Year 2000 Sampling Analysis and Mapping of Water Levels in the High Plains Aquifer of Kansas

Ricardo A. Olea
John C. Davis

Mathematical Geology Section
Kansas Geological Survey
1930 Constant Avenue
Lawrence, KS 66047

Open-file Report No. 2000-13

March, 2000

KANSAS GEOLOGICAL SURVEY
OPEN-FILE REPORT 2000-13

Year 2000 Sampling Analysis and Mapping
of Water Levels in the High Plains Aquifer
of Kansas

by

Ricardo A. Olea
John C. Davis

Disclaimer

The Kansas Geological Survey does not guarantee this document to be free from errors or inaccuracies and disclaims any responsibility or liability for interpretations based on data used in the production of this document or decisions based thereon. This report is intended to make results of research available at the earliest possible data, but is not intended to constitute final or formal publications.

KANSAS GEOLOGICAL SURVEY
1930 Constant Avenue
University of Kansas
Lawrence, KS 66047

YEAR 2000 SAMPLING ANALYSIS AND MAPPING OF WATER LEVELS IN THE HIGH PLAINS AQUIFER OF KANSAS

Ricardo A. Olea

John C. Davis

Mathematical Geology Section
Kansas Geological Survey
1930 Constant Avenue
Lawrence, Kansas 66047-3726

Open-file Report No. 2000-13
March 2000

Year 2000 sampling analysis and mapping of water levels in the High Plains aquifer of Kansas

Summary

The Kansas Geological Survey and the Division of Water Resources measured water table elevations at 1346 different sites in Kansas during January of 2000 as part of the annual water-level measurement program. 1240 wells (92.1%) monitor the water level in the High Plains aquifer.

Mapping the changes in water depth continues to show that the problem of aquifer depletion is more critical in southwest Kansas, while several other areas of the state show moderate reversal in the increase in water depth.

On average, depth to water increased at an annual rate of 0.28 ft during the last five years and at a rate of 0.36 ft during 1999.

Reliability of measurements and locations of wells have ceased to be a problem in the processing of the information. Moderate improvements were made in the reliability of the water-level sampling network by taking measurements at nine new wells with the intention of using them as observation wells.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF PLATES

YEAR 2000 SAMPLING ANALYSIS AND MAPPING OF WATER LEVELS IN THE HIGH PLAINS AQUIFER OF KANSAS

INTRODUCTION

The Kansas Geological Survey continues to monitor groundwater wells formerly measured by the U. S. Geological Survey. The Division of Water Resources (DWR) continues to measure the share of wells that it was monitoring prior to the time the Kansas Geological Survey assumed responsibility for the monitoring program.

The objective of this study is to display information on ground water levels collected in Year 2000 within the High Plains aquifer—the most important aquifer in the state of Kansas—to visualize trends in the depletion and recharge of the aquifer, to evaluate the impact that the addition of provisional observation wells has on the reliability of the network, and to suggest further changes to improve the capability of the network to properly monitor changes in water level.

YEAR 2000 OBSERVATION NETWORK

Although progress has been made in our ability to extract from the WIZARD data base only those wells monitoring the High Plains aquifer, the process is not yet completely automatic.

Of the 1346 observation wells, only the 1176 wells listed in Appendix A and posted on Plate 1 have values of water-table elevation for the High Plains aquifer in 2000. An additional twelve sites measured for the first time this year were provisionally included in this study. We labeled all wells with an arbitrary index number up to five digits in length in order to identify wells on the posting. The equivalence of these numbers to the official well name is given in Appendix A.

Among the remaining 171 wells, 79 wells were clearly flagged in the data base as monitoring other aquifers, primarily the Dakota aquifer. The wells in aquifers other than the High Plains aquifer are listed in Appendix B. 27 wells had to be eliminated from the sample because they were in alluvium outside of what is considered the High Plains aquifer. In the future, these wells should be identified with a distinctive aquifer code.

Finally, 64 wells in the High Plains aquifer were not measured this year. Of these, seven were the responsibility of Kansas Geological Survey and 57 were the responsibility of the Division of Water Resources. Table 1 summarizes the classification of the observation wells in Year 2000 and compares it to the classification from last year.

Table 1. Classification of observation wells

Year	Measured HPa	Dakota	Outside boundary	Dupli-cates	No reading	Total
1999	1204	91	34	5	68	1402
2000	1176	79	27	0	64	1346

CROSSVALIDATION OF YEAR 2000 MEASUREMENTS

Cross-validation is a verification procedure based on kriging that takes advantage of the spatial stochastic continuity of surfaces such as water-table elevation (Olea, 1999a, Chapter 7). The optimal semivariogram model for first degree residuals of the water-table elevation in the High Plains aquifer is Gaussian, with a nugget of 70 sq. ft, a sill of 7910 sq. ft, and range of 63,636 m (Olea, 1997). For the second consecutive year, cross-validation did not detect any wells that were sufficiently anomalous to warrant inspection to verify proper water depth, surface elevation or coordinates.

WATER-TABLE ELEVATION IN THE HIGH PLAINS AQUIFER

Plate 2 is a display of the water-table elevation in the High Plains aquifer for the year 2000. The Year 2000 water table contour map is very similar to the water table maps observed in the previous three years (Miller, Davis, and Olea, 1997; Miller, Davis, and Olea, 1998; Olea and Davis, 1999)

RELIABILITY MAPS

The kriging standard deviation is a measure of the reliability of estimation. A smaller kriging standard deviation indicates the individual estimates or collection of estimates are more reliable, as in Plate 3. Improving reliability is costly because reduction of the kriging standard deviation is inversely proportional to the fourth power of sampling density (Olea, 1984). Because of this, the Kansas Geological Survey, rather than attempting to significantly reduce the kriging standard deviation, has decided to limit the kriging standard deviation to the existing average kriging standard deviation in areas with good control. This critical limit is 10 ft. Areas having a kriging standard deviation of less than ten feet have been colored in yellow in Plate 3.

Plates 2 and 3 include twelve new observation wells located following the recommendations in Table 3 of Open-File Report 99-15 (Olea, 1999b). These 12 wells are considered provisional observation wells.

Inclusion of provisional well 3002 near site 9 in Table 3 of Open-File Report 99-15 (Olea, 1999b), provisional well 3005 near site 22, provisional well 3007 near site 25, provisional well 3008 near site 74, provisional well 3011 near site 58, provisional well 3012 near site 34, and provisional well 3014 between sites 80 and 81, resulted in the elimination of areas with kriging standard deviations greater than 10 ft.

Provisional well 3001 is 2.6 miles from site 4. Although the kriging standard deviation was reduced significantly in the vicinity, it did not go below 10 ft because the provisional well is too far from the ideal location represented by site 4.

Provisional well 3010, close to site 79 in Table 3 of Open-File Report 99-15 (Olea, 1999b), significantly reduced the size of an area of high kriging standard deviation. However, to completely eliminate this unreliable spot, a second provisional well near to site 73 is required.

Provisional well 3015 is not close to any site where an additional observation well was recommended.

Provisional wells 3003 and 3004 near sites 92 and 93 were added for reasons other than reducing the kriging standard deviation. The area has five wells that are erratic in their year-to-year behavior. Provisional well 3003 between erratic wells 1997 and 1999 seems to be in agreement with these two wells at least for this year. The same applies to provisional well 3004 near wells 31008 and 11000.

Failure to measure this year well 392901101093401 in Thomas county and well 392210100384601 in Sheridan county resulted in two new areas with high kriging standard deviations, which means that wells at these two locations are essential for the reliability of the network. Efforts must be made to secure their reliable measurement in the future, or replacement wells should be sought if there are problems of a permanent nature that prevented access to the wells this year.

Failure to measure well 375811097373001 is the reason for a high kriging variance in Harvey County. The failure to measure an additional 61 wells did not result in an increase in kriging standard deviation above 10 ft, indicating that the network can tolerate some missing measurements without increases in kriging standard deviation above the critical limit. This resilience has positive and negative implications. On the one hand, the network would be adequate for sampling the water table levels with fewer wells without a significant deterioration in reliability. On the other hand, the excess number of measurements provides the freedom to miss measurements without an increase in kriging standard deviation above the critical limit.

For example in Year 2000, only three of the 64 observation wells without measurements, resulted in a local increase in the kriging standard deviation above 10 ft except near the boundary of the aquifer.

The elimination of all areas having more than 10 ft of kriging standard deviation (except near the aquifer boundary) continues to require observation

wells near the 24 sites in Table 3 of Open-File Report 99-15 (Olea, 1999b). In addition, well 3001 should be replaced by another well closer to site 4.

WATER-TABLE FLUCTUATIONS

Plate 4 shows changes in water-table elevation based on measurements in January 1999 minus water table measurements made in January 2000. Consequently, negative values denote an increase in depth to water —or depletion of groundwater.

There are 1165 values for the 1999-2000 difference in water table elevation, whose cumulative distribution is in Figure 1a. The average increase in depth to water for the wells is 0.38 ft (0.36 ft for grid nodes) in Plate 4.

Fluctuations from well to well are somewhat erratic. Consequently, as shown in Figure 1b, the semivariogram has a short range. The best model is exponential with an effective range of 11.2 km and a sill of 4.6 sq ft.

Fluctuations in excess of 10 ft can be considered outliers that should be examined more closely, either to find a cause for the rapid changes in water level to determine if there are unusually pronounced recharge mechanisms in operation, or to verify the correctness of measurements made during the last two years. Wells with increase over 10 ft include wells 1144 and 1516. Wells with declines of more than 10 ft include wells 130, 1621, 1764, 11308.

Relative to the 1998-1999 difference, for 1999-2000 there is an improvement in water table elevations in Rawlins, Decatur, Thomas, Sheridan, Greeley, Meade, Ford, Pawnee, and Edwards County and an increase in the depth to water in areas in Scott, Lane, Rice, Reno, Kingman, and Harvey.

As expected, changes are more pronounced and systematic for 5-year changes in water table elevation from 1995 to 2000. As shown in Figure 2, there are no outliers. The semivariogram model for the residuals along the trend-free N48E direction is exponential with nugget of 2 sq ft, sill of 24.85 sq ft and effective range of 34 km.

The most depleted portion of the aquifer continues to be a large area in the southwest corner of the state of Kansas. In terms of increase in water table elevation (recharge), an area in Finney County is larger this year than in the period 1999-1994. The northern portion of the aquifer east of Ford County also shows this year a recharge relative to 1995.

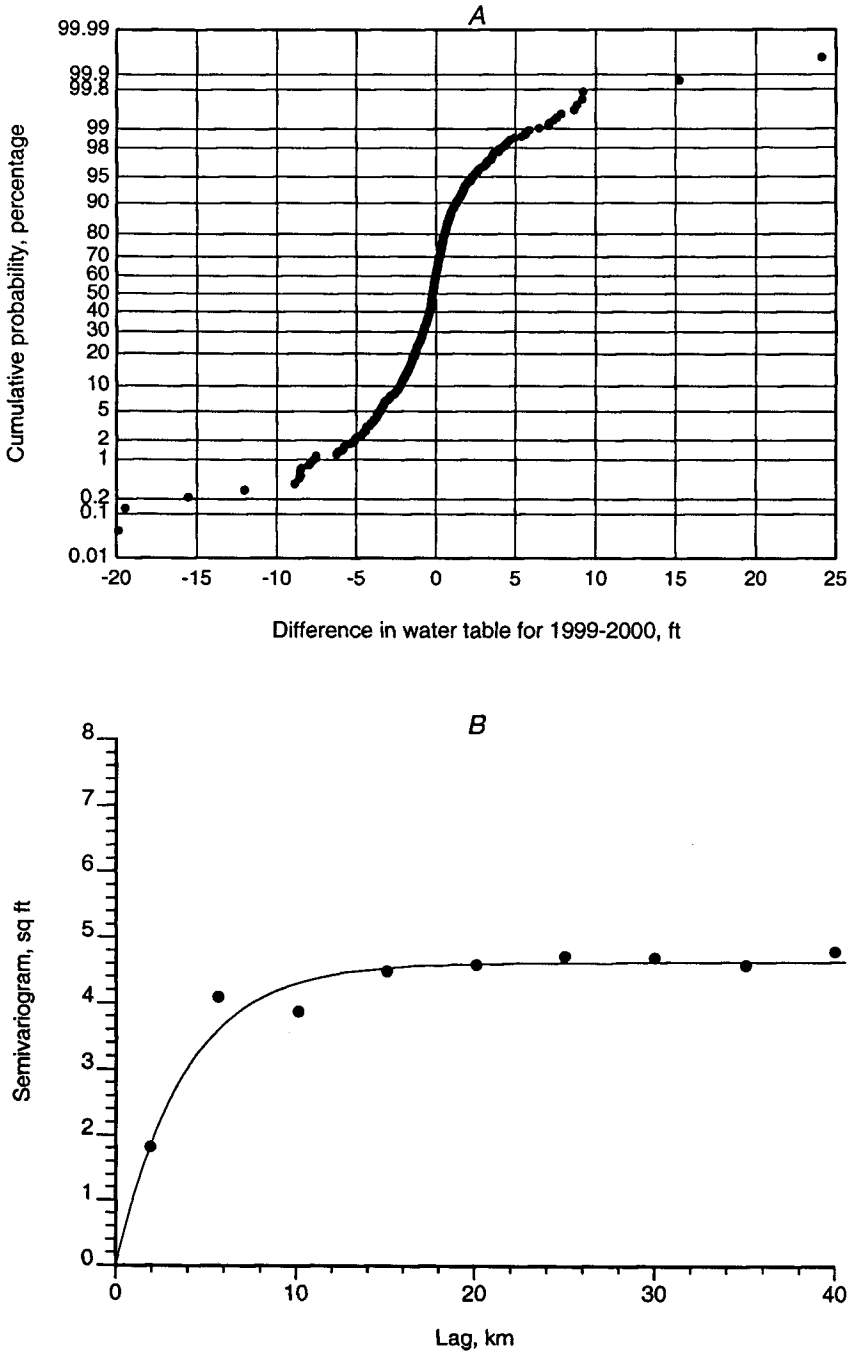


Figure 1—1999-2000 differences in water level (A) Cumulative distribution (B) Experimental semivariogram (dots) and semivariogram model (continuous line). The model is exponential with an effective range of 11.2 km and a sill of 4.6 sq ft.

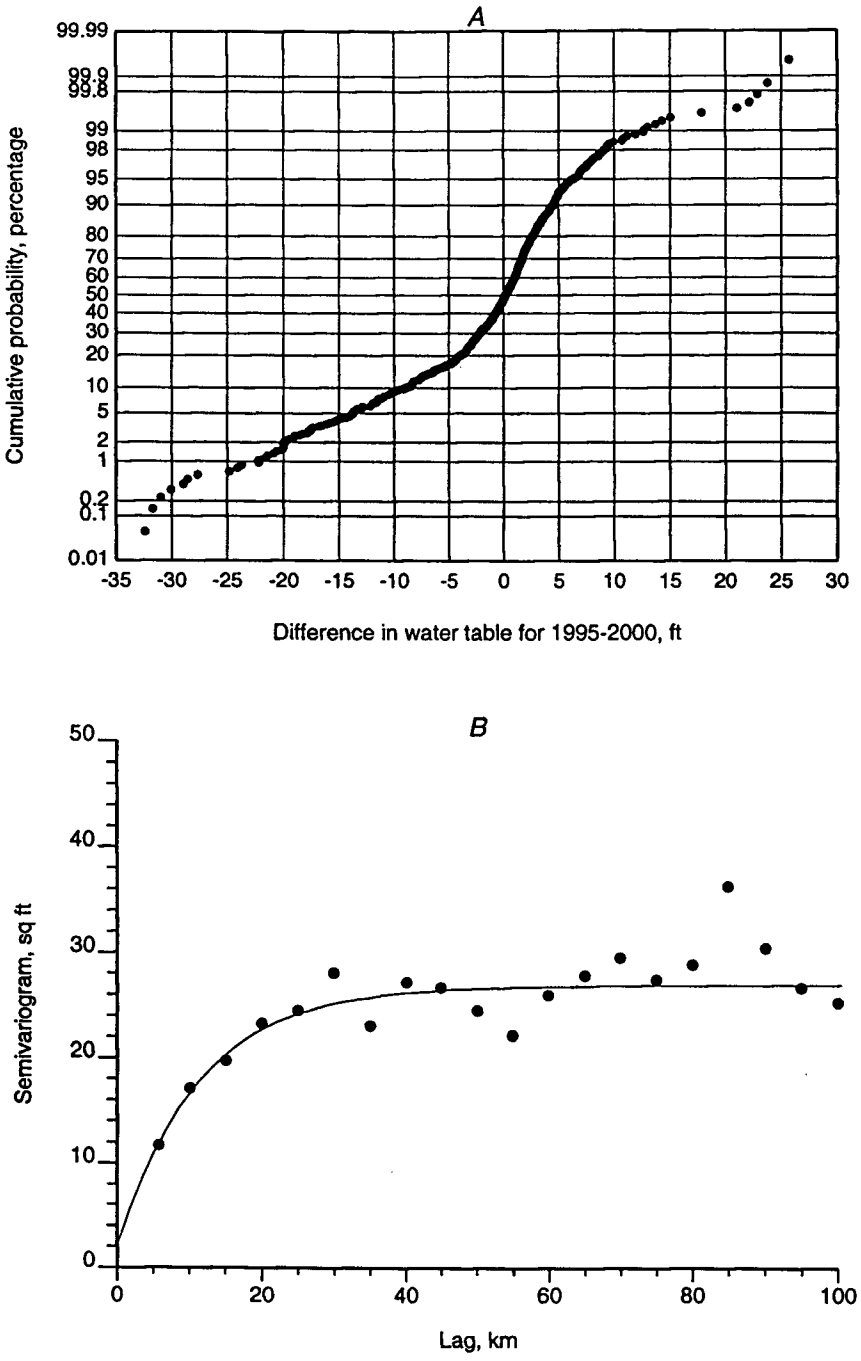


Figure 2—1995-2000 differences in water level (A) Cumulative distribution (B) Experimental semivariogram (dots) and semivariogram model for the residuals along N48E (continuous line). The model is exponential with a nugget of 2 sq ft, sill of 24.85 sq ft, and effective range of 34 km.

The average increase in depth to water for the 1082 wells with measurements is 1.11 ft (1.38 ft for grid nodes) in Plate 5.

CONCLUSIONS AND RECOMMENDATIONS

Without making any geohydrological assumptions, several objective conclusions and recommendations can be drawn from the geostatistical analysis of the water-level observation records.

1. Depletion of the High Planes aquifer increased at a rate of 0.28 ft per year during the period 1995-2000.

2. Depth to water in the High Planes aquifer increased last year at an accelerated average rate of 0.36 ft.

3. The addition of 9 wells to increase the reliability of the network resulted in the predicted significant improvements.

4. Complete elimination of areas with kriging standard deviations of more than 10 ft (except near the aquifer boundary) requires the resumption of annual measurements in 3 existing observation wells and the selection of 25 new observation wells.

5. Processing of the data would be easier if a code were used to identified wells tapping alluvial aquifers other that the High Plains aquifer, a situation that this year involves 28 wells.

REFERENCES

Miller, R. D., J. C. Davis, and R. A. Olea, 1997, Acquisition Activity, Statistical Quality Control, and Spatial Quality Control for 1997 Annual Water Level Data Acquired by the Kansas Geological Survey: Kansas Geological Survey Open-File Report No. 97-33, 45 p.

Miller, R. D., J. C. Davis, and R. A. Olea, 1998, 1998 Annual Water Level Raw Data Report for Kansas: Kansas Geological Survey Open-File Report No. 98-7, 275 p., 6 plates, and 1 compact disk

Olea, R. A., 1984, Sampling design optimization for spatial functions: Mathematical Geology, vol. 16, no. 4, p. 369-392.

Olea, R. A., 1997, Sampling analysis of the Annual Observation water-level wells in Kansas: Kansas Geological Survey Open-File Report No. 97-73, 44 p.

Olea, R. A., 1999a, Geostatistics for Engineers and Earth Scientists: Kluwer Academic Publishers, Norwell, Massachusetts, 303 p.

