

MEMORANDUM

July 9, 2009

TO: File
FROM: Patricia Turney, Paul Harms, NMISC Staff
SUBJECT: 2008 San Juan River Basin Acreage Inventory

This memorandum summarizes the subject inventory's methodology, collected field data, and analysis. NMISC gratefully acknowledges the assistance of the Navajo Nation in allowing the field data collection efforts to proceed on the Nation's lands.

Inventory Methodology and Collected Field Data

NMISC staff developed cultivated field delineations based on aerial photography flown in 2005 and 2006 that became available as a DOQQ product in January 2007, from the New Mexico Geospatial Data Acquisition Coordination Committee. NMISC contractors Garda Stock and Thelma Yazzie collected crop type and irrigation method information for each parcel and indicated boundary changes where appropriate. The ArcInfo database and its associated metadata are available from Patricia Turney.

NMISC contractors and staff identified the following irrigated crops and other acreage in the Basin during the summer of 2008.

Alfalfa	High-density single grass
New alfalfa	Low-density mixed grass
Turfgrass	Trees, fruit
Grapes	Trees, other
Corn	Sorghum
Wheat	Oats
Garden	Chile
Rye	Fallow
Pumpkins	Plowed ground
Melons	Wild native vegetation

NMISC staff aggregated the acres found irrigated as follows for purposes of comparing 2008 data with earlier years of inventory level data.

2008 Crop	Aggregated Crop
Alfalfa, New alfalfa	Alfalfa
Lawn, Turf grass	Sod
Corn, Sorghum	Corn/Sorghum
Garden, Pumpkins, Melons, Chile	Misc. Vegetables
High-density single grass	Pasture
Low-density mixed grass	Pasture
Trees	Orchard
Grapes	Orchard
Wheat, Oats, Rye	Small Grains
Fallow/irrigated	Distributed across irrigated small grains, pasture, alfalfa
Plowed/irrigated	Distributed across irrigated small grains, pasture, alfalfa
Unmarked, cleared land, or plowed ground with no irrigation status	Distributed across all categories, including not irrigated

Inventory Data Analysis

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.
- Table 2 lists the acreage distribution for the 2008 inventory.
- Figure 1 shows the extent of the San Juan River Basin 2008 inventory.

For analysis purposes, 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 areas targeted for field data collection, 78 acres were not field-checked, 0 acres were classified as cleared land with no associated irrigation status (i.e., flood, sprinkler, drip or not irrigated) and 128 acres were classified as plowed ground with no associated irrigation status. For analysis purposes, NMISC staff distributed these 206 acres across all acreage categories, including not irrigated acreage, based on the overall cropping pattern for each irrigation area within which they were found. Parcels found not irrigated and categorized as “wild native vegetation” or “grass, mixed varieties, low-density (including native grasses)” were not included in the categorical distribution and are not included in Table 2. These categories in a non-irrigated state represent natural vegetation that may include both native and introduced species, which grows without benefit of intentional cultivation.

Table 2 acreage data also includes golf courses and residential yards not supplied from municipal water supply systems and not field-checked during the inventory. Golf course acres are directly computed from DOQQ aerial photography and other information sources as described in Memorandum to File dated October 24, 2005, entitled *Golf Course Watering in the San Juan Basin*. Residential yard acres are estimated as described in Memorandum to File dated September 10, 1997, entitled *Residential Yard Watering in the San Juan Basin*.

**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, 8 (5%), Echo (2)
4	La Plata River above La Plata River near Farmington gage	Upper La Plata (3), La Plata River
5	Chaco River above the mouth	Chaco River, NIIP blocks 3 (89%), 7 (26%) & 8 (84%)
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, Fruitland, Hogback-East (6), Cambridge, NIIP Blocks 2, 6, 3 (11%), 7 (74%) & 8 (11%)
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, Red Wash

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 the 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 drainage includes the Crystal, New Mexico area that drains to Chinle Wash. Its confluence with the San Juan River is located below Bluff, Utah. The Red Wash confluence with the San Juan River is located in New Mexico just east of the Arizona-New Mexico state line.

