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# WATER LEVELS IN ALLUVIAL AQUIFERS OF THE LOWER SOUTH PLATTE RIVER BASIN, COLORADO

JULY, 1999



by  
CHUCK ROBERTS

COLORADO DIVISION OF WATER RESOURCES  
OFFICE OF THE STATE ENGINEER

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WATER LEVELS IN THE ALLUVIAL AQUIFERS OF THE  
LOWER SOUTH PLATTE RIVER BASIN, COLORADO

1999

*By Chuck Roberts*

The purpose of this report is to provide water level data for 64 wells within the Lower South Platte Alluvium for the period of Spring of 1988 through the Spring of 1999. The data presented in this report is a result of cooperation between well owners, the Central Colorado Water Conservancy District, and the Colorado Division of Water Resources. Funding for this project is supplied in part from well permit fees collected and managed by the Colorado Division of Water Resources as a result of the passage of Senate Bill 200 during the 1987 legislative session.

The following body of this report includes up to 22 water level measurements for each well, for the indicated period in addition to a water level measurement taken at the time of construction of the well, if available. Measurements are usually taken twice yearly, typically in the spring before irrigation pumping commences and in the fall after irrigation pumping has ceased. The measurement values in this report are expressed in feet below ground surface to water surface and were obtained utilizing an electric sounder device or steel tape. All measurements were done by Division 1 Water Commissioners (DWR) or the Central Colorado Water Conservancy District (CCWC) as indicated for each well. All of the wells are completed in unconsolidated gravel, sand, silt and clay deposits predominantly of alluvial origin. The column entitled AQUIF/TRIB in the main body of the report delineates the geologic unit and stream reach for each well as explained on page 4. Figure 1 is a GIS generated map showing the recorded location of the wells measured for this report. The South Platte River is shown in purple. The recorded outline of the South Platte River alluvial aquifers is depicted in gold.

The observation wells can be subdivided into two types: those which lie within or very near the South Platte River floodplain, and those located in tributary valleys. The number of observation wells in tributary valleys exceeds the number along the South Platte floodplain by 20.

An evaluation of the data of beginning water levels as compared to Spring 1998 levels reveals that approximately 46.9% of the wells have experienced a water level decline which compares to a 50.8% decline in the 1998 report. By comparison, 12.5% of the wells experienced a rise in the Spring 1999 as compared to the Spring 1988 water level. This percentage is considerably less than the 1998 report value (24.5%). Declines of Spring 1988 to Spring 1999 range from -0.24' to -10.5' as compared to the range of -0.04' to -12.3' in the 1998 report. Declines on the order of 0.01' are insignificant in that such changes can be caused by wind, earth movement, and the effect of evapotranspiration and phreatic consumption or maybe errors in data recording. The table following this narrative entitled "Table of Water Level Trends of the South Platte Alluvium through Spring 1999" recaps the statistics to date for this ongoing report in terms of all wells, tributary valleys, and the South Platte main stem/floodplain.

These data also reveal that the averages of the water level changes from Spring 1988 to Spring 1999 wells within the tributary valleys (both rises and declines) are less than the averages of the South Platte floodplain alluvium. By contrast, in 1998 the average rise and declines of Spring 1988 vs. Spring 1998 changes in the tributary valleys were greater than those in the South Platte floodplain.

The average annual water level change compared to the previous year over the past eleven years has averaged -0.20 ft/yr in the South Platte floodplains and -0.08 ft/yr in the tributary

valleys. The tributary valleys experienced less annual rise overall in 1999 than in 1998. Concurrently, the annual rise of the South Platte floodplain was greater in 1999 than 1998. Annual declines in the tributary valleys and the South Platte floodplain likewise were greater in 1999 than 1998.

The reader is advised that these data are based upon the measurements of only 64 wells. This represents only about 3 percent of the total nonexempt wells along the South Platte system between Kassler and the Colorado-Nebraska state line.

7250.cgr

## WATER LEVELS IN THE LOWER SOUTH PLATTE NETWORK

### Explanation

#### Geologic Units

All of the monitoring wells in this report are completed in unconsolidated gravel, sand silt, and clay of predominantly alluvial origin. The following subdivision is based upon location of the wells with respect to modern stream channels, floodplains, terraces, and interstream divides.

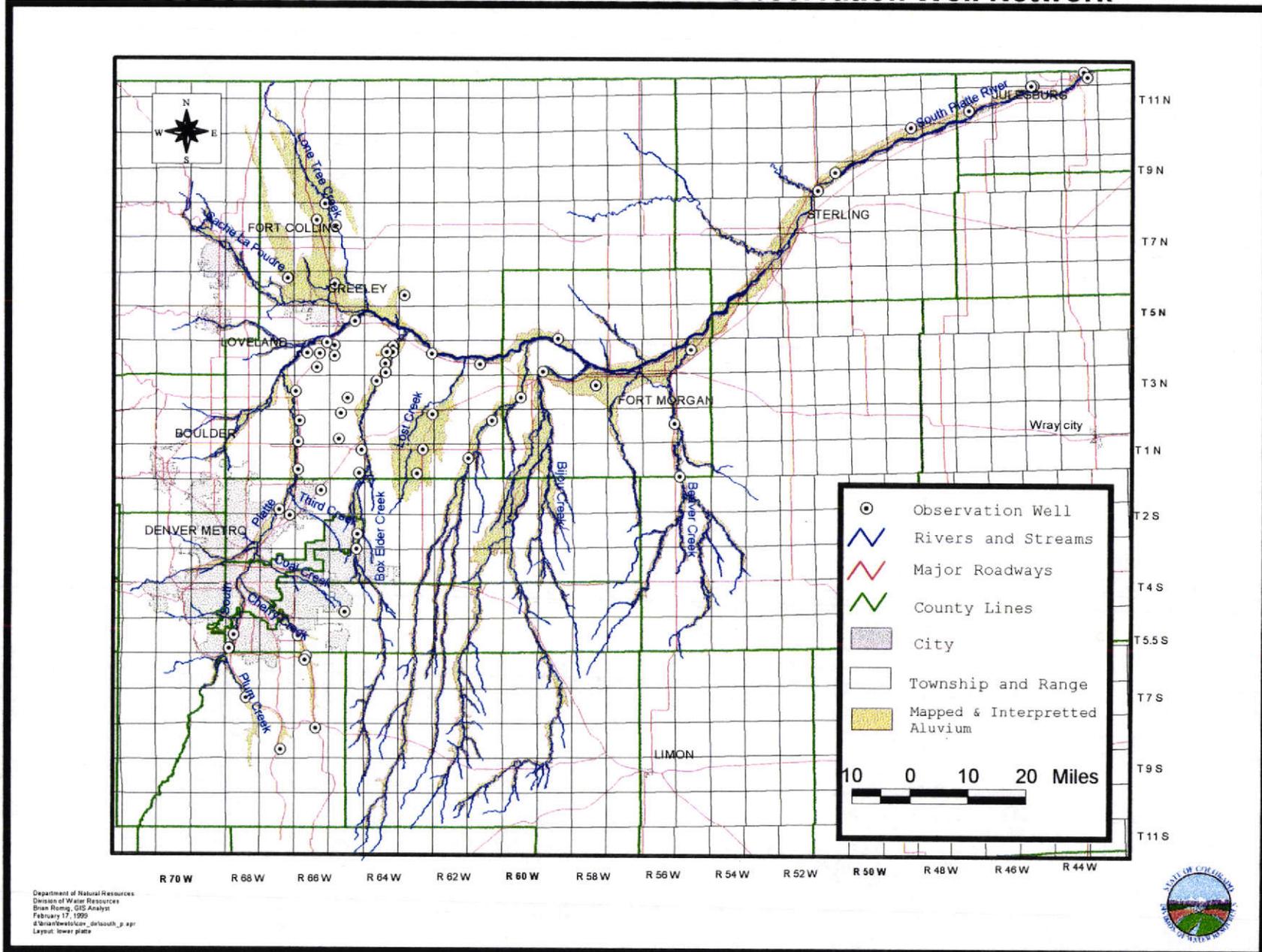
- Qal - Recent stream alluvium and floodplain deposits.
- Qoav - Alluvium of areas not within a distinct floodplain; upland areas along interstream divides; includes deposits of eolian origin.
- Qt - Alluvium underlying terraces identified and mapped by other investigators.

