



Panhandle Water News

JULY 2016

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PGCD to Host Upcoming Conference

Panhandle Groundwater Conservation District is excited to announce the dates for the upcoming Groundwater Districts Management Association's Annual Conference. PGCD is hosting the conference in Fort Worth on January 9-11, 2017. Registration begins soon with a discount for early registration. The conference covers a variety of issues with water conservation being the focus. Those interested in attending should contact the District at 806-883-2501.

SAVE *the* DATE

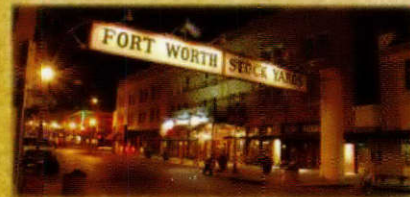
GMDA Winter Conference January 9 - 11, 2017

FORT WORTH, TEXAS



A block of rooms are reserved for the conference under the Groundwater Management Districts Association at a rate of \$159.00 per night. The **Hyatt Place** is located in the **Fort Worth Stockyards**. Call the Hyatt Place today to take advantage of the special rate between now and December 9, 2016.

Join us for a **Welcoming Registration Reception** on Monday, January 9th from 5:00 to 7:00 p.m. (location to be announced soon). Please take this time to pick up your registration packet and also for suggestions for dinner venues close to the hotel.



Formal Agenda & Registration Details coming soon!

The weekend after the conference begins the **Ft. Worth Stockshow & Rodeo**. If you are interested in staying, plans for booking a hotel should be made as soon as possible - hotels in the Ft. Worth area are already booking & filling up due to the event.

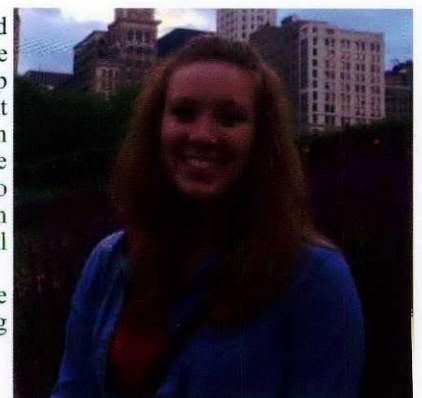
PGCD Welcomes Summer Intern

The District is excited to welcome Amy Weinheimer as our summer intern.

Amy is the daughter of Nick Weinheimer from Groom. She is currently attending West Texas A&M in Canyon and will be graduating in December with a bachelor's degree in Plant, Soil and Environmental Science and a minor in Ag Business. Amy is a member of the WT crops judging team, secretary of the Farm & Ranch Club, national secretary of the

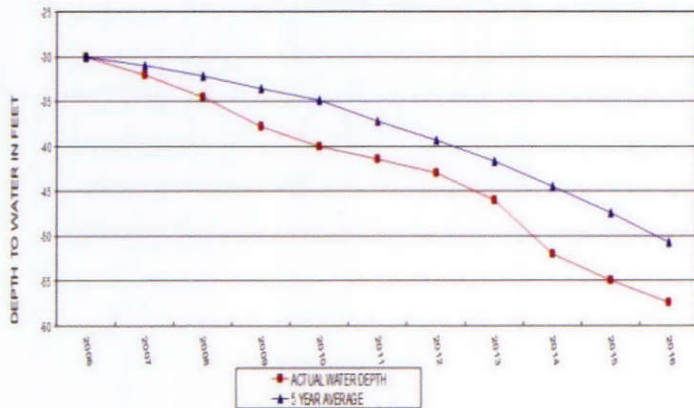
Students of Agronomy Soils and Environmental Science organization and on the leadership team at the Catholic Student Center. Her plans after graduation are undecided but she is passionate about agriculture and "wants to help farmers increase production while being mindful of the natural resources we have".

We are happy to provide Amy with a valuable learning experience this summer.





Explanation of 5 Year AVG Change Maps and Charts



Year	Depth	Static Change	5 Year AVG	5 Year AVG Change
2006	-30.0	-1.8	-30.0	
2007	-32.0	-2.0	-31.0	-1.0
2008	-34.5	-2.5	-32.2	-1.2
2009	-37.8	-3.2	-33.6	-1.4
2010	-40.0	-2.2	-34.8	-1.3
2011	-41.5	-1.5	-37.2	-2.3
2012	-43.0	-1.5	-39.4	-2.2
2013	-46.0	-3.0	-41.6	-2.3
2014	-52.0	-6.0	-44.5	-2.8
2015	-55.0	-3.0	-47.5	-3.0
2016	-57.5	-2.5	-50.7	-3.2

This is how the five year average change is calculated using the sample hydrograph above. The 2015 five year average -47.50 in red was calculated by summing the 2011-2015 depth to water measurements. This sum was then divided by five to get a five year average of -47.50 in 2015. The 2016 five year average -50.70 in blue was calculated by summing the 2012-2016 depth to water measurements. This sum was divided by five to get a five year average of -50.70 in 2016. The five year average change for 2015 was calculated by subtracting the 2015 five year average -47.50 from the 2016 five year average -50.70 to reach a value of -3.20 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 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 2011-2015 and 2012-2016. All five year average values were calculated using a hydrograph (example shown above). Negative and positive values are portrayed on the maps.

Explanation Continued

The Dockum and Whitehorse Aquifer maps show only well locations. The charts throughout this newsletter show the depth to water measurements for 2006, 2015 and 2016, differences of the annual and 10 year measurements, and the five year average change, where available for each well.