Olea, R. A., 1999b, Optimizing the High Plains aquifer water-level observation network: Kansas Geological Survey Open-File Report No. 99-15, 8 p. and 3 plates

Olea, R. A. and J. C. Davis, 1999, Sampling analysis and mapping of water levels in the High Plains aquifer of Kansas: Kansas Geological Survey Open-File Report No. 99-11, 35 p. and 9 plates

APPENDIX A

HIGH PLAINS AQUIFER WELLS

WITH YEAR 2000 VALUES FOR

WATER-TABLE ELEVATION

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
1	11	30S 11W 11CCA 01	372641098295101	-1.18	-9999	1772.72	4
2	12	30S 11W 17AAC 01	372621098322701	1.48	-9999	1774.99	4
3	13	30S 11W 33ADA 01	372338098311401	-0.35	-9999	1763.47	4
4	14	01S 30W 34DDD 01	395458100395501	-0.2	-2.74	2586.16	2
5	15	02S 26W 11BBA 01	395358100124001	0.9	3.66	2430.06	4
6	16	02S 28W 13ABA 01	395307100243001	0.53	-0.98	2461.72	2
7	27	03S 26W 30CBB 02	394544100172202	0.47	3.27	2490.63	4
8	18	03S 28W 06DCB 01	394859100301701	0.86	1.48	2543.68	2
9	19	03S 28W 32BCA 01	394504100293601	1.49	5.22	2623.52	4
10	110	03S 29W 12BBA 01	394846100314901	0.37	0.63	2540.29	2
11	111	03S 29W 17DCB 01	394715100355501	0.42	-7.06	2568.74	3
12	112	03S 29W 31DCC 01	394432100370401	-0.07	-1.42	2612.08	2
13	117	04S 26W 19DCA 01	394110100163301	-0.12	0	2449.34	2
14	118	04S 27W 17DAC 01	394208100221101	0.32	2.7	2551.7	4
15	119	04S 27W 33BBB 01	394005100215501	-0.34	3.21	2512.36	2
16	120	04S 28W 15AAA 01	394241100263201	0.5	2.94	2613.5	4
17	121	04S 28W 30DDD 01	394011100295401	0.38	2.34	2638.74	4
18	122	04S 30W 07BBB 01	394335100441701	0.1	0.59	2689.85	2
19	123	04S 30W 31BBB 01	394006100442101	-0.31	-9999	2740.45	2
20	124	05S 26W 05ADD 01	393853100150901	0.47	3.59	2484.34	4
21	125	05S 26W 26DDA 01	393505100115901	-0.13	2.03	2415.59	2
22	126	05S 26W 33DCC 01	393407100143101	0.78	4.98	2457.68	2
23	127	05S 27W 21CCA 01	393557100214701	1.88	3.31	2576.21	4
24	128	05S 28W 07BBC 01	393814100305401	-0.27	-0.1	2628.75	2
25	129	05S 28W 10BBB 01	393820100273201	-0.84	0.61	2592.76	2
26	130	05S 28W 14ADD 01	393709100252601	-19.47	0.31	2585.81	4
27	131	05S 28W 17DAC 01	393656100285601	-0.24	4.88	2639.3	4
28	132	05S 29W 22CBB 01	393610100341701	-0.23	0.06	2673.68	2
29	133	05S 30W 15CCB 01	393651100410001	3.97	1.4	2787.9	4
30	134	05S 30W 35BCB 01	393440100395501	0.31	1.02	2774.32	4
31	135	01S 29W 03DDB 01	395925100331901	-0.17	9.31	2525.51	2
32	136	01S 29W 19BDD 01	395708100370701	-0.48	0.08	2557.68	2
33	137	24S 18W 13DAC 01	375732099144301	-0.21	-0.48	2094.72	4
34	138	24S 18W 17ABD 01	375801099191001	-0.32	2.38	2116.71	4
35	139	24S 18W 28DAC 01	375550099175601	0.11	5.68	2121.75	4
36	140	24S 19W 34ADD 01	375513099231701	-0.13	0.43	2151.47	2
37	141	25S 16W 02BBB 01	375436099032701	-2.47	8.84	2051.14	4
38	142	25S 16W 27AAC 01	375059099034201	-3.23	-9999	2048.3	4
39	143	25S 16W 31DCC 01	374926099071601	-0.74	4.96	2069.09	4
40	144	25S 17W 01DAB 01	375411099080701	0.86	4.57	2076.07	4
41	145	25S 17W 17AAC 01	375245099123501	-0.14	1.74	2095.86	4
42	146	25S 17W 31BBD 01	375008099141501	-0.5	0.07	2118.97	4
43	147	25S 18W 09AAA 01	375346099174801	-0.13	1.51	2126.86	4
44	148	25S 18W 20AAB 01	375201099190201	-0.06	1.22	2143.3	4
45	149	25S 18W 33CDC 01	374931099182901	-0.01	-0.19	2144.16	4
46	150	25S 19W 08BDD 01	375329099260101	-0.48	3.18	2180.41	2
47	151	25S 19W 26DDB 01	375032099222001	0.64	2.53	2166.56	4
48	152	25S 19W 31CAB 01	374954099270701	0.09	-9999	2203.46	4
49	153	25S 20W 03BCD 01	375406099303401	0.04	2.69	2210.31	4
50	154	25S 20W 34CCC 01	374935099304801	-0.88	2.69	2211.19	2
51	155	26S 16W 10CCC 01	374731099035701	-0.52	3.55	2056.7	4
52	156	26S 16W 18CAC 01	374653099070201	-0.54	3.04	2077.36	4
53	157	26S 16W 31CCA 01	374408099070401	-1.37	3.07	2078.34	4
54	158	26S 16W 34ABC 01	374440099032401	-1.85	4.57	2059.8	4
55	159	26S 17W 14BAA 01	374720099090001	-0.83	3.78	2086.53	4
56	160	26S 17W 33DDB 01	374404099104601	-0.65	3.3	2103.1	4
57	161	26S 18W 15DCB 01	374637099163101	-0.73	0.73	2137.43	4
58	162	26S 18W 31CCC 01	374354099202001	0.1	1.05	2162.96	4
59	163	26S 19W 31AAC 01	374428099260501	0.6	1.92	2209.25	4
60	164	26S 19W 34BBD 01	374427099232901	0.05	1.07	2188.02	4
61	165	26S 20W 20BBC 01	374558099321601	0.38	4.66	2242.3	2
62	166	24S 16W 12CBD 01	375826099022201	-0.89	6.98	2033.08	4
63	167	24S 17W 20ADC 01	375655099123501	-0.99	-0.56	2089.28	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
64	168	24S 17W 24DDD 01	375629099075901	0.59	5.45	2069.81	4
65	173	12S 27W 10CCB 01	390113100184501	1.09	5.33	2630.24	4
66	174	12S 27W 12BBA 01	390152100162401	1.56	5.5	2596.22	4
67	175	12S 28W 07DDD 01	390106100274501	0.82	3	2696.94	4
68	176	12S 28W 12DDD 01	390106100221301	0.46	-2.11	2645.78	4
69	177	11S 26W 04CDC 01	390709100125401	2.35	3.36	2521.96	4
70	181	11S 26W 19AAA 01	390611100160101	0.64	4.18	2561.32	4
71	182	11S 27W 04CDC 01	390709100192401	9.15	1.28	2612.28	4
72	183	11S 27W 08DBB 01	390639100202901	-9999	-9999	2618.93	4
73	184	11S 27W 13ABB 01	390611100155701	-1.26	-9999	2553.05	4
74	185	11S 27W 36BCC 01	390316100163201	-3.37	1.66	2602	4
75	186	11S 28W 08AAA 01	390703100263601	-1.42	5.77	2683.74	4
76	187	11S 28W 26ABB 01	390427100235101	2.38	-7.63	2656.73	4
77	188	11S 29W 04DAD 01	390723100320801	0.81	2.38	2733	4
78	189	11S 29W 33BBA 01	390336100330001	0.29	3.45	2756.83	4
79	190	11S 30W 27ABB 01	390428100380701	0.86	4.63	2800.36	4
80	191	11S 30W 28CBA 01	390402100393801	0.65	4.06	2806.16	4
81	192	11S 30W 36CBB 01	390310100362801	-2.89	-0.07	2781.01	4
82	193	11S 31W 12AAB 01	390704100421401	0.1	3.42	2857.7	4
83	194	11S 31W 27ADC 01	390409100442901	-1.16	-0.01	2863.14	4
84	195	11S 31W 35BDC 01	390317100435701	4.12	4.01	2856.13	4
85	196	12S 26W 12BCC 01	390131100095701	0.9	2.22	2540.68	4
86	197	06S 22W 19CCC 01	393039099493101	-0.08	4.94	2294.6	4
87	198	06S 23W 13BBB 01	393216099503801	-0.17	2.67	2290.41	4
88	199	06S 23W 17CCA 01	393137099550001	0.57	7.4	2343.9	4
89	1100	06S 24W 14AAA 01	393216099572401	0.48	7.89	2419.32	4
90	1101	06S 24W 28BAB 01	393032100002001	0.24	2.23	2385.97	4
91	1102	06S 25W 12CCC 01	393223100040801	-0.08	1.29	2397.7	4
92	1103	06S 25W 28CBC 01	392959100073201	0.51	0.34	2432.47	4
93	1104	07S 22W 10BBC 01	392749099461001	-0.02	-0.12	2208.64	4
94	1105	07S 22W 19BBB 01	392611099493301	-1.52	-0.55	2261.92	4
95	1106	07S 24W 08CBA 01	392729100013501	0.36	4.77	2395.77	4
96	1107	07S 25W 24BBB 01	392611100040901	0.24	2.24	2410.38	4
97	1108	07S 25W 33DDD 01	392340100063401	0.57	0.4	2403.98	4
98	1113	09S 23W 26BAA 01	391451099512701	-0.24	3.6	2337.72	4
99	1114	09S 24W 22BAA 01	391545099590901	-0.45	3.14	2405.43	4
100	1115	09S 25W 14DDD 01	391551100041901	-1.75	0.53	2445.39	4
101	2116	06S 21W 19CDC 02	393039099423702	-3.7	1.03	2210.13	4
102	1117	29S 36W 33ADB 01	372904101152101	-2.21	-3.91	2755.57	4
103	1118	29S 37W 29BBA 01	373009101234301	-0.11	-6.1	2802.41	4
104	1120	29S 38W 35CCD 01	372832101265901	-2.82	-8.25	2921.12	4
105	1121	29S 35W 07CBD 01	373214101114301	1.61	-1.99	2782.98	4
106	1122	29S 35W 28ACC 01	372951101091001	-4.58	-9999	2686.21	4
107	1123	30S 35W 19BCD 01	372528101114301	0.05	0.43	2797.07	4
108	1124	30S 36W 01BBB 01	372826101125501	-1.73	-2.85	2745.85	4
109	1126	30S 36W 32BBC 01	372357101171501	-3.41	-18.92	2857.53	4
110	1128	30S 37W 15CBB 01	372616101213801	-9999	-9999	2854.53	4
111	2129	30S 37W 20CBC 02	372515101235102	-4.42	-11.38	2874.4	4
112	1130	30S 38W 15DBC 01	372608101273901	-2.93	-13.71	2923.75	4
113	1132	30S 38W 30ACA 01	372442101304601	-2.9	-9999	2928.23	4
114	1133	16S 40W 17CBC 01	383941101461201	-0.68	-4.42	3515.85	4
115	1134	16S 40W 26ADA 01	383815101415101	0	-0.41	3479.54	4
116	1135	16S 41W 20ABC 01	383915101522101	1.69	-1.19	3559.3	4
117	1137	16S 42W 22BCB 01	383909101572301	2.76	1.53	3624.69	4
118	1138	16S 42W 25AAA 01	383829101540901	0.26	-3.92	3571.62	4
119	1139	17S 39W 02BAA 01	383643101354101	0.23	1.54	3388	4
120	1140	17S 39W 22ABB 01	383405101363901	0.44	1.67	3388.72	4
121	1141	17S 39W 34CCB 01	383141101371201	2.37	0.98	3405.2	4
122	1142	17S 40W 15CCB 01	383418101435701	2.85	-2.55	3463.84	4
123	1143	17S 40W 17BBA 01	383458101460201	7.58	1.25	3474.75	4
124	1144	17S 40W 31BBA 01	383220101470801	15.24	-1.27	3499.3	4
125	1145	17S 42W 28DAB 01	383247101573601	0.04	6.9	3734.62	4
126	1146	18S 39W 07BBD 01	383028101402701	-0.15	9.32	3448.61	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
127	1147	18S 39W 19CDA 01	382810101400801	-0.5	0.73	3434.11	4
128	1148	18S 39W 24AAC 01	382843101341301	-2.96	2.13	3328.9	4
129	1149	16S 39W 22DCB 01	383841101363801	-3.49	-6.99	3381	4
130	1150	16S 40W 15ACC 01	383954101432401	0.61	1.03	3488.25	4
131	1151	23S 03W 14AAC 01	380318097364301	-0.12	8.57	1419.25	4
132	3152	23S 03W 32DCC 03	380002097401703	-2.05	3.12	1435.61	4
133	1153	24S 01W 05AAB 01	375955097264801	-1.56	5.66	1372.55	4
134	1154	24S 01W 19BCC 01	375658097284601	-0.66	8	1365.04	4
135	1155	24S 01W 22BCC 01	375658097252701	-0.91	4.93	1365.83	4
136	1156	24S 02W 28DDD 01	375540097320901	2.47	13.74	1375.81	4
137	1157	22S 02W 05CBD 01	380950097340901	1.39	1.18	1420.44	4
138	1158	22S 02W 29BBA 01	380653097340801	0.22	3.69	1405.58	4
139	1159	22S 03W 02DCD 01	380937097365501	1.14	4.57	1416.52	4
140	1160	22S 03W 29BAD 01	380647097402901	0.29	11.14	1424.91	3
141	1161	22S 03W 35AAA 01	380601097363601	-1.06	6.79	1412.32	4
142	1162	23S 01W 28AAD 01	380133097253501	0.77	4.23	1385.48	4
143	1163	23S 02W 22CCD 01	380146097315501	-1.82	4.63	1382.07	4
144	1164	23S 02W 34DCC 01	380001097313001	1.32	-16.53	1365.66	2
145	1165	23S 03W 06DDD 01	380423097410101	0.03	9.92	1430.01	4
146	1166	27S 05W 24CDC 01	374050097491601	-0.05	3.25	1463.1	4
147	2167	27S 05W 33ABB 02	373951097521902	-1.21	4.25	1453.79	4
148	1168	27S 06W 12CCD 01	374225097555101	-2.05	2.37	1479.01	4
149	1169	27S 06W 16CCB 01	374139097591601	-0.7	0.4	1458.53	2
150	2170	27S 07W 03ADC 02	374332098040102	-1.63	-9999	1535.08	4
151	1171	27S 07W 23BCC 01	374055098034401	-0.88	0.73	1559.63	4
152	1172	27S 08W 17DAB 01	374143098124601	0.27	2.75	1627.66	4
153	1173	27S 08W 35CBC 01	373859098101701	-0.75	1.89	1588.83	4
154	1174	30S 05W 12CCA 01	372659097491801	-0.69	1.68	1463.97	4
155	1175	30S 10W 05BBD 01	372803098262201	-1.34	4.97	1728.69	4
156	1176	30S 10W 13AAC 01	372622098213001	0.75	-9999	1681.17	4
157	1177	30S 10W 28DAC 01	372408098243901	-2.29	4.54	1710.96	4
158	1178	27S 09W 29AAA 01	374023098190401	-1.5	1.37	1675.72	4
159	1179	27S 10W 03DDD 01	374309098232301	1.59	0.62	1689.52	4
160	1181	27S 10W 17DDD 01	374123098253201	0.7	0.24	1691.31	4
161	1182	27S 10W 24DAD 01	374045098211401	-0.48	-0.34	1674.94	4
162	1183	28S 07W 29CDD 01	373422098063301	-0.04	1.82	1575.8	4
163	1184	28S 07W 35CCD 01	373331098033301	-0.3	2.96	1564.85	4
164	1185	28S 08W 21BBB 01	373602098123001	-0.25	0.4	1560.05	4
165	1186	28S 08W 26ABC 01	373503098094301	-0.05	-3.15	1588.74	4
166	1187	28S 09W 01BCC 01	373819098154001	-0.91	0.59	1572.21	3
167	1188	28S 09W 21AAA 01	373601098175901	0.11	2.3	1638.94	4
168	1189	28S 09W 29CCC 01	373422098200201	0.01	2.38	1676.28	4
169	1190	28S 09W 34AAB 01	373417098170201	0.66	3.06	1649.21	4
170	1191	28S 10W 16BCB 01	373641098252501	-0.16	1.88	1707.07	4
171	1192	29S 10W 19DDB 01	373008098264801	-1.51	1.8	1740.24	4
172	1193	29S 19W 22BAA 01	373038099230801	0	-0.66	2182.48	4
173	1194	29S 20W 11CDD 01	373131099283501	-0.43	-0.2	2231.45	4
174	1195	27S 16W 10BAC 01	374255099033901	-1.21	4.85	2062.21	4
175	1196	27S 16W 19BBD 01	374111099070401	0.14	4.29	2079.8	4
176	1197	27S 16W 28CDD 01	373938099043601	0.22	4	2054.38	4
177	1198	27S 17W 21ADC 01	374054099104501	0.14	3.58	2104.54	4
178	1199	27S 18W 13AAA 01	374201099135401	-0.13	2.45	2125.54	4
179	1200	27S 18W 18DDC 01	374117099193001	-0.13	-0.65	2167.16	4
180	1201	27S 18W 22ADC 01	374050099161301	-1.22	1.52	2147.29	4
181	1202	27S 18W 35AAC 01	373917099140101	0.33	-9999	2124.18	4
182	1203	27S 20W 26ABD 01	374001099282201	0.22	0.07	2227.21	4
183	1204	28S 16W 12BCA 01	373732099013501	0.31	0.87	2008.08	4
184	1205	28S 16W 17AAC 01	373648099051601	0.77	1.14	2045.82	4
185	1206	28S 16W 31DCA 01	373341099062501	-0.28	0.2	2038.93	4
186	1207	28S 17W 01CAB 01	373809099080001	0.33	2.17	2073.11	4
187	1208	28S 17W 15DDB 01	373612099093801	0.57	1.94	2079.81	4
188	1209	28S 18W 19CCB 01	373517099201701	-0.11	-1.37	2175.31	4
189	1210	28S 18W 25CAC 01	373429099143301	0.16	3.65	2108.41	4