#### Stream Reach

Each of the monitoring wells included in this report has a code following the Geologic Unit indicating the stream reach or tributary reach of the well (e.g. Qal/BIA).

<u>Code</u>	<u>Reach of Stream</u>
SPA	Mainstem of South Platte from Greeley downstream
USP	Upper South Platte: Platte Canyon to Greeley
PCA	Plum Creek drainage
CCA	Coal Creek drainage
CLP	Cache La Poudre drainage
BVA	Beaver Creek drainage
BIA	Bijou Creek drainage
LCA	Lost Creek drainage
BEC	Box Elder Creek drainage
LTC	Lone Tree Creek drainage
TCA	Third Creek drainage
CHC	Cherry Creek drainage

FIGURE 1: Lower South Platte Basin Observation Well Network



Department of Natural Resources  
Division of Water Resources  
Bran Romig, GIS Analyst  
February 17, 1999  
d:\water\resources\_south.ppt  
Layout: lower plate



Table of Water Level Trends of the South Platte Alluvium  
through Spring 1999\*

\*All signed values in feet; (-) is decline, (+) is rise  
Unsigned values are number of wells  
(x) is % of group

COMPARISON:	INITIAL WATERLEVELS TO SPRING '99			SPRING '88 TO SPRING '99 WATERLEVELS			SPRING '98 TO SPRING '99 WATERLEVELS			
	GROUP	RISES	DECLINES	NO CHANGE/ UNRECORDED	RISES	DECLINES	NO CHANGE/ UNRECORDED	RISES	DECLINE	NO CHANGE/ UNRECORDED
<u>ALL WELLS</u>										
Number	15 (23.4)	30 (46.9)	19 (29.7)	8 (12.5)	28 (43.8)	28 (43.7)	15 (23.4)	40 (62.5)	9 (14.1)	
Ranges of values	+0.07 to +19.35	- 0.38 to - 34.50	-	+0.55 to +4.06	- 0.24 to - 10.50	-	+0.06 to +9.54	- 0.05 to - 6.30	-	
Average	+6.71	- 7.71	-	+1.99	- 2.57	-	+1.94	- 1.32	-	
<u>TRIBUTARY VALLEYS</u>										
Number	11 (26.2)	19 (45.2)	12 (28.6)	7 (16.7)	18 (42.8)	17 (40.5)	8 (19.0)	28 (66.7)	6 (14.3)	
Ranges	+0.35 to 19.35	- 0.38 to - 34.50	-	+0.55 to +4.06	- 0.38 to - 10.50	-	+0.20 to +2.44	- 0.05 to - 6.30	-	
Average	+8.47	- 9.40	-	+1.93	- 1.99	-	+1.06	- 1.29	-	
<u>MAINSTEM</u> or ) So. Platte <u>FLOODPLAIN</u>										
Number	4 (18.2)	11 (50)	7 (31.8)	1 (4.5)	10 (45.5)	11 (50)	7 (31.8)	12 (54.5)	3 (13.7)	
Ranges	+0.07 to +4.75	- 1.12 to - 19.90	-	+0.55 to +4.06	- 0.24 to - 10.5	-	+0.06 to 9.54	- 0.15 to - 2.89	-	
Average	+1.86	- 4.79	-	+1.99	- 2.57	-	+2.94	- 1.38	-	

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg. Depth=
							SURF						SPRING	S99	S99	
													1999			
T01N	R55W	31	SWSESW	Uhlenhopp, S. & R.	11802 R	Qa1	4465	28.80	04/17/42	35.14	11/05/95	DWR	-3.61	-0.05	1.19	34.03
						/BVA		33.60	03/21/88	33.30	03/27/96					
								36.00	03/21/89	35.24	10/18/96					
								34.70	12/17/89	32.15	03/27/97					
								34.70	03/14/90	35.58	10/15/97					
								37.80	10/25/90	32.36	03/27/98					
								33.70	03/12/91	33.84	10/28/98					
								0.00	/ /	32.41	03/23/99					
								0.00	/ /							
								0.00	/ /							
								35.20	03/17/93							
								35.33	11/03/93							
								33.26	03/18/94							
								34.17	11/25/94							
								33.33	03/20/95							
T01N	R62W	13	SESENE	Roark, C.M.	4874 F	Qa1	4821	20.90	03/11/42	37.73	11/05/95	DWR	-20.10	-0.85	4.06	39.82
						/BIA		45.06	03/21/88	37.40	03/27/96					
								43.95	03/21/89	39.71	10/18/96					
								43.75	12/17/89	38.60	03/27/97					
								42.70	03/14/90	40.58	10/15/97					
								0.00	/ /	40.15	03/27/98					
								41.15	03/12/91	38.60	10/28/98					
								41.95	10/24/91	41.00	03/23/99					
								39.58	04/05/92							
								40.00	11/04/92							
								38.72	03/17/93							
								37.20	11/03/93							
								35.56	03/18/94							
								37.00	11/25/94							
								36.30	03/20/95							

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TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T01N	R63W	02	SWSWSW	U.S.G.S. Obs. Well	0	Qoa /LCA	4842	62.00	03/29/62	55.24	11/05/95	DWR	12.62	-0.18	-2.02	50.45
								47.36	03/21/88	51.94	03/27/96					
								49.60	03/21/89	54.95	10/18/96					
								53.25	12/17/89	50.76	03/27/97					
								51.40	03/14/90	54.30	10/15/97					
								58.20	10/25/90	49.20	03/27/98					
								53.95	03/12/91	52.25	10/28/98					
								58.88	10/24/91	49.38	03/23/99					
								53.14	04/05/92							
								0.00	/ /							
								0.00	/ /							
								0.00	/ /							
								0.00	/ /							
								0.00	11/25/94							
								52.80	03/20/95							
T01N	R63W	34	NWNWNW	Blood,C.	14860 R	Qoa /LCA	4963	109.00	03/09/60	100.91	11/05/95	DWR	7.76	-2.44	-3.57	101.64
								97.67	03/21/88	108.80	03/27/96					
								99.20	03/21/89	100.80	10/18/96					
								100.00	12/17/89	99.03	03/27/97					
								99.80	03/14/90	100.82	10/15/97					
								100.06	10/25/90	98.80	03/27/98					
								99.19	03/12/91	102.07	10/28/98					
								103.50	10/24/91	101.24	03/23/99					
								100.29	04/05/92							
								105.10	11/04/92							
								100.45	03/17/93							
								101.30	11/03/93							
								103.99	03/18/94							
								102.52	11/25/94							
								102.90	03/20/95							

