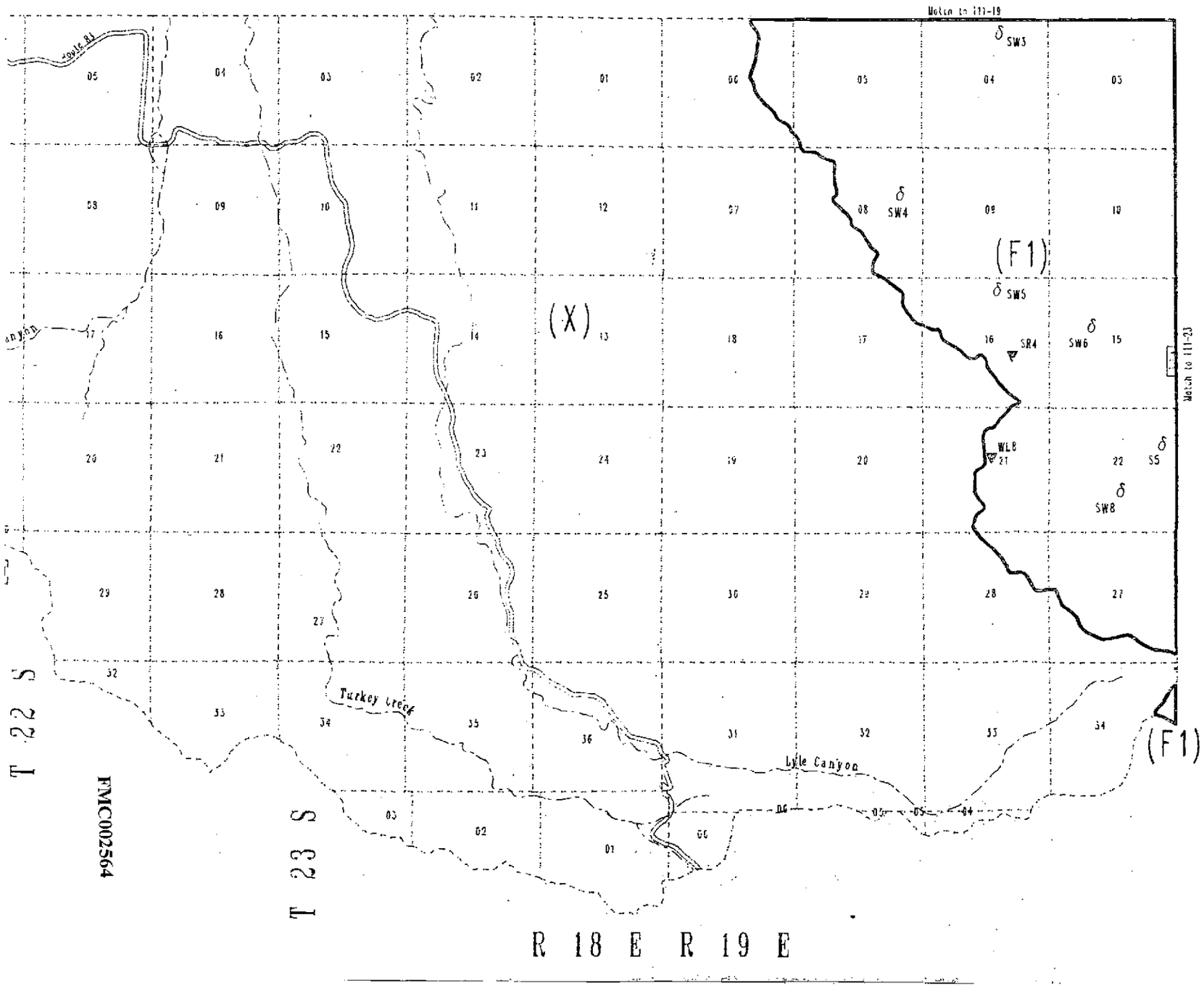


FMC002563



FMC002564

Region Map Legen

Owner
Roads
Sectio
Canal
Pipelin

Water Co. Service Area

Divers

Well (W)

Spring (S)

