Revision History: Memorandum to File from Patricia Turney dated November 6, 2000 - Subject: 2000 San Juan River Basin Acreage Inventory

January 17, 2002: Revised Table 1 and Table 2.

October 8, 2004: Revised Table 2 to remove the "Wild Native Vegetation" category acres from the "Acreage Not Irrigated" column, which also affected the "Total Acreage" amounts in column 13. Also revised Table 2 to disaggregate "Dulce" acres from "Above Navajo Dam" acres.

December 7, 2004: Revised NIIP data in Table 2 to reflect NIIP acreage by block for the years 2000 through 2003 inclusive, requested of and provided by Ron Bliesner, BIA NIIP consultant and revised the Memorandum's reference to NIIP acreage data.

## MEMORANDUM

November 6, 2000

TO:

File

FROM:

Patricia Turney, ISC Staff

SUBJECT:

2000 San Juan River Basin Acreage Inventory

This memorandum summarizes the subject inventory's methodology, collected field data, analysis and future inventory plans. NMISC gratefully acknowledges the assistance of the Navajo Nation and the Jicarilla Apache Tribe in the field data collection efforts on their respective lands.

### **Inventory Methodology:**

The complete data set for the inventory is contained in five ArcInfo coverages that correspond to the following geographic areas:

The San Juan River mainstem below Navajo Dam, Animas River, La Plata River, and a portion of the Chaco River drainage

Field delineations for this area were developed by the US Bureau of Reclamation (USBR) from 1:24,000 scale aerial photos, 1:24,000 scale orthophotos, quad sheets, and Landsat TM data (August 1992) for use in the 1994 San Juan Basin Irrigated Acreage Inventory. These delineations were revised by NMISC from field data collected during the summer of 2000 and from 1:12,000 scale 1997 and 1998 U.S. Geological Survey digital orthophoto quarter quad (DOQQ) imagery where necessary. NMISC contractors Kirby Chacon and Lyn Kirkpatrick collected parcel boundary changes to the 1994 inventory delineation, and crop type and irrigation method information for each parcel. On Navajo tribal lands, the Navajo Nation Department of Water Resources also participated in the data collection field work. NMISC staff input all field-collected data into the ArcInfo database.

The Los Pinos River above Navajo Reservoir

Field delineations for this area were developed by NMISC from U.S. Geological Survey DOQQs from National Aerial Photography Program photography flown in October 1997. NMISC contractors Kirby Chacon and Lyn Kirkpatrick delineated parcels in the field on 1:12,000 scale plots of the DOQQ imagery and collected crop type and irrigation method information for each parcel. Parcels were delineated on screen using the same digital imagery and the field collected boundary information. NMISC staff input all field-collected data into the ArcInfo database.

#### Dulce

Field delineations for this area were developed by NMISC from U.S. Geological Survey DOQQS from National Aerial Photography Program photography flown in October 1997. NMISC contractors Kirby Chacon and Lyn Kirkpatrick, assisted by U.S. Bureau of Indian Affairs (BIA) Jicarilla Agency personnel, delineated parcels in the field on 1:12,000 scale plots of the DOQQ imagery and collected crop type and irrigation method information for each parcel. Parcels were delineated on screen using the same digital imagery and the field collected boundary information. NMISC staff input all field-collected data into the ArcInfo database.

Navajo Indian Irrigation Project (NIIP)

The BIA Soils Lab south of Farmington provided NMISC with NIIP spatial database coverage, which data was included in the inventory analysis of the basin. NMISC updated NIIP acreage data on December 7, 2004, with data requested of and provided by Ron Bliesner, BIA NIIP consultant, which data included information on double-cropped acres not available from the aforementioned spatial database.

Crystal, Toadlena, Sheep Springs, Two Grey Hills

Field delineations for this area were developed by NMISC staff from U.S. Geological Survey DOQQs from National Aerial Photography Program photography flown in October 1997 and May 1998. These parcels were not field-checked and were not included in the inventory analysis of the basin.

#### **Inventory Acreage Status:**

NMISC contractors found the following irrigated crops and other acreage during the summer of 2000.

Alfalfa

Corn

Garden

High density single grass

Low density mixed grass

Wild native vegetation

Lawn/turf

Wheat, oats, barley

Orchard

Grapes

Christmas Trees

Fallow

Plowed

NMISC staff aggregated the acres found irrigated based on original Blaney-Criddle seasonal crop coefficients.