Table 2

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IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS							Total
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod	
HAMMOND AREA										
2008										
Hydrologic Unit 3	Alfalfa hay	Flood	0.0							0.0
	Alfalfa, new	Flood	0.0							0.0
	Corn, grain	Flood		8.8						8.8
	Misc. vegetables	Flood			0.3					0.3
	Pasture, native	Flood						9.6		9.6
	Pasture, improved	Flood						0.0		0.0
	Turfgrass, cool season	Flood					0.4			0.4
	Misc. fruit orchards	Flood								
	Spring small grains	Flood							1.2	1.2
	Winter small grains	Flood							0.0	0.0
	Total Flood-irrigated		0.0	8.8	0.3	0.4	9.6	1.2	65.1	85.4
	Alfalfa hay	Sprinkler	2189.6							2189.6
	Alfalfa, new	Sprinkler	61.9						17.5	61.9
	Turfgrass, cool season	Sprinkler		66.8						66.8
	Corn, silage	Sprinkler		10.0						10.0
	Sorghum, silage	Sprinkler			3.3					3.3
	Misc. vegetables	Sprinkler						897.0		897.0
	Pasture, native	Sprinkler						69.9		69.9
	Pasture, improved	Sprinkler						0.0		0.0
	Misc. field crops	Sprinkler				7.6				7.6
	Misc. fruit orchards	Sprinkler				0.0				0.0
	Christmas trees	Sprinkler								
	Spring small grains	Sprinkler							0.0	0.0
	Winter small grains	Sprinkler							0.0	0.0
	Total Sprinkler-irrigated		2251.5	76.8	3.3	7.6	966.9	0.0	17.5	3323.6
	Misc. fruit orchards	Drip				0.0				0.0
	Vineyards	Drip				0.0				0.0
	Total Drip-irrigated		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Alfalfa hay	Not irrigated	0.0							0.0
	Misc. fruit orchards	Not irrigated				0.4				0.4
	Fallow	Not irrigated								244.0
	Plowed	Not irrigated								0.0
	Total Not Irrigated		0.0	0.0	0.0	0.4	0.0	0.0	0.0	244.5
	Total Irrigated Acres		2251.5	85.6	3.7	8.0	976.5	1.2	82.6	3409.0
	Percentage of total irrigated acres		66.0%	2.5%	0.1%	0.2%	28.6%	0.0%	2.4%	3653.5
	Total Acres									

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IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS							Total	
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod		
ECHO AREA 2008 Hydrologic Unit 3	Alfalfa hay	Flood	59.6								59.6
	Corn, grain	Flood		0.0							0.0
	Misc. vegetables	Flood			1.3						1.3
	Pasture, native	Flood					100.5				100.5
	Pasture, improved	Flood					0.0				0.0
	Misc. field crops	Flood							0.0		0.0
	Turfgrass, cool season	Flood							3.0		3.0
	Misc. fruit orchards	Flood				17.1					17.1
	Christmas trees	Flood				0.0					0.0
	Spring small grain	Flood							0.0		0.0
	Winter small grain	Flood							0.0		0.0
	Vineyards	Flood				0.0					0.0
	Total Flood-irrigated			59.6	0.0	1.3	17.1	100.5	0.0	3.0	181.6
	Alfalfa hay		Sprinkler	61.8							61.8
	Alfalfa (new, 1st year)		Sprinkler	37.9							37.9
	Misc. vegetables		Sprinkler			0.5		59.0			0.5
	Pasture, native		Sprinkler					0.0			0.0
Pasture, improved		Sprinkler					0.0			0.0	
Turfgrass, cool season		Sprinkler						19.2		19.2	
Misc. fruit orchards		Sprinkler						0.0		0.0	
Spring small grain		Sprinkler						0.0		0.0	
Winter small grain		Sprinkler						0.0		0.0	
Total Sprinkler-irrigated			99.8	0.0	0.5	0.0	69.5	0.0	19.2	188.9	
Misc. fruit orchards		Drip				0.0				0.0	
Vineyards		Drip				0.0				0.0	
Total Drip-irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Alfalfa hay		Not irrigated								0.0	
Fallow		Not irrigated								0.0	
Spring small grain		Not irrigated							0.0	0.0	
Plowed		Not irrigated								0.0	
Total Not irrigated										67.2	
Total Irrigated Acres			159.3	0.0	1.8	17.1	170.0	0.0	22.2	370.5	
Percentage of total irrigated acres			43.0%	0.0%	0.5%	4.6%	45.9%	0.0%	6.0%		
Total Acres										437.7	

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IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS							Total	
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod		
TURLEY DITCH 2008 Hydrologic Unit 3	Alfalfa hay	Flood	38.5								38.5
	Corn, grain	Flood		0.0							0.0
	Misc. vegetables	Flood			0.0						0.0
	Pasture, native	Flood					7.8				7.8
	Pasture, improved	Flood					0.0				0.0
	Turfgrass, cool season	Flood								1.1	1.1
	Misc. field crops	Flood									0.0
	Misc. fruit orchards	Flood				0.0					0.0
	Spring small grains	Flood								0.0	0.0
	Winter small grains	Flood								0.0	0.0
	Total Flood-irrigated			38.5	0.0	0.0	0.0	7.8	0.0	1.1	47.4
	Alfalfa hay	Sprinkler		33.2							33.2
	Corn, grain	Sprinkler			5.2						5.2
	Misc. vegetables	Sprinkler				0.0					0.0
	Pasture, native	Sprinkler					60.4				60.4
	Pasture, improved	Sprinkler					0.0				0.0
	Turfgrass, cool season	Sprinkler								0.6	0.6
Spring small grains	Sprinkler								0.0	0.0	
Winter small grains	Sprinkler								0.0	0.0	
Misc. fruit orchards	Sprinkler								0.0	0.0	
Total Sprinkler-irrigated			33.2	5.2	0.0	0.0	60.4	0.0	0.6	99.4	
Misc. fruit orchards	Drip						0.0			0.0	
Vineyards	Drip						5.5			5.5	
Total Drip-irrigated			0.0	0.0	0.0	0.0	5.5	0.0	0.0	5.5	
Alfalfa hay	Not irrigated									0.0	
Fallow	Not irrigated									21.2	
Misc. fruit orchards	Not irrigated									0.0	
Plowed	Not irrigated									0.0	
Total Not irrigated										21.2	
Total Irrigated Acres			71.7	5.2	0.0	0.0	5.5	68.1	0.0	152.3	
Percentage of total irrigated acres			47.1%	3.4%	0.0%	0.0%	3.6%	44.7%	0.0%	100.0%	
Total Acres										173.5	