Mining Use

Industrial Use

Instre

Reserv

Instre

Effluen

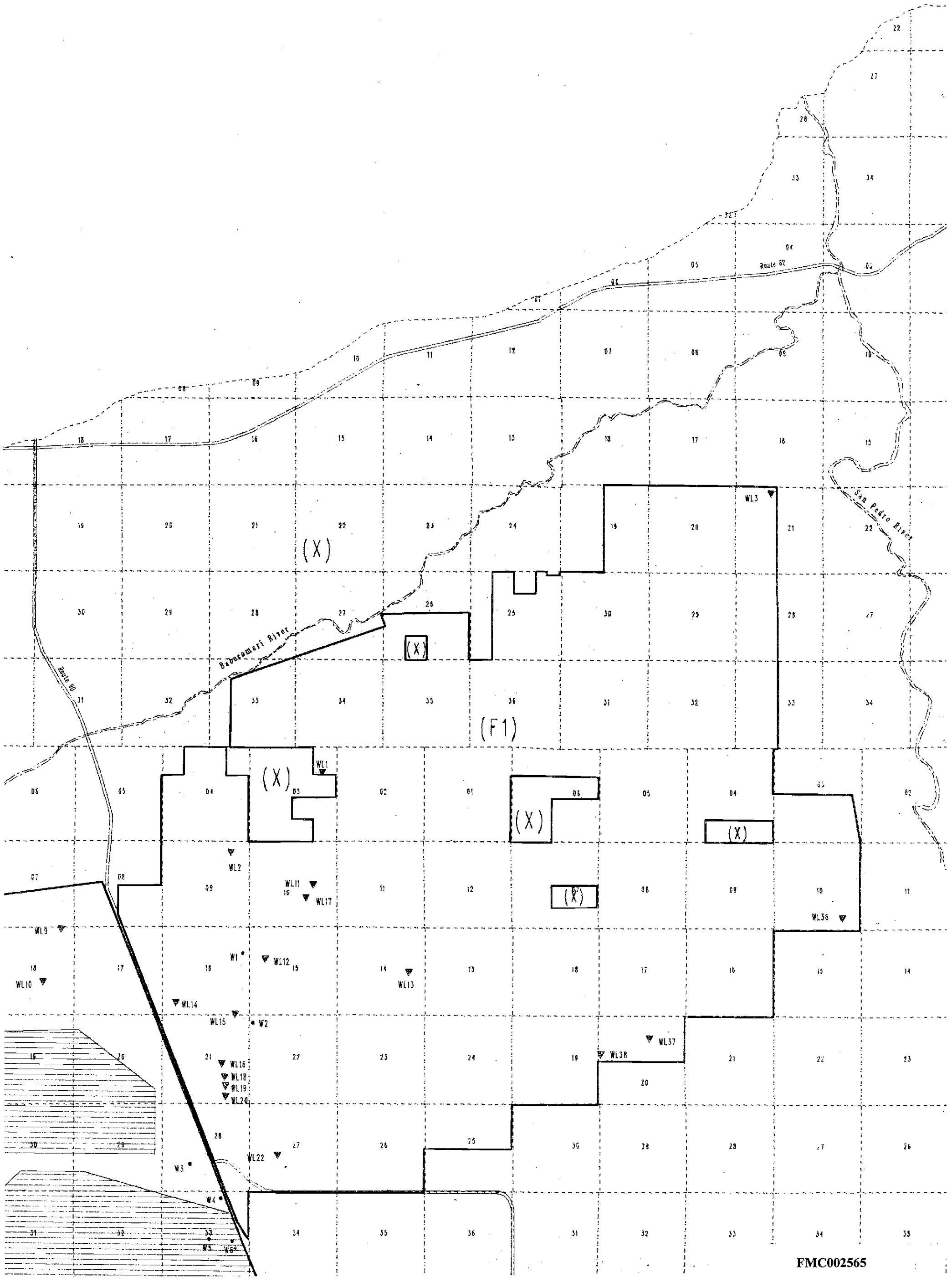
WATER USE CODES

ID :	Industrial	SP :	Sto
M :	Mining Use	SR :	Sm
PS :	Primary Storage	SW :	Sto
R :	Reservoir	WL :	Wil

