



Panhandle Water News

JULY 2011

Points of Interest

2011 Scholarship Winners

CRMWA & Mesa Sign Contract

Explanation of Maps and Charts

Community Intern

Permit Reminder

2010-2011 Education Summary

Earthfest 2011

Texas Water Day at the Capitol

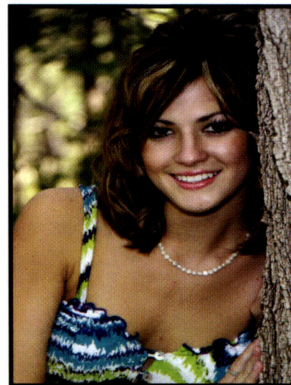
County Contour Map Index

County	Page
Armstrong	3, 15, 17
Carson	4, 5, 15
Donley	7, 17
Gray	9, 17
Hutchinson	11
Potter	14, 15
Roberts	11
Wheeler	13, 17
District Map	20

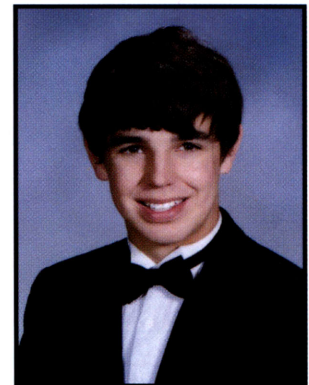
2011 Scholarship Winners Announced



Jenny Detten
\$4,000 Winner



Ashlyn Tubbs
\$3,000 Winner



Jacob Rapstine
\$2,000 Winner

The Panhandle Groundwater Conservation District is proud to announce the winners of the 2011 Scholarship Essay Contest.

Winner of the \$4,000 scholarship is Jenny Detten of Panhandle High School. Jenny graduated with a 3.74 GPA. Her future plans include attending Amarillo College to study Dental Hygiene. She is the daughter of Jeff and Peggy Detten.

The recipient of the \$3,000 scholarship is Ashlyn Tubbs of Clarendon High School. The daughter of Laban and Jennifer Tubbs, Ashlyn graduated with a 3.60

GPA and plans to attend Texas Tech University to study Mass Communication.

Jacob Rapstine of White Deer High School received the \$2,000 scholarship. Graduating with a 4.19 GPA, Jacob plans to study Finance, Agriculture Business at West Texas A & M University. He is the son of Chris and Linda Rapstine.

This year's winners were selected from 19 applicants writing on the essay topic, "Should municipal and agricultural water strategies be focused on conservation or

Scholarships cont. on page 2

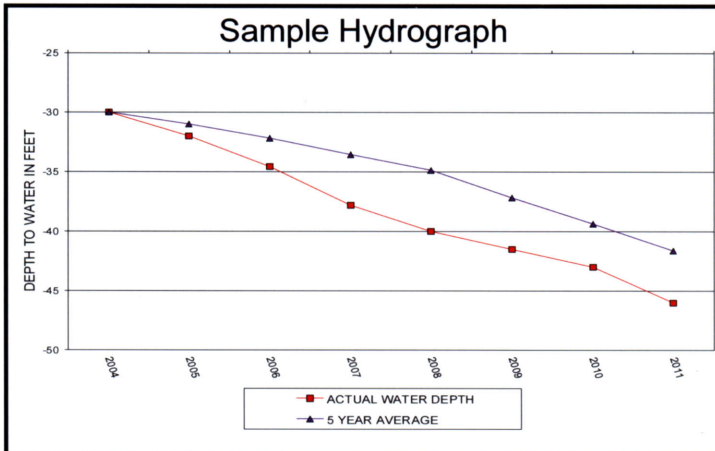
CRMWA and MESA Sign \$103 Million Contract for Water Rights

"Today is a good day," began Texas billionaire and MESA water owner T. Boone Pickens echoing the sentiments of the audience as they eagerly waited for the \$103 million contract between the Canadian River Municipal Water Authority (CRMWA) and MESA Water to be signed at the Plainview Country Club on June 23.

The deal gives the rights of over 211,000 surface acres-almost 4 trillion gallons-of groundwater from Pickens' Mesa Water located in Hemphill and Roberts counties to CRMWA enabling it to supply its member cities of Amarillo, Brownfield, Borger, Lamesa, Levelland, Lubbock,

CRMWA/MESA cont. on page 19

Explanation of 5 Year AVG Change Maps and Charts



Year	Depth	Static Change	5 Year AVG	5 Year AVG Change
2004	-30.00	-1.80	-30.00	
2005	-32.00	-2.00	-31.00	-1.00
2006	-34.56	-2.56	-32.19	-1.19
2007	-37.80	-3.24	-33.59	-1.40
2008	-40.00	-2.20	-34.87	-1.28
2009	-41.50	-1.50	-37.17	-2.30
2010	-43.00	-1.50	-39.37	-2.20
2011	-46.00	-3.00	-41.66	-2.29

This is how the five year average change is calculated using the sample hydrograph above. The 2009 five year average **-39.37** in red was calculated by summing the 2005, 2006, 2007, 2008 and 2009 depth measurements. This sum was then divided by five to get a five year average of **-39.37** in 2009. The 2010 five year average **-41.66** in blue was calculated by summing the 2006, 2007, 2008, 2009 and 2010 depth measurements. This sum was divided by five to get a five year average of **-41.66** in 2010. The five year average change for 2010 was calculated by subtracting the 2010 five year average **-41.66** from the 2009 five year average **-39.37** to reach a value of **-2.29** in green, which is the value used to contour the maps.

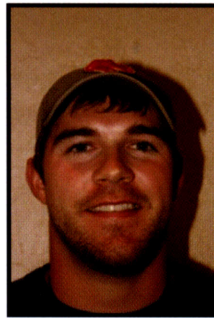
If you would like to see a trend analysis for your well, or on an individual well in your area as shown above, please contact Amy Crowell or Jennifer Puryear at the District office at 806-883-2501.

The contour maps in this newsletter show the average change in water level, in feet, of the aquifers in the District. The contour maps were drawn using the difference of the five year averages of 2006-2010 and 2007-2011. All five year average values were calculated using a hydrograph (shown above).

In the past only negative values have been shown, but this year the maps show all positive and negative values. The maps are also slightly different from previous years due to the colored background on the contour maps. These colors should

make it easier to determine the average change of the area. There is a color legend located on each map. Crosses on the map indicate wells that have some information, but were not used in contouring because they do not have enough information to calculate a five year average. The maps on pages 15 and 17 only show well locations. The charts show the depth to water measurements for 2001, 2010 and 2011 for each well, actual differences of the annual and 10 year measurements, and the five year average change, where available for each well.

Community Intern



James Coffee

This summer Panhandle Groundwater Conservation District partnered with Ogallala Commons to create a community internship position for the District office. The internship program provides an opportunity for interns to gain skill development, paid work experience and hometown career exploration opportunities while adding value to their local communities and institutions.

We are excited to have James Coffee, a Landscape Architecture major at Texas Tech University, with us this summer. James is transforming our xeriscape garden into one that is more aesthetically pleasing and even easier to maintain. Mulch is being replaced with crushed granite and stone, dead brush has been removed, and a dry riverbed with a windmill and bridge is being added. Once complete, we will share detailed step-by-step instructions and pictures so that you can build your own xeriscape garden at home.

In addition to James for all of his hard work and dedication, PGCD would like to thank Johnny, Joe and Justin Freeman for helping immensely by loaning us their tractor.

*To view our garden's progress, visit our blog:
<http://panhandlegroundwater.blogspot.com/>.

**To follow the community interns, please visit:
<http://www.ogallalaintern.blogspot.com/>.

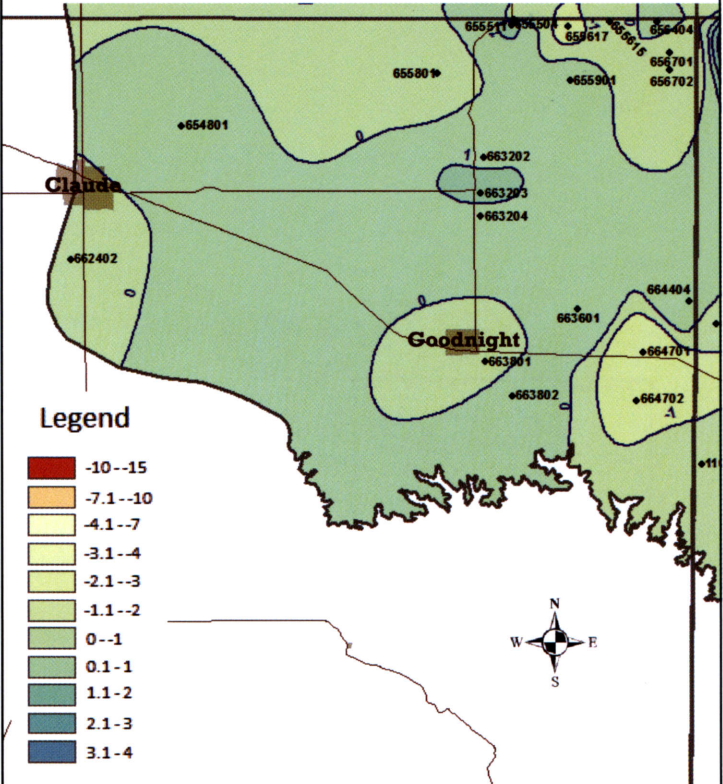
2011 Scholarships continued from page 1

efficiencies and why?" To be eligible, applicants are required to be a high school senior graduating from a school within the District and must write a 500 to 1,000 word essay on a topic chosen by the District. Winners are selected from a committee of three Board members, the general manager and a staff member. Recipients must enroll as a full-time student and attend college the fall semester immediately following graduation. Scholarships are paid out over four years.

The winning essays can be read on our blog at <http://panhandlegroundwater.blogspot.com/>. Jenny Detten's first place essay will appear in the October edition of Panhandle

Armstrong OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
654801	-294.3	-292.3	-292.4	1.9	-0.1	0.22
655504		-352.3	-353.0		-0.7	-0.45
655511	-345.0	-352.9	-346.1	-1.1	6.8	1.40
655615	-351.2	-353.8	-354.3	-3.1	-0.5	-0.60
655617		-352.9	-354.7		-1.8	-1.08
655801	-137.4	-136.7	-136.4	1.0	0.3	-0.34
655901	-242.0	-247.2	-247.7	-5.7	-0.5	0.22
656404	-343.0	-344.2	-343.7	-0.7	0.5	0.24
656701		-348.9	-348.8		0.1	-0.97
656702	-333.1	-335.5	-335.7	-2.6	-0.2	-0.16
662402	-145.8	-146.9	-147.8	-2.0	-0.9	-0.20
663202	-158.1	-163.7	-169.2	-11.1	-5.5	0.98
663203	-167.9	-169.1	-168.6	-0.7	0.5	1.13
663204	-180.3	-166.3	-164.5	15.8	1.8	0.74
663601	-91.7	-92.3	-92.7	-1.0	-0.4	0.70
663801	-193.4	-197.0	-197.2	-3.8	-0.2	-0.52
663802	-196.9	-199.8	-200.7	-3.8	-0.9	0.84
664404	-113.4	-126.2	-115.0	-1.6	11.2	0.54
664701	-125.0	-133.8	-135.2	-10.2	-1.4	-1.55
664702	-140.5	-146.5	-147.4	-6.9	-0.9	-1.04