Crop-type	Aggregated-crops
Alfalfa	(Alfalfa
Lawn/turf	Sod
Corn	*Corn/Sorghum
Garden	Misc. Vegetables
High-density single grass	Pasture
	Pasture Pasture
Wild native vegetation	*Pasture *
Wild native vegetation	Orchard
Orchard	Orchard
Grapes	Orchard
Christmas Trees	Orchard
Wheat, oats, barley	Small Grains
Fallow/irrigated	Distributed across irrigated small grains, pasture, alfalfa
Plowed/irrigated	Distributed across irrigated small grains, pasture, alfalfa
Not marked	Blank (Distributed across all categories, including not irrigated)

NMISC contractor Kirby Chacon described irrigated wild native vegetation as primarily grass and brush, and in a few instances, brush, Salt Cedar, and/or Russian Olive. Irrigated wild native vegetation occurred infrequently. Occurrences were mainly in the Upper San Juan area with a few parcels in the Echo Ditch, Hammond and Animas River areas. Irrigated wild native vegetation parcels were further checked against 1997 and 1998 U.S. Geological Survey DOQQs to determine their general vegetative characteristics as grass or trees. Apparently grassy wild native vegetation parcels were aggregated to pasture. Apparently treed wild native vegetation parcels were aggregated to orchard.

Irrigated fallow parcels were generally sprinkler-irrigated, with ground conditions indicating no crop for at least a year and signs of a previous crop (such as corn husks) observed. These parcels were considered "diskable". Irrigated plowed parcels were found recently seeded and water applied.

All irrigated plowed parcels and all irrigated fallow parcels were distributed across the irrigated crop categories of small grains, pasture and alfalfa based on the overall cropping pattern for these categories in each irrigation area.

Of the 38,950 acres targeted for field data collection, 240 acres were not field-checked (approximately 0.6% of the total). For analysis purposes, NMISC staff distributed these 240 acres across all acreage categories, including not irrigated acreage, based on the overall cropping pattern for each irrigation area.

The NIIP spatial database coverage gives the following irrigated crops and other acreage during the summer of 2000.

Alfalfa

New Alfalfa

Corn

Hay Grazer

Mint

Pasture

Potatoes

**Pumpkins** 

Sod

Winter Wheat

Winter Wheat Graze Out

Fallow

Conservation Reserve Program

BIA Soils Lab personnel described all fallow acreage as not irrigated and all Conservation Reserve Program acreage as old side row irrigated fields planted back to native vegetation and initially irrigated to establish cover. All NIIP irrigated acreage is sprinkler irrigated.

NMISC staff aggregated the NIIP irrigated acres based on original Blaney-Criddle seasonal crop coefficients.

Crop-type	% of aggregated category	Aggregated-crops
Alfalfa	92%	Alfalfa *.
New Alfalfa	4%	Alfalfa
Mint	4%	Alfalfa
Sod	100%	Sod
Corn	90%	Com/Sorghum
Haygrazer	10%	Corn/Sorghum
Potatoes	88%	Misc. Vegetables
Pumpkins	12%	Misc. Vegetables
Pasture	100%	Pasture
Winter Wheat	79%	Small Grains
Winter Wheat graze out	21%	Small Grains

#### **Inventory Analysis**

The following analysis of irrigated acreage is segregated by unit of location with hydrologic units being defined as drainage areas between streamflow gages. Specific irrigation areas within hydrologic units where it is deemed appropriate to distinguish between sources of irrigation water diversions further disaggregate the analysis. The data analysis is contained in the following tables and figure.

- Table 1 lists and describes the hydrologic units and the irrigation areas within each unit. Irrigation areas were also cartographically delineated, in part, in NMISC staff's memo to file dated June 11, 1997.
- Table 2 lists the acreage tally for the 2000 inventory. This tabulation was revised on September 28, 2004, to remove the "Wild Native Vegetation" category from the "Acreage Not Irrigated" amounts in column 12 which also affected the "Total Acreage" amounts in column 13. This tabulation was further revised on December 7, 2004, as previously described in this memorandum to reflect NIIP acreage by block as provided by Ron Bliesner, BIA NIIP consultant, for the years 2000 through 2003 inclusive.
- Figure 1 shows the mapped extent of the 2000 inventory. The figure includes some lakes and ponds in addition to lands under irrigation.

In addition to the targeted field data collection areas, NMISC staff found scattered irrigation in areas bounded by USGS quadrangles Crystal, Sheep Springs, Toadlena, and Two Grey Hills. NMISC staff observed these parcels on U.S. Geological Survey digital orthophoto imagery while making boundary changes to field-checked areas in the Newcomb area. No field data was collected for these parcels as they were not found until mid-October 2000. The imagery indicated that these parcels probably have a limited and insufficient water supply. They are not included in this analysis.

#### **Future Inventory Plan**

NMISC will update the San Juan River Basin Acreage Inventory in 2005 or as its priorities allow. The 2005 inventory will be based on 1:12,000 scale U. S. Geological Survey DOQQs or an equivalent digital imagery source and will be contained in a single ArcInfo database.