(10) - Provider Number (10) - O

* FILE NUMBER / NAME *

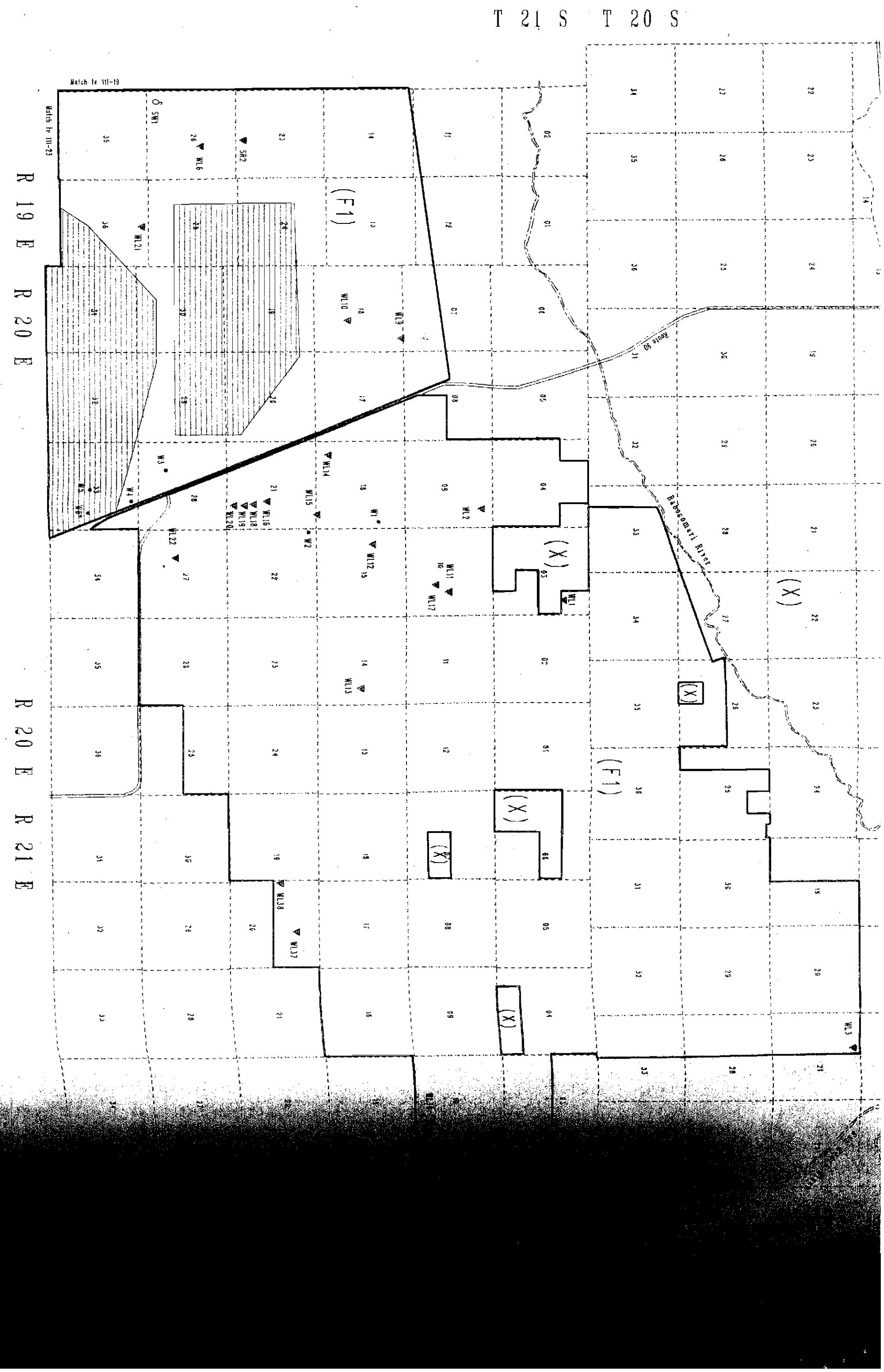
X AREAS WITHOUT MAPPED FEDERAL RI
F1 FORT HUACHUCA MILITARY RESERVAT

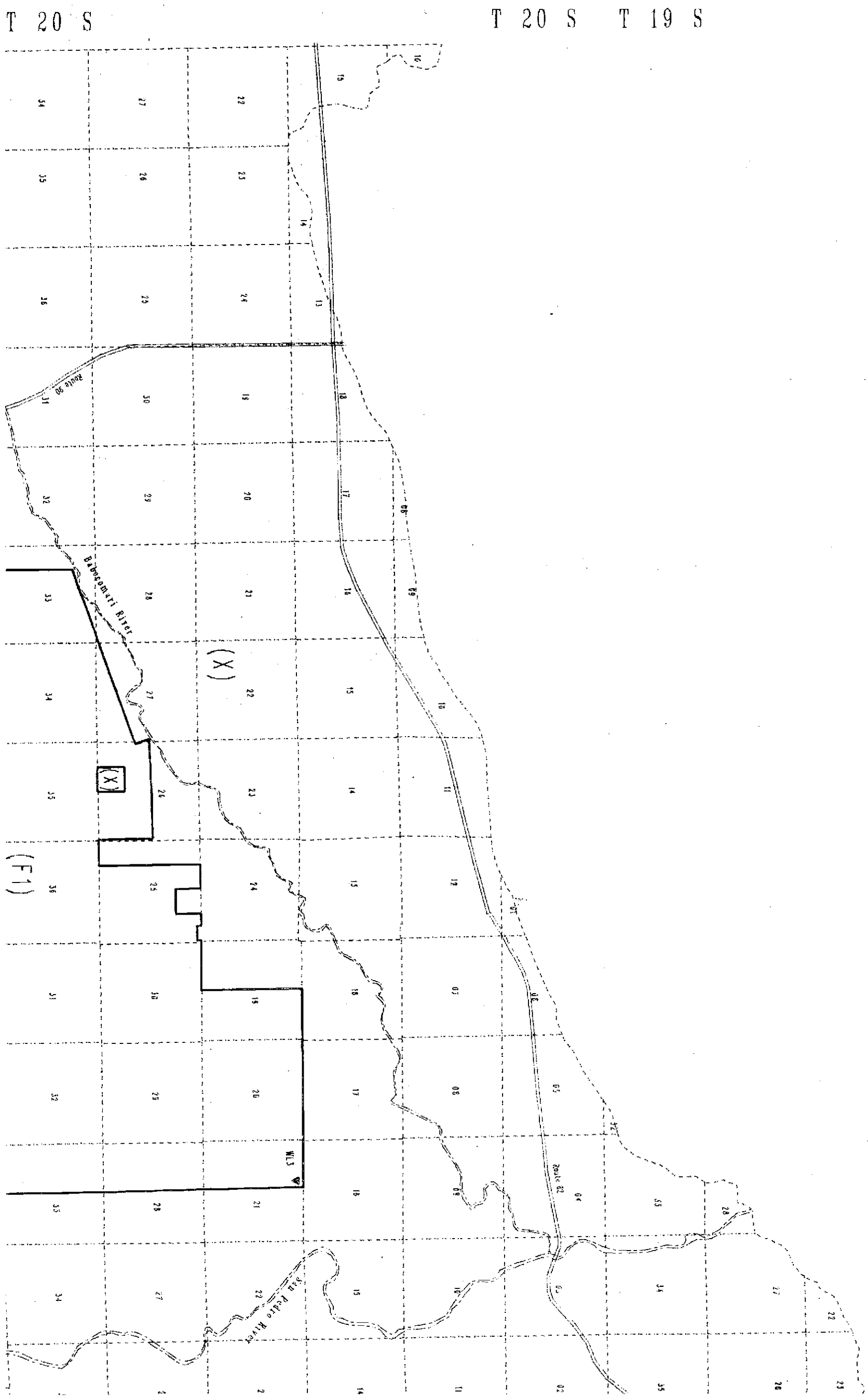

Route 82
San Pedro River
Babocomari River
Route 90
(X)