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TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T01N	R65W	01	SWSWSE	Taoka Bros.	11709 F	Qoav/ BEC	4959	30.00	11/30/37	10.00	11/22/95	CCWC	19.35	0.00	0.00	9.60
								0.00	/ /	10.20	04/11/96					
								8.80	04/20/89	10.61	11/19/96					
								9.04	10/13/89	11.43	05/05/97					
								8.90	04/10/90	10.76	12/15/97					
								9.88	10/17/90	0.00	04/30/98					
								15.65	04/18/91	10.15	10/28/98					
								12.10	10/24/91	10.65	05/20/99					
								0.00	/ /							
								0.00	/ /							
								10.21	03/23/93							
								10.95	11/22/93							
								8.75	05/05/94							
								12.00	10/25/94							
								11.98	04/25/95							
T01N	R65W	25	SESWSW	Hoffner, F.	11875 F	Qoa /BEC	5045	34.60	05/08/41	44.22	11/05/95	DWR	-6.12	0.72	-3.56	41.84
								37.16	03/21/88	41.40	03/27/96					
								42.35	03/21/89	44.57	10/18/96					
								50.50	12/17/89	40.64	03/27/97					
								41.75	03/14/90	44.20	10/15/97					
								41.75	10/25/90	41.44	03/27/98					
								39.60	03/12/91	43.90	10/28/98					
								43.49	10/24/91	40.72	03/23/99					
								40.00	04/05/92							
								42.19	11/04/92							
								40.20	03/17/93							
								42.00	11/03/93							
								40.30	03/18/94							
								43.42	11/25/94							
								41.93	03/20/95							

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TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T02N	R56W	13	NWSWSE	Peterson,C.	8822 F	Qoa	4320	32.10	04/04/62	40.82	11/05/95	DWR	-7.84	0.56	2.14	40.67
						/BIA		42.08	03/21/88	40.40	03/27/96					
								41.70	03/21/89	40.76	10/18/96					
								42.50	12/17/89	40.47	03/27/97					
								41.70	03/14/90	39.75	10/15/97					
								41.85	10/25/90	40.50	03/27/98					
								41.10	03/12/91	40.70	10/28/98					
								42.05	10/24/91	39.94	03/23/99					
								41.65	04/05/92							
								42.25	11/04/92							
								41.79	03/17/93							
								40.38	11/03/93							
								40.14	03/18/94							
								40.58	11/25/94							
								40.23	03/20/95							
T02N	R61W	11	SWSWSW	Calvert,R.	8309 R	Qa1	4670	23.40	03/30/62	51.02	11/05/95	DWR	-26.20	-1.65	-8.21	46.81
						/BIA		41.39	03/21/88	47.80	03/27/96					
								42.20	03/21/89	51.36	10/18/96					
								43.00	12/17/89	60.02	03/27/97					
								44.90	03/14/90	48.12	10/15/97					
								44.80	10/25/90	47.95	03/27/98					
								43.75	03/12/91	51.34	10/28/98					
								51.89	10/24/91	49.60	03/23/99					
								45.40	04/05/92							
								49.17	11/04/92							
								46.25	03/17/93							
								48.18	11/03/93							
								45.98	03/18/94							
								51.80	11/25/94							
								47.25	03/20/95							

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TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T02N	R63W	01	NWSESE	Sargent, B.	13963 R	Qoa	4715	13.20	03/29/62	19.50	11/05/95	DWR	-6.30	0.00	1.00	20.14
						LCA		20.50	03/21/88	19.50	03/27/96					
								20.05	03/21/89	19.50	10/18/96					
								21.10	12/17/89	19.50	03/27/97					
								20.75	03/14/90	19.50	10/15/97					
								23.00	10/25/90	19.50	03/27/98					
								20.50	03/12/91	19.50	10/29/98					
								23.94	10/24/91	19.50	03/23/99					
								19.20	04/05/92							
								20.50	11/04/92							
								19.39	03/17/93							
								19.50	11/03/93							
								19.50	03/18/94							
								19.50	11/28/94							
								19.50	03/20/95							
T02N	R65W	04	NWNWSW	Hill, O.	5 R	Qoav/ BEC	4880	50.00	04/01/49	44.35	01/11/96	CCWC	1.20	-0.72	0.00	45.08
								0.00	/ /	0.00	/ /					
								39.30	03/29/89	47.95	11/19/96					
								40.27	10/19/89	46.35	03/21/97					
								39.48	03/27/90	48.00	12/16/97					
								42.66	10/17/90	48.08	04/30/98					
								42.55	04/10/91	60.48	10/26/98					
								0.00	/ /	48.80	03/31/99					
								0.00	/ /							
								0.00	/ /							
								42.39	03/24/93							
								40.82	10/29/93							
								39.55	04/15/94							
								45.25	11/02/94							
								0.00	/ /							

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TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T02N	R65W	25		SENE Shaklee,Geo. & Zelda	3275 F	Qoav/ BEC	4904	6.00	03/16/61	0.00	/ /	CCWC	0.35	0.25	0.00	6.87
								0.00	/ /	0.00	/ /					
								0.00	/ /	7.00	11/19/96					
								0.00	/ /	5.90	05/05/97					
								0.00	/ /	7.90	12/15/97					
								0.00	/ /	5.90	04/30/98					
								0.00	/ /	5.95	11/25/98					
								0.00	/ /	5.65	05/20/99					
								0.00	/ /							
								0.00	/ /							
								0.00	/ /							
								6.87	03/28/94							
								10.20	10/25/94							
								7.29	04/24/95							
T02N	R65W	32		NENWNE Bergstom,R.	12683 R	Qoav/ BEC	4920	38.00	06/01/35	41.45	11/03/95	CCWC	-3.83	-1.33	0.00	38.50
								0.00	/ /	40.90	04/25/96					
								27.00	03/23/89	42.57	11/19/96					
								38.13	10/19/89	42.65	03/21/97					
								32.65	03/27/90	40.50	10/07/97					
								32.65	10/17/90	40.50	04/30/98					
								34.25	04/10/91	45.29	10/27/98					
								0.00	/ /	41.83	03/31/99					
								0.00	/ /							
								0.00	/ /							
								34.20	03/24/93							
								40.15	10/29/93							
								34.70	04/15/94							
								44.96	11/02/94							
								39.27	04/25/95							