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IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS							Total	
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod		
CITIZENS DITCH 2008 Hydrologic Unit 3	Alfalfa hay	Flood	139.0								139.0
	Alfalfa, new	Flood	0.0								0.0
	Corn, grain	Flood		0.0							0.0
	Misc. vegetables	Flood			3.5						3.5
	Pasture, native	Flood					626.5				626.5
	Pasture, improved	Flood					19.8				19.8
	Turfgrass, cool season	Flood							80.0		80.0
	Spring small grain	Flood							0.0		0.0
	Winter small grain	Flood							0.0		0.0
	Misc. fruit orchards	Flood				0.3					0.3
	Vineyards	Flood				0.0					0.0
	Total Flood-Irrigated			139.0	0.0	3.5	0.3	646.2	0.0	80.0	869.0
	Alfalfa		Sprinkler	1152.8							1152.8
	Alfalfa, new		Sprinkler	3.8							3.8
	Corn, grain		Sprinkler		0.0						0.0
	Misc. vegetables		Sprinkler			0.7		784.0			784.0
	Pasture, native		Sprinkler					38.0			38.0
	Pasture, improved		Sprinkler						0.0		0.0
	Spring small grain		Sprinkler						0.0		0.0
	Winter small grain		Sprinkler						0.0		0.0
	Turfgrass, cool season		Sprinkler				13.3			60.2	60.2
	Misc. fruit orchards		Sprinkler				0.0				0.0
	Christnas trees		Sprinkler				13.3				13.3
Total Sprinkler-Irrigated			1156.6	0.0	0.7	13.3	822.0	0.0	60.2	2052.8	
Vineyards		Drip				0.2				0.2	
Misc. vegetables		Drip			0.0					0.0	
Misc. fruit orchards		Drip				0.5				0.5	
Total Drip-Irrigated			0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7	
Misc. fruit orchards		Not irrigated								0.0	
Fallow		Not irrigated								0.0	
Alfalfa hay		Not irrigated	0.0							0.0	
Plowed		Not irrigated								0.0	
Total Not Irrigated										216.6	
Total Irrigated Acres			1295.6	0.0	4.2	14.3	1468.2	0.0	140.2	2922.5	
Percentage of total irrigated acres			44.3%	0.0%	0.1%	0.5%	50.2%	0.0%	4.8%		
Total Acres										3139.0	

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IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS																		
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod	Total											
ARCHULETA DITCH 2008	Hydrologic Unit 3																				
	Alfalfa hay	Flood	0.0																	0.0	
	Alfalfa, new	Flood	0.0																	0.0	
	Misc. vegetables	Flood																		0.0	
	Pasture, native	Flood																		0.0	
	Pasture, improved	Flood																		0.0	
	Turfgrass, cool season	Flood																		0.0	
	Spring small grain	Flood																		0.0	
	Winter small grain	Flood																		0.0	
	Corn, grain	Flood		0.0																0.0	
	Total Flood-irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Alfalfa hay	Sprinkler	0.0																		0.0
	Corn, grain	Sprinkler		0.0																	0.0
	Misc. vegetables	Sprinkler																			0.0
	Pasture, native	Sprinkler																			26.3
Turfgrass, improved	Sprinkler																			0.0	
Turfgrass, cool season	Sprinkler																			0.0	
Spring small grain	Sprinkler																			0.0	
Winter small grain	Sprinkler																			0.0	
Total Sprinkler-irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Misc. fruit orchards	Drip																			0.0	
Misc. vegetables	Drip																			0.0	
Total Drip-irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Alfalfa hay	Not irrigated	0.0																		0.0	
Fallow	Not irrigated																			0.0	
Misc. fruit orchards	Not irrigated																			0.0	
Total Not irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Irrigated Acres			0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Percentage of total irrigated acres			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Total Acres																				26.3	