(F1)
WL1
WL2
WL3
WL9
WL10
WL11
WL12
WL13
WL14
WL15
WL16
WL17
WL18
WL19
WL20
WL22
WL36
WL37
WL38
W1
W2
W3
W4
W5
W6

FMC002565

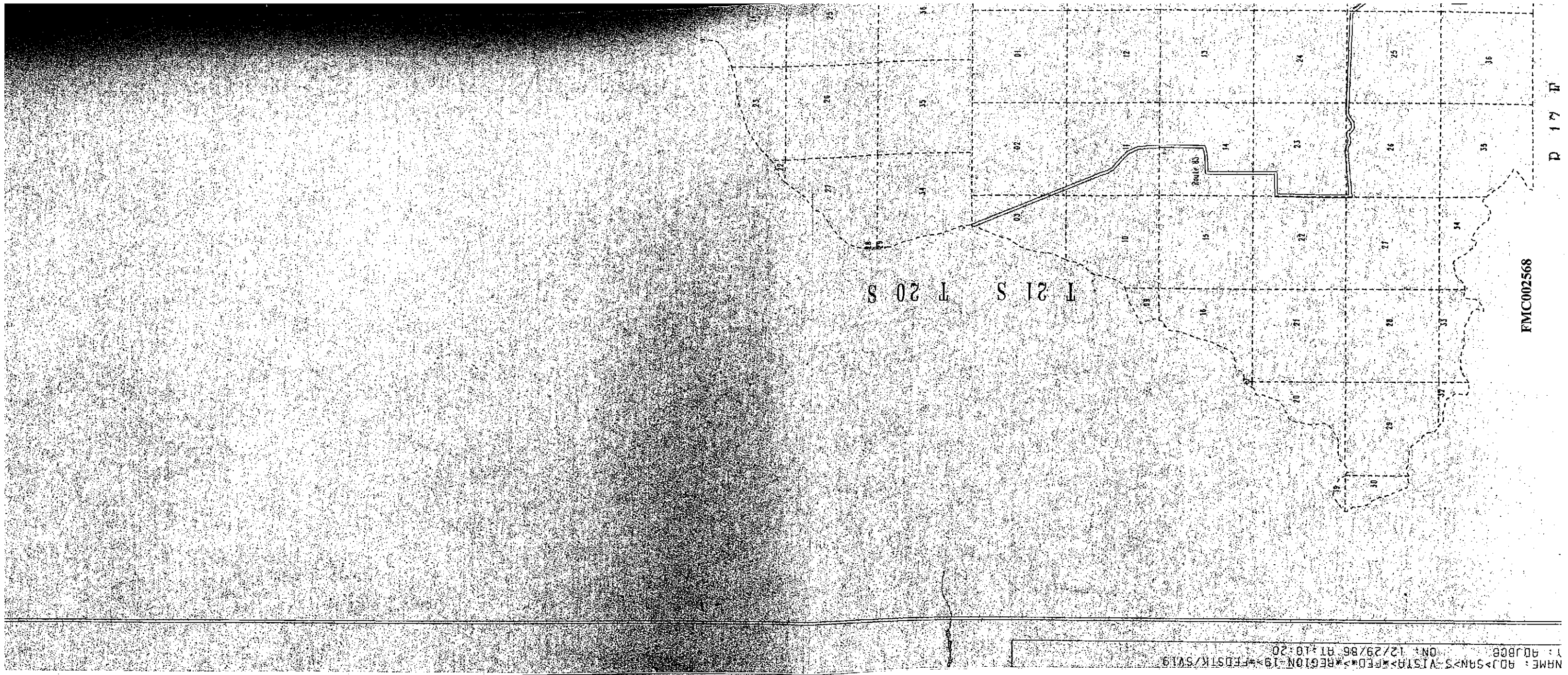
PLOT FILE NAME: 90JOHNPS-VISTAPREDMREGION-20PREDSIK/SV20
SUBMITED BY: 90JBOB ON: 12/31/95 AT:09:20