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TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T02N	R66W	31	SESWNE	Sakata, B.	6818 R	Qt	4894	17.00	05/01/35	17.50	10/31/95	CCWC	-3.60	-2.10	0.00	19.22
						/USP		0.00	/ /	0.00	/ /					
								21.60	04/06/89	19.35	11/14/96					
								17.99	10/13/89	19.90	04/14/97					
								19.65	03/26/90	19.80	10/15/97					
								19.57	10/09/90	18.50	04/29/98					
								20.05	04/01/91	19.30	11/24/98					
								18.43	10/24/91	20.60	03/24/99					
								0.00	/ /							
								0.00	/ /							
								18.90	03/16/93							
								20.70	10/06/93							
								18.45	04/27/94							
								18.85	11/02/94							
								18.98	04/12/95							
T03N	R58W	11	SWSWSW	Shepard, D.	6256 R	Qoa	4365	53.20	05/27/41	62.95	11/05/95	DWR	-9.87	-2.13	-3.67	61.05
						/SPA		59.40	03/21/88	60.98	03/27/96					
								60.74	03/21/89	63.24	10/18/96					
								62.10	12/17/89	60.73	03/27/97					
								61.12	03/14/90	59.37	10/15/97					
								62.10	10/25/90	60.94	03/27/98					
								60.50	03/12/91	60.63	10/28/98					
								63.19	10/24/91	63.07	03/23/99					
								60.80	04/05/92							
								62.10	11/04/92							
								60.57	03/17/93							
								61.46	11/03/93							
								59.31	03/18/94							
								63.30	11/25/94							
								62.39	03/20/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T03N	R58W	25		SWNE 3T Cattle Co.	8644 R	Qa1	4355	34.50	04/16/86	0.00	/ /		0.00	0.00	0.00	27.10
						/SPA		0.00	/ /	0.00	/ /					
								0.00	/ /	22.00	11/19/96					
								0.00	/ /	0.00	/ /					
								0.00	/ /	22.10	01/13/98					
								0.00	/ /	0.00	/ /					
								0.00	/ /	21.75	10/14/98					
								0.00	/ /	0.00	/ /					
								0.00	/ /							
								0.00	/ /							
								26.10	03/25/94							
								36.95	09/28/94							
								26.30	05/10/95							
T03N	R60W	22		SWSWSW Holden, B.A.	4422 R	Qa1	4568	79.00	04/11/38	109.72	11/05/95	DWR	-34.50	1.80	-10.50	107.43
						/BIA		103.00	03/22/88	113.95	03/27/96					
								104.40	03/21/89	112.23	10/18/96					
								0.00	/ /	112.23	03/27/97					
								0.00	/ /	111.15	10/15/97					
								0.00	/ /	115.30	03/27/98					
								106.80	03/12/91	114.30	10/28/98					
								108.80	10/24/91	113.50	03/23/99					
								0.00	/ /							
								108.80	11/04/92							
								108.56	03/17/93							
								141.95	11/03/93							
								110.42	03/18/94							
								110.25	11/25/94							
								0.00	/ /							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T03N	R64W	04	SESW	L.D.S. Farms	7067	Qoa/B	4743	19.60	03/20/64	20.90	11/05/95	CCWC	-3.05	-1.18	-5.35	20.15
						EC		17.30	03/21/88	19.44	03/27/96					
								18.20	03/31/89	0.00	/ /					
								20.50	12/17/89	0.00	/ /					
								19.80	03/14/90	22.12	12/15/97					
								23.30	10/25/90	21.47	04/30/98					
								19.95	03/12/91	23.80	11/25/98					
								21.63	10/24/91	22.65	04/06/99					
								20.30	04/05/92							
								19.90	11/04/92							
								19.50	03/17/93							
								16.73	11/03/93							
								17.11	03/18/94							
								19.87	11/25/94							
								19.11	03/20/95							
T03N	R66W	18	SWNES	Boulter, Wm.	0	Qt	4805	0.00	/ /	19.48	10/31/95	CCWC	0.00	1.15	0.00	21.18
						/USP		0.00	/ /	22.00	05/09/96					
								23.00	05/11/89	20.48	11/14/96					
								21.51	10/16/89	0.00	/ /					
								22.20	03/26/90	19.30	10/15/97					
								21.52	10/10/90	21.55	04/27/98					
								22.88	04/01/91	0.00	/ /					
								20.30	10/18/91	20.40	05/20/99					
								0.00	/ /							
								0.00	/ /							
								21.15	03/16/93							
								20.70	10/06/93							
								21.62	04/27/94							
								20.40	11/02/94							
								21.55	04/25/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	S99
													1999			
T03N	R66W	18	SWNESW	Boulter, W.	0	Qt	4805	0.00	/ /	20.15	10/31/95	CCWC	0.00	-1.12	0.00	22.01
						/USP		0.00	/ /	22.30	05/09/96					
								23.30	05/11/89	20.62	11/13/96					
								21.43	10/16/89	22.40	04/14/97					
								22.64	03/26/90	20.45	10/15/97					
								21.77	10/10/90	22.88	04/29/98					
								23.25	04/01/91	0.00	/ /					
								21.10	10/18/91	24.00	05/20/99					
								0.00	/ /							
								0.00	/ /							
								22.62	03/16/93							
								21.21	10/16/94							
								22.35	04/27/94							
								21.22	11/02/94							
								22.40	04/25/95							
T03N	R67W	15	SENE	Richardson, C.M. & G.L	10712	Qal	4795	31.00	07/18/63	0.00	/ /	CCWC	4.75	0.00	0.00	25.24
						/USP		0.00	/ /	0.00	/ /					
								0.00	/ /	24.95	11/13/96					
								0.00	/ /	0.00	/ /					
								0.00	/ /	26.20	12/16/97					
								0.00	/ /	0.00	/ /					
								0.00	/ /	25.20	11/25/98					
								0.00	/ /	26.25	03/11/99					
								0.00	/ /							
								0.00	/ /							
								0.00	/ /							
								24.45	04/27/94							
								24.70	11/01/94							
								24.90	04/25/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T04N	R55W	09	SWSWSE	Schooley,R.	0	Qa1	4175	11.10	04/23/30	25.38	11/05/95	DWR	-19.90	-2.89	-2.31	28.28
						/SPA		28.70	03/18/88	28.87	03/27/96					
								29.25	03/21/89	27.33	10/18/96					
								29.80	12/17/89	27.25	03/27/97					
								29.60	03/14/90	28.45	10/15/97					
								27.80	10/25/90	28.12	03/12/98					
								28.80	03/12/91	28.32	10/28/98					
								27.51	10/24/91	31.01	03/23/99					
								28.80	04/05/92							
								27.42	11/04/92							
								29.04	03/17/93							
								25.30	11/03/93							
								26.91	03/18/94							
								30.67	11/25/94							
								27.75	03/20/95							
T04N	R59W	31	SESENE	Frank,E.	13994 F	Qoav/ BIA	4505	97.00	04/28/45	0.00	/ /	CCWC	-16.80	1.05	0.00	113.45
								0.00	/ /	113.45	03/12/96					
								111.20	04/11/89	113.48	11/19/96					
								113.30	10/16/89	113.05	03/27/97					
								111.14	04/10/90	114.15	01/13/98					
								113.90	10/22/90	114.90	03/31/98					
								111.65	04/01/91	117.40	10/14/98					
								115.40	10/17/91	113.85	05/12/99					
								0.00	/ /							
								0.00	/ /							
								112.82	03/03/93							
								115.90	10/01/93							
								119.12	03/25/94							
								117.66	09/28/94							
								116.21	05/10/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T04N	R61W	28	NWNWNW	Eqqus Farms	0	Qa1	4480	30.30	03/02/48	31.45	11/05/95	DWR	-4.99	7.27	-1.29	33.26
						/SPA		34.00	03/21/88	36.21	03/27/96					
								35.30	03/21/89	31.49	10/18/96					
								32.60	12/17/89	35.79	03/27/97					
								35.75	03/14/90	31.46	10/15/97					
								29.35	10/25/90	42.56	03/12/98					
								35.45	03/12/91	29.92	10/28/98					
								28.05	10/24/91	35.29	03/23/99					
								27.87	04/05/92							
								0.00	/ /							
								35.68	03/17/93							
								30.87	11/03/93							
								34.28	03/18/94							
								32.03	11/25/94							
								36.02	03/20/95							
T04N	R63W	13	SWNE	USGS Obs. Well	0	Qa1	4510	5.60	03/21/67	6.45	11/05/95	DWR	0.00	-1.09	-0.92	5.23
						/BEC		4.60	03/22/88	4.35	03/27/96					
								6.90	03/21/89	4.12	10/18/96					
								7.00	12/17/89	4.47	03/27/97					
								6.20	03/14/90	4.02	10/15/97					
								6.90	10/25/90	4.43	03/27/98					
								3.65	03/12/91	4.85	10/28/98					
								0.00	/ /	5.52	03/23/99					
								0.00	/ /							
								0.00	/ /							
								6.72	03/17/93							
								5.30	11/03/93							
								4.54	03/18/94							
								3.92	11/25/94							
								5.22	03/20/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
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1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T04N	R64W	01	SWSWSW	Amigo Farms	6230 R	Qoav/ BEC	4615	18.00	01/01/46	9.27	11/22/95	CCWC	8.28	-0.44	0.00	10.33
								0.00	/ /	7.20	04/09/96					
								8.40	03/30/89	8.69	10/08/96					
								10.04	10/20/89	0.00	/ /					
								9.08	03/27/90	8.98	12/15/97					
								9.25	10/18/90	9.28	04/01/98					
								12.60	04/17/91	0.00	/ /					
								8.60	10/18/91	9.72	03/25/99					
								0.00	/ /							
								0.00	/ /							