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
190	1211	28S 19W 10AAC 01	373729099224501	-0.07	0	2169.35	4
191	1212	28S 19W 33CBD 01	373334099243001	-0.35	-1.17	2188.77	4
192	1213	28S 20W 12BBD 01	373724099274801	-0.2	-0.76	2227.96	4
193	1214	28S 20W 30ACA 01	373442099324101	-0.74	-0.68	2274.55	4
194	1215	27S 20W 32ABD 01	373910099313701	-0.11	0.08	2258.5	4
195	1216	29S 16W 02ADB 01	373310099015901	0	0.09	1988.4	4
196	1217	29S 17W 04ABC 01	373315099105901	-0.45	1.35	2073.09	4
197	1218	29S 17W 12DAA 01	373202099071801	0.06	0.12	2050.85	4
198	1220	29S 18W 07BBD 01	373220099200801	-0.43	-0.65	2156.09	4
199	1221	17S 27W 26CCC 01	383227100165301	0.27	0.19	2583.61	4
200	1222	17S 28W 07BBB 01	383551100275501	-0.21	-0.02	2684.47	4
201	1223	18S 27W 13CCC 01	382857100154501	-0.06	0.6	2589.14	4
202	1224	18S 28W 18ACC 01	382925100271801	0.82	5.86	2708.26	4
203	1225	18S 29W 04DDA 01	383056100311801	-0.58	1.16	2733.26	4
204	1226	18S 30W 04BAB 01	383130100383801	-0.26	0.02	2795.2	4
205	1227	18S 30W 23AAA 01	382853100354201	0.21	2.29	2790.91	4
206	1228	17S 28W 15BBC 01	383452100243601	-1.51	2.17	2655.16	4
207	1229	17S 28W 26ABB 01	383314100225601	-0.86	2.07	2633.72	4
208	1230	17S 28W 34CBB 01	383155100243401	-0.16	-0.87	2653.78	4
209	1231	17S 29W 10BAC 01	383545100305601	0.07	0.71	2695.1	4
210	1232	17S 29W 36BAA 01	383222100283401	-0.07	1.23	2695.63	4
211	1233	17S 30W 13CBB 01	383433100353601	-0.5	0.1	2752.2	4
212	1234	16S 29W 26CCD 01	383743100295901	-0.56	0.68	2695.53	4
213	1235	16S 29W 33BAB 01	383736100320301	0.1	1.06	2703.44	4
214	1236	16S 30W 24DCC 01	383836100350501	-0.31	2.61	2717.71	4
215	1237	16S 30W 29CDD 01	383743100393801	-0.46	0.3	2755.58	4
216	1238	17S 27W 20CCC 01	383320100201101	0.64	1.24	2618.12	4
217	1239	11S 33W 10BDD 01	390646100581301	-0.09	-0.61	2995.69	4
218	1240	11S 33W 14DCC 01	390528100565901	-0.03	-0.92	2983.26	4
219	1241	11S 34W 13AAB 01	390615101021601	-0.29	-0.74	3039.62	4
220	1242	11S 34W 16CDB 01	390537101060901	2.88	1.16	3098.76	4
221	1244	11S 37W 01DCD 01	390715101222201	2.21	-1.2	3199.48	4
222	1245	11S 32W 01BCC 01	390738100494401	-0.23	0.08	2925.45	4
223	1246	11S 32W 19AAB 01	390521100542901	0.38	-1.56	2967.05	4
224	1247	11S 32W 31CCD 01	390252100551301	-0.99	0.21	2985.87	4
225	1248	19S 03W 16BCB 01	382406097395501	1.36	1.46	1411.77	4
226	2249	19S 03W 31BBA 02	382142097415902	0.78	-9999	1408.14	4
227	1250	19S 04W 15AAC 01	382413097443601	0.92	-0.3	1405.88	4
228	1251	20S 01W 22BBB 01	381813097253201	-0.95	4.19	1519.96	4
229	1252	20S 03W 22DAA 01	381747097375101	0.8	-2.15	1428.85	4
230	1253	20S 03W 30BBA 01	381721097415901	1.16	0.33	1418.38	4
231	1254	20S 04W 15BDD 01	381847097450101	1	0.77	1418.17	4
232	1255	20S 04W 27DAC 01	381649097443601	1.35	2.68	1423.18	4
233	1256	21S 02W 36ACA 01	381102097291201	-0.03	4.25	1466.85	4
234	1257	21S 03W 06CBD 01	381504097415701	2.25	1.75	1417.93	4
235	1258	21S 03W 22BBB 01	381300097384401	1.8	4.55	1420.56	4
236	1259	21S 03W 33BBC 01	381109097395001	3.06	6.89	1420.17	4
237	1260	21S 04W 26CDC 01	381122097435901	3.9	8.57	1417.24	4
238	1261	18S 04W 21CCC 01	382755097463301	0.01	1.28	1401.47	4
239	1262	18S 03W 30CCC 01	382702097420701	1.16	1.38	1402.04	4
240	1263	19S 01W 32DAC 01	382110097265601	0.93	2.27	1546.19	4
241	1265	31S 40W 29ABB 01	371945101412701	-0.06	-2.64	3141.16	4
242	1276	33S 39W 04DBB 01	371221101334301	0.81	-4.55	3122.16	4
243	1278	33S 40W 27CCC 01	370835101394701	-0.91	-0.99	3225.06	4
244	1279	33S 41W 03ADA 01	371235101452101	0.63	0.78	3264.75	4
245	1280	33S 42W 21BCB 01	371000101535601	-0.67	-2.81	3434.01	4
246	1283	34S 40W 16ABB 01	370552101401901	-0.24	-3.5	3216.12	4
247	1284	34S 41W 26DCD 01	370322101443201	1.18	1.71	3198.01	4
248	1285	34S 41W 28CBA 01	370342101471501	-0.06	-9999	3312.84	4
249	1287	34S 42W 22CDB 01	370422101523401	-0.37	-1.49	3409.88	4
250	1288	35S 39W 06CDD 01	370136101360401	-3.21	-19.89	3095.48	4
251	2289	35S 40W 03BBB 02	370224101394602	-1.23	-6.41	3180.02	4
252	1290	35S 41W 16CCD 01	370001101472201	-0.37	-1.91	3295.41	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
253	1291	35S 42W 02DBB 01	370159101511101	-0.65	-2.85	3375.86	4
254	1292	35S 43W 04AAC 01	370217101593801	-1.39	-5.45	3455.57	4
255	1293	35S 43W 13BDB 01	370027101565601	-2.5	-10.31	3409.91	4
256	1294	01S 23W 15AAA 01	395819099532001	0.12	3.07	2312.44	4
257	1295	01S 24W 13BCB 01	395806099584801	0.14	1.78	2312.54	4
258	1296	01S 25W 25BBB 01	395634100053201	0.27	2.35	2366.65	4
259	1297	04S 23W 03DDD 01	394340099532401	0.89	4.71	2287.31	4
260	1301	04S 25W 13CCC 01	394156100054101	0.38	5.43	2409.88	4
261	1302	02S 21W 33CCC 01	394945099420101	0.77	4.45	2192.7	4
262	1303	02S 23W 22AAA 01	395214099532101	0.04	1.4	2306.46	4
263	1304	02S 25W 14AAA 01	395306100054301	0.43	4.1	2393.8	4
264	1310	26S 11W 27AAC 01	374533098301301	-1.1	1.09	1784.43	4
265	1311	26S 11W 29BCB 01	374526098331501	-1.49	1.31	1814.51	4
266	1312	26S 12W 02ABA 01	374918098355201	0.24	0.8	1846.83	4
267	1313	26S 12W 17CCA 01	374646098394401	-0.44	1.31	1872.25	4
268	1314	26S 12W 34CDC 01	374403098372301	-1.06	1.31	1840.08	4
269	2315	26S 12W 34CDC 02	374403098372302	-1.22	1.04	1840.86	4
270	1316	29S 11W 06AAA 01	373324098332601	1.82	7.53	1788.32	4
271	1317	29S 11W 09ADD 01	373213098311301	0.19	8.19	1780.42	4
272	1318	29S 11W 29AAD 01	372948098322001	1.46	9.38	1793.56	4
273	1319	29S 12W 20CCD 01	373000098394501	0.62	3.4	1810.92	4
274	1320	29S 13W 12ABB 01	373233098411501	0.26	1.41	1836.5	4
275	1321	29S 13W 31CAA 01	372838098470601	0.29	2.9	1864.81	4
276	1322	29S 14W 12ABB 01	373231098480401	1.04	-9999	1889.98	4
277	1323	29S 14W 17DBD 01	373107098521801	0.84	1.36	1915.05	4
278	1324	29S 15W 18ADA 01	373124098594001	2.23	8.26	1963.97	4
279	2325	29S 15W 25AAB 02	372952098542102	-0.07	1.69	1926.88	4
280	1326	26S 13W 16DAA 01	374703098442401	-0.31	4.02	1907.3	4
281	1327	26S 13W 19BBD 01	374631098472501	0.13	5.24	1931.1	4
282	1328	26S 13W 34BCB 01	374438098441601	0.5	2.3	1900.98	4
283	1329	26S 14W 17DBC 01	374653098523101	-1.35	9.59	1986.84	4
284	1330	26S 15W 01AAB 01	374908098542801	-1.6	6.27	2001.34	4
285	1331	26S 15W 17BBC 01	374717098593501	-1.28	4.04	2032.35	4
286	1332	27S 11W 12CBC 01	374230098285101	0.4	1.2	1736.72	4
287	1333	27S 11W 31DAA 01	373905098332501	-0.58	0.88	1720.76	2
288	1334	27S 12W 33CBA 01	373907098383801	-0.86	-0.12	1772.99	2
289	1335	27S 13W 13DDC 01	374126098411501	-0.37	1.65	1839.92	4
290	1336	27S 14W 03DAC 01	374323098500101	-0.07	4.25	1951.43	4
291	1337	28S 11W 12ACC 01	373728098281801	-0.06	2.98	1722.04	4
292	1338	28S 11W 20CAC 01	373529098330001	0.69	5.01	1773.63	4
293	1339	28S 12W 21BAD 01	373556098382201	-0.2	1.2	1801.02	4
294	1340	28S 13W 02DDC 01	373756098422001	3.98	1.02	1814.06	3
295	1341	28S 13W 17AAA 01	373658098452901	-0.7	0.59	1867.41	4
296	1342	28S 13W 26DCB 01	373432098423701	4.34	0.22	1825.66	4
297	1343	28S 14W 14CCC 01	373609098494301	1.77	0.45	1905.22	4
298	1344	28S 15W 23CCD 01	373514098560801	5.33	2.92	1958.22	4
299	1345	27S 14W 12DDD 01	374217098474101	0.61	1.5	1921.26	4
300	1346	27S 14W 21CAB 01	374052098513901	0.31	4.07	1955.07	4
301	1347	27S 15W 02ABC 01	374347098554501	-0.2	7.69	2009.48	4
302	1348	27S 15W 05CDB 01	374314098591801	-2.03	6.32	2044.76	4
303	1349	27S 15W 32CCA 01	373851098592501	-0.17	1.71	2014.78	4
304	1350	27S 15W 36ADD 01	373911098541401	1.68	2.78	1973.69	4
305	1351	26S 11W 01DDB 01	374833098280001	-1.4	-0.67	1775.91	4
306	1352	04S 35W 29DDD 01	394013101155301	1.52	0.22	3069.67	4
307	1353	04S 36W 23CBB 01	394125101201301	-1.69	-3.62	3134.78	4
308	1354	04S 36W 23DCA 01	394112101193101	-0.7	-2.36	3124.9	4
309	1355	03S 35W 24CBB 01	394637101122001	-0.04	0.15	2975.2	2
310	1356	03S 36W 14CBB 01	394730101201001	0.53	-3.07	3129.18	4
311	1357	03S 36W 17CCC 01	394711101233201	0.01	-3.29	3159.61	4
312	1358	03S 36W 21DBC 01	394632101215201	0.09	-4.45	3141.2	4
313	1359	02S 31W 03CAD 01	395419100471001	0	-0.76	2649.01	2
314	1360	02S 32W 20DCD 01	395130100555301	-1.53	-0.71	2724.35	2
315	1361	02S 33W 26DCC 01	395038100592301	0.42	0.11	2778.61	2

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
316	1362	02S 35W 13ABB 01	395308101114301	-5.11	-14.66	3011.64	4
317	1363	02S 36W 36BAA 01	395033101183701	-3.1	-4.28	3085.98	4
318	1364	01S 33W 29CCC 01	395551101031601	0.16	3.74	2881.54	4
319	1365	03S 31W 07CBD 01	394814100505201	0.2	0.35	2816.8	4
320	1366	03S 33W 03DCC 01	394854101003101	-0.43	-0.25	2799.1	2
321	1367	03S 33W 08CDC 01	394802101030301	0.35	-0.31	2837.39	2
322	1368	05S 31W 10DDA 01	393742100464301	-0.34	-1.5	2778.6	4
323	1369	05S 31W 20CCA 01	393558100495001	-2.31	1.55	2828.25	4
324	1370	05S 32W 14CDD 01	393644100525501	0.31	1.28	2891.88	4
325	1371	05S 33W 29BDA 01	393533101030001	0.33	-3.29	3023.01	4
326	1372	05S 34W 01BBB 01	393914101053801	5.64	6.73	3026.56	4
327	1373	05S 34W 28ADC 01	393526101081201	0.56	-0.15	3072.92	4
328	1374	05S 35W 30CBC 01	393513101180001	5.84	-0.02	3163.1	4
329	1375	05S 36W 21BCD 01	393619101222101	3.21	2.61	3200.78	3
330	1376	03S 34W 03ABB 01	394940101071501	-0.57	-0.4	2868.8	2
331	1377	03S 34W 26BAC 01	394605101062601	0.88	0.55	2890.81	2
332	1378	03S 35W 18CBB 01	394740101175601	-5.78	-9999	3091.64	4
333	1379	04S 31W 16ABD 01	394236100480601	-0.37	1.84	2753.24	2
334	1380	04S 33W 10ABC 01	394328101003401	1.57	1.05	2945.31	4
335	1381	04S 33W 28DCA 01	394026101014201	0.32	1.62	2978.52	4
336	1382	04S 34W 33CBC 01	393933101090001	0.7	0.7	3043.9	4
337	1383	23S 09W 05CBD 01	380435098203301	-1.96	1.82	1723.72	4
338	1384	23S 09W 21DDB 01	380151098184301	0.56	6.76	1725.21	4
339	1385	23S 09W 35CCC 01	380000098171701	-1.61	6.25	1701.27	4
340	3386	23S 10W 01AAA 03	380507098214903	-1.8	1.28	1728.71	4
341	1387	26S 06W 13BAB 01	374732097554401	-2.99	0.93	1465.36	4
342	1388	26S 06W 34BBC 01	374449097581101	-0.46	2.32	1527.99	4
343	1389	26S 07W 12DCC 01	374728098020801	-0.15	0.68	1549.85	4
344	1390	26S 08W 06DCC 01	374823098140501	-1.54	1.75	1661.91	4
345	1391	26S 08W 30DAA 01	374512098134301	0	1.75	1633.87	4
346	1392	26S 09W 10DDB 01	374735098170001	-2.84	-1.27	1663.33	4
347	1393	26S 09W 18AAA 01	374721098200701	-1.48	0.75	1659.02	4
348	1394	26S 09W 31DCC 01	374358098203301	1.55	3.56	1680.62	4
349	1395	26S 09W 34DBD 01	374412098170901	0.21	2.69	1659.51	4
350	1396	26S 10W 18CDC 01	374637098272501	-0.56	-0.4	1771.94	4
351	1397	26S 10W 32BBD 01	374439098262101	-1.36	1.21	1731.64	4
352	1398	23S 10W 25CAC 01	380104098223701	-2.24	1.46	1740.91	4
353	1399	23S 10W 29DCA 01	380057098264301	-1.22	1.77	1768.38	4
354	1400	22S 08W 23DAD 01	380712098094801	3.17	4.75	1626.62	4
355	2401	22S 08W 33CCD 02	380514098124902	-0.62	1.41	1652.05	4
356	1402	22S 09W 03BBD 01	381015098182501	-1.01	2.69	1681.31	4
357	1403	22S 09W 25BBA 01	380652098160901	-0.43	1.71	1685.63	4
358	1405	24S 04W 05CDB 01	375915097471301	-1.84	2.35	1471.98	2
359	1406	24S 04W 25BBD 01	375619097425301	-1.13	1.69	1443.32	2
360	2407	24S 04W 31DAB 02	375507097474502	-1.06	3.38	1462.58	2
361	1408	24S 05W 10CCA 01	375823097514501	-0.2	1.26	1488.82	4
362	1409	24S 06W 03AAB 01	375955097574301	0.28	0.79	1525.86	4
363	1410	24S 06W 23CBA 01	375652097571701	-0.79	1.09	1543.96	4
364	2411	24S 07W 08ADA 02	375849098062502	-0.02	-0.03	1591.5	4
365	1412	24S 07W 28AAA 01	375625098051701	-1.04	0.83	1577.51	4
366	1413	24S 08W 18BAC 01	375802098144501	-1.93	1.2	1643.25	4
367	1414	24S 08W 34DAC 01	375459098105401	-0.56	0.24	1584.97	4
368	1415	24S 09W 19DDB 01	375637098205201	-0.14	0.91	1681.21	4
369	1416	24S 10W 06DBB 01	375926098275201	-1.1	1.94	1777.79	4
370	1417	24S 10W 17DDC 01	375721098263301	-1.2	1.36	1739.76	4
371	1418	24S 10W 31CBC 01	375457098281801	-0.48	0.57	1740.23	3
372	1419	22S 10W 02DCC 01	380935098233201	-1.34	2.16	1728.06	4
373	1420	22S 10W 08BBB 01	380929098272701	-2.23	3.43	1752.08	4
374	1421	22S 10W 30DAA 01	380625098273401	0.63	2.54	1766.64	4
375	1422	22S 04W 12CDA 01	380851097424301	3.13	13.02	1423.58	4
376	1423	22S 04W 32BBC 01	380555097473101	1.27	6.05	1498.65	4
377	1426	22S 06W 18BCB 01	380825098015601	-0.98	1.75	1566.07	2
378	1427	22S 06W 28CCB 01	380614097594201	-0.48	0.38	1545.87	2