Table 2

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IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS								Total	
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod			
ANIMAS 2008 Hydrologic Unit 2	Alfalfa hay	Flood	564.9									564.9
	Alfalfa, new	Flood	52.4									52.4
	Corn, grain	Flood		52.8								52.8
	Chile	Flood			0.0							0.0
	Misc. vegetables	Flood			82.9							82.9
	Pasture, native	Flood					2775.9					2775.9
	Pasture, improved	Flood					96.2					96.2
	Turfgrass, cool season	Flood							171.1			171.1
	Misc. fruit orchards	Flood				45.1						45.1
	Vineyards	Flood				0.0						0.0
	Christmas trees	Flood				0.0						0.0
	Misc. field crops	Flood					0.0					0.0
	Spring small grain	Flood							8.6			8.6
	Winter small grain	Flood							0.0			0.0
	Total Flood-irrigated			617.4	52.8	82.9	45.1	2872.1	8.6	171.1		3850.0
Includes residential watering Includes golf course watering	Alfalfa hay	Sprinkler	296.7									296.7
	Alfalfa, new	Sprinkler	0.0									0.0
	Misc. vegetables	Sprinkler			7.2							7.2
	Pasture, native	Sprinkler					867.5					867.5
	Pasture, improved	Sprinkler					27.0					27.0
	Turfgrass, cool season	Sprinkler							282.3			282.3
	Spring small grain	Sprinkler							0.0			0.0
	Winter small grain	Sprinkler							0.0			0.0
	Misc. fruit orchards	Sprinkler				2.7						2.7
	Total Sprinkler-irrigated			296.7	0.0	7.2	2.7	894.5	0.0	282.3		1483.4
	Misc. fruit orchards	Drip					0.0					0.0
	Vineyards	Drip					0.0					0.0
	Total Drip-irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
	Alfalfa hay	Not irrigated		25.9								25.9
	Pasture, native	Not irrigated						10.0				10.0
Fallow	Not irrigated										0.0	
Spring small grain	Not irrigated							0.0			0.0	
Winter small grain	Not irrigated							8.9			8.9	
Turfgrass, cool season	Not irrigated							0.0			0.0	
Misc. fruit orchards	Not irrigated					15.4					15.4	
Plowed	Not irrigated										0.0	
Total Not Irrigated			25.9	0.0	0.0	15.4	10.0	8.9	0.0		484.9	
Total Irrigated Acres			914.1	52.8	90.0	47.8	3766.6	8.6	453.4		5333.4	
Percentage of total irrigated acres			17.1%	1.0%	1.7%	0.9%	70.6%	0.2%	8.5%		5818.3	

Table 2

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IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS							Total		
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod			
FARMERS MUTUAL DITCH 2008	Hydrologic Unit 6											
	Alfalfa hay	Flood	1155.8									1155.8
	Alfalfa, new	Flood	131.3									131.3
	Corn, grain	Flood		1.4								1.4
	Corn, silage	Flood		9.2								9.2
	Misc. vegetables	Flood			7.5							7.5
	Pasture, native	Flood					555.2					555.2
	Pasture, improved	Flood					3.4					3.4
	Corn, grain	Flood		0.0								0.0
	Turfgrass, cool season	Flood									55.2	55.2
	Misc. fruit orchards	Flood				14.7						14.7
	Vineyards	Flood				0.0						0.0
Christmas Trees	Flood				0.0						0.0	
Spring small grains	Flood								0.0		0.0	
Winter small grains	Flood								9.9		9.9	
	Total Flood-irrigated		1287.1	10.6	7.5	14.7	558.6	9.9	55.2	1943.6		
Includes residential watering Includes golf course watering	Alfalfa hay	Sprinkler	52.2									52.2
	Alfalfa, new	Sprinkler	23.2									23.2
	Corn, grain	Sprinkler		0.0								0.0
	Misc. vegetables	Sprinkler			0.0		6.3					6.3
	Pasture, native	Sprinkler					0.0					0.0
	Pasture, improved	Sprinkler							128.5			128.5
	Turfgrass, cool season	Sprinkler				0.0				0.0		0.0
	Misc. fruit orchards	Sprinkler								0.0		0.0
	Spring small grains	Sprinkler								0.0		0.0
	Winter small grains	Sprinkler								0.0		0.0
		Total Sprinkler-irrigated		75.4	0.0	0.0	0.0	6.3	0.0	128.5	210.2	
	Misc. fruit orchards	Drip					0.0					0.0
Vineyards	Drip					0.0					0.0	
Misc. vegetables	Drip					0.0					0.0	
	Total Drip-irrigated		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Alfalfa hay	Not irrigated		0.0								0.0	
Winter small grain	Not irrigated										0.0	
Fallow	Not irrigated										0.0	
Misc. fruit orchards	Not irrigated										0.0	
Plowed	Not irrigated										0.0	
	Total Not irrigated		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	Total Irrigated Acres		1362.5	10.6	7.5	14.7	564.8	9.9	183.7	2153.7		
	Percentage of total irrigated acres		63.3%	0.5%	0.3%	0.7%	26.2%	0.5%	8.5%			
	Total Acres									2368.0		