Northeast Armstrong County OGALLALA Aquifer 5 Year Average Change

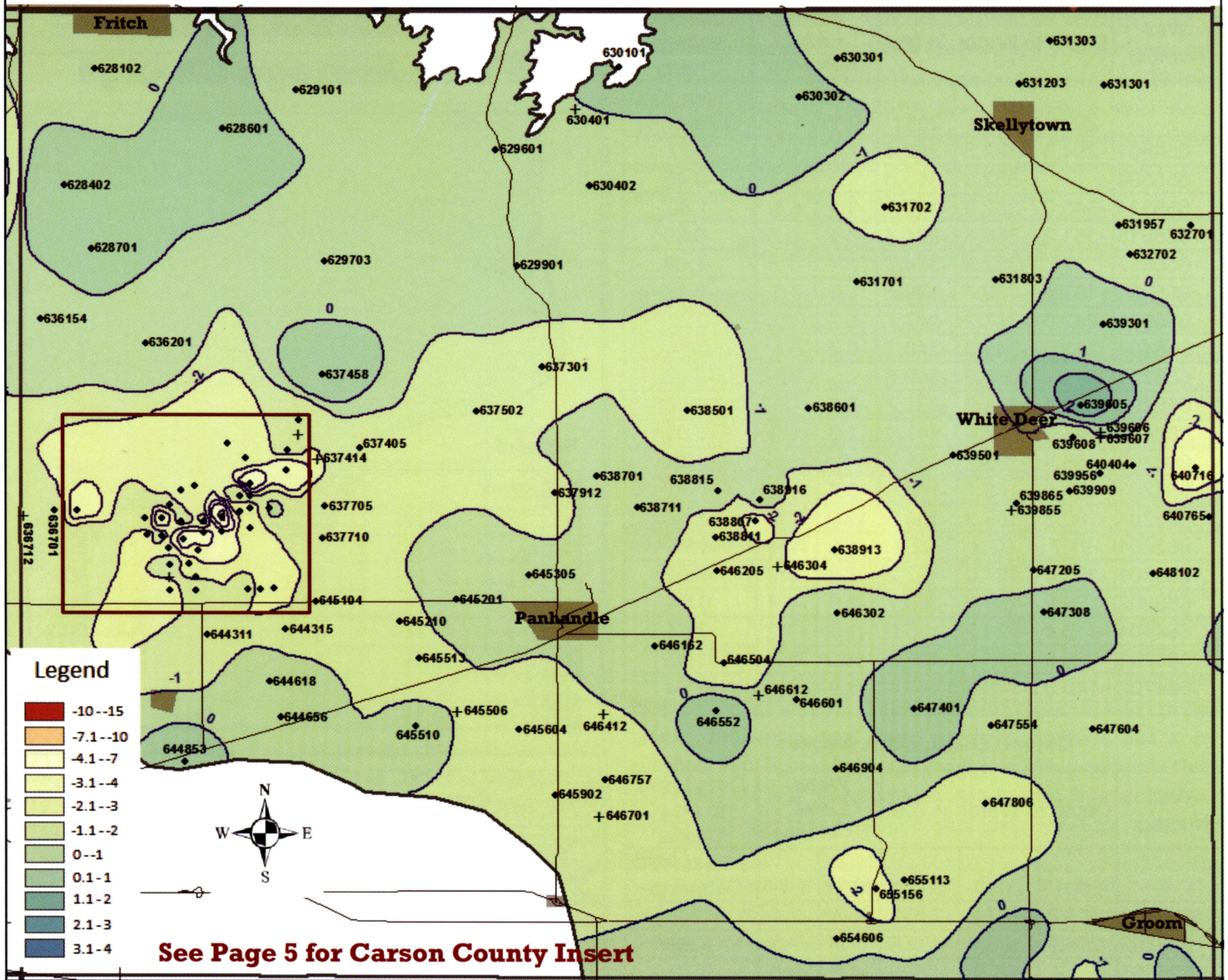


Carson OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
628102	-203.9	-207.2	-209.3	-5.4	-2.1	-0.82
628402	-206.7	-195.7	-202.9	3.8	-7.2	0.82
628601	-60.7	-64.9	-65.5	-4.8	-0.6	0.70
628701	-251.4	-254.4	-254.3	-2.9	0.1	0.30
629101	-56.8	-55.2	-55.6	1.2	-0.4	-0.14
629601	-49.0	-48.8	-54.9	-5.9	-6.1	-0.42
629703			-283.5			-0.65
629901	-80.2	-83.0	-82.9	-2.7	0.1	-0.26
630101		-28.5	-29.0	-29.0	-0.5	0.08
630301	-150.5	-151.8	-151.3	-0.8	0.5	-0.24
630302		-232.8	-225.7		7.1	0.70
630401			-203.2			
630402		-120.8	-122.2		-1.4	-0.58
631203	-298.1	-299.8	-299.9	-1.8	-0.1	-0.16
631301	-127.9	-122.5	-123.4	4.5	-0.9	-0.10
631303	-256.3	-257.4	-258.0	-1.7	-0.6	-0.20
631701	-389.1	-391.7	-390.0	-0.9	1.7	-0.02
631702	-277.8	-279.2	-282.1	-4.3	-2.9	-1.14
631803	-396.1	-394.4	-395.4	0.7	-1.0	-0.05
631957	-327.9	-328.2	-328.1	-0.2	0.1	0.00
632701	-392.3	-392.1	-392.2	0.1	-0.1	-0.08
632702	-399.1	-402.2	-404.0	-4.9	-1.8	-0.08

Carson OGALLALA Aquifer Cont'd

Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
636154		-320.5	-320.6		-0.1	-0.48
636201		-360.8	-361.5		-0.7	-0.74
636602	-477.4	-492.1	-495.2	-17.8	-3.1	-2.86
636608		-510.9	-512.4		-1.5	-2.24
636610		-417.0	-433.0		-16.0	-1.80
636701	-462.0	-488.0	-477.7	-15.7	10.3	-1.54
636702		-458.0	-465.0		-6.9	-3.49
636712			-414.7			
636807	-505.0		-546.5	-41.5		-1.70
636808	-532.0	-542.0	-548.5	-16.5	-6.5	-4.50
636809	-518.0	-527.0	-524.5	-6.5	2.5	-1.90
636810	-531.0	-547.0	-548.0	-17.0	-1.0	-2.20
636811	-526.0	-540.0	-544.3	-18.3	-4.3	-1.05
636812	-524.0		-544.0	-20.0		-1.75
636813	-519.0	-538.0	-547.4	-28.4	-9.4	-3.49
636816		-549.0	-556.2		-7.2	-2.66
636817	-521.0	-552.0	-553.0	-32.0	-1.0	-3.79
636819	-482.0		-517.0	-35.0		-2.60
636820	-523.0		-532.9	-9.9		-2.38
636905	-527.0	-545.0	-545.0	-18.0	0.0	-1.40

Carson County OGALLALA Aquifer 5 Year Average Change



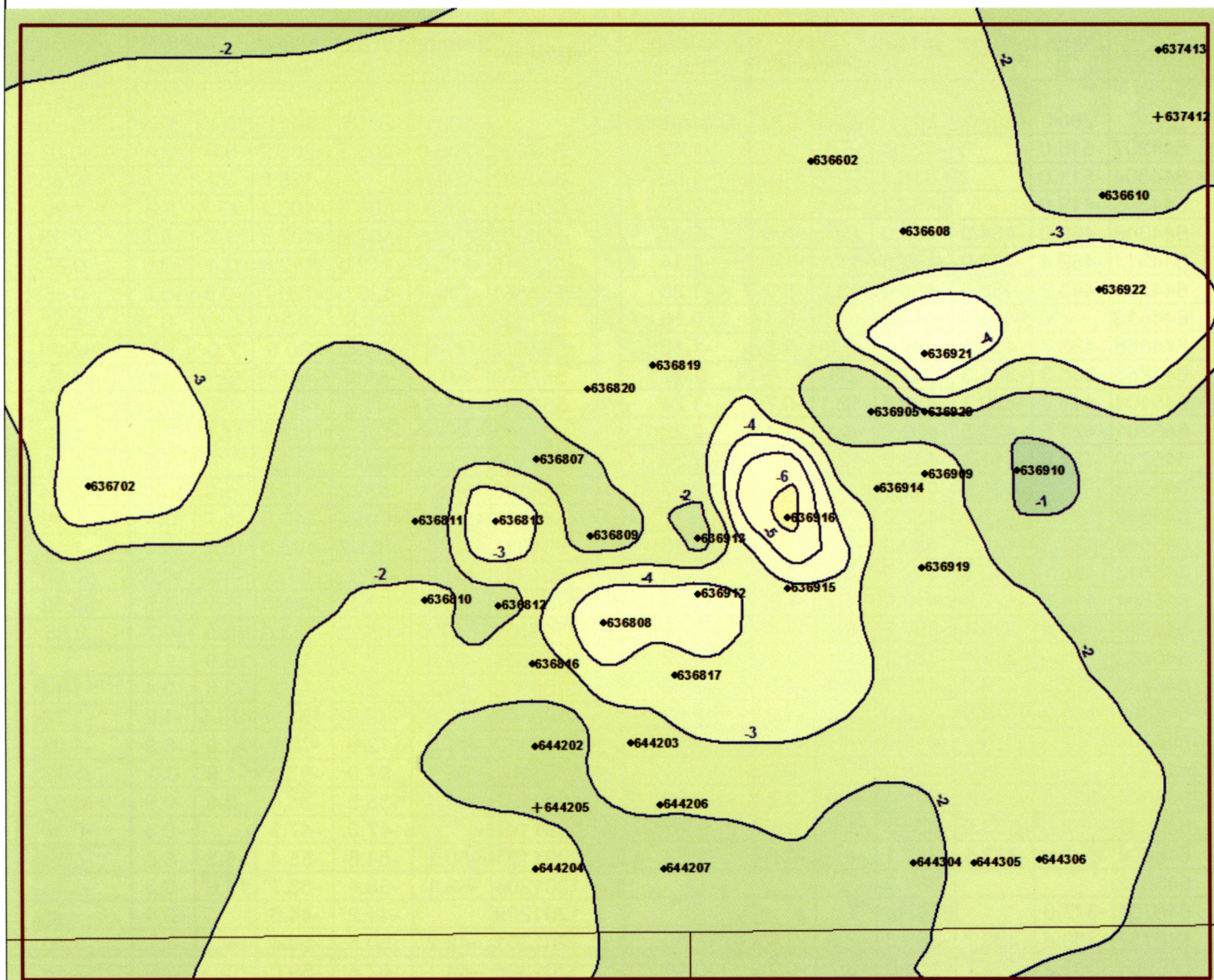
Carson OGALLALA Aquifer Cont'd

Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
636909	-482.0	-542.0	-537.4	-55.4	4.6	-2.69
636910		-497.0	-494.5		2.5	-0.92
636912	-517.0	-527.0	-543.4	-26.4	-16.4	-4.47
636913	-514.0	-541.0	-534.4	-20.4	6.6	-1.89
636914	-533.0		-523.4	9.6		-2.48
636915	-516.0	-542.0	-547.0	-31.0	-5.0	-3.60
636916	-504.0	-554.0	-554.0	-50.0	0.0	-6.40
636919		-520.4	-521.6		-1.2	-2.30
636920		-527.0	-529.6		-2.6	-1.31
636921		-525.0	-537.0		-12.0	-5.00
636922	-455.0		-478.5	-23.5		-3.70
637301		-275.1	-277.6		-2.5	-1.18

Carson OGALLALA Aquifer Cont'd

Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
637405	-436.3	-445.1	-446.4	-10.1	-1.3	-1.08
637412		-465.0	-446.0		19.0	
637413		-455.0	-460.1		-5.1	-1.51
637414			-463.0			
637458		-429.4	-430.5		-1.1	0.60
637502		-311.8	-312.4		-0.6	-1.38
637705		-467.6	-465.4		2.2	-1.16
637710		-440.3	-439.9		0.4	-1.22
637912	-401.3	-407.5	-409.2	-7.9	-1.7	-1.12
638501	-383.5	-378.1	-391.5	-8.0	-13.4	-1.48
638601	-370.8	-374.0	-374.3	-3.5	-0.3	-0.50
638701	-415.0	-416.8	-417.5	-2.5	-0.7	-0.24

Carson County Insert OGALLALA Aquifer 5 Year Average



Carson OGALLALA Aquifer Cont'd

Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
638711	-431.5	-425.2	-426.8	4.7	-1.6	0.00
638807		-414.8	-416.2		-1.4	-2.10
638811	-428.7	-436.6	-433.8	-5.1	2.8	-1.08
638815	-417.3		-421.3	-4.0		-0.93
638913	-398.6	-410.4	-413.0	-14.4	-2.6	-2.70
638916	-409.4	-412.2	-414.6	-5.2	-2.4	-0.86
639301		-397.5	-397.0		0.5	0.18
639501	-367.9	-374.0	-375.2	-7.3	-1.2	-0.84
639605		-284.1	-279.3		4.8	2.23
639606		-349.6	-352.0		-2.4	
639607		-356.1	-356.9		-0.8	
639608		-353.6	-353.6		0.0	-0.43