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
379	1428	25S 04W 02ABB 01	375441097433301	0.41	2.14	1441.34	2
380	1429	25S 07W 07BBD 01	375341098081801	-0.34	0.46	1579.82	4
381	1430	25S 07W 36CCC 01	374933098025301	-1.21	5.54	1542.14	4
382	1431	25S 09W 01DCD 01	375353098153101	-0.38	0.97	1644.97	4
383	1432	25S 09W 30DDA 01	375030098203901	-0.94	-0.42	1674.43	4
384	1433	25S 10W 14BBB 01	375252098235701	-0.04	-0.93	1721.17	4
385	1434	25S 10W 19ABD 01	375153098274401	2.62	0.02	1759.52	4
386	1435	22S 07W 17DCB 01	380758098065401	-0.64	2.16	1592.03	4
387	1436	22S 08W 09DBB 01	380903098122701	-0.02	1.87	1639.93	4
388	2437	23S 04W 03BAB 02	380509097450202	0	-9999	1468	4
389	1438	23S 04W 16BBB 01	380324097462401	-0.04	4.41	1551.56	4
390	1439	23S 04W 30BAA 01	380139097481201	-1.52	2.6	1483.88	2
391	1440	23S 05W 05DDC 01	380423097531701	3.5	4.68	1515.73	2
392	1441	23S 06W 31DCB 01	380008098011901	0.23	0.13	1546.68	4
393	1442	23S 07W 09DDD 01	380329098051701	-1.15	1.2	1582.4	2
394	1443	23S 07W 13DDD 01	380238098020201	0.16	0.41	1551.76	4
395	1444	23S 08W 18AAD 01	380316098140901	0.56	1.76	1663.46	4
396	1445	21S 09W 02DDA 01	381453098163801	-1.6	2.08	1657.06	2
397	2446	21S 09W 15AAC 02	381344098174702	-1.26	1.14	1662.84	2
398	1448	20S 09W 28ACD 01	381701098190001	0.76	1.65	1671.81	2
399	1450	20S 08W 22AAA 01	381813098110101	-0.53	1.48	1630.09	2
400	1451	20S 09W 12DDA 01	381918098152601	0.27	2.73	1653.25	2
401	1452	21S 07W 04AAC 01	381530098053501	-1.59	0.25	1599.36	2
402	1453	21S 07W 26CBD 01	381134098040201	-0.32	2.47	1583.13	2
403	1454	21S 08W 09CBD 01	381411098125601	-0.83	1.61	1636.47	2
404	1455	21S 08W 25ABB 01	381203098090501	-1.01	1.93	1615.41	2
405	1456	21S 08W 32DBB 01	381048098133501	-0.44	1.34	1634.17	2
406	1459	18S 33W 05CCC 01	383046100594901	-0.13	-1.15	2936.61	4
407	1460	18S 33W 25BBB 01	382803100552301	-0.28	-3.11	2852.32	4
408	1461	18S 34W 05CBB 01	383106101062701	-0.61	-0.73	3028.75	4
409	1462	18S 34W 25BBD 01	382756101015201	0.06	0.89	2978.6	4
410	1463	18S 34W 34BBC 01	382704101041301	-0.99	-0.35	3014.86	4
411	1464	17S 34W 16ACB 01	383448101044801	-2.43	-0.28	2993.48	4
412	1465	17S 34W 25DBB 01	383250101012901	-2.82	-2.37	2947.44	4
413	1466	16S 33W 33BAA 01	383738100582001	-0.48	-2.01	2907.72	4
414	1467	16S 34W 09CCB 01	384028101052301	0.06	-0.65	2983.37	4
415	1468	16S 34W 29CBB 01	383804101062801	0.35	1.25	2991.71	4
416	1469	16S 31W 17DDD 01	383928100453301	0.56	0.95	2809.95	4
417	1470	16S 31W 31BCB 01	383724100474001	-0.18	0.13	2822.17	4
418	1471	19S 32W 06CCB 01	382539100541601	0.78	1.61	2862.69	3
419	1472	19S 32W 32ACB 01	382144100523501	0.08	2.97	2897.06	4
420	1473	19S 33W 06DBB 01	382552101002001	0.08	-0.21	2960.14	4
421	1474	19S 33W 15DBD 01	382401100565301	0.21	2.76	2857.59	4
422	2475	19S 33W 29CBB 02	382223100594602	-0.17	2	2880.56	3
423	1476	19S 34W 19DCCC 01	382255101070001	0.07	-0.55	3010.71	4
424	1477	16S 32W 16BCA 01	384014100515901	-0.28	0.6	2842	4
425	1478	16S 33W 19BBC 01	383916101005901	-0.13	-9999	2936.73	4
426	1479	17S 31W 04DCC 01	383559100445101	-0.41	-0.81	2803.05	4
427	1480	17S 31W 19CDA 01	383328100471201	-2.13	-9999	2825.68	4
428	1481	17S 31W 35CCB 01	383144100431201	-0.29	0.12	2824.79	4
429	1482	17S 32W 16BBB 01	383501100520601	0.24	3.81	2838.2	4
430	1483	17S 33W 07BBA 01	383553101004901	-1.32	0.37	2941.5	4
431	1484	17S 33W 14ACB 01	383448100555801	-2.89	-0.51	2865.99	4
432	1485	20S 32W 30BCD 01	381716100540601	-1.63	-0.1	2807.2	4
433	1486	20S 33W 09BBB 01	382013100583901	-0.32	1.18	2871.49	4
434	1487	20S 33W 36CAD 01	381611100545501	-0.66	1.34	2813.1	4
435	1488	20S 34W 15BAA 01	381920101034501	-0.63	0.57	2959.25	4
436	1489	20S 34W 36CCD 01	381557101014701	1.36	4.12	2892.2	4
437	1490	18S 31W 24BCB 01	382841100420601	-1.34	-0.91	2843.17	4
438	1491	18S 31W 27ABA 01	382801100433501	-2.06	-2.83	2859.43	4
439	1492	18S 32W 14BBB 01	382947100495001	-0.84	-2.26	2860.75	4
440	2493	18S 32W 17ABA 02	382947100522902	-0.55	-2.06	2850.26	4
441	1494	18S 33W 03CCB 01	383053100573701	-1.6	-2.8	2879.9	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
442	1496	25S 01W 28DBA 01	375045097255201	0.23	4.63	1352.52	2
443	1497	25S 02W 22BBB 01	375204097320001	1.62	4.58	1382.75	3
444	2498	25S 02W 23DBD 02	375131097301402	0.54	-9999	1368.48	2
445	1499	25S 03W 03DDD 01	375356097373601	-0.22	2.22	1413.13	2
446	1500	25S 03W 15CCC 01	375211097383301	-0.27	3.34	1408.62	2
447	1501	25S 01W 07ABD 01	375342097280201	1.7	10.85	1356.06	2
448	1502	25S 01W 14DDD 01	375210097232601	1.07	4.21	1348.32	2
449	1503	26S 01W 12BAD 01	374837097225301	-0.16	2.85	1326.5	2
450	1504	26S 01W 19ABA 01	374659097280201	0.69	2.8	1347.14	2
451	1505	26S 01W 31DCC 01	374417097281301	0.99	-9999	1327.62	3
452	1506	26S 02W 08AAB 01	374837097332301	0.87	3.82	1369.4	2
453	1507	26S 02W 29AAA 01	374600097331401	1.73	3.7	1362.25	2
454	1508	26S 03W 02AAC 01	374927097362801	0.51	4.91	1391.56	2
455	1509	10S 30W 12ADA 01	391204100364101	1.25	2.72	2776.55	4
456	1510	06S 29W 24ABB 01	393123100301401	-0.11	-1.86	2673.24	4
457	1511	06S 29W 33CDA 01	392900100334201	2.15	-2.57	2713.32	4
458	1512	06S 30W 13BAA 01	393216100371301	0.1	-0.02	2747.68	4
459	1513	07S 26W 06AAB 01	392847100152601	0.21	-2.61	2495.72	4
460	1514	07S 26W 19BBC 01	392604100162101	-0.12	1.09	2499.33	4
461	1515	07S 26W 28CAB 01	392452100134601	0.89	0.39	2479.26	4
462	1516	07S 27W 22DAC 01	392538100185201	24.1	-0.08	2527.68	4
463	1517	07S 28W 08DCC 01	392709100280601	-0.05	-0.66	2627.68	4
464	1518	07S 28W 21ABB 01	392610100270101	0.38	-2.46	2611.18	4
465	1519	07S 28W 36ABA 01	392426100233001	-0.08	-0.46	2578.35	4
466	1520	07S 29W 05BBB 01	392848100351301	-0.59	-3.37	2730.69	4
467	1521	07S 29W 27CCC 01	392433100330201	-0.17	-1.48	2681.47	4
468	1522	07S 29W 30ABA 01	392519100354201	-9999	-1.63	2720.87	4
469	1523	07S 30W 08CBB 01	392729100420601	-0.15	-2.6	2813.26	4
470	1524	06S 30W 14CCD 01	393131100383701	0.77	0.36	2772.45	4
471	1525	06S 26W 26CBB 01	393005100114801	0.01	0.83	2468.74	4
472	1526	06S 27W 05CBB 01	393334100215501	8.85	1.21	2573.57	4
473	1527	06S 27W 08DCA 01	393228100211301	-0.33	1.51	2571.09	3
474	1529	08S 27W 11DCD 01	392156100175401	-0.21	-1.04	2493.21	2
475	1530	08S 27W 18DAA 01	392123100220601	-9999	-9999	2557.58	4
476	1531	08S 27W 35CBB 01	391847100183701	-8.51	6.25	2519.94	4
477	1532	08S 28W 11DAA 01	392215100242101	-0.2	-0.78	2591.55	4
478	1533	08S 28W 16AAC 01	392143100264501	-9999	-9999	2622.1	4
479	1534	08S 28W 17BAD 01	392143100281901	-0.72	-9999	2641.13	4
480	1535	08S 29W 01BDD 01	392316100302601	0.28	-9999	2624.48	4
481	1536	08S 30W 13DAA 01	392124100364001	-0.47	-2.72	2733.36	4
482	1537	08S 30W 30ABC 01	392000100424001	4.19	-2.95	2817.14	4
483	1538	06S 27W 19ADC 01	393104100221201	-0.31	-2.26	2586.25	4
484	1539	06S 28W 21BCD 01	393104100272301	-9999	-9999	2638.86	4
485	1540	06S 29W 10DBC 01	393235100322701	-1.37	-0.95	2692.48	4
486	1541	09S 26W 22BBB 01	391544100130001	1.04	2.99	2534.34	4
487	1542	09S 27W 12CCC 01	391643100173001	1.35	-4.25	2572.65	4
488	1543	09S 27W 20CBD 01	391512100245301	-9999	-9999	2601.28	4
489	1544	09S 27W 27DAA 01	391426100184601	-0.27	2.4	2600.58	4
490	1545	09S 27W 31ABB 01	391400100223301	-0.13	-9999	2613.48	4
491	1546	09S 28W 04BCC 01	391801100273801	-0.11	0.01	2650.31	3
492	1547	09S 28W 15CBA 01	391612100261901	-9999	-9999	2653.05	4
493	1548	09S 29W 03AAA 01	391821100320601	-8.48	-13.79	2695.67	4
494	1549	09S 29W 17BAB 01	391637100345901	-1.19	-2.46	2745.79	4
495	1550	09S 29W 26BAA 01	391452100313401	0.43	-9999	2722.13	4
496	2551	09S 30W 03AAB 02	391822100390302	-1.93	-1.73	2774.67	4
497	1552	09S 30W 35BBB 01	391401100384601	-5.32	4.71	2791.31	4
498	1553	10S 26W 12AAD 01	391209100095401	0.47	1.89	2511.92	4
499	1554	10S 27W 20CBC 01	390959100220001	0.57	-0.84	2586.26	2
500	1555	10S 27W 22DBA 01	391005100190401	0.79	0.18	2550.14	2
501	1556	10S 28W 05DDB 01	391229100275701	1.19	-2.78	2680.68	4
502	1557	10S 28W 29DAA 01	390913100274901	0.53	-4.73	2660.46	3
503	1558	10S 29W 02DDD 01	391222100310301	-0.79	-2.81	2720.97	4
504	1559	10S 29W 20CAA 01	391006100345201	-1.83	-4.65	2749.59	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
505	1560	10S 30W 08DDD 01	391131100410801	0.39	2.51	2834.31	4
506	1561	23S 12W 07DBD 01	380340098404601	-0.89	2.33	1851.76	4
507	1562	24S 11W 17DDB 01	375727098325701	-0.92	1.46	1812.21	4
508	1563	24S 12W 04CDB 01	375910098385901	-0.22	2.03	1856.25	4
509	1564	24S 12W 17CAB 01	375738098400601	-0.36	2.28	1868.2	4
510	1565	24S 12W 34ABC 01	375520098373701	0.21	1.92	1861.21	4
511	1566	24S 13W 16ACA 01	375750098451101	-0.24	1.92	1895.5	4
512	1567	24S 13W 20CDD 01	375625098463401	-0.29	1.28	1910.22	4
513	1568	24S 13W 36DDD 01	375439098413701	-0.75	1.2	1886.8	4
514	1569	24S 14W 17AAC 01	375759098524501	0.36	1.67	1948.97	4
515	1570	24S 14W 31BBD 01	375521098543201	-1.28	3.84	1979.08	4
516	1571	24S 15W 10BAB 01	375859098574001	-0.37	2.03	1994.25	4
517	1572	24S 15W 32DBC 01	375456098593401	-0.89	6.81	2023.01	4
518	1573	23S 12W 22BCC 01	380208098381001	-0.02	2.78	1842.11	4
519	1574	23S 12W 36BBC 01	380036098355801	-0.45	1.87	1835.8	4
520	1575	23S 13W 08CCB 01	380333098465901	0.07	1.96	1883.41	4
521	1576	23S 13W 30CBB 01	380108098480501	-0.35	0.35	1892.7	4
522	1577	23S 13W 35CCA 01	380002098433201	-0.14	1.93	1879.71	4
523	1578	23S 14W 15ADD 01	380301098502501	-0.13	1.75	1915.52	4
524	1579	23S 14W 30BBB 01	380136098544001	0.07	0.52	1944.77	4
525	1580	21S 11W 07BBB 01	381444098345101	-1.26	2.4	1794.61	4
526	1581	22S 11W 07BBB 01	380929098345101	-0.19	0.51	1780.71	4
527	1582	22S 12W 05BBD 01	381015098401201	-0.24	3.46	1857.26	4
528	1583	22S 12W 30BBD 01	380644098411901	-0.3	2.39	1859.44	4
529	2584	22S 12W 36BBB 02	380558098355802	-0.38	1.02	1823.2	4
530	1585	22S 13W 05CBC 01	380948098465901	0.1	2.08	1890.5	4
531	1586	22S 13W 12CAC 01	380855098421601	-0.59	2.85	1870.11	4
532	1587	22S 13W 29DAD 01	380617098460101	0.91	2.51	1887.38	4
533	1588	22S 14W 14CCA 01	380757098500901	1.64	3.05	1909.95	4
534	1589	22S 14W 35DDB 01	380519098492701	5.64	4.74	1905.8	4
535	2590	21S 12W 06CCB 02	381456098412802	7.84	-9999	1847.72	4
536	1591	21S 13W 05CBD 01	381504098465101	-6.14	-3.08	1862.92	4
537	2592	21S 13W 27DDD 02	381120098434802	-0.61	2.58	1871.42	4
538	1593	21S 14W 22AAC 01	381253098503401	2.15	3.38	1906.1	4
539	1594	21S 14W 32BAC 01	381108098531801	1.29	1.33	1917.61	4
540	1595	23S 11W 02BBB 01	380506098302901	-0.85	0.65	1787.02	4
541	1596	25S 11W 23DDD 01	375112098293101	-0.95	-1	1778.11	4
542	1597	25S 12W 11AAA 01	375342098360701	-0.28	2.92	1831.87	4
543	1598	25S 12W 16DCA 01	375210098383501	-1.72	1.53	1854.45	4
544	1599	25S 12W 24DDB 01	375117098350901	-0.7	0.56	1826.3	4
545	1600	25S 13W 16AAC 01	375228098451901	-3.61	1.87	1912.2	4
546	1601	25S 13W 31DDA 01	374930098470601	-2.22	5.84	1952.71	4
547	1602	25S 13W 36DCC 01	374923098420201	-1.76	2.67	1888.59	4
548	1603	25S 14W 04AAD 01	375428098513101	-0.93	1.34	1955.67	4
549	1604	25S 14W 21DDB 01	375118098513901	-2.2	2.87	1966.97	4
550	1605	25S 14W 30CDB 01	375025098542401	-1.32	3.03	1990.13	4
551	1606	25S 15W 11BCB 01	375330098565101	-0.27	4.93	2006.7	4
552	1607	25S 15W 29BBD 01	375059098595801	-1.53	2.57	2024.62	4
553	1608	23S 11W 22BCC 01	380209098313501	-0.73	2.13	1782.35	4
554	1609	23S 11W 36CCA 01	380004098291501	-9999	3.37	1788.17	4
555	1617	28S 40W 04CCC 01	373808101422201	-0.13	-6.43	3050	4
556	2618	28S 40W 12DDD 02	373716101380902	-1.7	0.53	3000.45	4
557	1619	28S 41W 02CCC 01	373808101464301	-0.2	-7.24	3101.5	4
558	1620	28S 41W 34BDD 01	373423101473701	-1.65	1.01	3053.85	4
559	1621	28S 42W 06DBB 01	373825101565801	-19.86	-24.82	3250.52	4
560	1622	28S 42W 20BCC 01	373558101563001	-0.91	-1.12	3300.46	4
561	1624	27S 39W 27BBA 01	374039101343701	8.67	-12.04	2947.07	4
562	1625	27S 40W 25CBC 01	374006101390601	1.39	-5.36	3033.17	4
563	1626	27S 41W 35CCC 01	373901101464301	-0.64	0.66	3151	4
564	1628	28S 39W 14BBC 01	373703101334001	-1.5	-7.54	2988.36	4
565	2630	28S 39W 36ABB 02	373433101320202	-7.84	-9999	2911.16	4
566	1631	29S 39W 21DBD 01	373031101350901	-3.53	-15.04	2957.63	4
567	1632	30S 39W 23BBB 01	372550101333801	-0.03	0.9	3019.05	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
568	1633	30S 40W 12BBB 01	372734101390601	-9999	-30.97	2982.13	4
569	1635	30S 40W 33CCB 01	372326101422301	-1.46	-3.69	3114.18	4
570	2636	30S 41W 13CCC 02	372556101454002	0.19	0.17	3147.47	4
571	1642	09S 34W 12ADA 01	391718101032301	-0.39	-3.47	3024.53	4
572	1643	09S 34W 17ABA 01	391639101080801	0.53	-0.47	3068.31	4
573	1644	06S 34W 17CBC 01	393144101084301	0.2	-2.58	3098.66	4
574	1645	06S 35W 02CDD 01	393316101113801	0.07	-1.28	3112.76	4
575	1646	06S 35W 26ACB 01	393020101113101	-0.32	-3.38	3137.16	4
576	1647	06S 36W 07BBB 01	393310101231501	-0.78	-3.5	3225.2	4
577	1648	06S 36W 11ACC 01	393250101181301	-0.46	-5.68	3180.76	4
578	1649	06S 36W 30DCB 01	392955101224301	-2.59	1.7	3256.06	4
579	1650	06S 36W 34DDB 01	392903101190501	0.05	1.78	3225.98	4
580	1651	10S 31W 26AAA 01	390940100443201	2.62	2.82	2882.95	4
581	1652	10S 31W 29AAB 01	390940100480901	-0.99	-2.4	2903.55	4
582	1653	10S 32W 11BAA 01	391217100514101	0.26	-2.12	2944.6	4
583	1654	10S 32W 29DCB 01	390901100545201	-0.46	-3.57	2963.37	4
584	1655	10S 33W 06BBC 01	391303101031701	-0.35	-7.44	3008.4	4
585	1656	10S 33W 11BAB 01	391217100583201	-0.35	-0.76	2979.47	4
586	1657	10S 33W 19CBD 01	391001101031001	3.58	-2.15	3057.17	4
587	1658	10S 34W 12BCD 01	391200101041601	1.83	2.04	3049.21	4
588	1659	10S 34W 29BBC 01	390936101085301	0.7	2.02	3125.51	4
589	1660	10S 35W 09ABB 01	391221101135301	0.33	-27.7	3151.79	4
590	1661	10S 36W 16CCC 01	391043101211101	-0.63	-1.44	3230.48	4
591	1662	06S 31W 03ADB 01	393348100454501	0.63	-1.24	2840.61	4
592	1663	06S 31W 19ABA 01	393127100490701	-0.36	-1.36	2889.87	4
593	1664	08S 31W 03CDD 01	392249100461301	0.19	-2.51	2854.34	4
594	1665	08S 31W 20CDD 01	392013100483101	-0.24	-4.1	2895.1	4
595	1666	08S 32W 07BAA 01	392243100560301	0.02	-2.19	2972.16	4
596	1667	08S 32W 12DBC 01	392210100502301	-0.18	-9999	2927.16	4
597	1668	08S 33W 34BBC 01	391908100595301	-0.04	-9999	3004.86	4
598	1669	08S 34W 01BAC 01	392329101040201	0.05	-1.17	3045.1	4
599	1670	08S 34W 06CBC 01	392303101095401	-0.13	0.76	3125.23	4
600	1671	08S 34W 23CBD 01	392027101051901	-1.9	-2.18	3044.05	4
601	1672	08S 34W 29CCC 01	391922101084901	-0.46	-0.63	3069.14	4
602	1673	08S 35W 04CCC 01	392252101142201	4.92	-0.58	3206.68	4
603	1674	08S 36W 15CBB 01	392127101195901	0.99	-0.22	3278.05	4
604	2675	08S 36W 18ABA 02	392153101223802	2.34	-0.05	3295.85	4
605	1676	08S 36W 31BCD 01	391858101231301	0.06	-5.23	3325.67	4
606	1677	06S 31W 33CCD 01	392854100473701	0.15	-1.62	2879.68	4
607	1678	06S 32W 12CBC 01	393236100505101	-0.22	-0.57	2901.28	4
608	1679	07S 31W 01DCA 01	392809100433901	-0.16	1.49	2831.19	4
609	1680	07S 32W 07ACA 01	392736100554301	-0.19	-1.31	2972.59	4
610	1681	07S 32W 13DBD 01	392631100501201	-0.75	-3.59	2910.3	4
611	1682	07S 32W 33BCB 01	392414100541201	-0.2	-1.93	2958.01	4
612	1683	07S 33W 07BDA 01	392743101024401	-0.24	-2.38	3044.48	4
613	1684	07S 34W 25AAA 01	392520101031901	-0.01	-1.15	3050.63	4
614	1685	07S 34W 26DBD 01	392448101044301	-0.3	4.89	3058.25	4
615	1686	07S 35W 09CCC 01	392712101142001	-0.48	-7.8	3179.9	4
616	1687	07S 36W 17CCC 01	392620101221101	-0.74	-1.98	3265.28	4
617	1688	06S 32W 29CDC 01	392946100550001	0.92	-9999	2951.94	4
618	1689	06S 33W 07BBB 01	393309101030601	1.78	0.51	3037.36	4
619	1690	06S 33W 23DDD 01	393039100574201	0.45	-0.42	2985.53	3
620	1691	06S 34W 11CDD 01	393223101045601	-0.27	-1.53	3052.25	4
621	1692	09S 31W 17CCC 01	391552100485901	0.17	-3.53	2922.36	4
622	1693	09S 31W 36AAB 01	391401100433101	-0.12	1.53	2865.38	4
623	1694	09S 32W 03AAA 01	391822100521201	3.47	0.8	2950.96	4
624	1695	09S 32W 27BCD 01	391434100530301	0.03	-3.06	2948.55	4
625	1696	09S 33W 35AAD 01	391355100574901	-0.05	-4.13	2972.88	4
626	1697	09S 34W 11CCC 01	391646101052901	0.68	-2.71	3045.56	4
627	1698	12S 23W 20CCC 01	385919099542601	-0.21	3.08	2357.01	3
628	1700	15S 40W 22ADC 01	384408101444801	-9999	-9999	3493.46	4
629	1701	15S 41W 05ACB 01	384657101535501	-1.98	-7.75	3582.85	4
630	1702	15S 41W 27CBC 01	384310101521901	-1.95	-5.99	3540.95	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
631	2703	15S 41W 36DDB 02	384212101491702	-0.74	-5.43	3531.78	4
632	1704	15S 42W 32BDA 01	384238102004501	-7.53	-13.41	3641.46	4
633	1705	15S 42W 36CDC 01	384206101562901	4.44	-3.3	3588.45	4
634	1707	14S 39W 28CAA 01	384828101393701	-0.03	-2.46	3447.95	4
635	1708	14S 40W 14CCC 01	384952101442601	-0.94	-9999	3490.26	4
636	1709	14S 40W 29ABA 01	384854101470601	0.5	-7.04	3507.72	4
637	1710	14S 41W 18DCB 01	384959101545901	-1.56	-14.96	3595.1	4
638	1712	14S 41W 22BBC 01	384946101521301	-0.9	-7.97	3573.82	4
639	1713	14S 42W 10BAA 01	385130101584201	-0.12	-2.79	3628.93	4
640	1714	14S 43W 25ABA 01	384854102023701	-3.44	-10.05	3663.73	4
641	1715	13S 43W 36ABB 01	385314102024201	-0.58	-12.11	3689.99	4
642	2716	11S 38W 35CCC 02	390254101305402	-1.72	-4.03	3253.65	4
643	1717	15S 38W 05CCB 01	384630101343101	-0.22	-1.81	3422.21	4
644	1718	15S 38W 14CCD 01	384441101310301	3.47	-3.1	3374.38	4
645	1719	15S 38W 21CCC 01	384347101332601	-2.57	-11.46	3345.15	4
646	1720	15S 39W 02BCA 01	384651101374201	7.35	-2.81	3430.83	4
647	1721	15S 39W 06CBC 01	384644101420801	-4.58	-10.93	3452.3	4
648	1722	15S 39W 08ACC 01	384558101403701	-1.41	-5	3448.62	4
649	1723	15S 39W 26ACC 01	384323101372101	-0.87	-2.46	3387.88	4
650	1724	15S 40W 03BAB 01	384710101451901	-2.37	-11.94	3486.82	4
651	1725	15S 40W 09DCB 01	384539101461101	-1.22	-8.89	3498.47	4
652	1726	20S 37W 29DCC 01	381643101254101	0.43	1.66	3257.62	4
653	1727	20S 38W 17CBD 01	381840101324401	0.45	0.98	3304.01	4
654	1728	20S 38W 33BBA 01	381635101313701	0.48	1.78	3287.88	4
655	1729	18S 38W 31DBC 01	382633101332401	0.66	-0.2	3331.32	4
656	1730	16S 35W 20CCC 01	383837101130601	-0.67	-1.44	3066.28	4
657	1731	16S 36W 07BCB 01	384054101204801	-0.24	-9999	3194.24	4
658	1732	16S 36W 30CBC 01	383757101204701	-1.28	-3.47	3158.34	4
659	2733	16S 36W 34CCC 02	383652101172902	-0.72	-3.25	3127.2	4
660	1734	16S 37W 17BBB 01	384014101261501	-1.51	-5.71	3240.02	4
661	1735	16S 37W 30BAB 01	383829101270401	0.38	-0.9	3239.42	4
662	1736	17S 35W 02ABC 01	383639101091301	-1.68	-4.37	3022.73	4
663	1737	17S 35W 18DCC 01	383416101133801	-1.34	-1.71	3067.08	4
664	1738	17S 35W 27CCC 01	383231101105201	-1.22	-1.62	3044.06	4
665	1739	17S 35W 30CBB 01	383251101141001	-0.36	0.02	3066.24	4
666	1740	17S 36W 33BCB 01	383210101183401	-1.02	-5.6	3126.96	4
667	1741	17S 37W 08BAA 01	383551101255001	-0.61	-9999	3229.92	4
668	1742	17S 37W 13CDD 01	383414101212801	0.08	-3.67	3177.83	4
669	1743	19S 35W 01ABB 01	382618101080501	0.31	1.07	3057.01	4
670	1744	19S 35W 08BBB 01	382526101130201	-0.17	-0.73	3116.37	4
671	1745	19S 36W 15BAA 01	382431101170201	-0.18	-0.14	3155.45	4
672	1746	19S 37W 22AAB 01	382337101231301	-0.28	-1.19	3225.25	4
673	1747	19S 38W 31CBC 01	382118101335801	0.18	-1.12	3320.94	4
674	1748	17S 37W 28CBC 01	383241101250901	-0.27	-4.29	3210.68	4
675	1749	17S 37W 36BCC 01	383202101215201	-0.96	-2.31	3169.09	4
676	1750	17S 38W 21BBB 01	383406101314401	-0.11	-1.64	3316.73	4
677	1751	17S 38W 28CCC 01	383227101314401	-0.8	0.14	3297.98	4
678	1752	16S 38W 04ABC 01	384149101311701	-0.88	-9999	3316.71	4
679	1753	16S 38W 26BBB 01	383829101293201	-0.58	-2.35	3274.22	4
680	1754	16S 35W 06AAB 01	384200101132301	0.49	3.48	3132.02	4
681	1755	16S 35W 13CCC 01	383929101084101	-0.27	0.36	3019.75	4
682	2756	18S 35W 08BBC 02	383033101130402	0.01	2.06	3078.99	4
683	1757	18S 35W 14DCD 01	382902101090301	0.16	0.02	3055.84	4
684	1758	18S 35W 31DDD 01	382625101131101	-0.68	-1.7	3109.53	4
685	1759	18S 36W 15DBD 01	382909101164601	-0.08	-9999	3142.69	4
686	1760	18S 37W 21BBB 01	382852101250901	-0.35	-1.04	3202.32	4
687	1761	18S 37W 25ABC 01	382753101211901	-2.8	0.76	3174.51	4
688	1762	18S 38W 02BCC 01	383109101293201	-0.95	1.36	3256.25	4
689	2763	18S 38W 20ACC 02	382831101321702	-0.75	-0.61	3305.12	4
690	1764	18S 38W 23BAB 01	382851101291601	-15.51	9.03	3273.01	3
691	1765	01S 38W 02CDC 01	395921101331801	-0.4	-0.95	3008.87	2
692	1767	01S 38W 08DCC 01	395829101362501	-0.5	-0.12	3042.88	2
693	1768	01S 38W 30BDC 01	395619101375201	-0.15	-0.3	3080.51	2