FMC002566



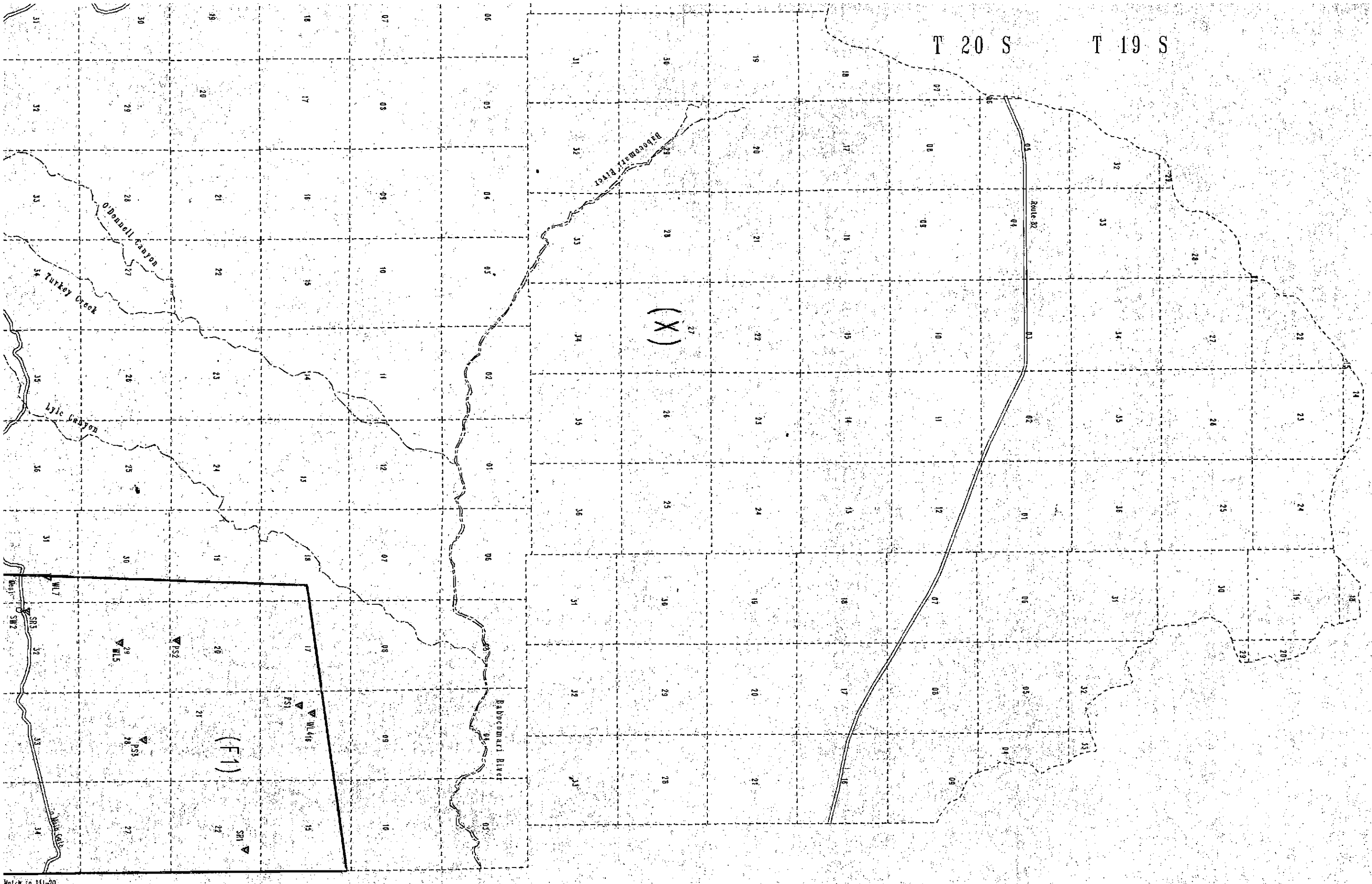

T 20 S
T 20 S T 19 S
Route 90
Babocomari River
(X)
(F1)
WL3
San Pedro River
Route 82