Carson OGALLALA Aquifer Cont'd

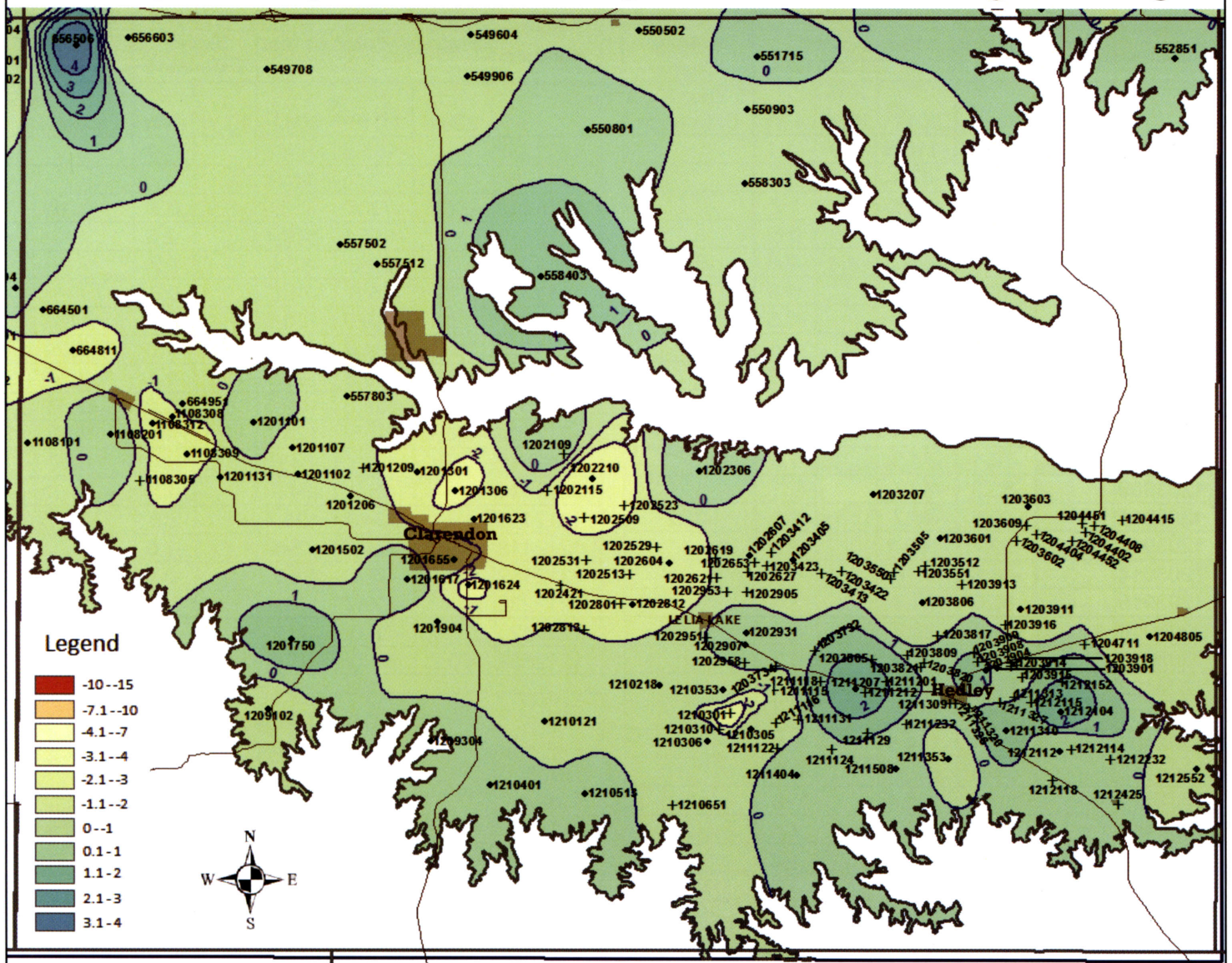
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
639855			-397.7			
639865	-396.9		-393.3	3.6		0.34
639909	-353.9	-354.4	-353.7	0.2	0.7	-0.40
639956	-371.7	-365.6	-366.0	5.7	-0.4	-0.52
640404	-377.9	-372.1	-371.8	6.1	0.3	-0.03
640716	-371.5	-377.1	-378.9	-7.4	-1.8	-2.27
640765	-338.6	-345.6	-345.9	-7.3	-0.3	-0.54
644202	-528.0	-549.0	-546.0	-18.0	3.0	-1.52
644203	-514.0	-542.0	-548.0	-34.0	-6.0	-2.60
644204	-474.0	-496.0	-497.6	-23.6	-1.6	-2.51
644205	-521.0	-535.0	-534.0	-13.0	1.0	
644206	-543.0	-538.0	-545.0	-2.0	-7.0	-2.20

Carson OGALLALA Aquifer Cont'd						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
644207	-516.0		-521.4	-5.4		-1.48
644304	-511.0		-518.3	-7.3		-1.82
644305	-419.0		-463.4	-44.4		-2.29
644306	-469.0	-464.0	-469.0	0.0	-5.0	-2.60
644311	-482.4	-493.9	-493.5	-11.1	0.4	-1.14
644315	-443.2	-455.5	-456.4	-13.2	-0.9	-1.26
644618		-444.8	-447.9		-3.1	-0.16
644656	-433.7	-438.1	-439.7	-6.0	-1.6	-1.10
644853	-305.3	-301.3	-302.4	2.9	-1.1	0.05
645104	-417.7	-429.1	-429.8	-12.1	-0.7	-1.24
645201	-421.5	-428.5	-429.6	-8.1	-1.1	-0.28
645210	-431.8	-441.8	-443.8	-12.0	-2.0	-1.36
645305		-434.8	-437.0		-2.2	-0.98
645506			-433.0			
645510	-423.3	-427.1	-428.3	-5.0	-1.2	-0.98
645513	-435.1	-440.9	-442.7	-7.6	-1.8	-1.16
645604	-416.8	-422.2	-418.0	-1.2	4.2	-1.20
645902	-391.4	-396.4	-397.5	-6.1	-1.1	-1.16
646162		-381.4	-381.1		0.3	-0.52
646205	-422.8	-424.9	-426.2	-3.4	-1.3	-1.30
646302	-368.2	-376.8	-378.0	-9.8	-1.2	-0.58
646304			-415.9			
646412		-405.7	-408.0		-2.3	
646504	-381.5	-389.1	-391.4	-9.9	-2.3	-1.82
646552	-353.6	-353.5	-353.5	0.1	0.0	0.16
646601		-373.5	-374.1		-0.6	-0.38
646612			-381.3			
646701	-377.6		-367.8	9.8		
646757	-380.4	-380.7	-383.3	-2.9	-2.6	-1.60
646904	-361.2	-364.7	-364.9	-3.7	-0.2	-0.44
647205	-376.0	-379.7	-379.6	-3.6	0.1	-0.38
647308	-297.8	-298.7	-296.1	1.7	2.6	0.60
647401	-346.0	-349.6	-350.2	-4.2	-0.6	0.34
647554		-307.9	-307.6		0.3	-0.04
647604	-314.5	-320.5	-320.2	-5.7	0.3	-0.38
647806	-357.8	-357.5	-358.8	-1.0	-1.3	-1.30
648102	-350.7	-354.0	-354.2	-3.5	-0.2	-0.28
654606	-368.3	-377.2	-378.5	-10.2	-1.3	-1.07
655113	-372.0	-378.0	-379.6	-7.6	-1.6	-1.54
655156		-380.6	-382.5		-1.9	-2.30

Donley OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
549604	-239.2	-237.8	-237.7	1.5	0.1	-0.18
549708	-318.8	-320.2	-320.6	-1.8	-0.4	-0.40

Donley OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
549906	-206.0	-205.2	-205.2	0.8	0.0	-0.07
550502	-130.0		-126.8	3.2		-0.63
550801	-85.8	-103.5	-103.2	-17.4	0.3	1.00
550903	-111.5	-107.6	-107.8	3.7	-0.2	-0.18
551715	-113.0	-112.0	-112.6	0.4	-0.6	0.09
552851	-120.4	-120.5	-120.7	-0.3	-0.2	0.66
557502		-96.8	-97.0		-0.2	-0.27
557512	-47.6	-41.4	-40.6	7.0	0.8	-0.08
557803	-88.1	-89.2	-88.8	-0.7	0.4	-0.16
558303	-35.5	-41.2	-40.8	-5.3	0.4	-0.88
558403	-155.4	-137.6	-138.8	16.6	-1.2	1.58
656506		-330.7	-332.2		-1.5	4.18
656603	-304.1	-309.2	-310.0	-5.9	-0.8	-0.84
664501	-112.1	-118.1	-117.8	-5.7	0.3	-0.36
664811	-95.6	-101.9	-102.0	-6.4	-0.1	-1.12
664951	-63.2	-67.1	-67.6	-4.4	-0.5	-0.66
1108101	-99.3	-97.2	-98.8	0.5	-1.6	-0.52
1108201	-117.5	-122.3	-123.0	-5.5	-0.7	0.85
1108305	-92.4		-97.4	-5.0		
1108308	-69.7	-72.9	-73.3	-3.6	-0.4	-1.42
1108309	-70.5	-79.9	-81.1	-10.6	-1.2	-1.70
1108312	-71.0	-72.0	-78.9	-7.9	-6.9	-1.08
1201101	-95.1	-97.0	-97.0	-1.9	0.0	0.52
1201102	-34.4	-35.5	-36.4	-2.0	-0.9	-0.32
1201107		-47.0	-47.3		-0.3	-0.16
1201131	-50.1	-54.8	-55.4	-5.3	-0.6	-0.30
1201206	-63.1	-68.4	-68.7	-5.6	-0.3	-0.35
1201209		-44.2	-44.6		-0.4	
1201301	-42.2	-50.5	-50.4	-8.2	0.1	-1.50
1201306	-44.1	-57.6	-59.6	-15.5	-2.0	-2.18
1201502	-131.4		-130.4	1.0		-0.08
1201617	-116.9	-115.4	-115.3	1.6	0.1	0.22
1201623	-62.1	-65.4	-69.9	-7.8	-4.5	-1.36
1201624	-106.8	-100.7	-101.7	5.1	-1.0	-2.03
1201655	-55.0	-55.4	-57.9	-2.9	-2.5	-0.58
1201750	-109.1	-107.7	-107.2	1.9	0.5	1.18
1201904	-141.1	-142.6	-143.4	-2.3	-0.8	-0.34
1202109			-95.8			
1202115		-73.8	-74.5		-0.7	
1202210	-61.6	-71.2	-71.6	-10.0	-0.4	-2.45
1202306	-50.0	-52.1	-49.6	0.4	2.5	0.15
1202421		-26.2	-25.1		1.1	
1202509		-67.2	-67.9		-0.7	
1202513		-71.4	-73.3		-1.9	
1202523		-84.4	-85.5		-1.1	
1202529		-75.5	-77.8		-2.3	
1202531		-59.4	-60.0		-0.6	
1202604	-56.0	-64.9	-65.8	-9.8	-0.9	-1.75
1202607	-69.5	-78.5	-78.2	-8.7	0.3	-0.34

Donley County OGALLALA Aquifer 5 Year Average Change



Donley OGALLALA Aquifer Cont'd						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts 5 Year AVG Difference
	2001	2010	2011	10 Yr	1 Yr	
1202619		-75.2	-76.0		-0.8	
1202621		-52.7	-52.3		0.4	
1202627		-79.0	-80.4		-1.4	
1202653		-99.0	-81.5		17.5	
1202801		-32.5	-33.8		-1.3	
1202812	-15.0	-25.9	-26.9	-11.9	-1.0	-1.12
1202813		-81.9	-82.6		-0.7	
1202905		-68.6	-68.0		0.6	
1202907	-11.5	-10.6	-10.8	0.7	-0.2	0.28
1202931	-41.3	-39.9	-38.6	2.7	1.3	0.00
1202951		-17.5	-15.9		1.6	
1202953		-48.0	-47.1		0.9	
1202958		-12.3	-9.7		2.6	