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
694	1769	01S 39W 25CBC 01	395606101391601	-0.25	-0.22	3092.05	2
695	1770	02S 37W 33DCC 01	394947101283501	-0.3	-1.23	3204.47	4
696	1771	02S 40W 28DBA 01	395100101484301	-0.03	0.67	3341.97	4
697	1772	02S 40W 32BCB 01	395021101503301	0.08	0.46	3362.56	4
698	1773	02S 41W 27BBD 01	395120101545301	0.03	1.1	3420	4
699	1774	02S 41W 33DBC 01	395001101553501	-0.11	-0.28	3413.13	4
700	1775	03S 37W 19BBC 01	394658101312601	-1.52	-4.03	3234.2	4
701	1776	03S 37W 21DDD 01	394619101281101	-0.69	-2.56	3200.46	4
702	1777	03S 37W 36ADB 01	394507101245701	0.66	-3.42	3174.76	4
703	1779	03S 38W 04BCC 01	394921101355801	0.21	-0.44	3261.86	4
704	1780	03S 38W 21BCB 01	394651101360001	0.07	-1.23	3270.35	4
705	1781	03S 38W 25BBB 01	394612101323501	0.25	-1.29	3252.28	4
706	1782	03S 39W 04CCC 01	394856101424201	-0.12	-0.03	3287.4	4
707	1783	03S 39W 20DAC 01	394632101430001	-0.6	-1.93	3309.05	4
708	1784	03S 39W 24DDD 01	394619101382601	-0.1	-1.95	3279.85	4
709	1785	03S 39W 32BDB 01	394507101433401	-0.37	-2.05	3335.43	4
710	2786	03S 40W 29ABC 02	394607101495502	0	-9999	3298.57	2
711	1787	03S 40W 35AAC 01	394514101463001	-0.5	-0.88	3346.74	4
712	1789	03S 41W 33ABB 01	394521101553601	0.58	1.68	3435.45	4
713	1791	04S 37W 17AAC 01	394237101292901	-0.56	2.72	3245.58	4
714	1792	04S 37W 25DCA 01	394020101250801	0.09	-1.91	3217.85	4
715	1794	04S 38W 04BAC 01	394421101354501	-0.28	-2.47	3286.1	4
716	1795	04S 38W 20CCC 01	394106101371301	-1.43	-1.52	3325.15	4
717	1797	04S 38W 21ADC 01	394132101351201	-0.56	-2.08	3301.62	4
718	1798	04S 39W 15CCA 01	394205101413101	0.7	-9999	3349.79	4
719	1799	04S 40W 22BCB 01	394139101482101	-0.51	-1.31	3393.24	4
720	1800	04S 41W 16DAA 01	394218101551201	-0.4	-0.14	3386.71	2
721	1801	04S 41W 23AAA 01	394152101525901	-0.55	-1.08	3402.12	4
722	2802	04S 41W 25BCB 02	394047101525102	-0.31	-9999	3425.33	4
723	1804	04S 41W 31ACA 01	393955101574301	-0.22	-0.84	3453.09	4
724	1805	04S 42W 02BCC 01	394409102003501	-0.28	-0.42	3491.03	4
725	1806	04S 42W 16CCD 01	394159102022201	0.06	-2.24	3498.44	4
726	1807	05S 37W 15DBB 01	393704101273301	-0.7	-2.11	3249.69	4
727	1808	05S 38W 13BAD 01	393724101321401	-0.05	-1.4	3309.52	4
728	1809	05S 38W 22ACB 01	393625101342401	-0.75	-1.48	3337.1	4
729	1810	05S 39W 06DAA 01	393849101440101	-0.42	-2.16	3390.75	4
730	1811	05S 39W 11CBC 01	393751101403601	0.32	-2.95	3375.75	4
731	1812	05S 39W 25CDA 01	393508101390801	-0.37	-1.38	3397.42	4
732	1813	05S 40W 14BCD 01	393712101470601	-1.31	-3.2	3417.6	4
733	1814	05S 40W 27BBA 01	393547101481501	-1.63	-9999	3446.23	4
734	1815	05S 42W 14DCC 01	393645102000401	-0.18	-2.21	3536.66	4
735	1817	06S 36W 01CAC 01	393329101172201	-0.57	-9999	3167.79	4
736	1818	06S 37W 07BBA 01	393310101295101	0.44	-0.45	3295.54	4
737	1819	06S 37W 16CDD 01	393132101272001	0.62	-1.55	3287.02	4
738	1821	06S 37W 19ABB 01	393126101292601	-0.58	-1.62	3314.26	4
739	1822	06S 38W 09ABD 01	393304101334601	-0.26	-9999	3345.3	4
740	1823	06S 38W 18DBD 01	393146101360101	-0.74	-9999	3390.53	4
741	1824	06S 39W 09DDD 01	393225101401201	-1.26	-2.3	3431.28	4
742	1826	06S 40W 10AAC 01	393304101455501	-0.44	-3.16	3473.49	4
743	1827	06S 40W 13CBC 01	393146101443201	-0.89	-3.84	3469.82	4
744	1829	06S 40W 30DCC 01	392948101493301	-0.34	-2.55	3545.08	4
745	1830	06S 41W 19DBD 01	393053101560401	-1.52	-4.42	3597.64	4
746	1831	06S 41W 27DBD 01	393001101524301	0.83	-2.91	3570.75	4
747	1832	06S 42W 02AAA 01	393403101575901	-1	-4.22	3572.45	4
748	1833	06S 42W 08CBB 01	393244102021801	-3.06	-7.59	3620.76	4
749	1834	06S 42W 22DCC 01	393040101593201	-0.7	-6.74	3631	4
750	1835	06S 42W 30ADA 01	393020102022701	1.18	-6.1	3657.4	4
751	1836	07S 37W 04BBC 01	392843101274601	0.06	-5.26	3310.92	4
752	1837	07S 37W 05CCB 01	392811101285301	-0.16	-3.82	3326.67	4
753	1838	07S 38W 28DAA 01	392456101333201	-0.33	-4.55	3391.99	4
754	1839	07S 39W 01DCD 01	392804101371001	-0.01	-2.04	3425.83	4
755	1840	07S 39W 09BBB 01	392758101411201	-0.67	-3.27	3467.74	4
756	1841	07S 39W 24BAA 01	392613101372701	-2.5	-5.43	3431.75	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
757	1842	07S 40W 06ADB 01	392836101491801	0.81	-3.09	3550.05	4
758	1843	07S 40W 29BBA 01	392521101485501	0.03	-2.09	3560.86	4
759	1844	07S 40W 35BBB 01	392429101454201	-0.13	-9999	3518.58	4
760	1845	07S 40W 36BAB 01	392429101441801	0.73	-2.05	3504.71	4
761	1846	07S 41W 07BCB 01	392744101564801	-0.53	-3.76	3632.36	4
762	1847	07S 41W 28DBB 01	392454101540201	-0.04	-3.16	3637.26	4
763	1848	07S 42W 07DAA 01	392730102022801	0.22	-6.5	3706.89	4
764	1849	07S 42W 17CCC 01	392618102022101	-0.26	-2.95	3715.68	4
765	1850	07S 42W 27AAB 01	392520101591901	-0.18	-3.59	3686.44	4
766	1851	08S 37W 03ADB 01	392324101255101	0.1	-3.29	3311.86	4
767	1853	08S 37W 21CCC 01	392016101274901	0.05	-0.59	3351.31	4
768	1854	08S 37W 32ABB 01	391917101282301	-0.07	-2.91	3367.13	4
769	1855	08S 38W 17CDD 01	392109101351401	-0.45	-3.35	3432.06	4
770	1856	08S 38W 24AAB 01	392101101302001	-0.03	-2.05	3387.72	4
771	1857	08S 39W 15CCC 01	392107101400701	-0.59	-2.88	3472.78	4
772	1858	08S 40W 12DBA 01	392218101435301	-0.41	-3.09	3500.31	4
773	1859	08S 40W 17CDB 01	392113101484901	-1.14	-2.91	3583.85	4
774	1860	08S 40W 25AAC 01	392001101434601	0.69	-2.3	3515.92	4
775	1861	08S 41W 17CBA 01	392125101553601	0.12	-3.6	3687.52	4
776	1863	08S 41W 25BBC 01	392000101511701	-0.48	-4.27	3624.88	4
777	1864	08S 42W 15DDB 01	392112101592101	-0.81	-4.08	3725.05	4
778	1865	08S 42W 31DCD 01	391828102024901	-1.06	-5.23	3780.6	4
779	1866	09S 37W 07DDB 01	391654101291401	0.68	1.63	3403.84	4
780	1867	09S 38W 13BCC 01	391622101311101	0.91	3.58	3430.65	4
781	1868	09S 39W 01DBA 01	391758101371201	-0.19	-4.25	3467.95	4
782	1869	09S 39W 02BAB 01	391824101383601	0.46	-5.9	3463.56	4
783	1870	09S 39W 10CCB 01	391652101400901	0.44	-1.83	3504.6	4
784	1871	09S 39W 19CCC 01	391502101433001	0.2	-0.92	3552.82	4
785	1872	09S 40W 13CDC 01	391553101442101	-0.89	-2.36	3555.45	4
786	1873	09S 40W 29BBB 01	391454101490901	-0.12	-2.04	3614.62	4
787	1874	09S 41W 05DCC 01	391737101551301	-4.67	-10.04	3679.86	4
788	1877	09S 41W 14BBC 01	391632101522601	-1.26	-7.49	3641.97	4
789	1878	09S 41W 34BAB 01	391401101531801	-0.31	-2.8	3683.44	4
790	1879	09S 42W 08AAA 01	391730102012701	-1.9	-6.34	3774.21	4
791	1880	09S 42W 14AAA 01	391638101580901	-2.28	-10	3721.1	4
792	1882	09S 42W 35ABB 01	391401101583501	-1.95	-12.02	3756.85	4
793	1883	10S 37W 23ABB 01	391037101250601	-3.27	-2.93	3216.01	4
794	1885	10S 40W 10ADC 01	391158101460401	-1	-0.47	3606.41	3
795	1886	10S 41W 15CAD 01	391052101531101	1.79	-0.92	3733.3	3
796	1888	10S 42W 20ABB 01	391032102015501	-0.97	-9999	3842.03	4
797	1889	10S 42W 21BBB 01	391032102012201	-0.53	-4.22	3840.37	4
798	1890	10S 42W 24BAB 01	391032101574801	0.13	-0.95	3796.53	4
799	1891	11S 42W 08DDC 01	390618102000301	-0.16	-0.3	3840.73	4
800	1892	11S 42W 10AAD 01	390657101573901	0.1	-0.8	3816.8	4
801	1893	18S 14W 27CDD 01	382704098512701	1.99	4.21	1861.81	4
802	3894	18S 15W 28CCC 03	382704098593803	0.35	6.91	1903.16	2
803	1899	19S 11W 19BDD 01	382307098345601	0.1	0.73	1772.01	4
804	1900	19S 11W 26BDA 01	382225098304401	-0.53	0.24	1759.52	4
805	1901	19S 12W 28DBC 01	382202098391201	-0.14	1.69	1800.81	2
806	1902	19S 13W 08BAD 01	382506098470501	0.41	1.59	1839.64	3
807	1903	19S 13W 33DDB 01	382104098453301	0.09	0.97	1838.31	3
808	2904	19S 14W 06BBB 02	382601098550102	1.27	2.22	1883.44	2
809	1906	19S 14W 30CDD 01	382159098545001	1.03	1.72	1872.18	2
810	1907	19S 14W 36BBC 01	382137098493201	7.04	7.58	1864.48	3
811	1908	20S 11W 06CCC 01	382004098352101	-0.5	1.64	1779.14	2
812	1909	20S 11W 26AAC 01	381714098300701	-0.86	1.29	1743.15	4
813	1910	20S 12W 03DAC 01	382018098375001	-0.32	1.84	1793.17	2
814	1911	20S 12W 06AAC 01	382044098410801	-0.18	0.92	1813.6	4
815	1912	20S 12W 23CCA 01	381734098372501	-0.58	2.25	1803.76	4
816	1913	20S 13W 17DDC 01	381821098463901	0.42	3.39	1864.48	4
817	1914	20S 14W 22DCB 01	381734098511501	0.57	2.96	1885.26	2
818	1915	20S 15W 24DBD 01	381739098552101	0.78	2.04	1903.37	2
819	1917	20S 15W 33ADD 01	381614098583801	0.46	0.82	1927.09	2