Table 2

8/7/2009

IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS							Total											
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod												
LA PLATA 2008																					
Hydrologic Unit 4																					
	Alfalfa hay	Flood	798.2																		798.2
	Alfalfa, new	Flood	25.8																		25.8
	Misc. Field Crops	Flood																			0.0
	Corn, grain	Flood		6.0																	6.0
	Sorghum, grain	Flood		115.1																	115.1
	Sorghum, silage	Flood		0.0																	0.0
	Misc. Vegetables	Flood			0.8																0.8
	Pasture, native	Flood																			1019.5
	Pasture, improved	Flood																			39.3
	Turfgrass, cool season	Flood																			7.9
	Misc. fruit orchards	Flood																			0.3
	Spring small grains	Flood																			10.4
	Winter small grains	Flood																			0.0
	Vineyards	Flood																			0.0
																					0.0
	Total Flood-irrigated		824.0	121.1	0.8	0.3	1058.8	10.4	7.9	2023.2											
	Alfalfa hay	Sprinkler	68.1																		68.1
	Alfalfa, new	Sprinkler	0.0																		0.0
	Corn, grain	Sprinkler		0.0																	0.0
	Misc. vegetables	Sprinkler			0.0																0.0
	Pasture, native	Sprinkler																			199.0
	Pasture, improved	Sprinkler																			47.2
	Turfgrass, cool season	Sprinkler																			0.7
	Spring small grains	Sprinkler																			0.0
	Winter small grains	Sprinkler																			0.0
	Misc. fruit orchards	Sprinkler																			0.0
	Total Sprinkler-irrigated		68.1	0.0	0.0	0.0	246.3	0.0	0.7	315.1											
	Misc. fruit orchards	Drip																			0.0
	Vineyards	Drip																			0.0
	Misc. vegetables	Drip																			0.0
	Total Drip-irrigated		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0											
	Alfalfa hay	Not irrigated																			30.1
	Corn, grain	Not irrigated																			0.0
	Fallow	Not irrigated																			701.3
	Spring small grains	Not irrigated																			0.0
	Winter small grains	Not irrigated																			0.0
	Plowed	Not irrigated																			0.0
	Total Not Irrigated																				731.4
	Total Irrigated Acres		892.1	121.1	0.8	0.3	1305.0	10.4	8.6	2338.3											
	Percentage of total irrigated acres		38.2%	5.2%	0.0%	0.0%	55.8%	0.4%	0.4%												
	Total Acres																				3069.7

Table 2

8/7/2009

IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS							Total		
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod			
UPPER LA PLATA 2008	Hydrologic Unit 4	Alfalfa hay	0.0							0.0		
		Corn, grain		0.0						0.0		
		Misc. vegetables			0.0					0.0		
		Pasture, native					13.8			13.8		
		Pasture, improved					3.4			3.4		
		Turfgrass, cool season							2.0	2.0		
		Misc. fruit orchards				0.2				0.2		
		Christmas Trees				0.0				0.0		
		Spring small grains							0.0	0.0		
		Winter small grains							0.0	0.0		
		Total Flood-irrigated			0.0	0.0	0.0	0.2	17.1	0.0	2.0	19.4
		Alfalfa hay									77.2	
		Alfalfa (new)									0.0	
		Misc. vegetables					0.0				0.0	
		Pasture, native							0.0		0.0	
		Pasture, improved							0.0		0.0	
		Turfgrass, cool season								1.7	1.7	
		Spring small grains								0.0	0.0	
		Winter small grains								0.0	0.0	
		Misc. fruit orchards						0.0			0.0	
Total Sprinkler-irrigated			77.2	0.0	0.0	0.0	0.0	0.0	1.7	78.9		
Misc. fruit orchards						0.0			0.0			
Vineyards						0.0			0.0			
Misc. vegetables						0.0			0.0			
Total Drip-irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Alfalfa hay									0.0			
Corn, grain									0.0			
Fallow									32.8			
Spring small grains									0.0			
Winter small grains									0.0			
Total Not irrigated										32.8		
Total Irrigated Acres			77.2	0.0	0.0	0.2	17.1	0.0	3.7	98.3		
Percentage of total irrigated acres			78.5%	0.0%	0.0%	0.2%	17.4%	0.0%	3.8%			
Total Acres										131.1		