# TABLE 1. IRRIGATION AREAS IN THE SAN JUAN RIVER BASIN IN NEW MEXICO BY HYDROLOGIC UNIT

UNIT	DESCRIPTION OF HYDROLOGIC DRAINAGE	IRRIGATION AREAS IN UNIT
1	NAVAJO RIVER, PINE RIVER, AND SAN JUAN RIVER ABOVE NAVAJO DAM	ABOVE NAVAJO DAM
2	ANIMAS RIVER ABOVE THE ANIMAS RIVER AT FARMINGTON GAGE	ANIMAS RIVER
3	SAN JUAN RIVER BELOW NAVAJO DAM AND ABOVE THE SAN JUAN RIVER AT FARMINGTON GAGE (EXCLUDING UNIT 2)	ABOVE ARCHULETA, CITIZEN'S DITCH, ARCHULETA DITCH, TURLEY DITCH, HAMMOND AREA (1), NIIP BLOCKS 1, 4, 5, & 6 (2%), ECHO (2)
4	LA PLATA RIVER ABOVE LA PLATA RIVER NEAR FARMINGTON GAGE	UPPER LA PLATA (3), LA PLATA RIVER
5	CHACO RIVER ABOVE MOUTH	CHACO RIVER, NIIP BLOCKS 3 (87%) & 7 (26%)
6	SAN JUAN RIVER BELOW THE SAN JUAN RIVER AT FARMINGTON GAGE AND ABOVE THE SAN JUAN RIVER AT SHIPROCK GAGE (EXCLUDING UNITS 4 AND 5)	FARMINGTON GLADE (4), FARMERS MUTUAL DITCH (5), JEWETT VALLEY, WESTWATER, FRUITLAND, HOGBACK- EAST (6), CAMBRIDGE, NIIP BLOCKS 2, 3 (13%), 6 (98%), & 7 (74%)
7	SAN JUAN RIVER BELOW THE SAN JUAN RIVER AT SHIPROCK GAGE (EXCLUDING UNIT 8)	HOGBACK-WEST (7), CUDEI
8	WHISKEY CREEK DRAINAGE, RED WASH	WHISKEY CREEK

#### NOTES:

- (1) INCLUDES HAMMOND PROJECT AND ACREAGE WITH PRIVATE WATER RIGHTS EXCLUSIVE FROM THE HAMMOND PROJECT.
- (2) INCLUDES ONLY THAT PORTION OF ACREAGE SERVED BY ANY DITCH DIVERSION FROM ANIMAS RIVER FOR WHICH RETURN FLOW OCCURS BELOW THE ANIMAS RIVER AT FARMINGTON GAGE OR TO THE SAN JUAN RIVER ABOVE THE MOUTH OF THE ANIMAS RIVER
- (3) INCLUDES ONLY ACREAGE SERVED BY DIVERSIONS FROM THE LA PLATA RIVER ABOVE THE LA PLATA RIVER AT STATELINE GAGE. THE ENTERPRISE DITCH SERVES LANDS IN THIS AREA AND IN COLORADO.
- (4) INCLUDES ONLY ACREAGE SERVED BY DIVERSION FROM ANIMAS RIVER FOR WHICH RETURN FLOW OCCURS TO THE SAN JUAN RIVER BELOW THE SAN JUAN RIVER AT FARMINGTON GAGE.
- (5) DIVERSION SERVING THIS AREA IS FROM ANIMAS RIVER BELOW THE ANIMAS RIVER AT FARMINGTON GAGE AND IS SUPPLEMENTED BY DIVERSION FROM THE SAN JUAN RIVER BELOW THE SAN JUAN RIVER AT FARMINGTON GAGE.
- (6) INCLUDES ONLY THAT PORTION OF THE HOGBACK PROJECT ABOVE SHIPROCK.
- (7) INCLUDES ONLY THAT PORTION OF THE HOGBACK PROJECT BELOW SHIPROCK, INCLUDING THE HOGBACK EXTENSION, WHICH IS SERVED BY DIVERSION FROM THE SAN JUAN RIVER ABOVE THE SAN JUAN RIVER AT SHIPROCK GAGE.
- (8) THE WHISKEY CREEK AREA WAS NOT FIELD-CHECKED AND IS NOT INCLUDED IN THIS ANALYSIS