								9.33	03/23/93							
								9.44	11/22/93							
								8.61	03/28/94							
								9.30	10/25/94							
								9.79	05/10/95							
T04N	R64W	10	SESESE	Dywer, T.E.	13072 R	Qoav/ BEC	4637	22.56	06/13/57	9.40	11/05/95	DWR	12.54	-1.14	-0.50	10.55
								9.52	03/21/88	9.50	03/27/96					
								10.10	03/21/89	9.68	10/18/96					
								10.10	12/17/89	9.78	03/27/97					
								0.00	/ /	9.04	10/15/97					
								12.10	10/25/90	8.88	03/27/98					
								10.75	03/12/91	10.29	10/28/98					
								10.42	10/24/91	10.02	03/23/99					
								9.20	04/05/92							
								10.35	11/04/92							
								9.37	03/17/93							
								9.95	11/03/93							
								9.55	11/03/94							
								10.91	11/25/94							
								10.65	03/20/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T04N	R64W	12	SWSWSW	Watkins Trust	12912 R	Qoav/ BEC	4635	21.00	05/23/77	18.90	01/11/96	CCWC	2.00	-2.00	0.00	18.23
								0.00	/ /	20.30	04/09/96					
								17.50	03/30/89	17.41	10/08/96					
								16.97	10/20/89	17.10	05/05/97					
								16.67	03/27/90	17.40	12/15/97					
								18.50	10/18/90	17.00	04/30/97					
								18.70	04/17/91	0.00	/ /					
								19.40	10/18/91	19.00	03/25/99					
								0.00	/ /							
								0.00	/ /							
								17.16	03/23/93							
								18.82	11/22/93							
								17.05	03/28/94							
								19.90	10/25/94							
								17.58	04/24/95							
T04N	R64W	22	SESWSW	Herbst, E.	0	Qoav/ BEC	4668	0.00	/ /	8.55	11/22/95	CCWC	0.00	0.00	0.00	9.45
								0.00	/ /	10.43	04/09/96					
								9.90	03/30/89	6.90	10/08/96					
								8.01	10/20/89	9.50	05/05/97					
								9.40	03/27/90	9.45	12/15/97					
								9.05	10/18/90	0.00	04/30/98					
								10.48	04/17/91	0.00	/ /					
								9.30	10/18/91	10.20	05/20/99					
								0.00	/ /							
								0.00	/ /							
								9.22	03/23/93							
								9.42	11/22/93							
								9.37	03/28/94							
								10.30	10/25/94							
								11.09	04/24/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T04N	R65W	18		NENESE Root, S.	14189	Qt	4710	0.00	/ /	9.40	10/30/95	CCWC	0.00	-2.09	0.00	9.32
						/USP		0.00	/ /	14.00	05/10/96					
								9.20	03/29/89	6.40	11/19/96					
								6.64	10/16/89	10.20	03/27/97					
								7.88	03/26/90	10.80	11/05/97					
								6.13	10/10/90	8.57	03/27/98					
								9.78	04/09/91	0.00	/ /					
								10.70	10/18/91	10.66	03/23/99					
								0.00	/ /							
								0.00	/ /							
								0.00	/ /							
								10.83	10/05/93							
								8.67	04/07/94							
								9.00	11/01/94							
								9.65	04/16/95							
T04N	R66W	09		SWSESW Monfort Feed Lots	12010 R	Qt	4735	25.30	04/28/47	32.85	10/27/95	DWR	-7.90	-0.55	-1.00	31.82
						/USP		32.20	03/16/88	33.80	03/19/96					
								33.00	03/11/89	31.30	10/22/96					
								32.00	10/15/89	32.85	03/19/97					
								32.70	03/12/90	32.05	10/17/97					
								30.75	10/22/90	32.65	03/12/98					
								32.30	03/05/91	33.10	10/07/98					
								31.50	10/16/91	33.20	03/19/99					
								0.00	03/24/92							
								0.00	/ /							
								30.20	03/12/93							
								30.75	10/25/93							
								32.40	03/29/94							
								31.20	10/27/94							
								32.20	03/15/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
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1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T04N	R66W	14	NENENW	Ewing, W.H.	12040 R	Qoav/	4725	16.00	04/01/51	25.18	10/30/95	CCWC	-13.90	-0.13	0.00	27.43
						USP		0.00	/ /	30.18	05/09/96					
								28.70	03/29/89	28.18	11/13/96					
								27.69	10/16/89	29.50	03/31/97					
								28.33	03/26/90	27.60	11/05/97					
								27.04	10/10/90	29.82	03/31/98					
								28.60	04/09/91	0.00	/ /					
								27.30	10/15/91	29.95	03/19/99					
								0.00	/ /							
								0.00	/ /							
								26.92	03/16/93							
								27.42	10/07/93							
								28.30	05/03/94							
								26.40	11/01/94							
								28.08	05/10/95							
T04N	R66W	27	SESENE	Lorenz, J.O.	0	Qoav/	4755	0.00	/ /	7.60	01/11/96	CCWC	0.00	2.44	0.00	6.20
						USP		0.00	/ /	7.05	05/08/96					
								6.90	03/29/89	6.26	11/13/96					
								5.88	10/16/89	7.30	03/31/97					
								5.48	03/26/90	6.72	12/16/97					
								5.67	10/10/90	7.69	03/31/98					
								0.00	/ /	0.00	/ /					
								5.90	10/18/91	5.25	05/20/99					
								0.00	/ /							
								0.00	/ /							
								5.42	03/16/93							
								4.82	10/05/93							
								4.75	04/27/94							
								6.10	11/01/94							
								6.69	04/16/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
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LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T05N	R59W	34	NWSESW	Williams,G.	0	Qa1	4360	14.10	03/02/48	12.80	11/05/95	DWR	-1.24	0.09	-0.24	14.62
						/SPA		15.10	03/21/88	15.95	03/27/96					
								17.20	03/21/89	12.08	10/18/96					
								15.00	12/17/89	15.33	03/27/97					
								17.25	03/14/90	10.81	10/15/97					
								13.40	10/25/90	15.43	03/27/98					
								16.80	03/12/91	12.11	10/28/98					
								12.49	10/24/91	15.34	03/23/99					
								16.33	04/05/92							
								14.44	11/04/92							
								17.29	03/17/93							
								12.60	11/03/93							
								15.41	03/18/94							
								13.80	11/25/94							
								15.15	03/20/95							
T05N	R65W	14	SE	Lorenz Farms	0	Qoav/	4612	0.00	/ /	0.00	/ /	CCWC	0.00	0.06	0.00	4.64
						USP		0.00	/ /	3.72	05/13/96					
								4.90	03/29/89	4.80	10/08/96					
								0.00	/ /	4.78	03/27/97					
								3.05	03/27/90	4.80	12/10/97					
								0.00	/ /	4.80	03/31/98					
								0.00	/ /	4.70	10/28/98					
								4.90	10/17/91	4.74	03/25/99					
								0.00	/ /							
								0.00	/ /							
								5.08	03/10/93							
								4.75	10/01/93							
								3.95	03/25/94							
								5.59	09/28/94							
								5.00	04/25/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T06N	R63W	29	NWNWNW	Wells,J.	12768 R	Qoav/ SPA	4655	11.30	03/21/62	13.85	10/27/95	DWR	-3.13	-2.40	-4.83	12.78
								9.60	03/16/88	12.95	03/19/96					
								11.80	03/11/89	13.18	10/22/96					
								10.80	10/15/89	12.38	03/19/97					
								12.40	03/12/90	13.33	10/17/97					
								11.40	10/22/90	12.03	03/12/98					
								12.35	03/05/91	16.13	10/07/98					
								0.00	/ /	14.43	03/19/99					
								13.05	03/24/92							
								13.30	10/23/92							
								13.90	03/12/93							
								12.13	10/25/93							
								11.93	03/29/94							
								14.63	10/27/94							
								14.18	03/15/95							
T06N	R65W	17	SWNWNW	Farr.H.W.	13423 R	Qoa /USP	4763	25.20	04/21/36	27.20	10/27/95	DWR	0.00	-1.20	-1.60	25.50
								23.60	03/16/88	25.80	03/19/96					
								27.00	03/11/89	24.15	10/22/96					
								22.90	10/15/89	23.75	03/19/97					
								25.80	03/12/90	24.80	10/17/97					
								26.50	10/22/90	24.00	03/12/98					
								25.50	03/05/91	27.00	10/07/98					
								26.20	10/16/91	25.20	03/19/99					
								25.20	03/24/92							
								26.90	10/23/92							
								25.70	03/12/93							
								26.00	10/25/93							
								24.80	03/29/94							
								27.40	10/27/94							
								25.60	03/15/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T06N	R67W	12	NWNWNW	Felte,F.	11267 RF	Qoav/ USP	4850	9.70	03/24/42	5.40	10/27/95	DWR	1.85	-0.95	0.55	8.77
								8.40	03/16/88	7.10	03/19/96					
								9.40	03/11/89	4.80	10/22/96					
								13.10	10/15/89	6.35	03/19/97					
								10.50	03/12/90	5.15	10/17/97					
								9.75	10/22/90	6.90	03/12/98					
								10.25	03/05/91	6.50	10/07/98					
								9.60	10/16/91	7.85	03/19/99					
								9.70	03/24/92							
								7.90	10/23/92							
								9.75	03/12/93							
								6.00	10/25/93							
								7.30	03/29/94							
								7.50	10/27/94							
								7.90	03/15/95							
T08N	R65W	29	NENWNW	Pettit,L.	9127 F	Qal /LTC	4983	8.40	03/07/76	8.50	10/29/95	DWR	-2.60	-6.30	-2.60	9.54
								8.40	03/16/88	8.65	03/19/96					
								9.60	03/11/89	4.90	10/22/96					