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
820	1918	21S 15W 11CBB 01	381419098565201	0.14	1.85	1922.94	2
821	1919	21S 15W 17CCC 01	381316098595801	0.67	2.07	1947.46	2
822	1920	21S 15W 31BAD 01	381108099005301	-0.3	2.57	1955.17	2
823	1921	21S 16W 14ADC 01	381333099025001	1.47	-0.71	1956.78	2
824	1922	21S 31W 26CCC 01	381134100420001	-0.08	-0.84	2824.5	4
825	1923	21S 32W 20CBD 01	381242100514201	-1.58	-7.38	2777.52	4
826	1924	21S 32W 26DAA 01	381155100473701	-1.99	-2.77	2833.71	4
827	1925	21S 33W 29BBC 01	381215100582401	-0.4	4.52	2807.9	4
828	1928	21S 39W 07CBA 01	381422101385501	3.55	6.64	3316.1	4
829	1929	22S 15W 03AAA 01	381022098570001	0.87	0.25	1938.7	4
830	2930	22S 15W 03AAA 02	381022098570002	1.16	0.8	1937.41	4
831	1931	22S 15W 13DCA 01	380758098550501	0.98	-0.2	1934.33	4
832	1932	22S 15W 33DDD 01	380513098580601	1.01	0.32	1964.26	4
833	2933	22S 16W 03CBC 02	380949099043602	0.32	2.41	1982.72	2
834	1934	22S 16W 06BBA 01	381021099074601	-0.74	0.6	1992.75	2
835	1935	22S 16W 23AAA 01	380744099023201	0.47	0.14	1971.2	4
836	1936	22S 16W 32CDD 01	380513099062201	0.51	0.38	2010.71	4
837	2937	22S 17W 05BBC 02	381015099132702	-1.27	2.94	2015.61	3
838	1938	22S 17W 18AAD 01	380830099133401	-0.84	4.31	2014.41	4
839	1939	22S 17W 24CBC 01	380712099090001	0.24	5.9	2025.06	2
840	1940	22S 17W 27BAB 01	380652099105701	-0.61	1.9	2030.47	3
841	1941	22S 22W 13CCC 01	380752099414101	-0.86	5.57	2124.79	2
842	1949	22S 31W 08CCC 01	390856100451901	-0.6	-3.89	2802.41	4
843	1951	22S 32W 08ACB 01	380932100511801	-0.96	-4.77	2775.01	4
844	1952	22S 32W 21CDC 01	380715100503701	-1.49	-7.42	2755.58	4
845	1953	22S 33W 22BAA 01	380801100554801	0.16	-7.62	2758.58	4
846	1954	22S 33W 36BCCC 01	380600100535701	-0.21	-1.17	2736.69	4
847	1956	22S 34W 10AAA 01	380945101014801	0.38	1.69	2827.03	4
848	1957	22S 34W 18CDD 01	380807101054001	3.03	11.9	2843.33	4
849	1959	22S 34W 26CCC 01	380622101014001	1.49	2.87	2771.45	4
850	1960	22S 35W 23CDD 01	380713101075501	1.54	3.02	2891.68	4
851	1962	22S 37W 34BBC 01	380606101223501	-0.38	-0.43	3092.84	4
852	1963	23S 15W 12DDB 01	380338098550101	0.68	1.02	1943.52	4
853	1964	23S 16W 11CDC 01	380328099031201	2.19	0.88	2010.56	4
854	2965	23S 16W 35CCD 02	375958099032002	1.07	5.23	2032.49	4
855	1966	23S 17W 07DBB 01	380348099135501	1.23	0.9	2063.27	4
856	1967	23S 17W 25AAC 01	380131099080901	0.13	0.46	2049.25	4
857	2968	23S 17W 33CCA 02	380005099121102	0.25	-0.4	2075.32	4
858	1969	23S 18W 28DAD 01	380105099174801	0.14	0.45	2093.65	4
859	1970	23S 18W 36DAC 01	380013099143901	0.03	0.76	2087.71	4
860	1978	23S 26W 20CCC 01	380149100122201	0.19	-9999	2551.62	4
861	1980	23S 26W 26AAD 01	380135100081001	-0.07	-0.73	2522.05	4
862	1982	23S 26W 31CDD 01	380005100130401	0.05	1.49	2553.47	4
863	1984	23S 27W 22DAB 01	380208100155501	0.76	3.53	2581.53	4
864	1985	23S 28W 22DCD 01	380149100223801	0.4	1.18	2655.32	4
865	1987	23S 28W 34DDC 01	380003100223001	0.16	-1.24	2642.56	4
866	1988	23S 29W 30BBB 01	380146100331301	-0.75	-0.97	2715.06	4
867	1989	23S 29W 34CDD 01	380006100293001	-0.39	-1.94	2680.8	4
868	1990	23S 30W 04ACC 01	380446100371901	-0.26	-1.55	2774.4	4
869	1992	23S 30W 19CCB 01	380202100394701	-0.29	-0.87	2770.43	4
870	1993	23S 31W 03DCD 01	380435100422401	-1.16	-2.41	2762.49	4
871	1994	23S 31W 17ABA 01	380333100442901	-1.27	-4.54	2780.81	4
872	1995	23S 32W 26ACC 01	380135100475901	-0.06	-9999	2748.82	4
873	1996	23S 32W 31CBD 01	380033100523501	1.09	10.7	2799.85	4
874	1997	23S 33W 26ABB 01	380155100543401	0.54	14.31	2799.78	4
875	1999	23S 33W 28CDC 01	380109100570201	1.92	17.88	2822.33	4
876	11000	23S 34W 17CCC 01	380253101045501	1.83	22.88	2863.34	4
877	11004	23S 34W 21DDC 01	380201101030101	1.1	-9999	2860.76	4
878	11005	23S 35W 05ACC 01	380500101110501	-0.02	-0.71	2944.08	4
879	21006	23S 35W 12CCC 02	380344101071302	2.51	23.78	2883.25	4
880	11007	23S 35W 16BBC 01	380329101103001	1.44	7.53	2909.49	4
881	31008	23S 35W 25BBB 03	380153101071303	3.55	25.75	2917.75	4
882	11009	23S 36W 04CBB 01	380452101170901	0.17	2.19	3038.37	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
883	11010	23S 36W 32BBB 01	380057101181401	0.89	2.15	2995.57	4
884	11011	23S 36W 35BBB 01	380058101145601	0.84	2.31	2981.74	4
885	11012	23S 37W 04ABC 01	380510101231101	0.94	1.24	3090.31	4
886	11013	23S 37W 28CCB 01	380108101234301	2.75	5.31	3054.51	4
887	11015	23S 42W 19CBB 01	380210101584801	-0.12	0.41	3315.33	3
888	11016	23S 42W 26DCA 01	380105101534401	0.3	1.91	3284.22	2
889	11018	23S 42W 27DDB 01	380105101544101	0.25	1	3289.43	2
890	11019	23S 42W 34CBB 01	380025101553001	0.16	0.98	3297.32	2
891	11020	23S 43W 21ABA 01	380236102023501	0.22	1.66	3351.65	2
892	11021	23S 43W 23BCB 01	380223102010301	0.36	1.54	3336.36	2
893	21023	23S 43W 25CBD 02	380111101594702	0.65	1.71	3328.13	2
894	11025	23S 43W 26BCC 01	380124102010201	0.27	1.02	3336.03	2
895	11027	24S 23W 03CCC 01	375912099503201	1.27	1.37	2361.07	4
896	11030	24S 24W 02CCC 01	375911099560301	2.44	1.53	2410.81	4
897	11031	24S 24W 20CCC 01	375636099592101	0.22	0.82	2448.2	4
898	11032	24S 25W 22BAB 01	375719100033001	1.28	2.82	2462.59	4
899	11033	24S 27W 08CCC 01	375819100185601	-0.27	-2.77	2614.66	4
900	11034	24S 27W 14ABB 01	375811100145901	-0.4	-0.01	2589.97	4
901	11035	24S 27W 29BCC 01	375607100185701	-1.65	-6.44	2606.49	4
902	11037	24S 27W 31CDD 01	375459100195001	-0.78	-3.35	2611.01	4
903	11038	24S 28W 28BBA 01	375626100241701	-0.79	-4.78	2631.4	4
904	11040	24S 28W 31DD 01	375451100254401	-0.08	-6.28	2616.44	4
905	11041	24S 29W 16DCA 01	375735100302001	-0.86	-3.25	2665.06	4
906	11042	24S 29W 18CCB 01	375736100331301	-1.95	-7.17	2671.5	4
907	21044	24S 30W 15CCC 02	375732100363002	-3.82	-8.21	2689.64	4
908	11046	24S 30W 33ADD 01	375521100363801	-1.35	-8.38	2685.76	4
909	11047	24S 31W 27CCB 01	375558100430401	0.31	3.95	2743.25	4
910	11048	24S 32W 10ACA 01	375905100484901	0.84	3.98	2779.88	4
911	21049	24S 32W 25CBB 02	375613100472702	0.09	-9999	2788.97	2
912	11051	24S 32W 36ACB 01	375536100465501	0.34	-9999	2787.42	4
913	11054	24S 33W 09CCD 01	375832100571001	1.92	7.75	2821.2	4
914	21055	24S 33W 09CCD 02	375832100571002	0.35	6.65	2854.05	2
915	11066	24S 33W 22DCA 01	375654100553201	2.25	2.39	2792.89	4
916	11067	24S 33W 28DAA 01	375614100562101	2.61	-1.5	2779.73	4
917	11068	24S 33W 34CAC 01	375516100555601	1.94	-4.31	2770.14	4
918	11072	24S 34W 01BCBB 01	375957101003501	2.68	9.09	2852.24	4
919	11073	24S 35W 09CCC 01	375828101103101	-3.61	1.39	2959.11	4
920	11074	24S 35W 24BCB 01	375718101071301	0.32	1.39	2913.05	2
921	21075	24S 36W 23CBB 02	375702101145602	-1.06	0.95	2983.92	4
922	11076	24S 39W 19CBC 01	375650101390001	-0.8	0.44	3166.08	2
923	11077	24S 39W 22CCB 01	375643101355001	-0.4	1.8	3140.92	2
924	11078	24S 39W 35CBA 01	375512101343401	0.39	0.98	3131.65	4
925	11079	24S 39W 35BAC 01	375531101342601	0.33	0.82	3135.44	2
926	11080	24S 40W 07CBB 01	375841101453401	0.09	1.84	3219.29	2
927	11081	24S 40W 17BBB 01	375815101442401	0.04	2.32	3208.18	2
928	11082	24S 40W 23AAB 01	375722101402101	0.18	2.22	3179.41	2
929	11083	24S 40W 31BBB 01	375538101453401	0.4	1.69	3225.02	4
930	11084	24S 41W 01DAD 01	375927101454301	-1.23	4.24	3233.56	3
931	11087	25S 22W 20AAA 01	375206099451001	0.52	2.31	2382.2	4
932	11093	25S 25W 32DAD 01	374948100045601	0.72	0.76	2519.29	4
933	11095	25S 26W 25CDD 01	375026100074001	-0.33	-9999	2544.02	4
934	11097	25S 27W 33ABB 01	375018100171901	0.07	-9999	2583.97	4
935	11098	25S 29W 07BCB 01	375339100331401	-1.94	-8.75	2666.36	4
936	11099	25S 29W 14ABB 01	375258100281701	-0.39	-9999	2627.07	4
937	11100	25S 30W 20BCB 01	375159100384101	0.27	12.65	2724.8	4
938	11101	25S 32W 22DBC 01	375145100485701	-1.24	-8.36	2738.29	4
939	21102	25S 32W 31DDC 01	374948100515802	-1.76	-17.71	2723.57	4
940	11103	25S 32W 35ADB 01	375020100474201	0.95	-10.08	2725.92	4
941	11104	25S 33W 03BCC 01	375436100561301	-0.45	3.1	2850	4
942	11106	25S 33W 05ABD 01	375449100574301	0.09	-3.56	2775.9	4
943	11109	25S 33W 09ABD 01	375357100563701	1.23	-7.72	2766.43	4
944	11110	25S 33W 15DAC 01	375239100552401	0.89	-8.33	2749.98	4
945	11111	25S 33W 16DCC 01	375226100564601	-1.15	-1.18	2828.79	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
946	11113	25S 34W 06AAA 01	375456101050301	-0.85	-13.97	2825.64	4
947	11114	25S 34W 10ABB 01	375404101021201	-0.35	-2.43	2848.82	4
948	11115	25S 34W 34DBD 01	375002101020401	-4.37	-22.15	2771.25	4
949	11116	25S 35W 02BAA 01	375454101075401	-0.15	-8.43	2866.28	4
950	11117	25S 35W 04BDD 01	375433101100601	0.48	-9999	2903.7	4
951	11118	25S 35W 17AAA 01	375307101103901	-2.15	-17.5	2861.65	4
952	11119	25S 35W 26BAB 01	375124101080201	-4.39	-21.37	2814.46	4
953	11120	25S 36W 14B 01	375257101144301	-0.11	4.79	2955.92	4
954	11121	25S 36W 28CBD 01	375049101165801	9.23	4.5	2937.55	4
955	11123	25S 36W 35CCA 01	374951101144601	-2.11	-11.47	2891.05	4
956	21124	25S 37W 15ABA 02	375305101215502	-0.4	1.28	3042.26	2
957	11127	25S 39W 02CAD 01	375413101341701	0.59	0.59	3124.52	4
958	11128	25S 39W 23BDD 01	375149101341601	0.6	1.26	3198.39	4
959	11129	25S 40W 01CA 01	375416101394401	1.14	1.77	3169.22	4
960	11135	25S 43W 25CCD 01	375031101594501	-5.93	-11.57	3322.03	4
961	11138	26S 21W 25CCC 01	374434099343001	-1.32	1.22	2262.84	2
962	11145	26S 24W 29DDD 01	374442099573601	0.91	5.05	2428.64	4
963	11147	26S 24W 31DDA 01	374356099584201	1.77	21.08	2453.6	2
964	11149	26S 24W 33CDA 01	374357099570301	0.97	8.77	2430.79	4
965	11150	26S 25W 16DCC 01	374649100035201	1.57	-9999	2477.3	4
966	11152	26S 26W 18CCB 01	374657100124101	1.71	4.18	2544.96	3
967	11153	26S 26W 32DCC 01	374403100110601	-0.35	-4.53	2512.08	4
968	11154	26S 26W 36DCC 01	374404100064401	0.16	0.85	2493.03	4
969	11155	26S 27W 12CDD 01	374746100132901	0.18	-9999	2553.71	4
970	11156	26S 27W 27CDD 01	374502100153401	-0.91	-6.56	2535.32	4
971	11157	26S 28W 06DDB 01	374848100250301	0.25	6.54	2635.11	3
972	21158	26S 28W 10ACB 02	374820100220502	0.03	-9999	2603.65	2
973	11159	26S 29W 35CCC 01	374417100280401	-3.46	-19.85	2596.7	4
974	11160	26S 30W 01ABC 01	374924100325901	-0.22	-0.24	2660.11	4
975	11161	26S 30W 24DDD 01	374557100323401	-4.18	-20.06	2622.57	4
976	11162	26S 31W 01DDA 01	374840100391301	-1.2	-11.49	2675.71	4
977	11163	26S 31W 06BBBB 01	374931100453501	-1.47	-11.96	2711.48	4
978	11165	26S 31W 31CDC 01	374417100451901	-3.66	-18.45	2662.45	4
979	11167	26S 32W 22ABB 01	374645100481901	3.63	-6.21	2730.43	4
980	11169	26S 33W 10CCD 01	374747100552101	-3.77	-9999	2731.63	4
981	11170	26S 33W 17DBD 01	374701100565001	-1.09	-9999	2737.46	4
982	11171	26S 34W 05ADC 01	374905101032801	-4.42	-9999	2784.15	4
983	11173	26S 34W 21BBD 01	374638101025601	-3.96	-21.6	2767.2	4
984	11174	26S 35W 27AAC 01	374544101074601	-3.16	-9999	2792.14	4
985	11176	26S 35W 29BBD 01	374544101103701	-3.25	-19.67	2817.81	4
986	11177	26S 36W 22CCA 01	374606101145401	-2.41	-12.95	2874.15	4
987	11178	26S 37W 06ACB 01	374917101242701	-0.92	0.28	3064.98	4
988	11179	26S 37W 23BBC 01	374638101203801	-3.26	-9999	2909.16	4
989	11180	26S 41W 20BCD 01	374638101495001	-0.85	-2.72	3267.85	4
990	21183	26S 42W 10BB 02	374826101541402	-2.47	-6.42	3265.39	4
991	21185	26S 42W 22DCC 02	374559101534602	-5.08	-17.5	3205.8	4
992	11188	27S 21W 10DBB 01	374214099360301	-1.1	1.48	2285.16	3
993	11192	27S 23W 28AAA 01	374035099500101	-3.99	-9999	2365.27	4
994	11194	27S 23W 36CCC 01	373831099473901	-0.34	-1.15	2378.21	4
995	11195	27S 24W 03CDD 01	374258099555701	0.33	6.9	2430.5	4
996	11196	27S 24W 03BBD 01	374337099561401	0.51	0.7	2425.25	4
997	11197	27S 24W 04BBC 01	374337099572801	-1.72	7.94	2430.1	4
998	11198	27S 24W 09AAD 01	374245099563001	-0.38	7.36	2424.6	4
999	11199	27S 24W 16BDB 01	374146099571101	0.56	5.01	2434.71	4
1000	11200	27S 24W 26DAA 01	373950099541801	-0.46	-1.44	2413.87	4
1001	11201	27S 25W 09ACA 01	374304100032201	-0.08	2.46	2471.67	4
1002	11202	27S 25W 25BBB 01	374040100004601	-0.31	-0.59	2448.79	4
1003	11203	27S 27W 01BAA 01	374403100132401	-4.01	-10.5	2520.45	4
1004	11204	27S 27W 07ADC 01	374251100182601	-0.55	-9.04	2564.62	4
1005	11205	27S 27W 10CDB 01	374231100154201	1.44	-6.7	2547.9	4
1006	11206	27S 28W 05AAA 01	374411100235101	-2.19	-6.92	2582.83	4
1007	11207	27S 28W 30CCA 01	374001100254501	-1.05	-9.57	2604.09	4
1008	11208	27S 29W 27CAA 01	374014100284601	-1.32	-11.6	2619.52	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
1009	11209	27S 30W 08BBB 01	374317100375501	-1.77	-14.01	2644.07	4
1010	11210	27S 30W 23BBC 01	374125100344101	-3.28	-17.83	2620.62	4
1011	11211	27S 30W 34CCC 01	373900100354401	-2.17	-13.73	2624.77	4
1012	11212	27S 31W 24CDC 01	374044100395001	-2.89	-13.88	2628.14	4
1013	11213	27S 31W 31BCC 01	373929100453601	0.83	-4.74	2660.11	4
1014	11214	27S 32W 06CBB 01	374343100520801	-4.99	-24.09	2693.35	4
1015	11216	27S 32W 19CCD 01	374046100520101	-5.09	-30.09	2652.45	4
1016	11217	27S 33W 19CDC 01	374046100582701	-1.33	-8.33	2726.55	4
1017	21218	27S 34W 16DDD 02	374136101020902	-4.73	-22.16	2754.61	4
1018	21219	27S 34W 28DAA 02	374011101020902	-4.23	-23.73	2747.31	4
1019	11220	27S 35W 17ADD 01	374203101095101	-3.52	-13.68	2794.22	4
1020	11221	27S 35W 25BDC 01	374013101060801	-4.69	-20.63	2768.42	4
1021	11222	27S 36W 01ADB 01	374357101121001	-3.46	-9999	2813.07	4
1022	11223	27S 36W 21DCC 01	374047101153401	-2.39	-11.63	2818.19	4
1023	11224	27S 37W 04ABB 01	374406101221501	7.1	-0.57	2887.45	4
1024	11228	27S 38W 12ADC 01	374255101251501	-1.69	-5.17	2865.59	4
1025	11232	28S 21W 10DDD 01	373644099354101	-0.1	1.45	2302.4	4
1026	11233	28S 21W 23DBC 01	373513099350001	-0.74	0.9	2290.05	4
1027	11236	28S 21W 25ABB 01	373510099335801	-0.01	1.79	2291.3	4
1028	11237	28S 22W 05ADD 01	373820099442701	0.05	1.13	2350.23	3
1029	11238	28S 22W 12CAC 01	373659099404301	-0.23	-0.36	2339.03	4
1030	11239	28S 22W 32BAB 01	373404099445801	-0.14	-1.1	2357.18	4
1031	11240	28S 23W 18BAB 01	373702099525701	-0.25	-2.37	2402.81	4
1032	11241	28S 23W 24ABB 01	373602099470101	-0.39	-0.97	2366.21	4
1033	11242	28S 24W 08DCC 01	373652099575901	0.04	22.17	2429.61	4
1034	11243	28S 24W 22CDA 01	373528099553501	-0.08	-1.43	2386.32	4
1035	11246	28S 24W 35CAB 01	373358099550801	-3.24	-4.43	2415.77	4
1036	11247	28S 25W 06ABB 01	373838100053901	-0.5	12.68	2485.42	4
1037	11249	28S 25W 19BBB 01	373601100061301	0.11	-0.07	2481.44	4
1038	11250	28S 26W 06ABB 01	373841100115601	-0.16	-2.84	2509.74	4
1039	11251	28S 26W 13CAA 01	373632100065401	-0.15	-9999	2486.14	4
1040	11252	28S 27W 03BBB 01	373848100155901	-0.34	-4.32	2557.78	4
1041	11253	28S 29W 16ACC 01	373651100294301	-0.61	-2.69	2625.61	4
1042	11254	28S 30W 10DDD 01	373714100344601	-1.57	-6.98	2622.97	4
1043	11255	28S 30W 17BBA 01	373709100374701	-4.4	-14.21	2618.59	4
1044	11256	28S 30W 24BAB 01	373614100331601	-3.77	-8.41	2614.99	4
1045	11257	28S 31W 35CCB 01	373352100411301	1.13	-10.98	2619.51	4
1046	11258	28S 32W 17CDD 01	373624100503901	-1.9	-9999	2614.65	4
1047	11259	28S 32W 24BCC 01	373556100464201	4.55	7.19	2670.43	4
1048	11263	28S 33W 20ACD 01	373607100565301	-1.86	-9999	2594.82	4
1049	11264	28S 34W 14CCC 01	373632101004301	-1.17	-9999	2624.06	4
1050	11265	28S 35W 03DBB 01	373828101080401	-3.34	-9.01	2766.72	4
1051	11266	28S 35W 36ABC 01	373426101055101	-1.77	-10.36	2688.84	4
1052	11268	28S 36W 24AAD 01	373607101121001	0.59	-9999	2775.2	4
1053	11270	28S 38W 12BCB 01	373748101260301	1.27	1.2	2876.3	4
1054	11273	28S 38W 33BDB 01	373417101290201	-6.24	-12.77	2884.48	4
1055	11275	29S 21W 05BBB 01	373309099384901	-0.07	-0.16	2315.07	4
1056	11276	29S 21W 20CAD 01	373005099381801	-0.05	0.04	2308.7	4
1057	11277	29S 22W 17DAD 01	373054099441601	-0.31	-0.24	2342.27	4
1058	11278	29S 22W 36ACA 01	372841099401201	-2.31	-3.31	2303.12	4
1059	11279	29S 23W 12BAC 01	373223099472101	0.24	0.09	2360.87	4
1060	11280	29S 24W 01ABA 01	373318099532701	0.11	-0.96	2409.94	4
1061	11281	29S 24W 13BCA 01	373127099540701	-0.25	-0.81	2411.9	4
1062	11283	29S 24W 18BAA 01	373131099591001	0.26	-0.89	2447.62	4
1063	11284	29S 25W 03ADA 01	373310100015601	-2.1	-9999	2446.82	4
1064	11285	29S 25W 10BBBC 01	373231100025401	3.24	3.8	2453.4	4
1065	11289	29S 26W 29ABB 01	372957100110901	2.27	0.68	2455.06	4
1066	11291	29S 26W 36BBB 01	372906100072001	3.2	5.44	2501.37	4
1067	11293	29S 27W 30BCC 01	372942100192201	-0.27	-7.99	2497.4	4
1068	11294	29S 28W 28CDC 01	372922100232701	-3.19	-11.41	2535.76	4
1069	11295	29S 29W 10ABB 01	373247100283801	-0.12	-9999	2610.58	4
1070	11297	29S 29W 27BCB 01	372957100291101	2.06	-8.51	2575.4	4
1071	11299	29S 30W 22BBC 01	373054100354401	-2.23	-13.42	2586.1	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
1072	11300	29S 30W 35ACD 01	372855100335801	-0.79	-11.5	2571.96	4
1073	11301	29S 31W 09CB 01	373218100432101	1.15	-13.62	2610.78	4
1074	11302	29S 32W 04AAA 01	373340100490201	0.38	-15.62	2617.59	4
1075	11303	29S 32W 19CCC 01	373018100521101	-1.6	15.12	2591.95	4
1076	21304	29S 32W 26CBB 02	372944100474902	-2.07	-11.79	2599.64	4
1077	11305	29S 33W 01AAB 01	373340100522701	-1.18	-9999	2581.23	4
1078	11306	29S 33W 28BCB 01	372958100563301	-5.69	-14.33	2616.92	4
1079	11307	29S 33W 34DDD 01	372833100543001	-2.16	-13.68	2595.64	4
1080	11308	29S 34W 11ADD 01	373228100595701	-12	-9999	2605.23	4
1081	11310	30S 26W 04CBB 01	372746100103701	4.36	0.93	2456.41	4
1082	11313	30S 26W 13ABB 01	372628100064701	0.59	0.43	2505.57	4
1083	11314	30S 26W 32DDD 01	372304100104601	0.45	7.19	2472.06	4
1084	11316	30S 27W 20ABA 01	372539100171401	-3.29	-11.03	2477.06	4
1085	11317	30S 27W 23ABB 01	372539100142501	-4.43	-8.25	2464.92	4
1086	11318	30S 27W 27BBB 01	372446100160201	-7.52	-15.3	2467.22	4
1087	11321	30S 27W 32DDD 01	372307100171401	-0.9	-0.07	2467.45	4
1088	11322	30S 28W 17ABB 01	372638100241701	-1.38	-6.11	2523.36	4
1089	11324	30S 29W 28BBB 01	372455100301701	-2.17	-9.13	2549.99	4
1090	11326	30S 30W 06CCC 01	372740100390101	-2.09	-11.1	2589.81	4
1091	11327	30S 30W 28ABB 01	372454100361701	-2.35	-9.66	2581.4	4
1092	11328	30S 31W 05BBB 01	372816100441901	-7.72	-9999	2603.78	4
1093	11329	30S 31W 26ABB 01	372454100404001	-1.7	-28.56	2569.21	4
1094	11330	30S 32W 22BBB 01	372549100485501	-5.24	-12.89	2579.7	4
1095	11333	30S 32W 31BAB 01	372405100515601	0.67	-7.81	2613.94	4
1096	11335	30S 34W 05BBB 01	372825101041201	-1.27	-10.62	2676.4	4
1097	11336	31S 26W 30BBB 01	371931100115501	-1.17	5.03	2413.12	4
1098	21337	31S 27W 20AAA 02	372026100162402	3.01	4.44	2431.34	4
1099	11339	31S 28W 02CCC 01	372220100203501	-0.74	-5.34	2480.16	4
1100	11340	31S 28W 10BCB 01	372200100214001	3.45	-9999	2487.36	4
1101	11344	31S 28W 26ABB 01	371936100200301	1.71	4.08	2450.36	4
1102	11345	31S 29W 02DBB 01	372241100263201	-1.62	-7.39	2528.39	4
1103	21347	31S 29W 25AAA 02	371938100250102	1.99	-4.21	2499.29	4
1104	11348	31S 29W 30AAA 01	371938100302901	4.61	-8.84	2551.2	4
1105	11350	31S 30W 16BBC 01	372117100354701	-0.92	-16.04	2541.16	4
1106	11351	31S 31W 03CCC 01	372234100410001	-1.56	-9999	2567.46	4
1107	11352	31S 32W 01ABC 01	372306100446001	-2.58	-9999	2570.64	4
1108	11354	31S 32W 31BBB 01	371852100505801	0.21	-8.52	2624.61	4
1109	11355	31S 33W 06CBD 01	372240100572101	-0.99	-10.66	2675.91	4
1110	11356	31S 33W 20DBB 01	372010100555101	-1.31	-8.51	2662.17	4
1111	11357	31S 34W 18BBB 01	372128101035901	-1.69	-4.5	2698.71	4
1112	11358	31S 35W 15BAA 01	372128101065001	-2.71	-9.71	2698.45	4
1113	11360	31S 36W 02CDD 01	372227101121501	1.68	-9999	2824.33	4
1114	11362	31S 37W 09BBC 01	372214101211701	-2.59	-19.94	2841.06	4
1115	11363	31S 37W 22BCC 01	372016101201201	-0.12	-19.89	2828.98	4
1116	11364	31S 37W 30DDB 01	371904101223801	-4.1	-28.99	2867.62	4
1117	11365	32S 28W 04ADD 01	371732100214701	0.43	-0.2	2467.42	4
1118	21366	32S 29W 27AAB 02	371425100272002	-1	-4.57	2526.55	4
1119	11367	32S 30W 09CCC 01	371618100354701	-1.18	-9.36	2541.62	4
1120	11368	32S 31W 03DAA 01	371733100402001	-1.87	-9.6	2563.74	4
1121	11370	32S 31W 08BBB 01	371706100432201	-1.53	-10.21	2578.43	4
1122	11371	32S 31W 26CAA 01	371403100394301	-2.11	-2.52	2543.44	4
1123	11372	32S 32W 14BBB 01	371615100463701	-0.48	-7.49	2582.27	4
1124	11373	32S 32W 19BAB 01	371524100504201	-1.07	-6.36	2616.1	4
1125	11374	32S 33W 32DBD 01	371306100554201	-1.34	-8.34	2649.92	4
1126	11375	32S 34W 10DAA 01	371641100594601	-1.98	-10.31	2671.12	4
1127	11376	32S 34W 32BBB 01	371339101025301	-1.66	-12.91	2719.95	4
1128	11377	32S 35W 08DDD 01	371621101082601	-2.22	-11.03	2817.28	4
1129	11378	32S 35W 32DCD 01	371252101084201	-2.43	-9999	2799.65	4
1130	11379	32S 36W 21AAC 01	371516101135901	-2	-17.38	2863.35	4
1131	11380	32S 37W 10DCC 01	371621101194001	-0.13	-9999	2940.69	4
1132	11381	32S 37W 26BAC 01	371420101185501	-0.79	-13.34	2980.17	4
1133	11382	32S 39W 14DDD 01	371530101320601	-5.83	-12.02	3112.96	4
1134	11384	33S 28W 29BCB 01	370857100234601	0.34	-0.24	2354.85	4