FMC002567



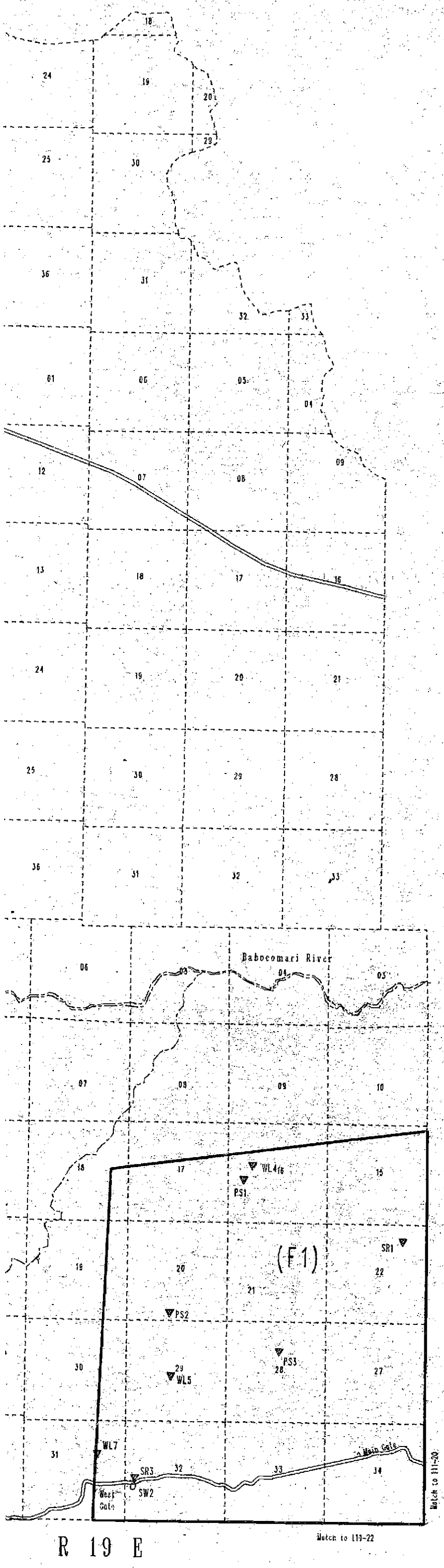
FMC002568

NAME: AOJ>SAN>S-VISTA>*FLO*>*REGION-19>*FLDSTK/SVL9
T: AOJBOB ON: 12/29/86 AT 10:20



Match to 111-20

FMC002569



Ownership Boundary
Roads or Highways
Section Boundary
Canal
Pipeline
Water Co. Service Area
Diversion (D)
Well (W)
Instream Use
Spring (S)
Reservoir / Stockpond
Mining Use
Instream Pump (P)
Industrial Use
Effluent (E)

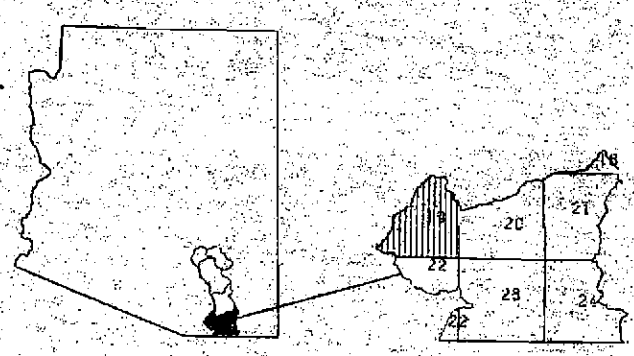
WATER USE CODES

ID : Industrial	SP : Stockpond
M : Mining Use	SR : Small Reservoir
PS : Primary Storage	SW : Stockwatering
R : Reservoir	WL : Wildlife Use