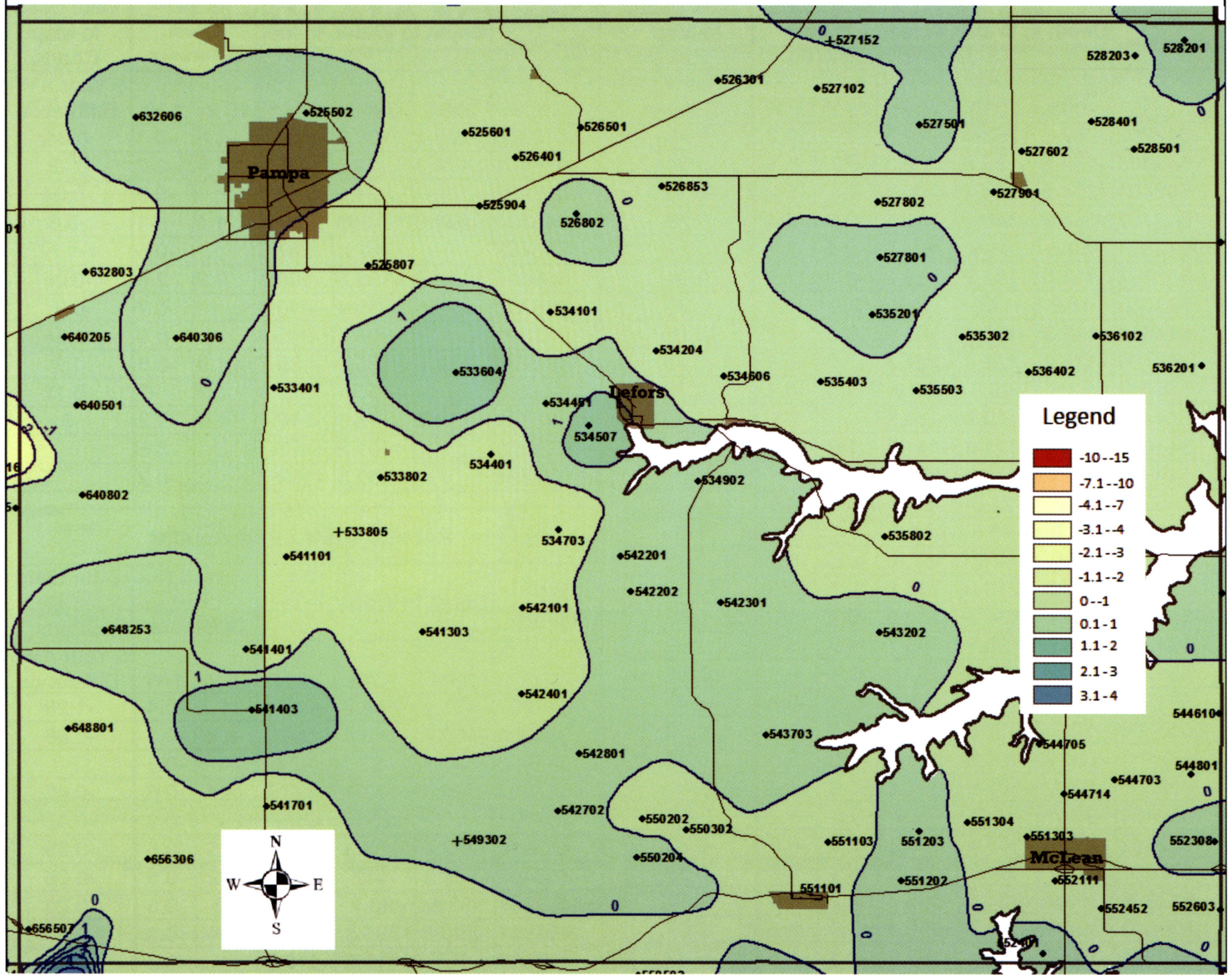
Donley OGALLALA Aquifer Cont'd						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts 5 Year AVG Difference
	2001	2010	2011	10 Yr	1 Yr	
1203207	-79.3	-81.1	-81.5	-2.2	-0.4	-0.02
1203405	-66.0	-70.7	-70.6	-4.6	0.1	-0.35
1203412		-80.6	-80.5		0.1	
1203413		-58.2	-59.0		-0.8	
1203422		-39.8	-39.5		0.3	
1203423		-89.6	-89.9		-0.3	
1203505			-97.8			
1203512		-111.0	-110.9		0.1	
1203550		-93.1	-92.1		1.0	
1203551		-112.8	-112.5		0.3	
1203601	-93.4	-97.3	-97.8	-4.4	-0.5	-0.27
1203602		-111.8	-112.1		-0.3	
1203603	-85.3	-89.3	-90.5	-5.2	-1.2	-0.66

Donley OGALLALA Aquifer Cont'd						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
1203609		-115.7	-116.8		-1.1	
1203732		-57.5	-57.1		0.4	
1203734		-28.0	-26.8		1.2	
1203805		-67.7	-67.2		0.5	
1203806	-118.8	-120.9	-123.7	-4.9	-2.8	-0.32
1203809		-56.1	-57.1		-1.0	
1203817		-85.8	-86.3		-0.5	
1203820		-70.5	-71.0		-0.5	
1203821		-62.7	-63.6		-0.9	
1203901		-88.9	-88.5		0.4	0.42
1203904	-57.7	-64.5	-61.4	-3.7	3.1	1.15
1203908		-76.1	-74.3		1.8	
1203909		-83.8	-82.7		1.1	
1203911		-48.8	-46.7		2.1	-0.32
1203913		-99.7	-100.1		-0.4	
1203914		-96.6	-97.6		-1.0	
1203915		-85.0	-81.4		3.6	
1203916		-28.1	-22.7		5.4	
1203918		-78.6	-78.4		0.2	
1204402		-115.2	-114.8		0.4	
1204404		-116.5	-118.0		-1.5	
1204408		-113.7	-114.5		-0.8	
1204415		-97.0	-96.1		0.9	
1204451		-125.8	-125.4		0.4	
1204452		-129.1	-126.6		2.5	
1204711		-41.6	-40.4		1.2	
1204805	-25.7	-31.0	-27.8	-2.1	3.2	-0.36
1209102	-99.7		-100.7	-1.0		-0.15
1209304	-26.0	-24.2	-24.0	2.0	0.2	0.04
1210121		-127.9	-130.5		-2.6	-0.24
1210218	-59.7	-61.9	-63.7	-4.0	-1.8	-0.18
1210301	-16.6	-16.5	-13.9	2.7	2.6	
1210305	-35.6	-38.3	-37.6	-2.0	0.7	-0.56
1210306	-31.2	-36.5	-38.0	-6.8	-1.5	-0.60
1210310	-23.2	-28.1	-27.0	-3.8	1.1	
1210353	-19.0	-22.2	-20.7	-1.7	1.5	-0.36
1210401	-111.9	-112.3	-112.1	-0.2	0.2	0.80
1210513		-115.4	-116.0		-0.6	0.06
1210651			-67.8			
1211115		-105.2	-105.7		-0.5	
1211116		-112.4	-112.2		0.2	
1211118		-102.1	-102.5		-0.4	
1211122		-109.4	-110.6		-1.2	
1211124		-182.8	-183.9		-1.1	
1211129		-165.5	-167.1		-1.6	
1211131		-75.4	-76.4		-1.0	
1211201		-52.0	-51.7		0.3	
1211207	-91.5	-109.1	-106.8	-15.3	2.3	2.06
1211212		-90.7	-87.0		3.7	

Donley OGALLALA Aquifer Cont'd						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
1211232		-165.5	-166.6		-1.1	
1211309			-69.9			
1211310	-72.0	-73.4	-72.6	-0.6	0.8	1.18
1211313		-147.1	-149.4		-2.3	
1211320		-83.6	-82.4		1.2	
1211326		-75.6	-74.8		0.8	
1211327		-119.0	-120.9		-1.9	
1211353	-103.3	-104.4	-105.4	-2.1	-1.0	-0.20
1211404	-193.7	-193.8	-194.9	-1.2	-1.1	0.34
1211508	-171.4	-168.0	-169.0	2.4	-1.0	0.66
1212104	-136.0		-124.7	11.3		2.20
1212112			-84.6			0.17
1212114		-85.2	-84.9		0.3	
1212115		-124.4	-121.8		2.6	
1212118		-73.8	-75.4		-1.6	
1212152		-95.1	-95.2		-0.1	
1212232		-109.7	-109.1		0.6	
1212425		-30.0	-30.7		-0.7	
1212552	-60.2	-61.0	-61.6	-1.4	-0.6	-0.10

Gray OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
525502	-348.7	-350.5	-351.0	-2.3	-0.5	0.36
525601		-370.0	-370.6		-0.6	-0.34
525807	-371.1	-371.2	-371.8	-0.7	-0.6	-0.08
525904	-364.3	-366.5	-366.8	-2.5	-0.3	-0.68
526301	-358.8	-364.2	-363.2	-4.4	1.0	-0.50
526401	-370.5	-371.9	-372.4	-1.9	-0.5	-0.44
526501	-364.6	-367.2	-369.2	-4.6	-2.0	-0.41
526802	-361.1	-355.8	-356.2	4.9	-0.4	0.08
526853	-363.3	-366.1	-365.6	-2.3	0.5	-0.22
527102	-359.9	-361.7	-363.0	-3.1	-1.3	-0.56
527152			-344.1			
527501	-349.8	-349.2	-350.3	-0.5	-1.1	0.03
527602	-331.2	-331.6	-332.6	-1.4	-1.0	-0.38
527801	-135.9	-133.3	-133.3	2.6	0.0	0.50
527802	-339.7	-338.9	-338.8	0.9	0.1	-0.18
527901	-339.7	-340.2	-340.6	-0.9	-0.4	-0.18
528201	-355.8	-347.1	-346.5	9.3	0.6	0.36
528203	-341.0	-339.5	-339.4	1.6	0.1	-0.02
528401	-329.0		-330.4	-1.4		-0.32
528501	-283.6	-284.1	-284.7	-1.1	-0.6	-0.24
533401	-345.7	-350.6	-350.7	-5.0	-0.1	-0.24
533604	-76.9	-89.0	-78.0	-1.1	11.0	1.90
533802	-207.8	-210.3	-210.0	-2.2	0.3	-0.18

Gray County OGALLALA Aquifer 5 Year Average Change



Gray OGALLALA Aquifer Cont'd

Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
533805		-342.9	-343.3		-0.4	
534101	-139.9	-141.6	-141.8	-1.9	-0.2	-0.12
534204	-194.3	-194.8	-194.7	-0.4	0.1	-0.02
534401	-117.5	-118.6	-119.2	-1.7	-0.6	-0.16
534451	-111.9	-109.7	-109.9	2.0	-0.2	0.02
534507			-34.6			1.18
534606	-72.4	-73.8	-74.1	-1.7	-0.3	-0.12
534703	-74.4	-75.9	-76.3	-1.9	-0.4	-0.24
534902	-69.0	-70.9	-71.1	-2.1	-0.2	0.14
535201	-128.6	-128.1	-132.6	-4.0	-4.5	0.08
535302	-14.7	-16.6	-16.9	-2.2	-0.3	-0.18
535403	-123.8	-125.5	-125.6	-1.8	-0.1	-0.20

Gray OGALLALA Aquifer Cont'd

Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
535503	-74.2	-76.3	-76.6	-2.4	-0.3	-0.08
535802	-118.5	-118.6	-119.2	-0.7	-0.6	-0.22
536102	-164.9	-166.1	-166.3	-1.4	-0.2	-0.34
536201	-147.2	-149.8	-150.0	-2.8	-0.2	-0.32
536402	-8.4	-9.0	-9.3	-0.9	-0.3	-0.10
541101	-370.0	-370.8	-370.3	-0.3	0.5	-0.08
541303	-342.1	-345.6	-341.9	0.2	3.7	-0.30
541401	-322.4	-325.0	-325.3	-2.9	-0.3	-0.24
541403	-300.3	-293.5	-293.5	6.8	0.0	1.92
541701	-263.3	-263.6	-264.1	-0.8	-0.5	-0.08
542101	-266.1	-270.6	-263.6	2.5	7.0	-0.18
542201	-133.2	-133.4	-132.1	1.1	1.3	0.18