APPENDIX A

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
1135	11385	33S 29W 36AAB 01	370819100250601	-0.15	-1	2373.22	4
1136	11386	33S 31W 09AAB 01	371154100412801	-1.81	-8.31	2542.72	4
1137	11388	33S 32W 02AAC 01	371237100455301	-1.01	-9999	2564.69	4
1138	21390	33S 32W 28CDD 02	370833100482402	0.29	-2.04	2568.27	4
1139	11391	33S 33W 12AAD 01	371148100510701	-0.63	-9999	2606.5	4
1140	11393	33S 33W 20BCC 01	371000100561001	-2.11	-8.36	2649.74	4
1141	11394	33S 33W 25DCC 01	370842100515101	-3.33	-4.32	2600.07	4
1142	11395	33S 34W 17DCC 01	371026101020701	-1.9	-5.26	2767.8	4
1143	11396	33S 35W 23CBB 01	370958101055501	-3.92	-32.43	2785.68	4
1144	11398	33S 36W 22ADC 01	370949101125501	-8.62	-9999	2807.91	4
1145	11400	33S 37W 17CCC 01	371015101222101	-3.46	-17.33	2989.8	4
1146	11402	33S 37W 28CAC 01	370843101210301	-0.93	-9999	2980.61	4
1147	11403	33S 38W 06AAB 01	371246101290701	-0.59	-2.45	3105.15	4
1148	11404	33S 38W 10ACC 01	371135101260901	-2.53	-15.88	2993.69	4
1149	11405	34S 28W 05BDA 01	370712100232201	0.42	0.65	2323.7	4
1150	11406	34S 30W 22CBC 01	370423100344401	-1.68	-5.95	2465.5	4
1151	11407	34S 31W 01CAA 01	370706100384201	-1.57	-9999	2497.19	4
1152	11408	34S 31W 30BBB 01	370407100442701	-0.5	-2.35	2513.13	4
1153	11409	34S 32W 29BAA 01	370407100492901	-1.75	-4.71	2586.07	4
1154	11410	34S 32W 35ADA 01	370301100454001	-1.01	-3.24	2534.71	4
1155	11411	34S 33W 07CCB 01	370602100572601	-1.6	-8.19	2747.98	4
1156	11412	34S 34W 16DAA 01	370523101004901	-3.92	-19.38	2773.03	4
1157	11413	34S 34W 26BCA 01	370355100592301	-2.6	-20.9	2765.87	4
1158	11414	34S 35W 26ACC 01	370352101055301	-8.89	-31.67	2804.07	4
1159	11416	34S 36W 10CAC 01	370604101132901	-3.67	-18.98	2872.52	4
1160	11417	34S 36W 21DBD 01	370422101140501	-3.41	-17.67	2880.04	4
1161	21418	34S 37W 27ABC 02	370356101193902	-2.35	-13.47	2982.88	4
1162	11419	34S 37W 29BBD 01	370356101221301	-4.14	-9999	2992.63	4
1163	11420	34S 37W 35AAD 01	370304101180901	-2.04	-10.42	2962	4
1164	11421	34S 38W 02ADC 01	370714101244701	-3.7	-20.15	2991.05	4
1165	11422	34S 38W 34CAA 01	370246101261701	-3.72	-9999	2998.25	4
1166	11423	34S 39W 02CCA 01	370655101315801	-0.68	-4.04	3141.77	4
1167	11424	34S 39W 15CAD 01	370517101324601	-1.09	-6.63	3132.87	4
1168	11425	35S 30W 10CDA 01	370048100342101	-1.07	-0.49	2367.65	2
1169	11426	35S 31W 10AAC 01	370123100402401	-0.69	3.26	2492.57	4
1170	11429	35S 32W 06CBB 01	370157100505901	-8.53	-15.24	2594.93	4
1171	11430	35S 33W 16BCA 01	370023100550801	0.02	-5	2695.55	4
1172	11432	35S 34W 10BBB 01	370128101004001	-2.7	-7.81	2815.36	4
1173	11433	35S 35W 15BCC 01	370012101070901	-1.76	-16.81	2837.83	4
1174	11434	35S 36W 01AAA 01	370218101103301	-2.41	-19.94	2862.99	4
1175	11435	35S 37W 16BCC 01	370014101211601	-3.86	-18.2	2974.65	4
1176	11436	35S 39W 10CAD 01	370057101324601	-8.02	-16.23	3077.77	4

APPENDIX B

OBSERVATION WELLS IN AQUIFERS OTHER THAN THE HIGH PLAINS AQUIFER

APPENDIX B

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
1	1119	29S 38W 20CDC 01	373015101300701	-9999	-9.24	2928.62	0
2	1127	30S 37W 03DBA 01	372759101210001	0.03	-9999	2816.71	0
3	1219	29S 18W 02ACC 01	373258099152101	0.15	0.75	2107.09	5
4	1264	31S 39W 18CCC 01	372043101363101	3.12	-6.59	3018.74	0
5	1266	31S 41W 07CDD 01	372135101491101	-0.56	-0.35	3306.4	1
6	1267	31S 41W 31CBC 01	371817101492301	-0.57	-2.31	3352.4	1
7	1268	31S 42W 29AAB 01	371945101541201	0.09	-1.34	3404.07	5
8	1269	31S 43W 03CB 01	372243101591701	0.92	1.45	3543.42	0
9	1270	31S 43W 14DDC 01	372043101572701	-0.16	-0.76	3502.62	1
10	1271	32S 41W 15CDC 01	371531101460301	-0.39	-1.76	3333.84	0
11	1272	32S 41W 35DCC 01	371255101444201	-0.59	-5.77	3239.72	5
12	1273	32S 42W 26CDD 01	371347101512101	-0.19	-9999	3329.99	0
13	1274	32S 43W 08CBD 01	371636102012301	0.8	7.85	3508.31	5
14	1275	32S 43W 28BBC 01	371426102002601	-0.81	-9999	3453.73	5
15	1277	33S 39W 16ABB 01	371103101334301	-0.05	-4.59	3146.69	0
16	1281	33S 43W 09DBA 01	371130101594601	-0.68	-4.17	3514.51	5
17	1282	34S 39W 06CCA 01	370655101362201	0.03	-2.66	3186.57	5
18	1286	34S 42W 05BDC 01	370717101544501	0.05	0.07	3409.13	0
19	1447	21S 10W 16CDC 01	381305098260401	-0.9	0.73	1713.53	0
20	1449	20S 10W 27BBB 01	381718098251501	-0.55	0.43	1753.4	1
21	1610	29S 40W 06BCC 01	373331101442101	-1.66	-9999	2994.82	5
22	1611	29S 41W 14CDC 01	373113101462601	-2.82	-9999	3077.16	0
23	1612	29S 42W 08CDC 01	373202101561501	2.88	0.76	3329.25	1
24	1613	29S 42W 27DAD 01	372944101532401	0.07	-9999	3262.4	0
25	1614	29S 43W 21DCDD 01	373024102011701	4.64	0.38	3471.21	1
26	1616	29S 43W 33CDB 01	372840102014101	-4.69	-12.11	3520.73	1
27	1623	28S 42W 32BBB 01	373433101563101	1.74	-3.56	3326.9	0
28	1627	27S 42W 17CCC 01	374138101562901	-1.37	-7.26	3247.8	5
29	1629	28S 39W 16CCC 01	373624101355001	-4.67	-9.51	2970.84	0
30	1634	30S 40W 24CDC 01	372504101384901	6.36	-9999	3053.77	0
31	1637	30S 41W 23DDB 01	372510101455601	0.31	-1.65	3171.79	5
32	1638	30S 42W 12ACC 01	372715101513901	-1.94	-3.43	3260.46	1
33	1639	30S 42W 16BDB 01	372629101551101	-3.75	-4.58	3347.35	1
34	1640	30S 43W 34BBA 01	372355102004101	4.14	-9999	3543.4	0
35	1641	30S 43W 36BB 01	372402101584001	0.93	-9999	3510.59	5
36	1927	21S 34W 14DBB 01	381340101010701	0.92	-0.46	2846.62	1
37	1942	22S 24W 14BBC 01	380833099560201	-3.54	-0.21	2200.9	1
38	1943	22S 24W 15BDA 01	380827099564301	-3.24	0.07	2203.18	1
39	1944	22S 24W 25DDC 01	380609099540701	-9.19	-1.34	2192.32	1
40	1945	22S 24W 26DDA 01	380616099550401	-0.36	-9999	2208.37	1
41	1946	22S 24W 35DAC 01	380530099551301	-5.68	-2.96	2193.75	1
42	1947	22S 27W 14ADC 01	380823100144801	1.85	12.47	2295.97	1
43	1955	22S 34W 08BCB 01	380932101045601	0.49	0.87	2852.25	1
44	1971	23S 22W 07DAA 01	380351099461501	-15.73	-4.61	2149.83	1
45	1972	23S 23W 04DCA 01	380432099505701	-5.41	-9999	2202.95	1
46	1973	23S 23W 04AAD 01	380504099504001	-6.37	-2.79	2200.21	1
47	1974	23S 23W 12ABD 01	380412099473801	0.07	-9999	2189.23	1
48	1975	23S 24W 11DAA 01	380352099550501	-7.58	5.16	2197.53	1
49	1977	23S 26W 07CCC 01	380335100132701	0.07	-0.31	2296.76	1
50	11014	23S 40W 29DDB 01	380105101433601	-0.78	-15.36	3076.8	1
51	11026	24S 21W 20CBB 01	375653099392401	0.48	2.63	2274.76	5
52	11028	24S 23W 06AAB 01	375958099530101	8.04	68.6	2318	1
53	31056	24S 33W 09CCD 03	375832100571003	3.1	7.37	2810.4	1
54	11057	24S 33W 18BDB 01	375812100591301	3.72	-9999	2818.29	1
55	21059	24S 33W 18BDB 02	375812100591302	11.72	28.25	2805.29	1
56	11062	24S 33W 19DBB 01	375706100585701	1.56	-9999	2805.66	1
57	21064	24S 33W 19DBB 02	375706100585702	10.08	21.3	2800.76	1
58	11085	24S 42W 28DDD 01	375544101553801	-0.33	-2.13	3283.68	1
59	11086	24S 43W 14CBB 01	375749102010201	-1.27	2.99	3335.45	1
60	11088	25S 22W 27CCD 01	375028099434701	0.48	5.59	2391.98	5
61	11089	25S 23W 11CCC 01	375307099492701	2.42	0.99	2371.74	1
62	11090	25S 23W 12BBB 01	375353099482001	0.58	1.2	2228.51	1
63	11091	25S 25W 32CDD 01	374936100052801	0.77	-2.92	2402.69	1