Table 2

8/7/2009

IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS							Total	
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod		
JEWETT VALLEY 2008											
Hydrologic Unit 6											
	Alfalfa hay	Flood	487.2								487.2
	Alfalfa, new	Flood	34.0								34.0
	Corn, grain	Flood		10.3							10.3
	Corn, silage	Flood		0.0							0.0
	Misc. vegetables	Flood			3.4						3.4
	Pasture, native	Flood						227.4			227.4
	Pasture, improved	Flood						2.6			2.6
	Misc. field crops	Flood						0.0			0.0
	Turfgrass, cool season	Flood								5.0	5.0
	Misc. fruit orchards	Flood				0.0					0.0
	Christmas Trees	Flood				0.0					0.0
	Spring small grains	Flood								0.0	0.0
	Winter small grains	Flood								0.0	0.0
	Total Flood-irrigated		521.2	10.3	3.4	0.0	0.0	230.1	0.0	5.0	770.0
	Alfalfa hay	Sprinkler									
	Alfalfa, new	Sprinkler	38.4								38.4
	Corn, grain	Sprinkler	25.5	0.0							25.5
	Misc. vegetables	Sprinkler			0.0						0.0
	Pasture, native	Sprinkler						0.0			0.0
	Pasture, improved	Sprinkler						0.0			0.0
	Turfgrass, cool season	Sprinkler								97.5	97.5
	Misc. fruit orchards	Sprinkler				0.0					0.0
	Winter small grains	Sprinkler							0.0		0.0
	Total Sprinkler-irrigated		63.9	0.0	0.0	0.0	0.0	0.0	0.0	97.5	161.4
	Misc. fruit orchards	Drip				0.0					0.0
	Vineyards	Drip				0.0					0.0
	Misc. vegetables	Drip				0.0					0.0
	Total Drip-irrigated		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Alfalfa hay	Not irrigated									
	Corn, grain	Not irrigated	0.0								0.0
	Fallow	Not irrigated									0.0
	Winter small grains	Not irrigated									0.0
	Spring small grains	Not irrigated									0.0
	Plowed	Not irrigated									0.0
	Total Not irrigated		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total Irrigated Acres		585.1	10.3	3.4	0.0	0.0	230.1	0.0	102.5	931.4
	Percentage of total irrigated acres		62.8%	1.1%	0.4%	0.0%	0.0%	24.7%	0.0%	11.0%	97.2.5
	Total Acres										972.5

Table 2

8/7/2009

IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS							Total	
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod		
FRUITLAND 2008 Hydrologic Unit 6	Alfalfa hay	Flood	1037.7								1037.7
	Alfalfa, new	Flood	8.9								8.9
	Corn, grain	Flood		403.7							403.7
	Sorghum, grain	Flood		0.0							0.0
	Misc. vegetables	Flood			23.7						23.7
	Pasture, native	Flood					155.4				155.4
	Pasture, improved	Flood					6.6				6.6
	Misc. field crops	Flood					0.0				0.0
	Turfg rass, cool season	Flood							0.0		0.0
	Misc. fruit orchards	Flood				1.9					1.9
	Christmas Trees	Flood				0.0					0.0
	Spring small grains	Flood							0.0		0.0
	Winter small grains	Flood							0.0		0.0
	Total Flood-irrigated			1046.6	403.7	23.7	1.9	161.9	0.0	0.0	1637.8
	Alfalfa hay	Sprinkler		29.1							29.1
	Corn, grain	Sprinkler			0.0						0.0
	Misc. vegetables	Sprinkler				0.0					0.0
	Pasture, native	Sprinkler					0.0				0.0
	Pasture, improved	Sprinkler					0.0				0.0
	Turfg rass, cool season	Sprinkler							0.0		0.0
Misc. fruit orchards	Sprinkler						0.0			0.0	
Spring small grains	Sprinkler							0.0		0.0	
Winter small grains	Sprinkler							0.0		0.0	
Total Sprinkler-irrigated			29.1	0.0	0.0	0.0	0.0	0.0	0.0	29.1	
Misc. fruit trees	Drip						0.0			0.0	
Vineyards	Drip						0.0			0.0	
Misc. vegetables	Drip						0.0			0.0	
Total Drip-irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Alfalfa hay	Not irrigated									0.0	
Corn, grain	Not irrigated									0.0	
Fallow	Not irrigated									0.0	
Spring small grain	Not irrigated									0.0	
Misc. fruit orchards	Not irrigated									0.0	
Plowed	Not irrigated									0.0	
Total Not Irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Irrigated Acres			1075.7	403.7	23.7	1.9	161.9	0.0	0.0	1666.9	
Percentage of total irrigated acres			64.5%	24.2%	1.4%	0.1%	9.7%	0.0%	0.0%	2441.9	
Total Acres										2441.9	