CORN/ SORGHUM         MISC. NORGHUM         CRAIL SORGHUM         SMAIL SORGHUM         SMAIL SO	IRRIGATION AREA ABOVE NAVAJO DAM								_			
TITEM   ALFALEA SORGHUM   MISC.   OKCHARD   PASTURE   SOD   GRAINS   OKCHARD   PASTURE   SOD   GRAINS   OKCHARD   OKCHARD	IRRIGATION ARE/				CROP CA	TEGORY				and a second sec		
TOTAL ACRES   CORN   MISC   ORCHARD   PASTURE   SOMALL	IRRIGATION AREA			4		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			-	TOTAL	ACREAGE	
TOTAL ACRES   1   1   1   1   1   1   1   1   1	IRRIGATION AREA			CORN/	MISC.				SMALL	ACREAGE	NOT	TOTAL
TOTAL ACRES         61         0 <t< td=""><td>ABOVE NAVAJO DAM</td><td></td><td>ALFALFA</td><td></td><td>VEGET.</td><td>ORCHARD</td><td></td><td>SOD</td><td>GRAINS</td><td>IRRIGATED</td><td>IRRIGATED</td><td>ACREAGE</td></t<>	ABOVE NAVAJO DAM		ALFALFA		VEGET.	ORCHARD		SOD	GRAINS	IRRIGATED	IRRIGATED	ACREAGE
YOTALACRES         61         0         0         99         0         0           % DISTRIB.         38         0         0         0         62         0	ABOVE NAVAJO DAM			***************************************						470000000000000000000000000000000000000	***************************************	
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TOTALACRES		Drip-irrigated	0		0	0	0	0	0	0		
Flood-irrigated	EO II IQ	TOTAL ACRES	r			-		•				
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TOTAL ACRES   1,058   126   38   78   2,913   152   82		Sprinkler-irrigated	0		0	0	0	0	0	0		
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UNIT	INNIGATION AREA	I I EM	ALFALFA	SURGROIM	veuei.	ORCHARD	FASIORE	SOD	GKAINS	IKKIGALED	IKKIGATED IKKIGATED	ACKEAGE
3	CITIZENS DITCH	TOTAL ACRES	959	22	3	8	1,701	72	179	2,645	225	2,870
	4	% DISTRIB.	25	-	0	-	64	m	7			
	The state of the s	Flood-trrigated	169	18	3	12	1,166	0	12	1.379		
		Sprinkler-irrigated	482	4	0	5	536	72	167	1,265		
		Drip-trrigated	0	0	0	-	0	0	0	_		
3	TURLEY DITCH	TOTAL ACRES	0	0	0	0	163	3	3	691	14	183
		% DISTRIB.	0	0	0	0	16	-	2		A STATE OF THE STA	
		Flood-irrigated	0	0	0	0	158	3	2	162		
	And the state of t	Sprinkler-irrigated	0	0	0	0	S	0	2	7		
		Drip-irrlgated	0	0	0	0	0	0	0	0		
E)	HAMMOND	TOTAL ACRES	1.910	39		3	1.151	78	19	3.242	227	3 469
		% DISTRIB.	59	-	0	0	36	2	2			
		Flood-irrigated	76	0	0	0	73	0	0	149		
		Sprinkler-irrigated	1,834	39	-	3	1,078	78	19	3,093		
		Drip-irrigated	0	0	0	0	0	0	0	0		
67	dIIN	TOTAL ACRES	829	4 258	8 266	0	C	189	3 785	17.810	7 885	25 703
		% DISTRIB.	8	24	46	0	0	4	21		COO'.	21/2
*	UPPER LA PLATA	TOTAL ACRES	0	0	0	0	114	7	0	122	29	189
		% DISTRIB.	0	0	0	0	94	9	0			The state of the s
		Flood-irrigated		0	0	0	8	0	С	000		
		Sprinkler-irrigated	0	0	0	0	1.6	7	0	104		
		Drip-irrigated	0	0	0	0	0	0	0	0		
-	LA PLATA RIVER	TOTAL ACRES	\$95	2	C		1 909	0	69	7 545	1 531	4 076
		% DISTRIB.	22	0	0	0	75	0	3			
		-										
	ANTINIA ALA ANTINIA	riood-irrigated	212	7	0	0	1,486	0	37	2,037		
	THE PARTY OF THE P	Sprinkler-Irrigated	33	0	0	D	473	0	32	208		