APPENDIX B

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
64	11125	25S 38W 08CAA 01	375328101305701	0.65	2.03	3096.98	5
65	11126	25S 38W 20ACC 01	375150101304801	0.82	14	3107	5
66	11130	25S 40W 26BBB 01	375116101410801	-0.2	-1.99	3183.28	1
67	11131	25S 43W 03ABB 01	375446102013601	-0.37	-2.46	3304.93	1
68	11140	26S 22W 21DCD 01	374529099433401	0	4.18	2340.11	5
69	11143	26S 23W 02ABB 01	374929099481601	-0.93	2.84	2372.94	1
70	11144	26S 23W 10DAD 01	374725099485601	0.23	-1.62	2281.6	1
71	11181	26S 41W 32DDB 01	374421101490901	-0.98	-9999	3223.22	1
72	11184	26S 42W 17CBB 01	374708101562401	1.25	-12.81	3252.11	5
73	11187	26S 43W 25DCC 01	374507101580601	1.96	-11.58	3259.78	5
74	11190	27S 23W 24BCB 01	374048099474001	1.22	28.24	2338.3	1
75	11226	27S 37W 16AAD 01	374215101222301	-1.02	-3.86	2841.49	5
76	11227	27S 37W 21BDD 01	374110101222301	-3.57	-9.01	2836.91	5
77	11229	27S 38W 15BBB 01	374221101281501	32.2	16.7	2982.3	1
78	11267	28S 36W 18ABC 01	373701101175001	0.91	-9.21	2800.01	5
79	41269	28S 37W 02BBB 04	373853101203604	1.04	-4.08	2810.97	5

APPENDIX C

OBSERVATION WELLS CLASSIFIED AS HIGH PLAINS AQUIFER BUT OUTSIDE AQUIFER BOUNDARY

APPENDIX C

Rows	INDEX	LOCATION	USGS ID	'99-'00	'95-'00	'00 WTE	AQUIFER
1	169	14S 18W 12AAD 01	385115099155401	-0.07	0.87	1976.68	4
2	270	15S 18W 27CBC 02	384259099191202	-0.78	-9999	1898.48	2
3	171	15S 19W 25CAB 01	384305099232201	-0.12	-0.46	1921	2
4	172	13S 18W 29CCC 01	385313099211601	-0.17	1.11	1981.24	4
5	178	13S 26W 20CBC 01	385423100142501	-0.13	2.32	2426	2
6	279	13S 27W 16CA 02	385519100193402	-0.25	-9999	2476.43	2
7	180	13S 28W 14AC 01	385532100234301	-0.38	-9999	2528.7	4
8	1109	08S 21W 17ABB 01	392151099410501	-2.33	-3.45	2010.41	2
9	1110	08S 22W 18CDC 01	392105099491801	-0.24	-0.28	2113.89	2
10	1111	08S 24W 23ACC 01	392038099575401	-2.84	1.37	2211.22	2
11	1112	08S 25W 24BAB 01	392058100035201	-0.39	-9999	2276.68	4
12	1243	13S 36W 20CCB 01	385421101210001	0.17	1.7	3013.8	2
13	1298	05S 21W 10AAA 01	393822099395801	-0.37	-9999	1986.41	2
14	1299	05S 22W 18CCD 01	393643099505401	-0.28	-9999	2119.9	2
15	1300	05S 24W 14BDC 01	393709099594501	0.04	-9999	2237.36	4
16	1305	07S 15W 10CCC 01	392710098591901	0.11	-0.94	1631.02	2
17	1306	06S 12W 23CDC 01	393038098374501	-1.35	-6.86	1485.77	4
18	1307	07S 12W 28ABA 01	392518098393601	-0.16	-3.23	1499.07	4
19	1308	04S 19W 35DDD 01	393922099253001	-0.28	-1.16	1835.3	2
20	1309	04S 18W 27DDD 01	394013099194801	-0.52	-0.47	1759.48	2
21	1457	07S 17W 14CDD 01	392618099110701	-0.79	-9999	1719.71	2
22	1458	07S 19W 23CDB 01	392533099243701	1.53	1.57	1864.31	2
23	1528	08S 26W 14DAA 01	392123100105401	1.8	1.45	2385.24	2
24	1699	14S 25W 13ABC 01	385026100025601	0.21	0.71	2229.55	2
25	1706	13S 39W 33BBB 01	385314101395701	0.61	4.06	3299.1	2
26	1896	18S 21W 25AAB 01	382749099352001	-0.05	0.92	2059.88	2
27	1897	18S 21W 31CAA 01	382632099411501	-1.19	0.06	2094.23	2

MEASURED OBSERVATION WELLS IN THE HIGH PLAINS AQUIFER, JANUARY 2000

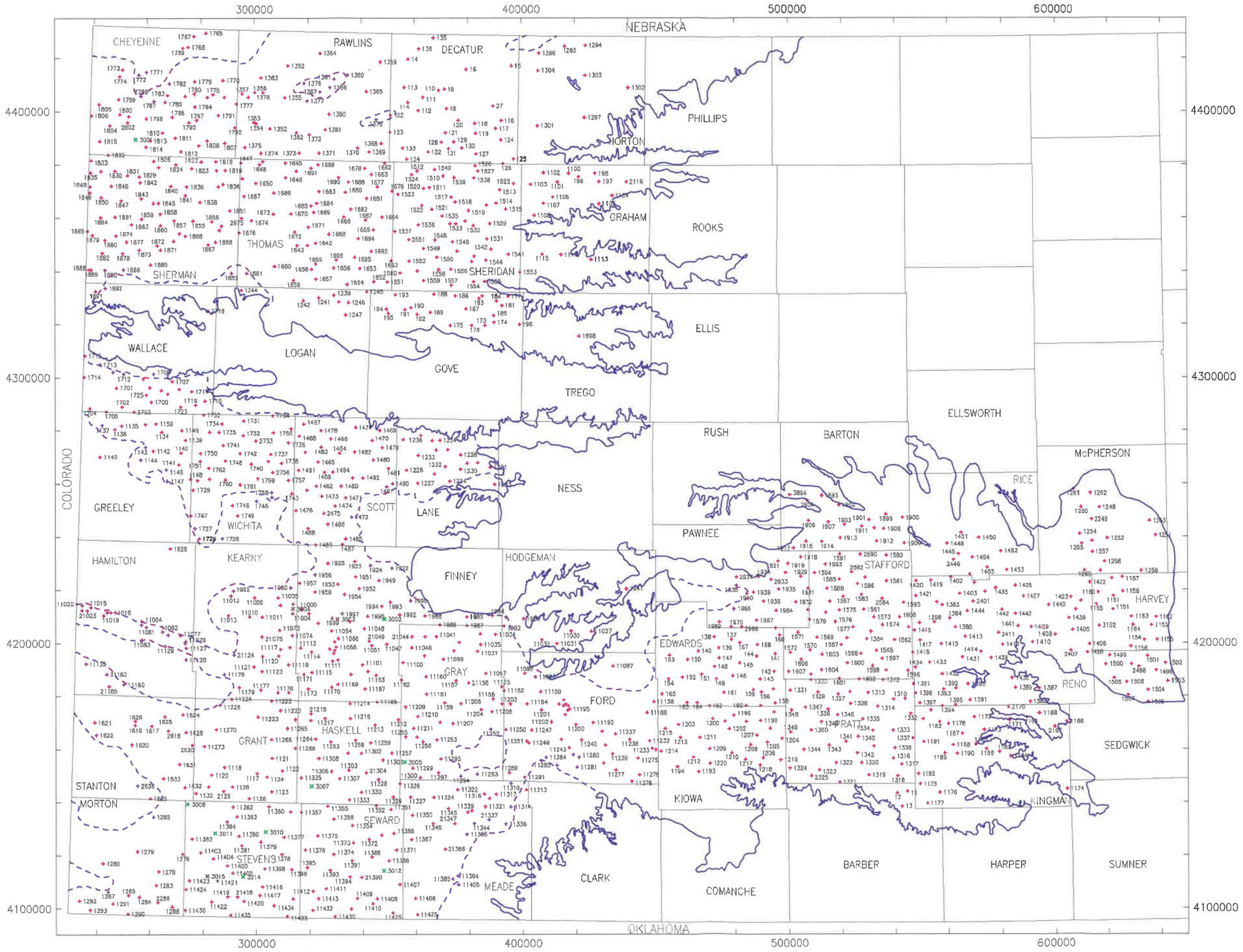


PLATE 1
Kansas Geological Survey
OFR 2000-13
Olea & Davis

WATER–TABLE ELEVATION IN THE HIGH PLAINS AQUIFER, JANUARY 2000

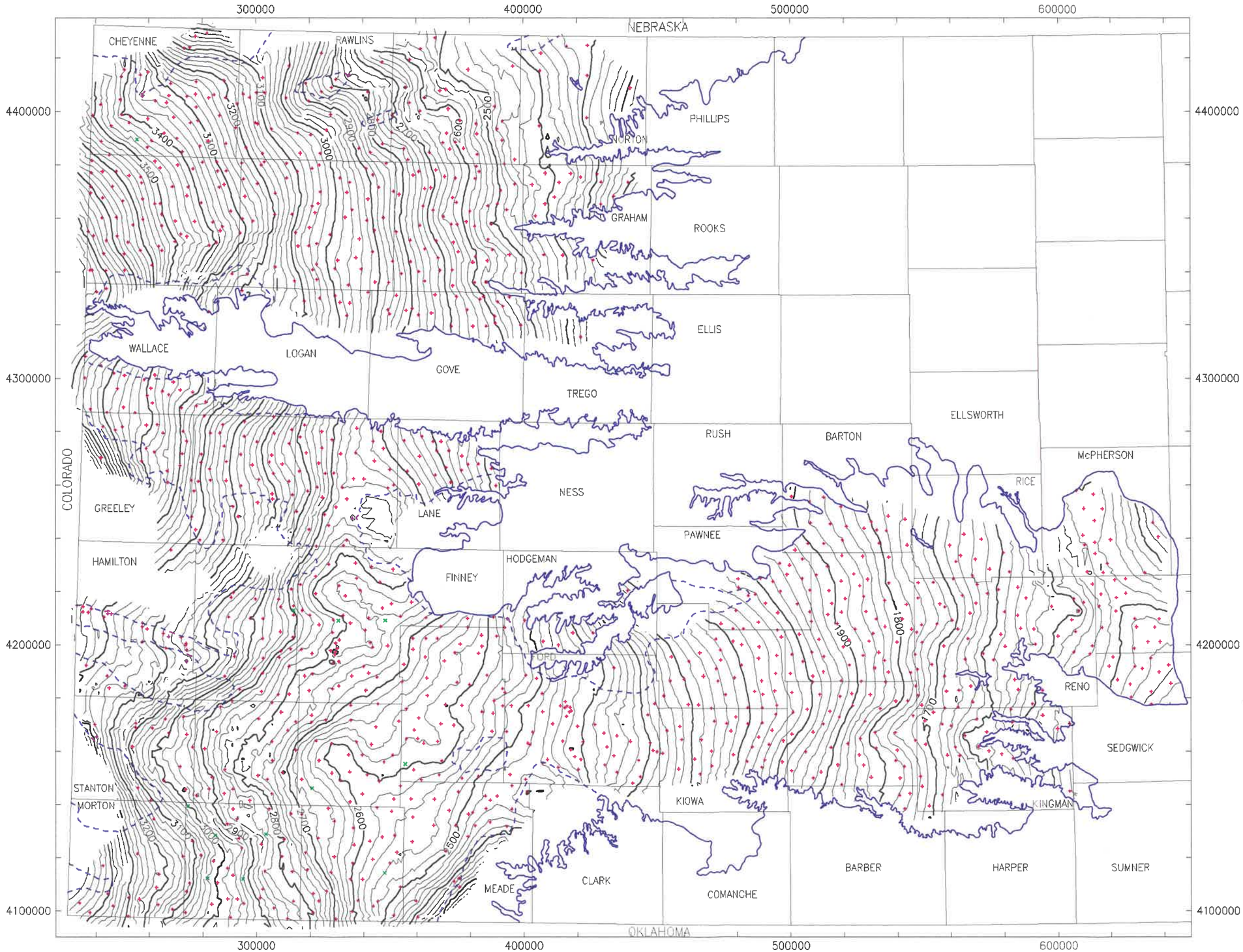


PLATE 2
Kansas Geological Survey
OFR 2000–13
Olea & Davis

KRIGING STANDARD DEVIATION, JANUARY 2000

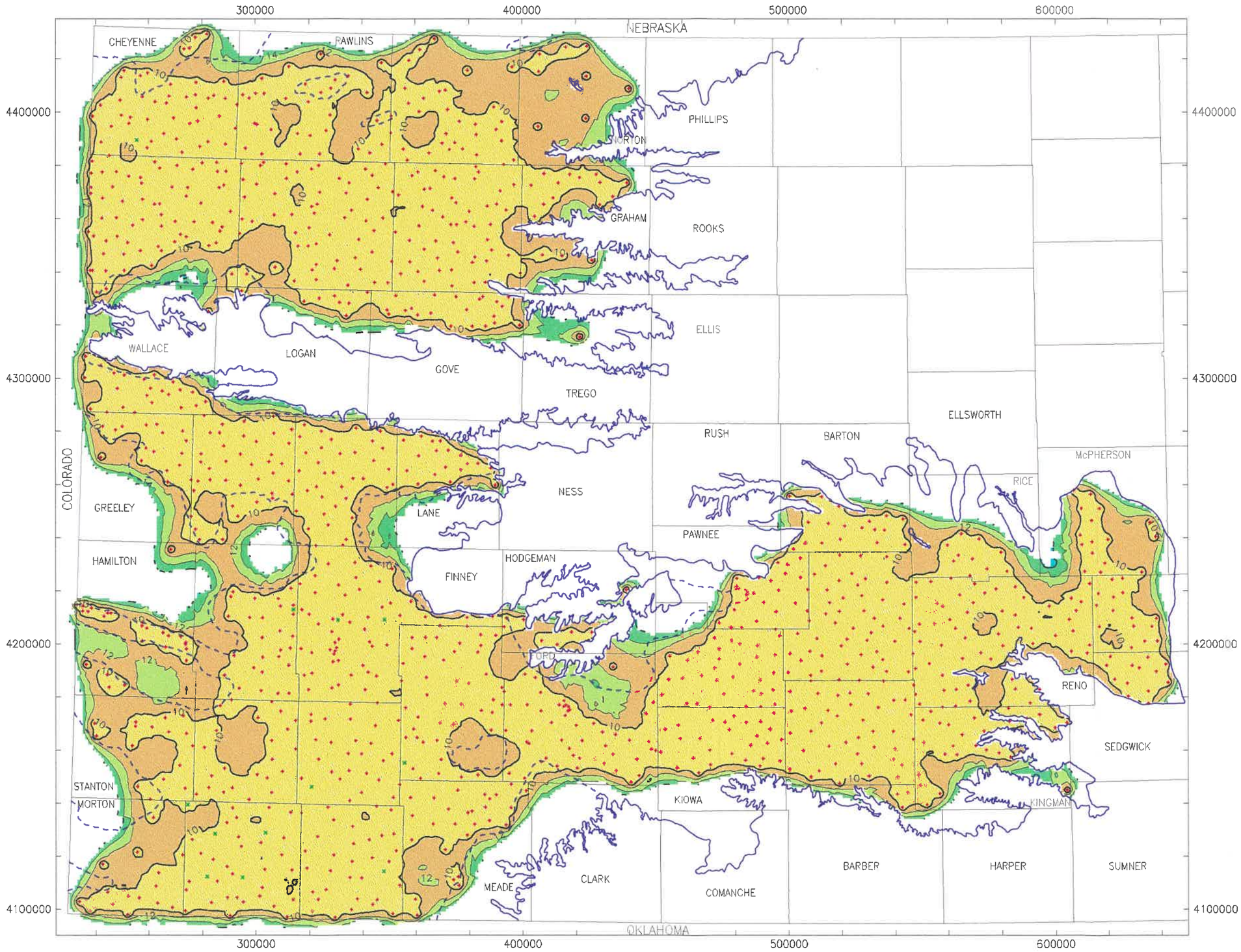
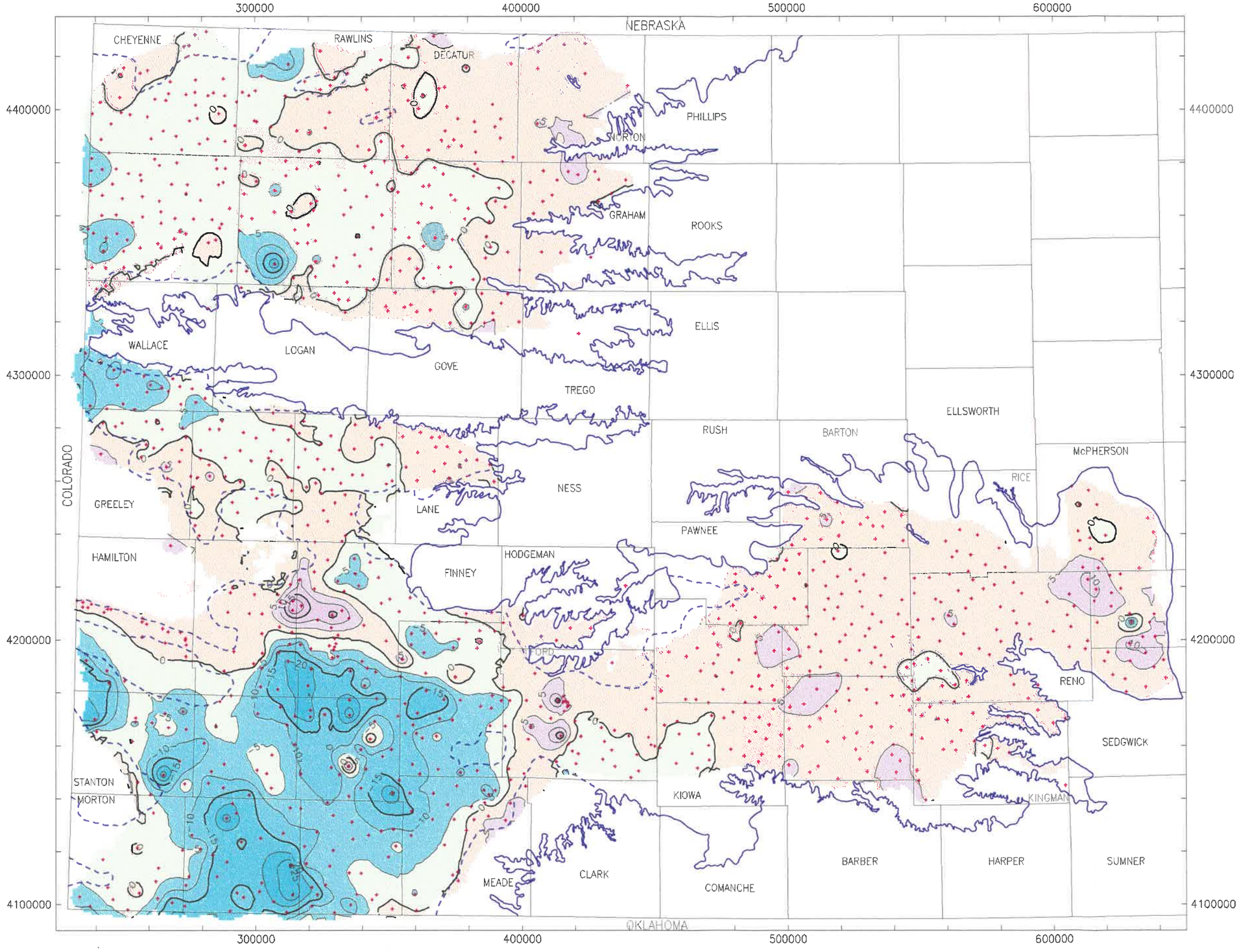


PLATE 3
Kansas Geological Survey
OFR 2000–13
Olea & Davis

DIFFERENCE IN WATER-LEVEL FOR 2000-1999

PLATE 4
Kansas Geological Survey
OFR 2000-13
Olea & Davis

DIFFERENCE IN WATER-LEVEL FOR 2000–1995



0 20 mi
0 30 km

Geologic boundary

Major aquifer limit

Official observation well

Negative values denote depletion

PLATE 5
Kansas Geological Survey
OFR 2000–13
Olea & Davis