Table 2

8/6/2009

IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS							Total	
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod		
CAMBRIDGE 2008 Hydrologic Unit 6	Alfalfa hay	Flood	27.6								27.6
	Corn, grain	Flood		14.6							14.6
	Misc. vegetables	Flood			0.8						0.8
	Pasture, native	Flood					11.9				11.9
	Pasture, improved	Flood					0.0				0.0
	Turfgrass, cool season	Flood							0.0		0.0
	Spring small grains	Flood							0.0		0.0
	Winter small grains	Flood							0.0		0.0
	Orchard/Grapes	Flood				0.0					0.0
	Total Flood-irrigated			27.6	14.6	0.8	0.0	11.9	0.0	0.0	54.9
	Alfalfa hay	Sprinkler		0.0							0.0
	Corn, grain	Sprinkler			0.0						0.0
	Misc. vegetables	Sprinkler				0.0					0.0
	Pasture, native	Sprinkler					0.0				0.0
	Pasture, improved	Sprinkler					0.0				0.0
	Turfgrass, cool season	Sprinkler							0.0		0.0
	Spring small grains	Sprinkler							0.0		0.0
	Winter small grains	Sprinkler							0.0		0.0
	Total Sprinkler-irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Orchard/Grapes	Drip					0.0				0.0
Misc. vegetables	Drip				0.0					0.0	
Total Drip-irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Alfalfa hay	Not irrigated		0.0							0.0	
Corn, grain	Not irrigated									0.0	
Fallow	Not irrigated									0.0	
Spring small grain	Not irrigated									0.0	
Winter small grain	Not irrigated									0.0	
Plowed	Not irrigated									0.0	
Total Not irrigated										0.5	
Total Irrigated Acres			27.6	14.6	0.8	0.0	11.9	0.0	0.0	54.9	
Percentage of total irrigated acres			50.4%	26.5%	1.5%	0.0%	21.7%	0.0%	0.0%		
Total Acres										55.4	