								10.40	10/15/89	5.40	03/19/97					
								11.20	03/12/90	4.75	10/17/98					
								8.75	10/22/90	4.70	03/12/98					
								10.50	03/05/91	6.10	10/07/98					
								10.70	10/16/91	11.00	03/19/99					
								10.90	03/24/92							
								8.20	10/23/92							
								9.40	03/12/93							
								8.70	10/25/93							
								8.70	03/29/94							
								9.70	10/27/94							
								9.30	03/15/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T08N	R66W	01	NWNENW		0	Qoa	5123	20.10	05/22/57	23.60	10/27/95	DWR	0.00	0.00	0.00	23.32
						/LTC		22.90	03/16/88	23.40	03/19/96					
								23.80	03/11/89	24.15	10/22/96					
								24.70	10/15/89	24.50	03/19/97					
								24.60	03/12/90	24.00	10/17/97					
								25.00	10/22/90	22.60	03/12/98					
								24.70	03/05/91	23.90	10/07/98					
								25.00	10/16/91	0.00	/ /					
								21.95	03/24/92							
								20.90	10/23/92							
								21.70	03/12/93							
								22.20	10/25/93							
								22.90	03/29/94							
								23.15	10/27/94							
								23.70	03/15/95							
T08N	R66W	22	NENENE	Jones, T.	11303 R	Qoa	5070	20.20	04/13/51	21.73	10/27/95	DWR	-0.38	-1.15	-4.08	20.92
						/LTC		16.50	03/16/88	21.73	03/19/96					
								20.00	03/11/89	20.88	10/22/96					
								20.90	10/15/89	20.98	03/19/97					
								21.20	03/12/90	21.63	10/17/97					
								21.35	10/22/90	19.43	03/12/98					
								21.60	03/05/91	20.63	10/07/98					
								21.60	10/16/91	20.58	03/19/99					
								21.30	03/24/92							
								22.10	10/23/92							
								22.60	03/12/93							
								21.33	10/25/93							
								21.78	03/29/94							
								21.63	10/27/94							
								21.88	03/15/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T09N	R51W	10	SWSWSW	Stieb Bros. Inc.	5316	F Qal	3830	8.00	03/01/64	9.11	10/31/95	DWR	-1.12	0.61	0.00	9.02
						/SPA		0.00	/ /	0.00	/ /					
								0.00	/ /	8.03	10/14/96					
								0.00	/ /	9.87	04/29/97					
								0.00	/ /	0.00	/ /					
								0.00	/ /	9.73	04/21/98					
								9.45	03/28/91	9.27	11/18/98					
								0.00	/ /	9.12	04/27/99					
								0.00	/ /							
								0.00	/ /							
								0.00	/ /							
								8.10	07/24/94							
								8.86	10/31/94							
								9.65	04/13/95							
T09N	R51W	31	NWNWNW	MacNiel, N.	9322	F Qal	3865	4.50	03/18/48	5.78	10/31/95	DWR	-2.64	-0.76	-1.44	6.34
						/SPA		5.70	03/18/88	5.60	04/22/96					
								7.20	03/30/89	5.70	10/14/96					
								6.00	11/14/89	6.78	04/29/97					
								7.80	04/02/90	5.87	11/05/97					
								7.00	10/31/90	6.38	04/21/98					
								5.82	03/29/91	7.03	11/18/98					
								6.80	11/08/91	7.14	04/27/99					
								7.53	03/25/92							
								7.10	11/16/92							
								6.25	06/08/93							
								5.78	11/08/93							
								6.05	04/07/94							
								6.30	10/31/94							
								5.81	04/13/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
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LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T10N	R49W	02	SWNWSW	Longman, M. & E.	11125 R	Qa1	3711	7.00	03/07/60	6.08	10/31/95	DWR	0.07	-0.89	-0.93	6.65
						/SPA		6.00	01/18/88	6.38	04/22/96					
								7.00	03/30/89	5.67	10/14/96					
								8.00	11/14/89	7.12	04/29/97					
								6.70	04/02/90	6.08	11/05/97					
								7.25	10/31/90	6.04	04/21/98					
								6.33	03/28/91	6.98	11/18/98					
								6.70	11/08/91	6.93	04/27/99					
								7.42	03/25/92							
								7.05	11/16/92							
								6.75	06/08/93							
								6.47	11/08/93							
								6.45	04/07/94							
								6.43	10/31/94							
								6.20	04/13/95							
T11N	R45W	05	NENWNW	Hilderman, F.G.	8325 R	Qa1	3540	15.50	03/22/59	16.60	10/31/95	DWR	-1.59	1.83	-1.09	17.15
						/SPA		16.00	03/18/88	16.90	04/22/96					
								17.40	03/31/89	15.00	10/14/96					
								17.80	10/31/89	17.83	04/29/97					
								18.00	04/02/90	15.37	11/05/97					
								17.75	10/31/90	18.92	04/21/98					
								17.03	03/28/91	15.96	11/18/98					
								18.40	11/08/91	17.09	04/27/99					
								17.64	03/25/92							
								17.10	11/16/92							
								17.43	06/08/93							
								16.53	11/08/93							
								17.05	04/07/94							
								18.47	10/31/94							
								18.60	04/13/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T11N	R45W	06	NWNENE	Williamson, L.	2087 F	Qa1	3542	20.00	05/04/59	19.43	10/31/95	DWR	0.29	-0.73	-1.01	19.82
						/SPA		18.70	03/18/88	19.72	04/22/96					
								19.96	03/31/89	18.91	10/14/96					
								19.90	11/14/89	19.61	04/29/97					
								20.45	04/02/90	19.01	11/05/97					
								20.20	10/31/90	18.98	04/21/98					
								19.25	03/28/91	0.00	/ /					
								20.65	11/08/91	19.71	04/27/99					
								21.03	03/25/92							
								19.30	11/16/92							
								19.81	06/08/93							
								19.12	11/08/93							
								18.70	04/07/94							
								21.80	10/31/94							
								21.20	04/13/95							
T11N	R47W	28	NWNWNW	Davidson, W.C.	7034 R	Qa1	3624	3.70	03/02/49	3.94	10/31/95	DWR	-1.41	-0.46	-1.81	4.61
						/SPA		3.30	03/18/88	4.62	04/22/96					
								5.20	03/31/89	3.30	10/14/96					
								7.45	11/14/89	5.05	04/29/97					
								6.00	04/02/90	3.67	11/05/97					
								5.50	10/31/90	4.65	04/21/98					
								3.90	03/28/91	5.40	11/18/98					
								5.70	11/08/91	5.11	04/27/99					
								4.63	03/25/92							
								5.60	11/16/92							
								4.71	06/08/93							
								5.30	11/08/93							
								4.60	04/07/94							
								6.80	10/31/94							
								4.85	04/13/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	S99
													1999			
T12N	R44W	22	SWNESE	USGS Obs.Well	0	Qa1	3450	9.20	03/20/68	8.23	10/31/95	DWR	2.32	-0.15	2.42	7.77
						/SPA		9.30	03/18/88	7.45	04/22/96					
								7.80	03/31/89	6.81	10/14/96					
								8.05	11/14/89	7.17	04/29/97					
								8.20	03/22/90	6.66	11/05/97					
								7.95	10/31/90	6.73	04/21/98					
								9.71	03/28/91	6.74	11/18/98					
								9.00	11/08/91	6.88	04/27/99					
								6.53	03/25/92							
								6.55	11/16/92							
								6.48	06/08/93							
								6.63	11/08/93							
								6.55	04/07/94							
								8.25	10/31/94							
								7.36	04/13/95							
T12N	R44W	26	NESESW	Tranel,L.	2574 F	Qa1	3465	0.00	/ /	26.73	10/31/95	DWR	0.00	-2.99	-2.22	27.14
						/SPA		26.70	03/18/88	26.35	04/22/96					
								27.40	03/31/89	25.78	10/14/96					
								28.40	11/14/89	28.50	04/29/97					
								27.20	03/22/90	25.96	11/05/97					
								29.35	10/31/90	25.93	04/21/98					
								26.70	03/29/91	27.73	11/18/98					
								28.50	11/08/91	28.92	04/27/99					
								27.59	03/25/92							
								27.10	11/16/92							
								28.40	06/08/93							
								26.74	11/08/93							
								26.44	04/07/94							
								27.75	10/31/94							
								26.45	04/13/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
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1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T01S	R66W	11	SWSWSE	Wenzel	0	Qoav/ USP	5050	0.00	/ /	12.35	11/03/95	CCWC	0.00	0.00	0.00	13.81
								0.00	/ /	13.20	04/25/96					
								13.40	04/20/89	15.45	11/19/96					
								16.59	10/16/89	16.50	03/21/97					
								14.42	04/12/90	14.85	10/07/97					
								13.35	10/17/90	0.00	03/21/98					
								13.70	04/10/91	14.27	10/27/98					
								14.77	10/24/91	14.60	03/31/99					
								0.00	/ /							
								0.00	/ /							
								14.40	03/24/93							
								13.83	11/22/93							
								13.35	04/27/94							
								15.03	11/02/94							
								13.75	04/25/95							
T01S	R67W	34	SWNENW	USGS Obs.Well	0	Qa1 /USP	5015	7.71	10/31/67	18.76	10/31/95	CCWC	-10.10	9.54	0.00	16.67
								0.00	/ /	22.85	05/09/96					
								10.50	03/30/89	25.10	11/19/96					
								9.69	10/13/89	26.95	04/16/97					
								10.45	03/26/90	26.15	10/15/97					
								11.71	10/09/90	27.32	04/02/98					
								0.00	/ /	18.10	10/27/98					
								0.00	/ /	17.78	03/25/99					
								0.00	/ /							
								17.28	03/22/93							
								16.33	10/06/93							
								16.07	04/27/94							