(10) - Provider Number (10) - Owner Number

*** FILE NUMBER / NAME ***

X AREAS WITHOUT MAPPED FEDERAL RIGHT CLAIMS
F1 FORT HUACHUCA MILITARY RESERVATION / 111-23-F1



N

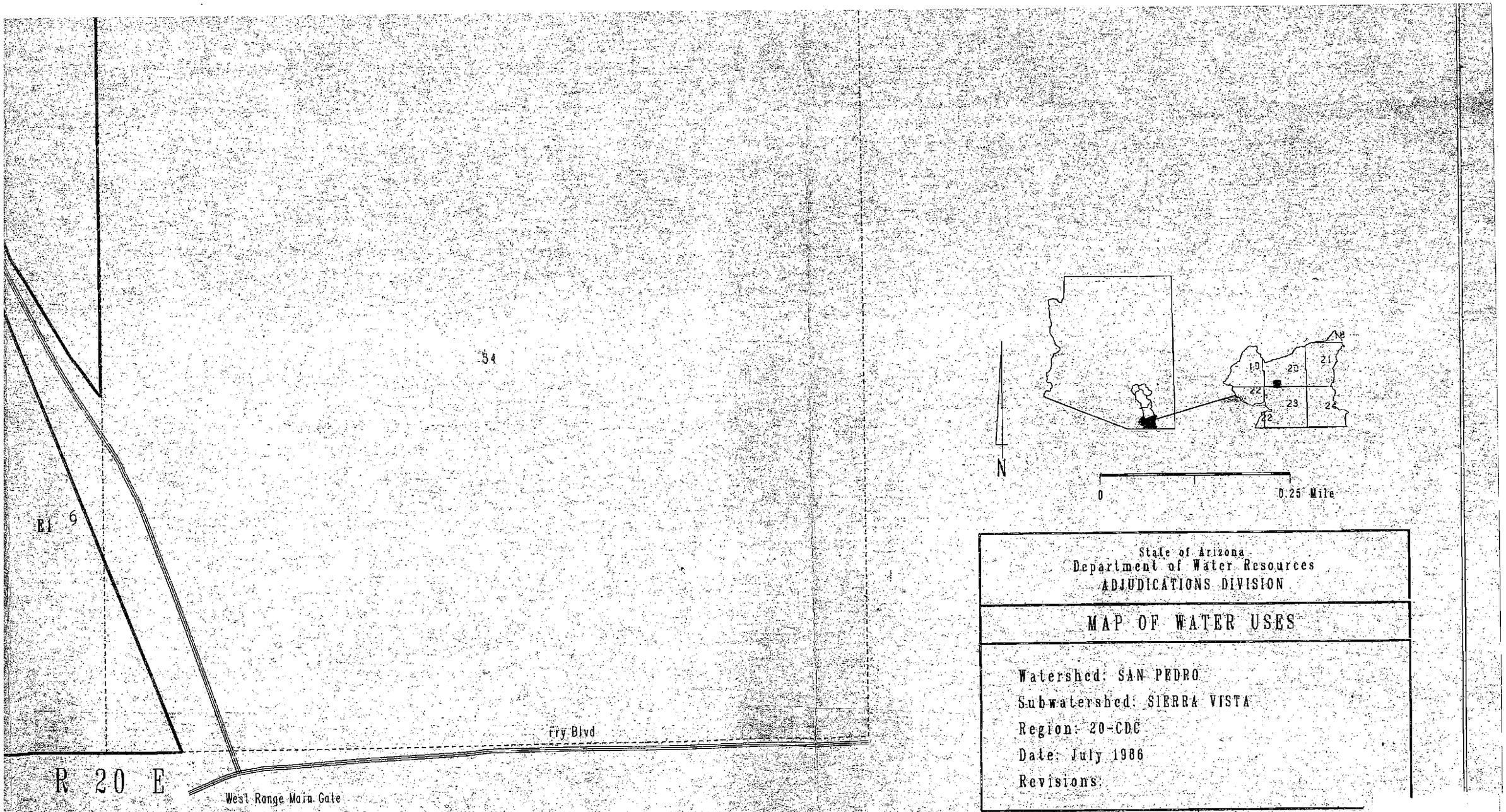
0 2 MI

State of Arizona
Department of Water Resources
ADJUDICATIONS DIVISION

MAP OF WATER USES

Watershed: SAN PEDRO
Subwatershed: SIERRA VISTA
Region: 19
Date: July 1986
Revisions:

FMC002570

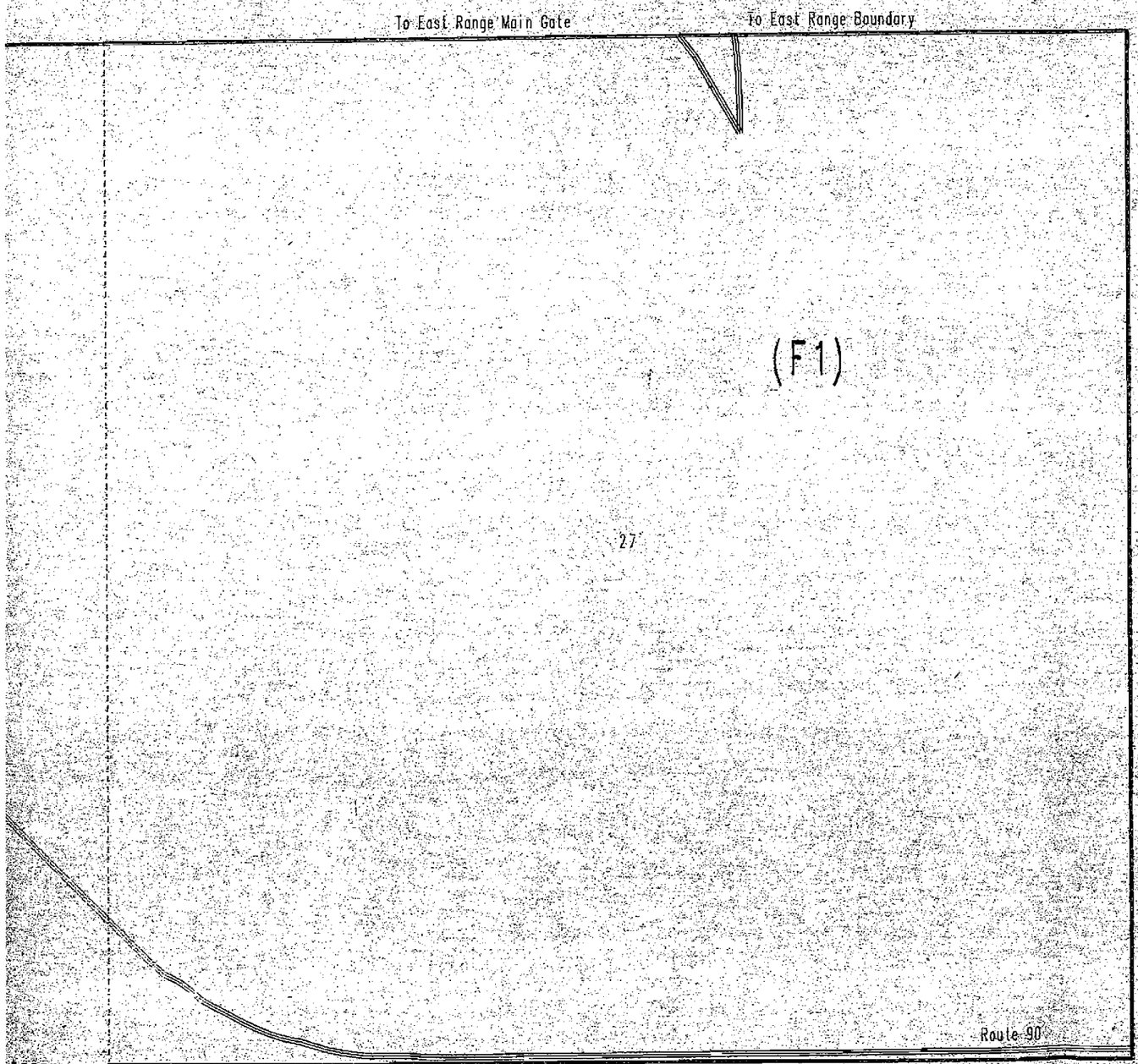


State of Arizona
Department of Water Resources
ADJUDICATIONS DIVISION

MAP OF WATER USES

Watershed: SAN PEDRO
Subwatershed: SIERRA VISTA
Region: 20-CDC
Date: July 1986
Revisions:

FMC002571



Subregion Map Legend

- Ownership Boundary
- Irrigation Boundary
- Roads or Highways
- Section Boundary
- Canal
- Pipeline
- Irrigation
- Reservoir / Stockpond
- Diversion (D)
- Well (W)
- Spring (S)
- Instream Pump (P)
- Industrial Use
- Instream Use
- Effluent (E)

WATER USE CODES

I.D:	Industrial	R.C:	Recreational Irrigation
I.R:	Agricultural Irrigation	S.P:	Stockpond
O.I:	Other Irrigation Use	S.R:	Small Reservoir
P.S:	Primary Storage	S.W:	Stockwatering
R :	Reservoir	W.L:	Wildlife Use

(10) Owner Identification Number

* FILE NUMBER / NAME *

X AREAS WITHOUT MAPPED FEDERAL RIGHT CLAIMS
F1 FORT HUACHUCA MILITARY RESERVATION 7 111-23-F1

FMC002572

R 20 E
T 21 S
Match to 111-20-CCD
Match to 111-23-BAB
East Range Main Gate
West Range East Gate
To West Gate
Route 90
28
33
E2 6
E1 6
(F1)