Table 2

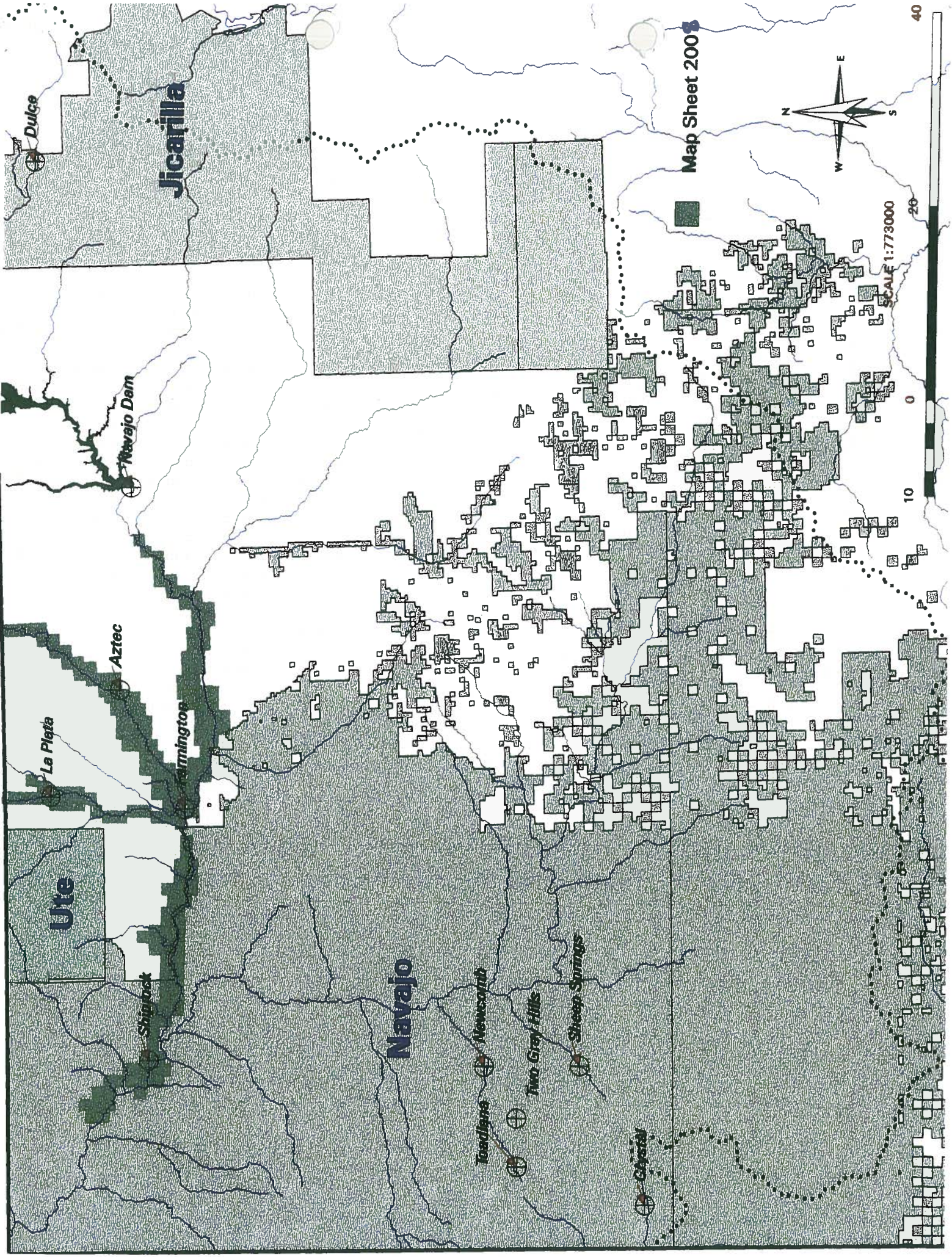
8/6/2009

IRRIGATION AREA HOGBACK WEST 2008 Hydrologic Unit 7	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS							Total	
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod		
	Alfalfa hay	Flood	900.7								900.7
	Alfalfa, new	Flood	33.9								33.9
	Corn, grain	Flood		584.3							584.3
	Sorghum, grain	Flood		0.0							0.0
	Misc. vegetables	Flood			50.7						50.7
	Pasture, native	Flood						210.0			210.0
	Pasture, improved	Flood						17.7			17.7
	Turfgrass, cool season	Flood								7.3	7.3
	Misc. fruit orchards	Flood				2.2					2.2
	Christmas Trees	Flood				0.0					0.0
	Spring small grains	Flood								3.2	3.2
	Winter small grains	Flood								0.0	0.0
	Total Flood-irrigated		934.6	584.3	50.7	2.2	227.7	3.2	7.3	1810.2	
	Alfalfa hay	Sprinkler	0.0								0.0
	Corn, grain	Sprinkler		0.0							0.0
	Misc. vegetables	Sprinkler			0.0						0.0
	Pasture, native	Sprinkler					0.0				0.0
	Pasture, improved	Sprinkler					0.0				0.0
	Turfgrass, cool season	Sprinkler							16.2		16.2
	Spring small grains	Sprinkler							0.0		0.0
	Winter small grains	Sprinkler							0.0		0.0
	Misc. fruit orchards	Sprinkler				0.0					0.0
	Total Sprinkler-irrigated		0.0	0.0	0.0	0.0	0.0	0.0	16.2	16.2	
	Misc. fruit orchards	Drip				2.5					2.5
	Vineyards	Drip				0.0					0.0
	Misc. vegetables	Drip				0.0					0.0
	Total Drip-irrigated		0.0	0.0	0.0	2.5	0.0	0.0	0.0	2.5	
	Alfalfa hay	Not irrigated									0.0
	Corn, grain	Not irrigated									0.0
	Fallow	Not irrigated									806.2
	Winter small grains	Not irrigated									0.0
	Misc. fruit orchards	Not irrigated									0.0
	Plowed	Not irrigated									0.0
	Total Not Irrigated		934.6	584.3	50.7	4.7	227.7	3.2	23.6	1828.9	
	Total Irrigated Acres		934.6	584.3	50.7	4.7	227.7	3.2	23.6	1828.9	
	Percentage of total irrigated acres		51.1%	32.0%	2.8%	0.3%	12.5%	0.2%	1.3%	2635.1	
	Total Acres									2635.1	

Table 2

8/6/2009

IRRIGATION AREA	CIR CROP	IRRIGATION METHOD	AGGREGATED CROPS							Total	
			Alfalfa	Corn/Sorghum	Misc. Vegetables	Orchard	Pasture	Small Grains	Sod		
CUDEI 2008 Hydrologic Unit 7	Alfalfa hay	Flood	78.4								78.4
	Corn, grain	Flood		76.9							76.9
	Misc. vegetables	Flood			12.3						12.3
	Pasture, native	Flood					2.3				2.3
	Pasture, improved	Flood					0.0				0.0
	Alfalfa (new, 1st year)	Flood	5.9								5.9
	Misc. fruit trees	Flood				0.0					0.0
	Christmas Trees	Flood				0.0					0.0
	Spring small grains	Flood						0.0			0.0
	Winter small grains	Flood						0.0			0.0
	Total Flood-irrigated			84.4	76.9	12.3	0.0	2.3	0.0	0.0	175.8
	Alfalfa hay	Sprinkler	0.0								0.0
	Corn, grain	Sprinkler		0.0							0.0
	Misc. vegetables	Sprinkler			0.0						0.0
	Pasture, native	Sprinkler					0.0				0.0
	Pasture, improved	Sprinkler					0.0				0.0
	Turfgrass, cool season	Sprinkler						0.0			0.0
Misc. fruit trees	Sprinkler				0.0					0.0	
Spring small grains	Sprinkler						0.0			0.0	
Total Sprinkler-irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Misc. fruit trees	Drip				0.0					0.0	
Vineyards	Drip				0.0					0.0	
Misc. vegetables	Drip				0.0					0.0	
Total Drip-irrigated			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Fallow		Not irrigated								0.0	
		Not irrigated								197.5	
		Not irrigated								0.0	
		Not irrigated								0.0	
		Not irrigated								0.0	
Total Not irrigated										197.5	
Total Irrigated Acres			84.4	76.9	12.3	0.0	2.3	0.0	0.0	175.8	
Percentage of total irrigated acres			48.0%	43.7%	7.0%	0.0%	1.3%	0.0%	0.0%		
Total Acres										373.3	



Dulce

Jicarilla

Navajo Dam

Aztec

La Plata

Farmington

Ute

Shiprock

Navajo

Tondilans

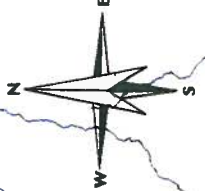
Newcastle

Two Grey Hills

Sheep Springs

Capital

Map Sheet 2008



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