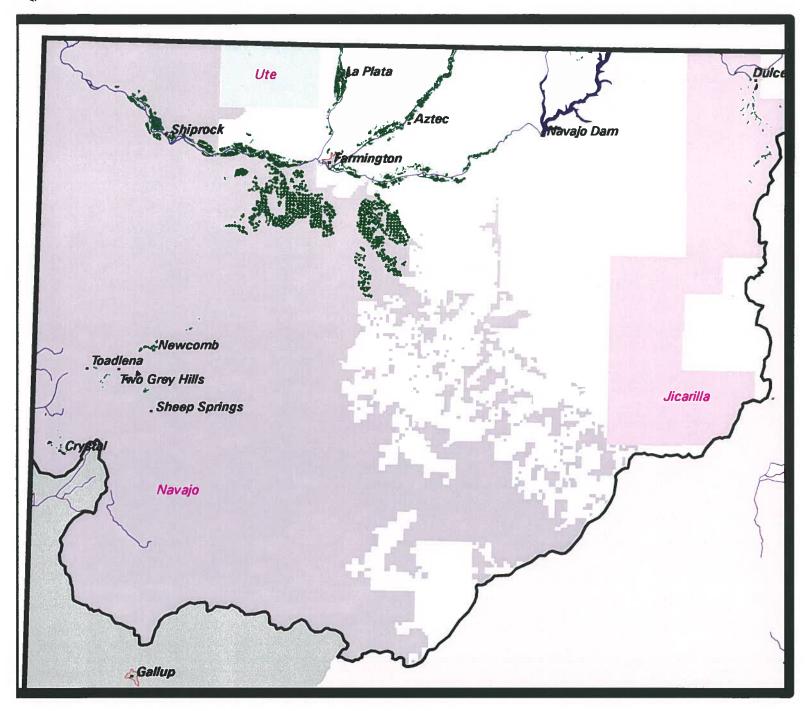
					CROP CATEGORY	EGORY						
	of Control of the Con									TOTAL	ACREAGE	
OISO IOGUAN	A TON MOUTA OLD OT	Y CLASS	7 1 1 4 1 1 4	CORN/	MISC.	adviio do	4	600	SMALL	ACREAGE		TOTAL
INIT	INNIGATION AREA	ILEM	ALFALFA	SOKCHOM	vegel.	UKCHAKD	PASIUKE	SOD	CKAINS	IKKIGALED	IKKIGALED	ACREAGE
5	CHACO RIVER	TOTAL ACRES	140	31	91		8=	0	0	306	547	852
		% DISTRIB.	46	01	5	0	39	0				
		Flood-irrigated	140	31	91		811	0	0	308		
		Sprinkler-trrigated	0	0	0	0	0	0		0		
		Drip-irrigated	0	0	0	0	0	0		0		
5	dIIN	TOTAL ACRES	1,848	2,712	498	0	0	0	1,261	6.319	2.111	8.430
		% DISTRIB.	29	43	00	0	0	0				
9	FARMERS MUTUAL DITCH	TOTAL ACRES	1,556	82	-	31	406	90		2.085	523	2.607
		% DISTRIB.	75	4	0	-	61	0	0			
			1 166	S		Č	201					
A Commence of the Commence of	And the second s	Sprinkler-irrigated	101	79			406	0	0	1,9/4		
		Dein irrigated		0	-					2		
		Drip-irrigated			-			0		-	The state of the s	
9	JEWETT VALLEY DITCH	TOTAL ACRES	718	61	-	0	86	0	26	862	681	1,051
		% DISTRIB.	83	2	0	0	=	0	3			
	The state of the s											
	N. D. C.	Flood-trrigated	636	61	-	0	86	0		780		
Mary and the factor of the same and		Sprinkler-irrigated	82	0	0	0	0	0		82		
		Drip-irrigated	0	0	0	0	0	0	0	0		
9	WESTWATER	TOTAL ACRES	69		0					(3		(7)
		% DISTRIB.	001	0	0	0	0 0	0		100		70
							,					
	THE TRANSPORT FRANCISCO	Flood-irrigated	62	0	0	0	0	0	0	62		
		Sprinkler-irrigated	0	0	0	0	0	0	0	0		
		Drip-Irrigated	0	0	0	0	0	0	0	0		
9	CAMBRIDGE	TOTAL ACRES	2	7	5		35	0	3	55	7	62
	and probability to the form of the	% DISTRIB.	6	12	6	-	4	0	2		9.9 (6)	
		Flood irrigated	8		~	-	36	0	6	4		
	PARTICLE AND THE PARTIC	Chrimbler-irriagiod	0		, (	-	S		0	3		
		oprimer-intraneu		> 4				>	0	•		
		Dain tunional										