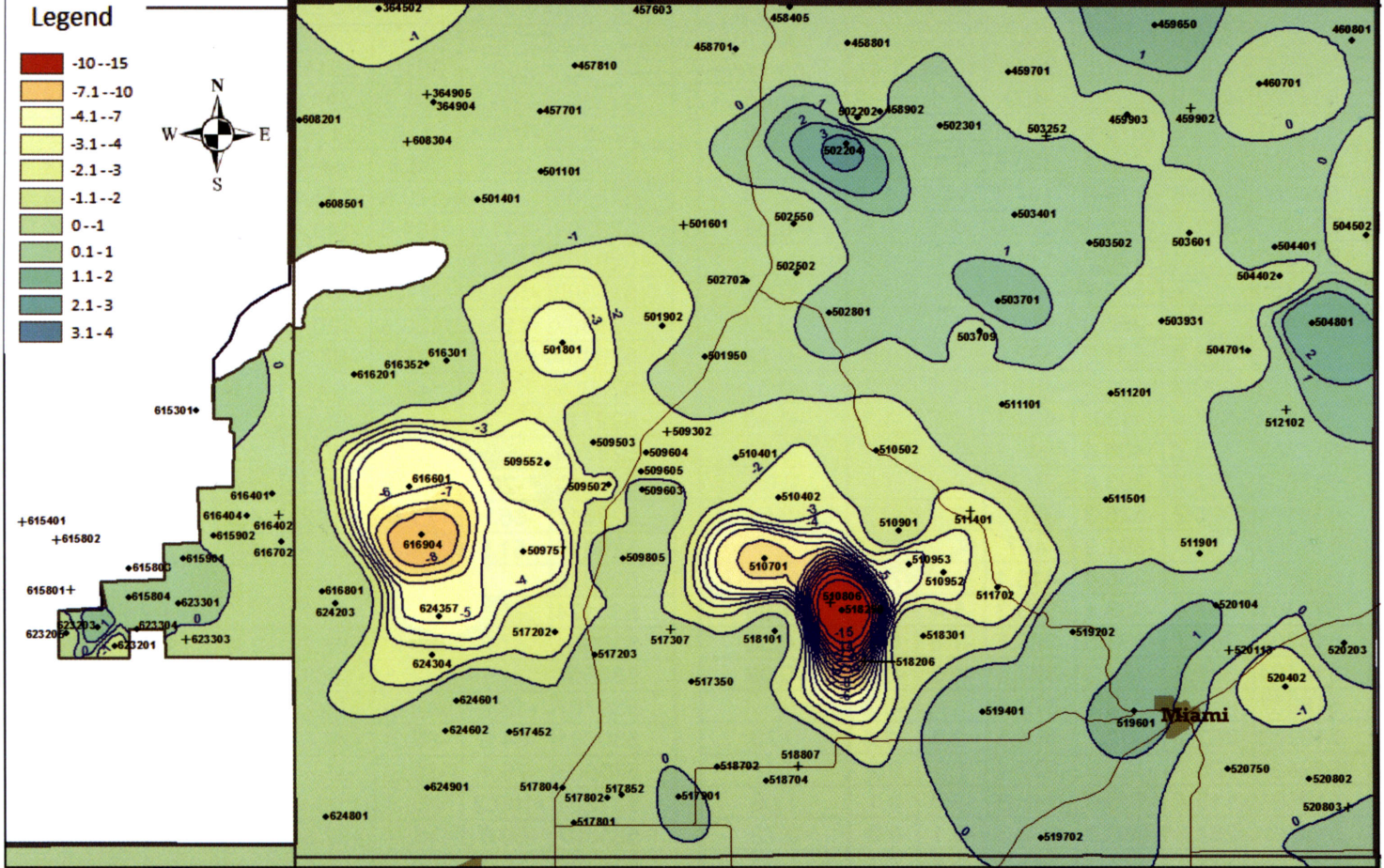
Gray OGALLALA Aquifer Cont'd						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
542202	-262.2	-262.0	-262.3	-0.1	-0.3	0.18
542301	-139.5	-139.6	-139.3	0.2	0.3	0.04
542401	-204.8	-200.2	-200.4	4.4	-0.2	-0.12
542702	-144.9	-145.1	-145.5	-0.6	-0.4	0.26
542801	-80.8	-81.9	-81.2	-0.4	0.7	0.24
543202	-112.0	-112.2	-112.2	-0.2	0.0	0.04
543703	-16.6	-14.5	-14.6	2.0	-0.1	0.38
544610	-183.3	-183.2	-183.9	-0.6	-0.7	-0.26
544703	-125.2	-126.9	-127.3	-2.1	-0.4	-0.40
544705	-62.6	-63.8	-63.9	-1.3	-0.1	-0.10
544714		-110.9	-110.8		0.1	-0.25
544801	-110.0	-111.4	-111.6	-1.6	-0.2	-0.24
549302			-195.8			
550202	-22.6	-24.0	-27.9	-5.3	-3.9	-0.12
550204	-52.0	-48.0	-47.6	4.4	0.4	0.48
550302	-86.9	-87.2	-87.4	-0.5	-0.2	-0.05
551101	-215.0	-213.0	-213.8	1.2	-0.8	-0.10
551103	-134.4	-134.3	-134.8	-0.4	-0.5	-0.32
551202	-189.5	-190.2	-190.7	-1.2	-0.5	0.26
551203	-149.9	-151.9	-152.0	-2.1	-0.1	0.10
551303	-108.6	-107.9	-108.7	-0.1	-0.8	-0.43
551304	-70.7	-73.4	-73.7	-3.0	-0.3	-0.02
552111	-104.9	-106.9	-107.4	-2.5	-0.5	-0.64
552308	-98.1	-102.9	-103.1	-5.0	-0.2	0.44
552401	-73.7	-71.6	-72.8	0.9	-1.2	0.12
552452	-105.7	-107.4	-108.2	-2.5	-0.8	-0.32
552603	-16.9	-20.5	-21.3	-4.4	-0.8	-0.68
632606	-363.2	-364.6	-365.4	-2.2	-0.8	0.02
632803	-394.1	-394.7	-395.4	-1.3	-0.7	-0.07
640205	-387.2	-388.4	-389.5	-2.3	-1.1	-0.42
640306	-400.5	-405.1	-402.6	-2.1	2.5	0.50
640501	-370.8	-374.0	-374.4	-3.6	-0.4	-0.30
640802	-359.2	-363.8	-364.8	-5.6	-1.0	-0.82
648253	-355.8	-355.9	-355.4	0.4	0.5	0.94
648801	-283.5	-285.2	-286.3	-2.8	-1.1	-0.65
656306	-283.0	-283.4	-283.7	-0.7	-0.3	-0.64
656507	-295.7	-300.7	-301.0	-5.3	-0.3	-0.58

Hutchinson OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
615301	-135.1	-114.9	-113.3	21.8	1.6	0.35
615401		-136.3	-135.4		0.9	
615801			-179.1			
615802		-166.5	-171.8		-5.3	
615803	-78.3	-79.2	-78	0.3	1.2	-0.06

Hutchinson OGALLALA Aquifer Cont'd						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
615804	-108.1	-109.6	-109.9	-1.8	-0.3	0.04
615901	-74.3	-72.9	-73.2	1.1	-0.3	0.28
615902		-24.6	-25.5		-0.9	-0.04
616401	-294.6	-295	-296	-1.4	-1	-0.6
616402		-267.1	-267.7		-0.6	
616404	-110.6	-103.5	-100.7	9.9	2.8	-0.04
616702		-239.4	-240.1		-0.7	-0.37
623201		-204.7	-205.6		-0.9	-1.58
623203	-187.6	-185.2	-185.7	1.9	-0.5	1.7
623205		-153.4	-155.4		-2	-0.12
623301	-116.2	-113.9	-115.1	1.1	-1.2	0
623303		-101.2	-97.7		3.5	
623304		-189.5	-189.7		-0.2	0.08

Roberts OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
364502	-437.9	-448.7	-449.1	-11.2	-0.4	-1.28
364904	-108.7	-113.8	-114.5	-5.8	-0.7	-0.66
364905		-97	-97.5		-0.5	
457603	-394.3	-403.1	-403.7	-9.4	-0.6	-0.42
457701		-25.5	-25.7	-25.7	-0.2	-0.42
457810	-252.4	-255.3	-255.9	-3.5	-0.6	-0.65
458405	-338.3	-342	-342.5	-4.2	-0.5	-0.06
458701	-93.5	-90.7	-91.2	2.3	-0.5	-0.20
458801	-390.3	-395.1	-395.7	-5.4	-0.6	-0.90
458902		-118.6	-118.8		-0.2	-0.32
459650	-273.4	-287.8	-281.5	-8.1	6.3	1.55
459701	-53.2	-55.4	-55.6	-2.4	-0.2	-0.24
459902	-46.8	-45	-47.6	-0.8	-2.6	
459903	-40	-41	-40.9	-0.9	0.1	-0.02
460701	-96.4	-97.6	-97.4	-1.0	0.2	-0.04
460801	-186.6	-187.4	-187.2	-0.6	0.2	0.00
501101	-54.1	-55.9	-56.2	-2.1	-0.3	-0.24
501401	-50.4	-52.6	-52.9	-2.5	-0.3	-0.28
501601			-86.5			
501801		-217.9	-224.7		-6.8	-3.06
501902	-196.6		-202.8	-6.2		-1.18
501950		-128.7	-129.1		-0.4	-0.18
502202	-69.4	-69.3	-69.6	-0.2	-0.3	-0.04
502204		-12.1	-12.3		-0.2	3.14
502301	-61.2	-63.9	-60	1.2	3.9	0.40
502502	-107.6	-107.7	-107.8	-0.2	-0.1	-0.04
502550	-100.1	-100.7	-100.9	-0.8	-0.2	-0.08
502702	-53.4	-58.8	-58.5	-5.1	0.3	-0.78
502801	-7.1	-7.7	-7.7	-0.6	0.0	0.06

Roberts/Hutchinson County OGALLALA Aquifer 5 Year Average Change



Roberts OGALLALA Aquifer Cont'd

Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts 5 Year AVG Difference
	2001	2010	2011	10 Yr	1 Yr	
			-39.5			
503252						
503401	-98.8	-100.1	-99.5	-0.7	0.6	0.04
503502	-29.7	-31.1	-30.3	-0.6	0.8	0.12
503601	-84.8	-86.1	-85.8	-1.0	0.3	-0.06
503701	-86.2	-86.2	-86.5	-0.3	-0.3	1.53
503709		-277	-276.9		0.2	-0.05
503931			-50.3			-0.16
504401	-98.5	-99.8	-100.1	-1.6	-0.3	0.76
504402	-166.4	-168.5	-169	-2.6	-0.5	-0.48
504502	-114.6	-116.2	-116.5	-1.9	-0.3	-0.24
504701	-320.6	-320.2	-322.2	-1.6	-2.0	-0.03
504801		-173.6	-171.7		1.9	2.58
509302	-188.3	-185.5	-186.3	2.0	-0.8	
509502	-279	-298.8	-300.6	-21.6	-1.8	-2.02
509503		-263.8	-264.2		-0.4	-1.58
509552		-109.5	-112.2		-2.7	-3.40
509603	-186.4		-201.3	-14.9		-0.50

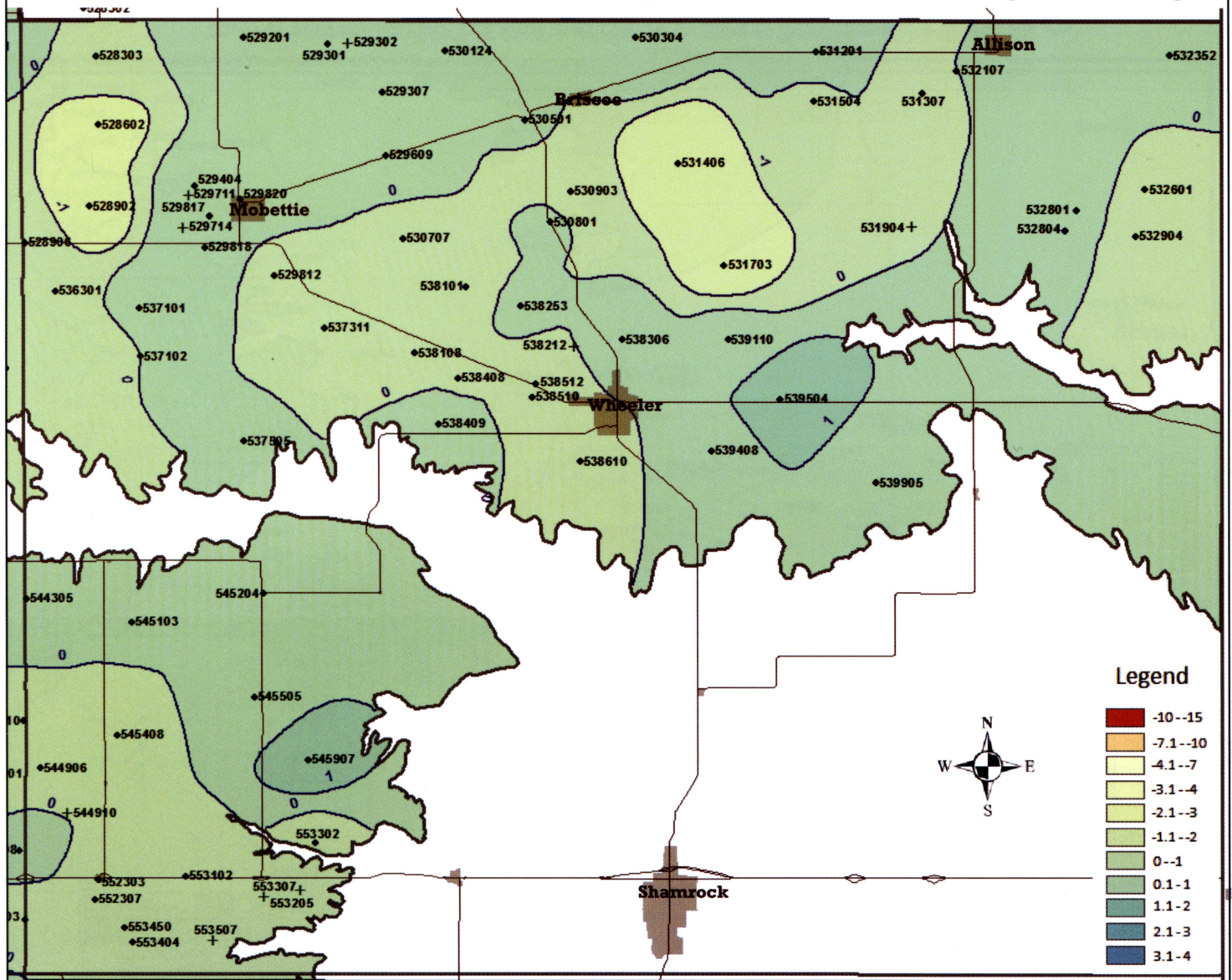
Roberts OGALLALA Aquifer Cont'd

Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts 5 Year AVG Difference
	2001	2010	2011	10 Yr	1 Yr	
509604		-187.6	-188.6		-1.0	-1.06
509605		-239.1	-241.6		-2.5	-1.56
509757		-455.8	-452.4		3.4	-4.66
509805	-302.6	-315.6	-316.2	-13.6	-0.6	-0.78
510401	-149.9	-151.2	-155.2	-5.3	-4.0	-1.10
510402		-253.8	-263.9		-10.1	-2.66
510502	-242.3	-244	-245	-2.7	-1.0	-1.07
510701		-295.7	-323.4		-27.7	-7.08
510806		-286.5	-390.3		-103.8	
510901	-153.8	-156.4	-164.8	-11.0	-8.4	-1.61
510952	-345.4	-345.2	-361	-15.6	-15.8	-3.22
510953	-184.7	-185.2	-206.2	-21.5	-21.0	-4.27
511101	-285.2	-288	-288	-2.8	0.0	-0.13
511201	-292.9	-293.1	-293.1	-0.2	0.0	-0.14
511401	-334.4	-327.7	-328.1	6.3	-0.4	
511501	-306.6	-306.9	-308.2	-1.6	-1.3	-0.28