								19.75	11/02/94							
								21.90	04/12/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
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1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg. Depth=
							SURF						SPRING	S99	S99	
													1999			
T02S	R65W	23	SWSENE	Stapleton Airport	18380 F	Qa1	5300	0.00	/ /	14.45	01/11/96	CCWC	0.00	-0.18	0.00	15.12
						/TCA		0.00	/ /	12.30	05/13/96					
								17.00	04/20/89	15.46	11/19/96					
								17.79	10/13/89	15.42	05/16/97					
								17.42	04/10/90	13.62	12/15/97					
								16.70	10/17/90	13.82	04/30/98					
								16.90	04/18/91	13.60	11/24/98					
								17.47	10/24/91	14.00	04/07/99					
								0.00	/ /							
								0.00	/ /							
								14.27	03/22/93							
								14.20	10/27/93							
								0.00	/ /							
								14.66	11/07/94							
								13.76	04/25/95							
T02S	R65W	35	SESWSE	Stapleton Airport	18380 R	Qa1	5360	0.00	/ /	20.25	01/11/96	CCWC	0.00	-1.20	0.00	19.89
						/TCA		0.00	/ /	20.30	05/13/96					
								20.20	04/20/89	20.96	11/19/96					
								22.07	10/13/89	27.00	05/16/97					
								18.08	04/10/90	22.40	12/15/97					
								19.83	10/17/90	20.45	04/30/98					
								22.48	04/18/91	21.70	11/24/98					
								19.75	10/24/91	21.65	04/07/99					
								0.00	/ /							
								0.00	/ /							
								17.29	03/22/93							
								20.80	10/27/93							
								0.00	/ /							
								20.34	11/07/94							
								19.68	04/25/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T02S	R67W	01	SENWNW	Squires,G.	14784 R	Qoav/ USP	5065	29.00	06/23/53	0.00	/ /	CCWC	0.00	0.00	0.00	30.04
								0.00	/ /	0.00	/ /					
								33.40	04/06/89	27.06	11/19/96					
								31.26	10/13/89	30.60	04/15/97					
								33.90	03/26/90	27.10	11/05/97					
								32.60	10/09/90	30.86	04/15/98					
								31.90	04/10/91	0.00	/ /					
								28.77	10/24/91	0.00	/ /					
								0.00	/ /							
								0.00	/ /							
								0.00	/ /							
								0.00	/ /							
								0.00	/ /							
								23.98	04/12/95							
T04S	R65W	28	NESWSE	USGS Obs. Well	0	Qa1 /CCA	5640	5.80	05/01/75	13.66	10/24/95	DWR	-6.13	-0.60	-2.43	12.36
								9.50	03/25/88	0.00	/ /					
								12.70	03/15/89	13.96	10/23/96					
								13.40	10/24/89	14.08	05/09/97					
								12.80	03/22/90	12.73	10/17/97					
								13.70	10/25/90	11.33	05/01/98					
								10.46	03/21/91	12.13	10/15/98					
								14.10	10/23/91	11.93	04/05/99					
								0.00	/ /							
								12.05	11/01/92							
								14.25	04/22/93							
								13.41	10/28/93							
								13.41	04/14/94							
								13.91	10/31/94							
								13.71	04/03/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
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1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T04S	R67S	28	NESENW	Denver Water Dept.	27286 F	Qa1 /CHC	5410	0.00	/ /	18.25	10/24/95	DWR	0.00	-1.00	0.00	20.52
								0.00	/ /	20.38	04/25/96					
								0.00	/ /	18.59	10/23/96					
								0.00	/ /	18.80	05/09/97					
								0.00	/ /	17.47	10/17/97					
								0.00	/ /	17.77	05/01/98					
								28.56	03/21/91	12.47	10/15/98					
								20.60	10/23/91	18.77	04/05/99					
								0.00	/ /							
								20.15	11/01/92							
								20.85	04/22/93							
								17.96	10/28/93							
								18.71	04/14/94							
								17.67	10/31/94							
								17.59	04/03/95							
T05S	R66W	18	SESWSE	Colo. Div. Parks	0	Qa1 /CHC	5632	35.50	03/07/57	22.41	10/24/95	DWR	15.82	-0.70	-0.38	21.02
								19.30	03/25/88	19.79	04/25/96					
								19.80	03/15/89	22.29	10/23/96					
								24.20	10/24/89	19.83	05/09/97					
								22.50	03/22/90	21.58	10/17/97					
								24.44	10/25/90	18.98	05/01/98					
								25.52	03/21/91	19.58	10/15/98					
								25.75	10/23/91	19.68	04/05/99					
								0.00	/ /							
								23.33	11/01/92							
								21.50	04/22/93							
								23.33	10/28/93							
								19.71	04/14/94							
								23.66	10/31/94							
								21.08	04/03/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	S99
													1999			
T05S	R68W	17	NESESW	Denver Water Dept.	11555	R Qal /USP	5313	11.00	04/12/52	12.91	10/24/95	DWR	-1.90	-1.60	0.00	13.21
								0.00	/ /	13.50	04/25/96					
								0.00	/ /	12.67	10/23/96					
								0.00	/ /	12.75	05/09/97					
								0.00	/ /	12.60	10/17/97					
								0.00	/ /	11.30	05/01/98					
								13.20	03/21/91	12.30	10/15/98					
								14.10	10/23/91	12.90	04/05/99					
								0.00	/ /							
								14.05	11/01/92							
								13.92	04/22/93							
								13.00	10/28/93							
								12.58	04/14/94							
								13.00	10/31/94							
								13.25	04/03/95							
T05S	R68W	31	NENWNE	Denver Water Dept.	2188	F Qal /USP	5351	14.00	08/02/59	17.75	10/24/95	DWR	-4.17	-1.80	0.00	18.26
								0.00	/ /	19.71	04/25/96					
								0.00	/ /	17.42	10/23/96					
								0.00	/ /	17.84	05/09/97					
								0.00	/ /	17.07	10/17/97					
								0.00	/ /	16.37	05/01/98					
								17.88	03/21/91	17.37	10/15/98					
								19.90	10/23/91	18.17	04/05/99					
								0.00	/ /							
								19.90	11/01/92							
								19.08	04/22/93							
								17.17	10/28/93							
								17.13	04/14/94							
								17.55	10/31/94							
								17.84	04/03/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
OF THE  
LOWER SOUTH PLATTE RIVER BASIN, CO  
1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T06S	R66W	04	SESWNW	Cottonwood Est.	0	Qa1	5715	0.00	/ /	6.38	10/24/95	DWR	0.00	-1.40	-1.50	6.22
						/CHC		6.00	03/25/88	6.38	04/25/96					
								5.80	03/15/89	6.58	10/23/96					
								6.30	10/24/89	6.67	05/09/97					
								5.78	03/22/90	6.90	10/17/97					
								6.38	10/25/90	6.10	05/01/98					
								6.00	03/21/91	7.40	10/15/98					
								6.40	10/23/91	7.50	04/05/99					
								0.00	/ /							
								6.15	11/01/92							
								6.08	04/22/93							
								6.25	10/28/93							
								6.29	04/14/94							
								6.75	10/31/94							
								6.42	04/03/95							
T06S	R66W	08	NENENE	Cottonwood Est.	0	Qa1	5748	0.00	/ /	27.33	10/24/95	DWR	0.00	0.20	2.82	26.47
						/CHC		26.80	03/25/88	24.29	04/25/96					
								28.00	03/15/89	25.75	10/23/96					
								28.50	10/24/89	27.50	05/09/97					
								26.50	03/22/90	26.28	10/17/97					
								27.83	10/25/90	24.18	05/01/98					
								27.27	03/21/91	23.88	10/15/98					
								28.85	10/23/91	23.98	04/05/99					
								0.00	/ /							
								27.50	11/01/92							
								27.75	04/22/93							
								26.75	10/28/93							
								26.79	04/14/94							
								27.83	10/31/94							
								26.50	04/03/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
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1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T06S	R66W	08		NENENE Cottonwood Est.	0	Qa1	5748	0.00	/ /	27.33	10/24/95	DWR	0.00	0.00	1.77	27.47
						/CHC		27.70	03/25/88	24.29	04/25/96					
								29.00	03/15/89	27.46	10/23/96					
								29.30	10/24/89	26.08	05/09/97					
								27.30	03/22/90	26.93	10/17/97					
								28.18	10/25/90	25.93	05/01/98					
								28.02	03/21/91	25.98	10/15/98					
								29.65	10/23/91	25.93	04/05/99					
								0.00	/ /							
								29.25	11/01/92							
								28.83	04/22/93							
								27.50	10/28/94							
								27.58	04/14/94							
								28.50	10/31/94							
								28.33	04/03/95							
T07S	R68W	10		NENWSE Clapp, F.	0	Qa1	5680	4.00	03/14/80	5.92	10/24/95	DWR	-3.10	-1.70	-1.70	5.55
						/PCA		5.40	03/25/88	4.96	04/25/96					
								5.40	03/15/89	6.21	10/23/96					
								5.80	10/24/89	6.00	05/09/97					
								5.50	03/22/90	5.90	10/17/97					
								5.83	10/25/90	5.40	05/01/98					
								5.71	04/21/91	6.85	10/15/98					
								5.80	10/23/91	7.10	04/05/99					
								0.00	/ /							
								5.90	11/01/92							
								5.08	04/22/93							
								5.42	10/28/93							
								5.50	04/14/94							
								6.33	10/31/94							
								5.71	04/03/95							