CORN
ALFALFA SORGHUM
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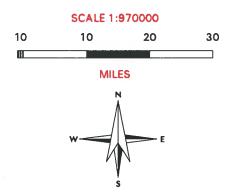
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Property Companies   Property Cartegory   Property Cartegory   Property Cartegory Companies   Property Cartegory C		TABLE 2. 20	UUU CROP ACKEAGE DATA FOR THE SAN JUAN RIVER BASIN IN NEW MEXICO BY AREA	AGE DAT	A FUK IHE	SAN JUA	N RIVER I	N NI NISE	EW MEX	ICO BY A	KEA		
ACCHILLE ADDICTION NEED   TITEM   ALFALFA SONGHIOM   VEGET   ORCHAND   PATTICE   SON   GRANS   RAGIANTED   NOT   CHARACTER						CROP CA	FEGORY						
The control of the	DROLOGIC	and an application of the significant and a second and a	Mari	AIFAIFA		MISC.	CAVEDAO	DACTIBE	S	SMALL	ACREAGE		
Figure   F	UNIT				3 .	vedei.	ORCHORD	LASIONE	700	CMINA	INNIGALED		
% DISTRIB.         54         2         0         1         39         2         3           Planck-impgered         2,399         118         4         47         1,598         3         39         4,516           Symithet-impgered         2,399         118         4         47         1,698         3         39         4,567           TOTAL ACRES         1,218         3         1         2         1,69         18         2,59         4,567           % DISTRIB.         1,218         37         1,20         3,186         18         2,59         4,567           Symite-impgered         550         128         24         117         2,882         74         82         4,973         1,644           Symite-impgered         50         0 </td <td></td> <td>ARCHULETA DITCH, CITIZENS DITC</td> <td>Ξ</td> <td>4,906</td> <td>191</td> <td>9</td> <td>55</td> <td>3.527</td> <td>091</td> <td>269</td> <td>9.084</td> <td>1 212</td> <td>49 54</td>		ARCHULETA DITCH, CITIZENS DITC	Ξ	4,906	191	9	55	3.527	091	269	9.084	1 212	49 54
Proof-trigered   2,397   118   4   47   1,908   3   3   4,516   2   2   2   2   2   2   2   2   2		TURLEY DITCH, HAMMOND		54	2	0	-	39	2	3	1001	7,41	12,00
Princed-renigoard   2,397   118   4   41   1,908   33   4,516		FARMERS MUTUAL DITCH						0.00					
Symmeter-impared         2,509         4,3         1         8         1,619         158         229         4,567           TOTAL ACRES         1,218         1,28         3,186         186         186         29         4,567           Yo DISTRIB.         1,218         2,3         1,2         3,186         186         82         4,975         1,644           Flood-impared         650         128         2,4         117         2,882         74         82         4,975         1,644           Sprinkler-impared         527         0         33         2         3,84         112         0         979           Symmeter-impared         552         2         0         0         2,024         7         69         2,667         1,599           Symmeter-impared         512         0         0         0         0         0         0         0         0         0         0           Symmeter-impared         1,8         514         1,6         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0		JEWETT VALLEY AND	Flood-irrigated	2,397	118	4	47	1,908	3	39	4,516		-
Propertingened   0		WESTWATER COMBINED	Sprinkler-irrigated	2,509		_	•	1,619	158	229	4,567	4	
TOTAL ACRES         1.218         1.28         57         1.20         3.186         186         82         4.975         1,644           % DISTRIB.         24         3         1         2         644         4         2         4.975         1,644           Propulational Strain         650         128         24         117         2.882         74         82         3.997           Symbol Integrated Strain         55         2         0	-		Drip-trrigated	0	0	_	-	0	0	0	2		
Figure   F		ANIMAS RIVER ECHO	TOTAL ACRES	1 2 18	128	27	120	3 186	781	83	707	1 644	61 22
Productive continued   Color		AND FARMINGTON GLADE	% DISTRIB.	24	071	5 -	2	2,100	100	70	6,7,4	1,044	01,33
Problematication of 690         128         24         117         2.882         74         82         3.997           Symble-Intigated Displayed         527         0         33         2         364         112         0         979           TOTAL ACRES         565         2         6         0         0         0         0         0         0         0           TOTAL ACRES         565         2         0         0         2.024         7         69         2.667         1,599           Problematic intigened         512         2         0         0         0         0         0         0         0           Problematic intigened         512         0         0         0         0         0         0         0         0           Problematic intigened         1,869         514         196         9         368         3         96         3,034         2,034           Problematic intigened         1,869         514         196         9         368         3         96         3,034         2,034           Problematic intigened         1,809         514         196         9         368         3,034		COMBINED			2	•	1	5	-	7			
Symboles-irrigated         527         0         33         2         304         112         0         979           TOTAL ACRES         565         2         0         0         2,024         7         69         2,667         1,599           "A DISTRIB.         21         0         0         0         0         2,024         7         69         2,667         1,599           Producturigened         512         2         0         0         0         76         0         2,667         1,599           Symble-irriganed         512         2         0         0         0         0         0         0         0           Producturiganed         1,869         514         196         9         368         2         96         3,074         2,034           Producturiganed         1,869         514         196         9         368         2         96         3,074         2,034           Producturiganed         1,969         514         1,96         9         368         2         96         3,074         2,034           Producturiganed         1,124         1,24         6         0         0 <th< td=""><td></td><td></td><td>Flood-irrigated</td><td>069</td><td>128</td><td>24</td><td>117</td><td>2,882</td><td>74</td><td>82</td><td>3,997</td><td></td><td></td></th<>			Flood-irrigated	069	128	24	117	2,882	74	82	3,997		