Roberts OGALLALA Aquifer Cont'd						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
511702	-401.9		-409	-7.1		-2.08
511901	-273.3	-272.8	-273.4	-0.1	-0.6	-0.06
512102	-281.4	-282.1	-280.5	0.9	1.6	
517202	-165.8	-175.9	-177.4	-11.6	-1.5	-2.10
517203	-321.1	-325.1	-325.6	-4.5	-0.5	-0.38
517307		-120.7	-121.9		-1.2	
517350		-341.7	-342.7		-1.0	-0.34
517452		-358.9	-359		-0.1	-0.22
517801	-386.8	-391.2	-390.4	-3.6	0.8	-0.76
517802	-400.2	-401.7	-401.5	-1.3	0.2	-0.32
517804	-397.4	-400	-401.1	-3.7	-1.1	-0.40
517852	-405.7	-406.4	-406.1	-0.4	0.3	-0.36
517901	-392.7	-393.6	-393.2	-0.5	0.4	0.08
518101	-325.2	-325.3	-328.6	-3.4	-3.3	-0.96
518206		-391.9	-407		-15.1	
518250		-336.4	-413.1		-76.7	-15.70
518301	-357.9	-358.4	-363.3	-5.4	-4.9	-1.08
518702	-387.7	-389.6	-389.5	-1.8	0.1	-0.32
518704	-379.6	-384.3	-385.1	-5.5	-0.8	-0.09
518807		-372.2	-372.4		-0.2	
519202	-362.2	-362.7	-364.5	-2.3	-1.8	0.70
519401	-328.7	-327.6	-327.4	1.3	0.2	0.47
519601	-113.4	-116.9	-116.8	-3.4	0.1	1.06
519702	-257.2	-260.3	-260.3	-3.1	0.0	0.70
520104	-141.1	-141.1	-141.7	-0.6	-0.6	1.00
520113		-64.2	-65.7		-1.5	
520203	-111.3	-112.9	-111.8	-0.5	1.1	0.12
520402	-286.2	-291.7	-292.5	-6.3	-0.8	-1.24
520750	-290.9	-294.5	-294.6	-3.7	-0.1	-0.32
520802	-242.5	-243.9	-243.2	-0.7	0.7	-0.06
520803			-327.8			
528302		-299.6	-298.5		1.1	0.00
608201	-173.4	-175.3	-176.1	-2.7	-0.8	-0.12
608304		-80.7	-81.4		-0.7	
608501	-60.9	-65	-64.6	-3.7	0.4	-0.24
616201		-144	-144.6		-0.6	0.00
616301		-179.1	-182		-2.9	-0.98
616352		-182.2	-188.9		-6.7	-0.86
616601	-217	-260.9	-264.5	-47.5	-3.6	-5.76
616801		-218.1	-219.6		-1.5	-0.14
616904		-331.2	-324.1		7.1	-8.42
624203	-240.6	-245.1	-245.6	-5.0	-0.5	-0.68
624304	-280.6	-302.8	-304.5	-23.9	-1.7	-2.54
624357		-366.8	-359		7.8	-5.62
624601	-206.4	-206.1	-206.9	-0.5	-0.8	-0.28
624602	-327.1	-325.7	-326.2	0.9	-0.5	-0.70
624801	-110.1	-111.7	-112	-1.9	-0.3	-0.20
624901	-355	-357.3	-357.1	-2.1	0.2	-0.15

Wheeler OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
528303	-296.5	-296.7	-297.3	-0.8	-0.6	-0.04
528602	-108.4	-115	-116	-7.6	-1	-1.3
528902	-25.4	-33.3	-34.7	-9.3	-1.4	-1.43
528906		-170.6	-171.1		-0.5	-0.44
529201	-141.6	-139.6	-140.4	1.2	-0.8	0.94
529301	-123.4	-122.7	-123.3	0.1	-0.6	0.68
529302	-108.5	-119	-107.2	1.3	11.8	
529307	-119.8	-120.6	-120.6	-0.8	0	0.06
529404		-70.9	-67.9		3	0.1
529609	-57.4	-58	-57.9	-0.5	0.1	0.6
529711		-68.1	-68.84		-0.7	
529714	-5.2	-9.8	-5.5	-0.3	4.3	
529812	-20	-22.8	-23.1	-3.1	-0.3	-0.18
529817	-66.9	-71.8	-71.2	-4.3	0.6	0.4
529818	-51.5	-56.3	-55.6	-4.1	0.7	0.82
529820		-76.6	-76.7		-0.1	0.4
530124		-25.1	-25.2		-0.1	0.22
530304	-87.2	-88.2	-89.6	-2.4	-1.4	0.54
530501	-105	-108.5	-106.6	-1.6	1.9	0.02
530707	-12.2	-13.6	-14.2	-2	-0.6	-0.2
530801	-64.6	-66.3	-66.6	-2	-0.3	0.06
530903	-76.1	-78.3	-81.4	-5.3	-3.1	-0.85
531201	-109.2	-108.5	-108.4	0.8	0.1	0.48
531307	-50.6	-55	-52.5	-1.9	2.5	-0.26
531406	-78.7	-88.4	-83.5	-4.8	4.9	-1.54
531504	-33.4	-35	-33.9	-0.5	1.1	-0.06
531703	-94.2	-98.7	-99.2	-5	-0.5	-1.24
531904		-78.3	-79.9		-1.6	
532107	-50.7	-52.6	-51.7	-1	0.9	0
532352		-94	-95.6		-1.6	0.78
532601		-69.5	-70.5	-71	-1	-0.78
532801	0	-0.93	0	0	0.93	0.2
532804	-17.2	-17.1	-16.5	0.7	0.6	0.08
532904	-62.4	-63.5	-62.9	-0.5	0.6	-0.22
536301	-121	-136.8	-139	-18	-2.2	-0.78
537101	-78.1	-83.6	-83.5	-5.4	0.1	0.26
537102	-52.7	-57.2	-56.8	-4.1	0.4	0
537311	-21.6	-21.8	-26.1	-4.5	-4.3	-0.32
537505	-60.8	-62.9	-63	-2.2	-0.1	0.04
538101	-4.1	-5.3	-7	-2.9	-1.7	-0.3
538108	-120.7	-125.9	-126.7	-6	-0.8	-0.84
538212		-66.7	-66.2		0.5	
538253		-96.1	-94.7		1.4	0.08
538306		-53.3	-52.6		0.7	0.26
538408	-88.5	-90.2	-91	-2.5	-0.8	-0.04
538409	-69.7	-80.9	-81.7	-12	-0.8	0.68
538510	-28.8	-32	-35.3	-6.5	-3.3	-0.04
538512	-41	-43.4	-44.9	-3.9	-1.5	-0.63

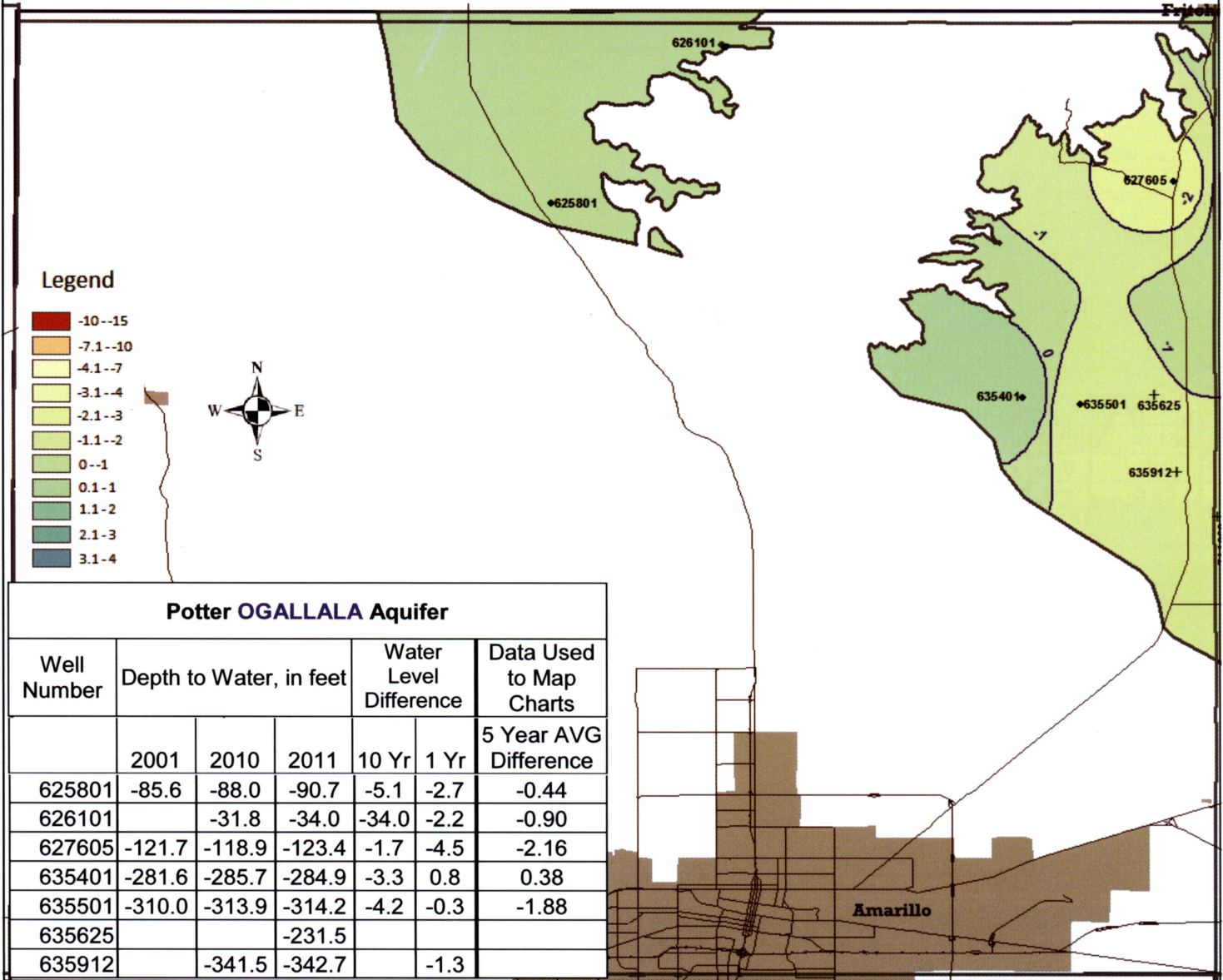
Wheeler County OGALLALA Aquifer 5 Year Average Change



Wheeler OGALLALA Aquifer Cont'd						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
538610	-62.5	-66.8	-66.5	-4	0.3	-0.28
539110		-74.2	-73.9		0.3	0.24
539408	-5.4	-5.4	-5.1	0.3	0.3	0.44
539504	-38.5	-42.5	-39.9	-1.4	2.6	1.56
539905	-31.9	-36.3	-33.8	-1.9	2.5	0.42
544305	-84.3	-87	-87.3	-3	-0.3	0.87
544906	-107.2	-106.4	-107.6	-0.4	-1.2	-0.22
544910		-91.5	-91.8		-0.3	
545103	-6.6	-6.6	-6.5	0.1	0.1	0.04
545204	-114.3	-112.9	-113.4	0.9	-0.5	0.08
545408	-114	-106	-108.2	5.8	-2.2	-0.36
545505	-99.3	-100.9	-103.2	-3.9	-2.3	0.7

Wheeler OGALLALA Aquifer Cont'd						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
545907	-45.4	-49.1	-46.1	-0.7	3	1.18
552303	-40.2	-42	-43.2	-3	-1.2	-0.16
552307	-78.8	-75.3	-75.7	3.1	-0.4	-0.44
553102	-57.1	-63.6	-63.7	-6.6	-0.1	-0.56
553205		-29.5	-28.9		0.6	
553302	-21.1	-24.6	-23.1	-2	1.5	-0.1
553307			-38.5			
553404	-8.6	-7.4	-7.9	0.7	-0.5	-0.08
553450	-38.8	-37.9	-39.6	-0.8	-1.7	-0.12
553507		-37.9	-36.9		1	