WATER LEVELS IN THE ALLUVIAL AQUIFERS  
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1999

TWN	RNG	SEC	QTR	OWNER	PERMIT	AQUIF	ELEV	WATER	DATE	WATER	DATE	MEAS.	CHANGE	CHANGE	CHANGE	REMARKS /
							LAND	LEVEL		LEVEL		BY	1ST TO	S98 TO	S88 TO	Avg.Depth=
							SURF						SPRING	S99	S99	
													1999			
T08S	R66W	03	NWSESE	CENTENNIAL MATL'S	20706 R	Qa1	6120	8.99	06/01/56	11.46	10/24/95	DWR	-3.19	-0.60	-1.13	11.91
						/CHC		11.05	03/25/88	11.42	04/25/96					
								0.00	/ /	13.58	10/23/96					
								0.00	/ /	12.25	05/09/97					
								0.00	/ /	11.68	10/17/97					
								0.00	/ /	11.58	05/01/98					
								12.15	04/12/91	11.88	10/15/98					
								12.50	10/23/91	12.18	04/05/99					
								0.00	/ /							
								11.75	11/01/92							
								12.50	04/22/93							
								11.75	10/28/93							
								12.63	04/14/94							
								11.66	10/31/94							
								11.58	04/03/95							
T08S	R67W	27	SESWNE	Lowell, J.	7262 P	Qa1	6340	17.80	06/03/76	8.50	10/24/95	DWR	11.40	1.50	0.00	7.54
						/PCA		6.40	03/25/88	11.83	04/25/96					
								7.00	03/15/89	0.00	/ /					
								7.30	10/24/89	0.00	/ /					
								7.00	03/22/90	8.40	10/17/97					
								6.50	10/25/90	7.90	05/01/98					
								7.56	04/12/91	5.50	10/15/98					
								6.35	10/23/91	6.40	04/05/99					
								0.00	/ /							
								5.20	11/01/92							
								5.33	04/22/93							
								8.25	10/28/93							
								8.04	04/14/94							
								8.58	10/31/94							
								8.63	04/03/95							