TOTAL ACRES         565         2         0         <			Sprinkler-trrigated	527	0	33	2	304	112	0	979		
TOTAL ACRES         S65         2         0         0         2,024         7         69         2,667         1,599           % DISTRIB.         21         0         0         0         76         0         2,024         7         69         2,667         1,599           Flood-irrigated         512         2         0         0         0         7         32         612           Symither-irrigated         1,888         514         196         9         368         3         96         3,074         2,034           Problingered of Principle of Symither-irrigated         1,869         514         196         9         368         2         96         3,074         2,034           Flood-irrigated of Symither-irrigated         1,869         514         196         9         368         2         96         3,074         2,034           Flood-irrigated of Drip-irrigated         1,869         514         9         368         2         96         3,074         2,034           Flood-irrigated of Drip-irrigated         1,28         314         9         368         2         96         3,074         2,034           Flood-irrigated of Drip-irrigated <t< td=""><td></td><td></td><td>Drip-Irrigated</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>of the same</td><td></td></t<>			Drip-Irrigated	0	0	0	0	0	0	0	0	of the same	
% DISTRIB.         21         0         0         76         0         3           Flood-irrigated Sprinkter-irrigated 1,248         12,048         0         0         1,504         0		UPPER LA PLATA AND LA	TOTAL ACRES	565	2	0	0	2.024	7	69	7,967	1 599	4 26
Finod-irrigated   512   2   0   0   1,504   0   37   2,055   5   5   5   5   5   5   5   5   5		PLATA RIVER COMBINED	% DISTRIB.	21	0	0	0	92	0	3			
Sprinkler-Intigated         312         2         0         1,504         0         37         2,035           Prip-Intigated         33         0 <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>				-									
TOTAL ACRES   1,888   514   196   9   368   3   96   3,074   2,034			Sprinkler-irrigated	512	7 0	0	0	1,504	0 1	3,	2,055	Spring Mary and American	
TOTAL ACRES   1,888   514   196   9   368   3   96   3,074   2,034			Deln-irrigated	0						4	710		
TOTAL ACRES         1,888         514         196         9         368         3         96         3,074         2,034           % DISTRIB.         61         17         6         0         12         0         3         5         3,074         2,034           Prood-irrigated         1,869         514         196         9         368         2         96         3,054         2         96         3,054         2         96         3,054         2         96         3,054         2         96         3,054         2         96         3,054         2         96         3,054         9         9         9         9         9         9         9         9         9         9         3,054         9         3,054         9         9         3         9         3,054         9         9         3         9         19         9         9         3         9         9         3,054         9         9         3,054         9         3         19         9         19         9         9         19         9         19         9         10         9         10         9         10         9         10 <td></td> <td></td> <td>name di di di</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>&gt;</td> <td></td> <td></td> <td></td>			name di di di							>			
% DISTRIB.         1,000         3,14         2,035         2,134         2,035         2,134         2,035         2,134         2,035         2,134         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144         2,035         2,144		FBI IITI ANID CAMBBIDGE AND	TOTAL ACBES	1 000	V.1.2	701		070		2	100	1000	
Flood-irrigated   1,869   514   196   9   368   2   96   3,054     Sprinkler-irrigated   1,989   514   196   9   368   2   96   3,054     Drip-irrigated   1,248   336   124   6   372   3   56   2,154     Sprinkler-irrigated   1,248   336   12,43   6   372   3   56   2,144     Sprinkler-irrigated   1,248   336   12,43   2,035     Flood-irrigated   1,248   336   12,43   2,03   3   56   2,144     Sprinkler-irrigated   1,248   336   12,243   224   0   681   8,946   42,651   14,469     Flood-irrigated   0   0   0   0   0   0   0     Sprinkler-irrigated   0   0   0   0   0   0   0   0     Sprinkler-irrigated   0   0   0   0   0   0   0   0   0     Sprinkler-irrigated   0   0   0   0   0   0   0   0   0		HOGBACK-EAST COMBINED	% DISTRIB.	19	117	9	0	12	0	2 6	3,0,4	7,034	3,10
Filood-irrigated   1,869   514   196   9   368   2   96   3,054     Spiniker-irrigated   1,9   0   0   0   0   0   0   19     Drip-irrigated   1,248   336   124   6   372   3   56   2,144     Filood-irrigated   1,248   336   12,43   2,035   372   3   56   2,144     Spinikler-irrigated   1,248   336   12,44   6   372   3   56   2,144     Spinikler-irrigated   1,248   336   12,44   6   372   3   56   2,144     Spinikler-irrigated   0   0   0   0   0   0   0     ACRES   9,356   11,201   12,243   224   0   681   8,946   42,651   14,469     Filood-irrigated   0   0   0   0   0   0   0     Spinikler-irrigated   0   0   0   0   0   0   0   0     Spinikler-irrigated   0   0   0   0   0   0   0   0   0     Spinikler-irrigated   0   0   0   0   0   0   0   0   0     Spinikler-irrigated   0   0   0   0   0   0   0   0   0						1000							and the second s