Northeast Potter County OGALLALA Aquifer 5 Year Average Change

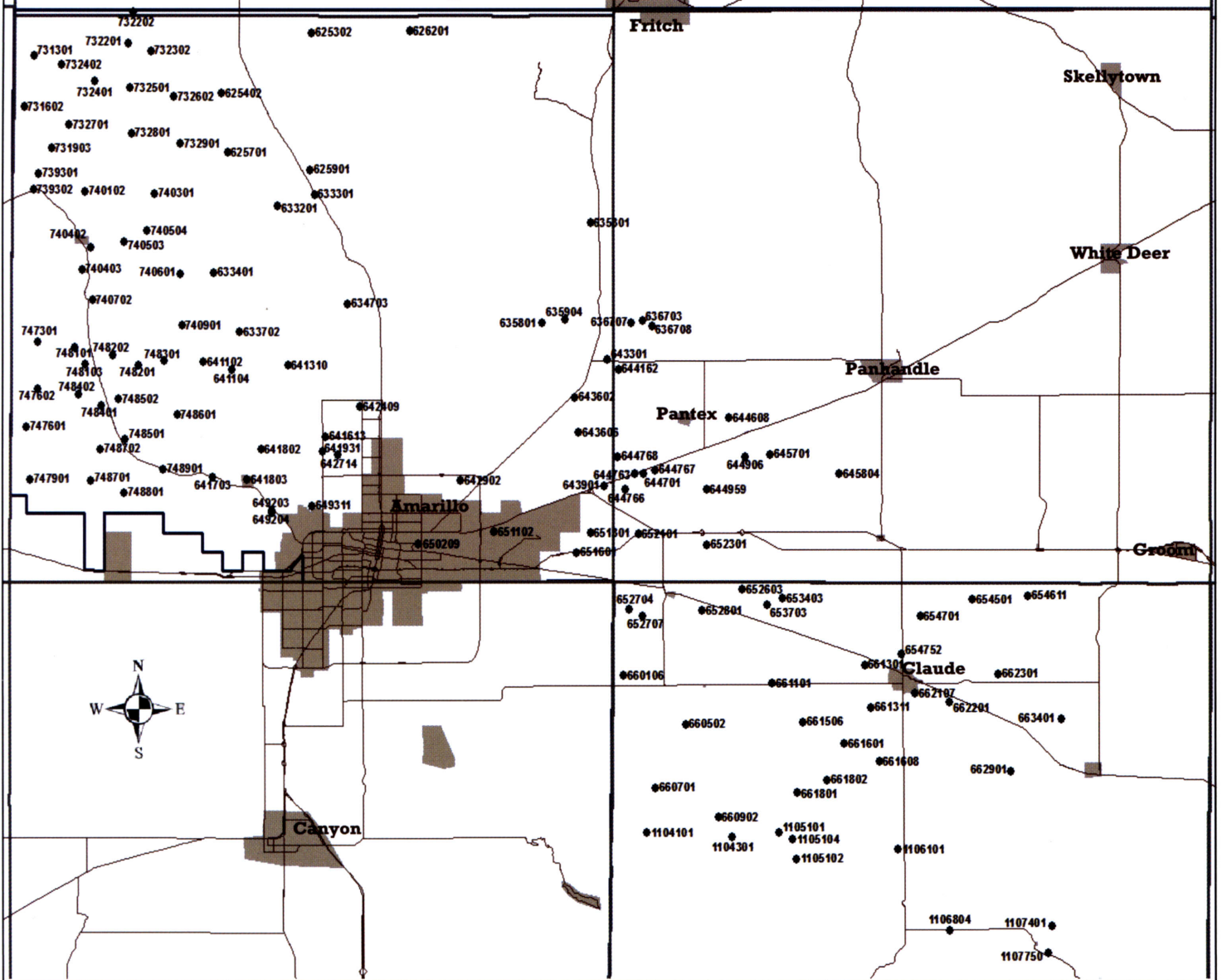


Potter OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Map Charts
	2001	2010	2011	10 Yr	1 Yr	5 Year AVG Difference
625801	-85.6	-88.0	-90.7	-5.1	-2.7	-0.44
626101		-31.8	-34.0	-34.0	-2.2	-0.90
627605	-121.7	-118.9	-123.4	-1.7	-4.5	-2.16
635401	-281.6	-285.7	-284.9	-3.3	0.8	0.38
635501	-310.0	-313.9	-314.2	-4.2	-0.3	-1.88
635625			-231.5			
635912		-341.5	-342.7		-1.3	

Armstrong, Carson and Potter Counties DOCKUM Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		
	2001	2010	2011	10 Yr	1 Yr	
625302	-90.8	-92.6	-92.1	-1.3	0.5	
625402	-95.9	-95.7	-96.2	-0.3	-0.5	
625701		-160.9	-154.0		6.9	
625901	-166.9	-165.2	-170.7	-3.8	-5.5	
626201		-111.8	-112.2		-0.4	
630901		-329.9	-330.6		-0.7	
633201	-85.1	-85.6	-85.1	0.0	0.5	
633301	-61.2	-67.1	-66.5	-5.3	0.6	
633401	-63.4		-54.1	9.3		
633702	-109.2	-99.8	-99.8	9.4	0.0	

Armstrong, Carson and Potter Counties DOCKUM Aquifer Cont'd						
Well Number	Depth to Water, in feet			Water Level Difference		
	2001	2010	2011	10 Yr	1 Yr	
634703	-87.2	-85.7	-86.2	1.0	-0.5	
635301	-297.0	-302.4	-303.0	-6.0	-0.6	
635801	-136.9	-131.3	-130.7	6.2	0.6	
635904			-247.5			
636703	-481.0	-488.0	-483.2	-2.2	4.8	
636707	-466.0	-483.0	-480.4	-14.4	2.6	
636708			-506.1			
641102	-102.7	-102.8	-102.4	0.3	0.4	
641104	-139.0		-165.1	-26.1		
641310	-37.2	-43.5	-42.9	-5.7	0.6	

Armstrong, Carson and Potter Counties **DOCKUM** Aquifer 5 Year Average Change



**Armstrong, Carson and Potter Counties
DOCKUM Aquifer Cont'd**

Well Number	Depth to Water, in feet			Water Level Difference	
	2001	2010	2011	10 Yr	1 Yr
641613	-87.3	-104.5	-104.2	-16.9	0.3
641703	-305.2	-305.7	-304.0	1.2	1.7
641802	-85.6	-98.8	-105.6	-20.0	-6.8
641803		-133.2	-134.5		-1.3
641931		-67.4	-68.1		-0.7
642409		-68.1	-69.7		-1.6
642714		-88.5	-88.5		0.0
642902	-228.7		-226.6	2.1	
643301	-486.0	-486.0	-487.3	-1.3	-1.3
643602	-320.3	-319.0	-319.3	1.0	-0.3

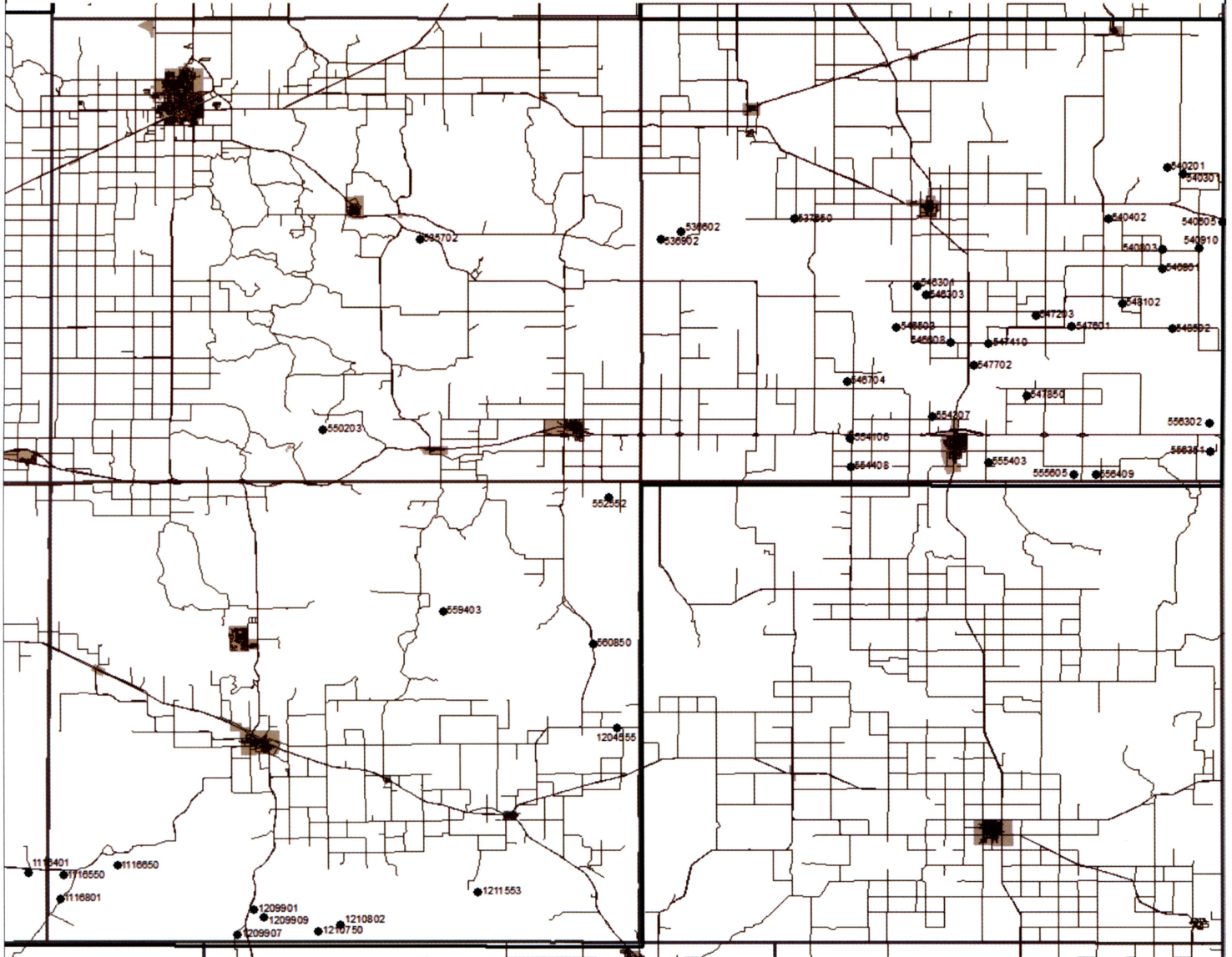
**Armstrong, Carson and Potter Counties
DOCKUM Aquifer Cont'd**

Well Number	Depth to Water, in feet			Water Level Difference	
	2001	2010	2011	10 Yr	1 Yr
643606		-268.2	-268.5		-0.3
643901	-217.0		-207.3	9.7	
644162		-484.9	-486.0		-1.1
644608	-417.9	-428.8	-460.6	-42.7	-31.8
644701	-252.3	-249.9	-250.6	1.7	-0.7
644763	-240.0	-238.9	-237.3	2.7	1.6
644766	-225.6	-232.3	-224.4	1.2	7.9
644767	-264.7	-265.4	-261.8	2.9	3.6
644768		-268.9	-268.0		0.9
644906	-348.9	-349.3	-349.6	-0.7	-0.3

Armstrong, Carson and Potter Counties DOCKUM Aquifer Cont'd					
Well Number	Depth to Water, in feet			Water Level Difference	
	2001	2010	2011	10 Yr	1 Yr
644959	-222.1	-221.3	-220.7	1.4	0.6
645701	-387.6	-388.2	-388.4	-0.8	-0.2
645804	-321.3	-325.7	-326.1	-4.8	-0.4
649203		-107.5	-108.9		-1.4
649204		-128.0	-126.7		1.3
649311	-51.5	-56.0	-58.4	-6.9	-2.4
650209	-235.6	-203.2	-208.8	26.8	-5.6
651102	-177.9	-176.8	-172.9	5.0	3.9
651301	-225.0	-208.6	-208.3	16.7	0.3
651601	-196.8	-193.4	-193.1	3.7	0.3
652101	-189.9	-191.3	-191.4	-1.5	-0.1
652301	-200.1	-199.2	-199.1	1.0	0.1
652603		-170.0	-170.1		-0.1
652704		-172.2	-172.7		-0.5
652707		-219.8	-223.0		-3.2
652801	-171.3	-173.2	-174.4	-3.1	-1.2
653403	-180.9	-181.7	-181.3	-0.4	0.4
653703	-182.9	-183.6	-185.0	-2.1	-1.4
654501		-252.0	-252.8		-0.8
654611	-311.1	-316.2	-316.7	-5.6	-0.5
654701	-256.5	-252.7	-252.7	3.8	0.0
654752		-184.1	-184.8		-0.7
660106	-220.5	-214.2	-210.0	10.5	4.2
660502	-151.4	-152.1	-152.4	-1.0	-0.3
660701	-186.8	-186.1	-185.3	1.5	0.8
660902	-214.1	-210.4	-211.6	2.5	-1.2
661101	-162.2	-152.4	-152.4	9.8	0.0
661301	-158.1	-157.4	-157.5	0.6	-0.1
661311	-174.2	-175.3	-175.7	-1.5	-0.4
661506			-156.7		
661601	-170.2	-169.0	-169.4	0.8	-0.4
661608	-164.1	-165.5	-163.4	0.7	2.1
661801	-163.0	-163.6	-162.8	0.2	0.8
661802	-161.2	-155.7	-155.9	5.3	-0.2
662107		-188.6	-184.3		4.3
662201	-186.1	-186.7	-186.6	-0.5	0.1
662301	-287.0	-284.2	-284.5	2.5	-0.3
662901		-218.8	-218.3		0.5
663401	-194.2	-195.5	-194.6	-0.4	0.9
731301		-22.1	-22.0		0.1
731602		-191.3	-193.7		-2.4
731903		-24.2	-24.8		-0.6
732201			-163.3		
732202			-68.0		
732302		-54.0	-53.4		0.6

Armstrong, Carson and Potter Counties DOCKUM Aquifer Cont'd					
Well Number	Depth to Water, in feet			Water Level Difference	
	2001	2010	2011	10 Yr	1 Yr
732401		-37.4	-62.4		-25.0
732402		-4.2	-6.9		-2.7
732501	-60.2	-63.5	-60.8	-0.6	2.7
732602	-41.1	-40.7	-39.2	1.9	1.5
732701		-37.0	-33.2		3.8
732801		-132.3	-133.2		-0.9
732901		-169.8	-171.0		-1.2
739301	-3.6	-5.1	-5.1	-1.5	0.0
739302	-131.0		-130.8	0.2	
740102		-25.0	-26.3		-1.3
740301		-165.4	-165.5		-0.1
740402	-84.1	-85.9	-86.0	-1.9	-0.1
740403	-59.5	-60.9	-61.0	-1.5	-0.1
740503	-30.4	-31.4	-31.1	-0.7	0.3
740504		-25.4	-26.6		-1.2
740601	-64.5	-75.6	-76.3	-11.8	-0.7
740702		-232.2	-233.7		-1.5
740901	-125.5		-131.0	-5.5	-131.0
747301	-33.9	-44.3	-43.2	-9.3	1.1
747601	-38.0	-41.9	-43.2	-5.2	-1.3
747602	-97.7	-85.5	-85.0	12.7	0.5
747901	-116.0	-117.6	-117.9	-1.9	-0.3
748101	-114.1	-109.3	-110.1	4.0	-0.8
748103		-40.0	-40.1		-0.1
748201	-148.1	-137.6	-97.4	50.7	40.2
748202		-7.8	-9.4		-1.6
748301	-68.7	-76.4	-74.6	-5.9	1.8
748401	-49.8	-45.6	-46.4	3.4	-0.8
748402	-23.8	-26.8	-29.5	-5.7	-2.7
748501	-44.0	-41.0	-57.8	-13.8	-16.8
748502	-76.2	-82.8	-40.4	35.8	42.4
748601	-135.6	-129.1	-126.4	9.2	2.7
748701	-82.0	-82.5	-82.5	-0.5	0.0
748702	-44.4	-45.1	-45.0	-0.6	0.1
748801	-40.2	-40.1	-42.3	-2.1	-2.2
748901	-96.0		-101.5	-5.5	
1104101	-200.2	-199.8	-201.8	-1.6	-2.0
1104301	-302.8	-302.4	-301.7	1.1	0.7
1105101	-189.7	-183.4	-182.7	7.0	0.7
1105102	-160.2	-161.2	-161.6	-1.4	-0.4
1105104		-174.8	-174.0		0.8
1106101	-176.1	-175.0	-173.8		1.2
1106804		-220.3	-216.3		4.0
1107401	-118.5	-118.4	-117.4	1.1	1.0
1107750		-121.6	-122.4		-0.8

Armstrong, Donley, Gray and Wheeler Counties WHITEHORSE Aquifer Well Locations



**Armstrong, Carson, Gray and Wheeler Counties
WHITEHORSE/BLAINE Aquifer**

Well Number	Depth to Water, in feet			Water Level Difference	
	2001	2010	2011	10 Yr	1 Yr
535702			-23.7		
536602	-10.2	-35.7	-24.8	-14.6	10.9
536902	-28.6	-23.4	-7.6	21.0	15.8
537650	-9.4	-10.0	-11.3	-1.9	-1.3
540201		-5.2	-3.4		1.8
540301	-33.9	-32.1	-26.6	7.3	5.5
540402	-33.0	-39.5	-31.5	1.5	8.0
540605	-47.1	-42.4	-43.4	3.7	-1.0
540801	-17.9	-18.2	-17.7	0.2	0.5
540803	-5.5	-6.0	-6.2	-0.7	-0.2
540910	-36.5	-48.6	-44.8	-8.3	3.8

**Armstrong, Carson, Gray and Wheeler Counties
WHITEHORSE/BLAINE Aquifer Cont'd**

Well Number	Depth to Water, in feet			Water Level Difference	
	2001	2010	2011	10 Yr	1 Yr
546301	-7.1	-13.0	-9.7	-2.6	3.3
546303	-6.6	-10.0	-9.1	-2.5	0.9
546503	-34.2	-38.1	-36.8	-2.6	1.3
546608		-35.2	-31.1		4.1
546704	-90.0	-104.1	-99.5	-9.5	4.6
547203	-18.3		-21.8	-3.5	
547410	-24.5	-25.4	-23.7	0.8	1.7
547601	-48.4	-51.0	-50.6	-2.2	0.4
547702	-33.3	-39.6	-36.5	-3.2	3.1
547850		-97.3	-97.6	-97.6	-0.3
548102	-37.9	-45.9	-43.6	-5.7	2.3

2010-2011 Elementary Education Summary

Educating future generations about the important role water plays in our lives and the necessity of water conservation is essential to the preservation of our groundwater. Since 1999, the staff at Panhandle Groundwater Conservation District has travelled across the District to speak to elementary children about water issues and conservation techniques.

Our 5th grade education program covers water conservation, the water cycle, aquifer knowledge, playa lakes and sources of water. We also have an underground flow model that visually demonstrates what the aquifer looks like, how water flows beneath the Earth and how wells work. At the end of the presentation, students are given a water conservation kit and a water wheel in hopes that they will share their knowledge and practice water conservation at home. During the 2010-2011 school year, we covered 3,591 miles giving 93 water conservation presentations to 84% of the schools within the District. We reached 2,248 fifth grade students and the total cost of the program per student including gas, salaries, water kits and water wheels was \$10.65.

This year marked the seventh year that the District has sponsored the "Major Rivers" program. "Major Rivers" is a TAKS affiliated, seven lesson course that includes student workbooks, teacher lesson plans, and fun educational experiments. It was developed by teachers and the Texas Water Development Board to introduce fourth graders to Texas' major water resources and how to use them wisely. In September 2010, we delivered 2,634 fourth grade student packets to District schools.



4th Graders learn about water at the Carson County Ag Fair

Our staff also reached an additional 1060 students through area water festivals, science days and out-of-district presentations. At Earthfest 2011, we unveiled our new Water Warrior mascot. Kids of all ages can recite the Water Warrior pledge and get a temporary tattoo to show the world their commitment to saving water.

The 2010-2011 education program was a lot of fun and we are looking forward to reaching more students this fall.

Armstrong, Carson, Gray and Wheeler Counties WHITEHORSE/BLAINE Aquifer Cont'd					
Well Number	Depth to Water, in feet			Water Level Difference	
	2001	2010	2011	10 Yr	1 Yr
548502	-29.3	-33.2	-32.6	-3.3	0.6
550203			-55.2		
552552		-96.5	-96.8		-0.3
554106	-48.6	-56.8	-54.2	-5.6	2.6
554307		-53.4	-48.2		5.2
554408	-83.5	-86.3	-86.5	-3.0	-0.2
555403	-77.9		-78.6	-0.7	
555605	-83.1	-85.7	-83.9	-0.8	1.8
556302	-1.0	-7.0	-7.4	-6.4	-0.4
556351		-60.7	-62.3		-1.6
556409	-44.1	-50.6	-49.3	-5.2	1.3
559403	-79.9	-82.4	-72.7	7.2	9.7
560850	-118.1	-98.5	-98.4	19.7	0.1
1116401	-72.1	-57.4	-67.1	5.0	-9.7
1116550	-121.4	-119.6	-120.1	1.3	-0.5
1116650	-5.5	-6.2	-6.0	-0.5	0.2
1116801	-46.5	-49.5	-47.7	-1.2	1.8
1204555	-2.0	-5.5	-5.1	-3.1	0.4
1209901	-60.7	-62.6	-62.1	-1.4	0.5
1209907		-35.5	-36.1		-0.6
1209909		-156.0	-155.5		0.5
1210750		-55.9	-55.5		0.4
1210802	-93.4	-131.2	-125.6	-32.2	5.6
1211553	-22.3	-23.8	-23.1	-0.8	0.7

Well Permit Reminder

Paperwork **MUST** be filled out prior to drilling wells. Permits and registrations require a \$100 refundable deposit. Panhandle Groundwater Conservation District rules mandate that landowners sign all water well application forms. All well permits must be spaced from property lines and other area wells by a District employee prior to drilling.

Please call before you drill. Contact Anita Haiduk at 806-883-2501 or ahaiduk@pgcd.us with any questions.



Earth Day 2011

On Saturday, April 16, local families came out to celebrate Earth Day at Wildcat Bluff in Amarillo. Panhandle Groundwater Conservation District was delighted to welcome our first volunteer, Panhandle High School sophomore Kalli Looten. Kalli jumped into the day's festivities by educating children about water conservation through our new Water Warrior program. She and staffers applied Water Warrior temporary tattoos to children who pledged to turn off the faucet when brushing their teeth and to take shorter showers.



Cole Camp recruits Water Warriors

At other booths, children were given the opportunity to plant cucumbers or squash and received packets of ladybugs. Children and adults alike crowded around the face painting booth and many were excited to take home one of the tree seedlings that were given away to the first to arrive. Live music throughout the day added the crowning touch.

The first Earth Day was observed on April 22, 1970.

Texas Water Day at the Capitol

April 27th was Texas Water Day at the Capitol and Panhandle Groundwater Conservation District was excited to participate. Exhibits from across the State of Texas proudly displayed water conservation education efforts and items ranging from gardening gloves to shower heads to lawn gauges were freely distributed.

Enlightening and informative presentations regarding water issues in Texas were delivered by Dr. Robert Mace, Deputy Executive Administrator of the Texas Water Development Board, and Dr. Michael Webber, Associate Director of the Center for International Energy and Environmental Policy. Author James Workman discussed his latest novel, *Heart of Dryness, How the Last Bushmen Can Help Us Endure the Coming Age of Permanent Drought*, and its relevance to our current state of drought. Mr. Workman also emphasized the importance of redefining the consumer relation to water and spoke of the diamond-water paradox. The paradox is the contradiction that while life can exist without diamonds, it cannot exist without water; however, diamonds are worth much, much more than water.

A resounding success, the day not only provided an opportunity for leaders in water conservation efforts to gather and share ideas, but it also highlighted the vital importance of public education.

CRMWA/MESA continued from page 1



MESA CEO T. Boone Pickens, MESA General Counsel Robert Stillwell, CRMWA General Manager Kent Satterwhite and CRMWA President Norman Wright shake hands after signing the contract.

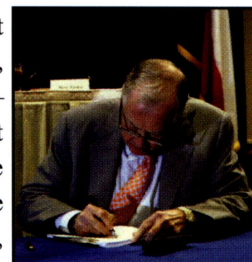
O'Donnell, Pampa, Plainview, Slaton and Tahoka with water for the next few hundred years. Mr. Pickens will retain the rights to the water beneath his Roberts County ranch.

For years, many have feared that the water would be transported downstate to San Antonio; however, after looking at Lake Meredith and seeing that it was nearly gone, Pickens said he was confident that selling the water locally was the right thing to do. According to CRMWA, Lake Meredith began delivering water to its member cities in 1968 and shortly thereafter reached record depths of 101.85 feet in April of 1973. Decades of pumping it for municipal use coupled with the extreme drought have dropped it to the meager level of 35.14 feet as of June 30. Earlier this year, CRMWA was prompted to switch off the pumping and turn to groundwater from Roberts County to give the lake a chance to recover before the increased summer demand hit the pumps.

Water (and the lack of) has been making the headlines and the water rights deal couldn't have occurred at a better time. In addition to the depleting water supply, Texas A&M recently confirmed that Texas has endured the driest February through June since record keeping began in 1895. Many cities have been forced to issue water restrictions and Amarillo is currently asking for volunteer rationing with a daily target water usage of 74 million gallons or less.

"The first time I had the water it was very exciting," said Mr. Pickens, "and now I'm experiencing two things – the first day I got it I was excited. I want you to know now that I'm selling the water and it's like the guy who had the motorboat. The first day was a great day, but when he got rid of the motorboat, it was a greater day.

"The water is staying here," he continued, "the water is where it should be."



T. Boone Pickens Signs contract

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Panhandle Water News is published quarterly. Subscriptions are free, upon request.



2011 Ogallala 5 Year Average Decline
 Based on Measurements Taken 2006-2011
 Contour Interval = 1 Foot