Sprinkler-Irrigated         19         0         0         0         0         0         19           Drip-Irrigated         10         0         0         0         0         0         19           TOTAL ACRES         1,248         336         124         6         372         3         56         2,154         2,035           % DISTRIB.         58         16         6         0         17         0         3         5,154         2,035           Flood-Irrigated         1,248         336         124         6         372         3         56         2,144         2,035           Sprinkler-Irrigated         10         0         0         0         0         0         10           ACRES         9,356         11,201         12,243         224         0         6         0         0         0           ACRES         9,356         11,201         12,243         224         0         0         0         0         0         0           ACRES         9,356         11,201         12,243         224         0         0         0         0         0         0           Sprinkler-Irrigated </td <td>The second second second second</td> <td>Policy and Policy and</td> <td>Flood-irrigated</td> <td>1,869</td> <td>514</td> <td>136</td> <td>6</td> <td>368</td> <td>2</td> <td>96</td> <td>3,054</td> <td></td> <td></td>	The second second second second	Policy and	Flood-irrigated	1,869	514	136	6	368	2	96	3,054		
Porp-irrigated         0			Sprinkler-Irrigated	19	0	0	0	0	0	0	19		
TOTAL ACRES         1,258         336         124         6         372         3         56         2,154         2,035           % DISTRIB.         58         16         6         0         17         0         3         2,154         2,035           Flood-irrigated         1,248         336         124         6         372         3         56         2,144           Sprinkler-irrigated         10         0			Drip-irrigated	0	0	0	0	0	0	0	0		
% DISTRIB.         58         16         6         0         17         0         3           Flood-Irrigated         1,248         336         124         6         372         3         56         2,144           Sprinkler-Irrigated         10         0         0         0         0         10           ACRES         9,356         11,201         12,243         224         0         681         8,946         42,651         14,469           ** DISTRIB         22         26         29         1         0         2         21         4,469           Fibod-Irrigated         0         0         0         0         0         0         0         0           Sprinkler-Irrigated         0         0         0         0         0         0         0         0           Orb-irrigated         0         0         0         0         0         0         0         0		HOGBACK-WEST AND CUDE!	TOTAL ACRES	1,258	336	124	9	372	3	56	2,154	2,035	4,190
Final-Irrigated   1,248   336   124   6   372   3   56   2,144		COMBINED	% DISTRIB.	28	91	9	0	11	0	3		A STATE OF THE STA	
Sprinkler-Irrigated         10         0         0         0         0         0         10           Dry-irrigated         0         0         0         0         0         0         10           ACRES         ACRES         9,356         11,201         12,243         224         0         681         8,946         42,651         14,469           % DISTRIB         22         26         29         1         0         2         21         4,469           % DISTRIB         22         26         29         1         0         2         21         4,469           Ribod-irrigated         0         0         0         0         0         0         0           Sprinkler-irrigated         9,356         11,201         12,243         224         0         681         8,946         42,651           Drip-irrigated         0         0         0         0         0         0         0			Flood-Irrigated	1,248	336	124	9	372	3	56	2,144		
ACRES         9,356         11,201         12,243         224         0         681         8,946         42,651         14,469           ACRES         ACRES         9,356         11,201         12,243         224         0         681         8,946         42,651         14,469           ACRES         ACRES         22         26         29         1         0         2         21           ACRES         3,00         2         2         2         1         4,469         14,469           ACRES         2         2         1         0         0         0         0         0           ACRES         3,00         3         1         0         0         0         0         0           ACRES         3,00         3,00         0         0         0         0         0         0           ACRES         3,00         3,00         0         0         0         0         0			Sprinkler-irrigated	10	0	0	0	0	0	0	10		
ACRES         9,356         11,201         12,243         224         0         681         8,946         42,651         14,469           % DISTRIB.         22         26         29         1         0         2         21         42,651         14,469           Flood-irrigated         0         0         0         0         0         0         0         0         0           Sprinkler-irrigated         9,356         11,201         12,243         224         0         681         8,946         42,651         0           Drip-irrigated         0         0         0         0         0         0         0         0			Drip-irrigated	0	0	0	0	0	0	0	0	1,000	
% DISTRIB.         22         26         29         1         0         2         21           Flood-irrigated         0         0         0         0         0         0         0           Sprinkler-irrigated         9,356         11,201         12,243         224         0         681         8,946         42,651           Drip-irrigated         0         0         0         0         0         0		NAVAJO INDIAN IRRIGATION	ACRES	9,356	11,201	12,243	224	0	189	8,946	42,651	14,469	57,12
0         0		PROJECT	% DISTRIB,	22	26	29	<b>,</b>	0	2	21			
9,356 11,201 12,243 224 0 681 8,946 0 0 0 0 0 0 0 0		777	Flood-irrigated	0	0	0	0	0	0	0	0		
0 0 0 0 0 0			Sprinkler-irrigated	9,356	11,201	12,243	224	0	189	8,946	42,651		
		The state of the s	Drtp-irrigated	0	0	0	0	0	0	0	0		

Figure 1



# San Juan Basin 2000 Acreage Inventory Extent



Projection ALBERS
Datum NAD27
Zunits NO
Units FEET
Spheroid CLARKE1866
Xshift 0.0000000000
Yshift 0.0000000000
Generalize 0.000000000
Parameters
32 25 0.000 /\* 1st standard parallel
36 5 0.000 /\* 2nd standard parallel
-106 0 0.000 /\* central meridian
35 0 0.000 /\* latitude of projection's origin
0.00000 /\* false easting (meters)
0.00000 /\* false northing (meters)