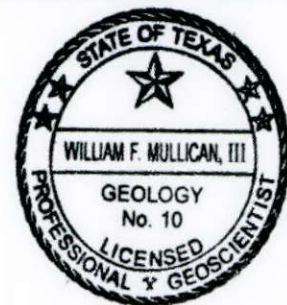
Ogallala Aquifer Water Level Measurements

Panhandle Groundwater Conservation District takes measurements on a network of 800+ wells throughout the District each year to determine yearly aquifer changes in water levels. The measurements are taken not only to determine the water level in the aquifer, but also to collect data, provide information for future planning and to determine IRS depletion allowances.

The winter water level measurements play a critical role in in gauging our compliance with the 50/50 goal, to have 50 percent of the water remaining in the aquifer 50 years from now, by allowing us to monitor the decline of saturated thickness in the aquifer over the past year.

Knowing the amount of decline drives enforcement of study areas in places where water levels have dropped below the allowed annual 1.25 percent of saturated thickness. When study areas go into place, the landowner is notified and water use is monitored more frequently by the District. If the decline levels improve it can come out of a study area; however, if decline continues to exceed the allowable limit, the study area could be designated a conservation area by the District which may result in reductions of the maximum annual production rate.

Depth to water level measurements shown in this publication were taken from November 2015 to February 2016. The measurements are taken during these winter months when demands for irrigation are lower so that a more representative static water level can be obtained. Every effort is made to capture this measurement when levels have recovered or stabilized.

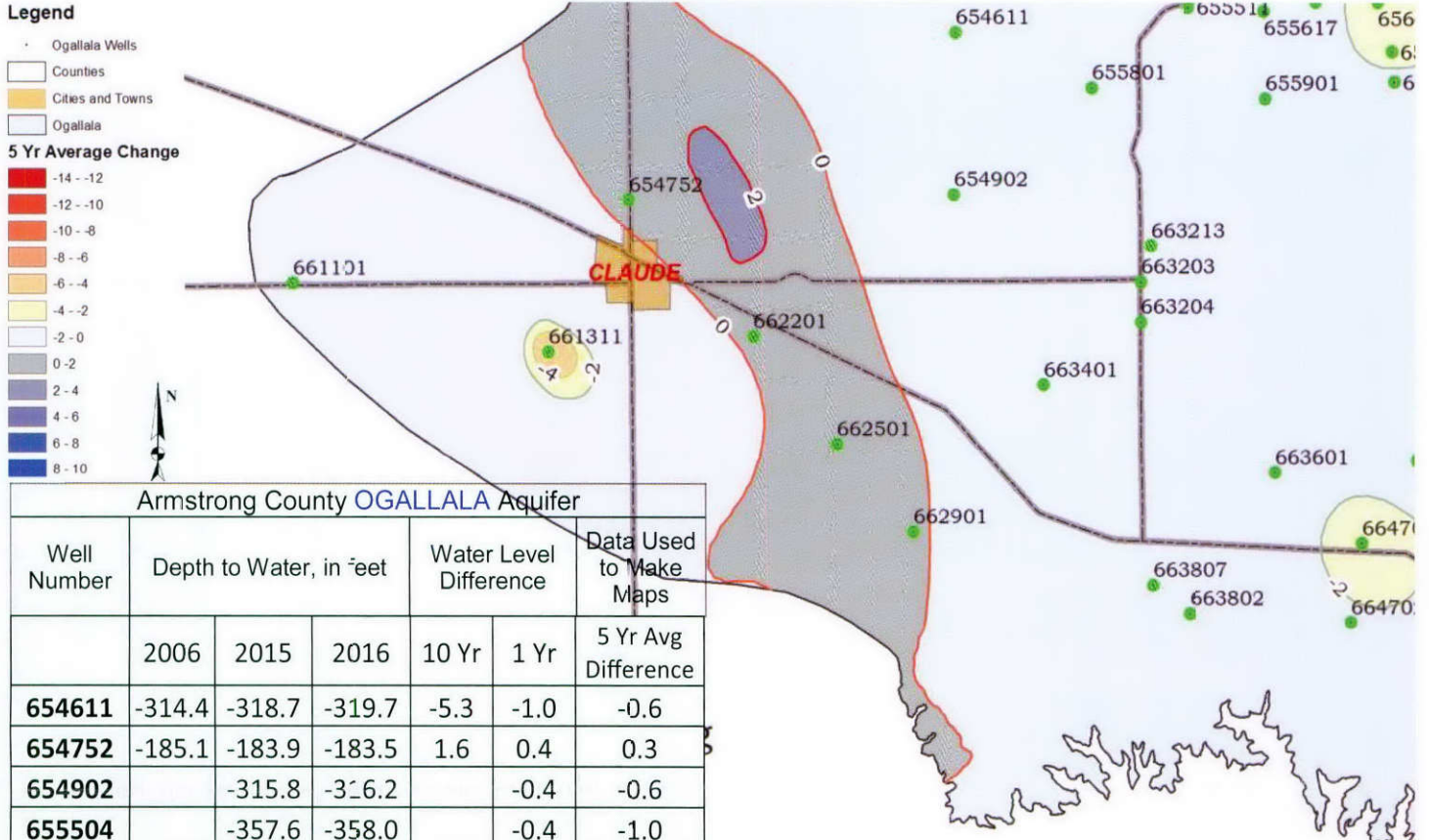


William F. Mullican III

The groundwater-related technical information (text, maps, and hydrographs) appearing in this newsletter was reviewed and approved by Professional Geoscientist William F. Mullican III.



Northeast Armstrong County **OGALLALA** Aquifer 5 Year Average Change

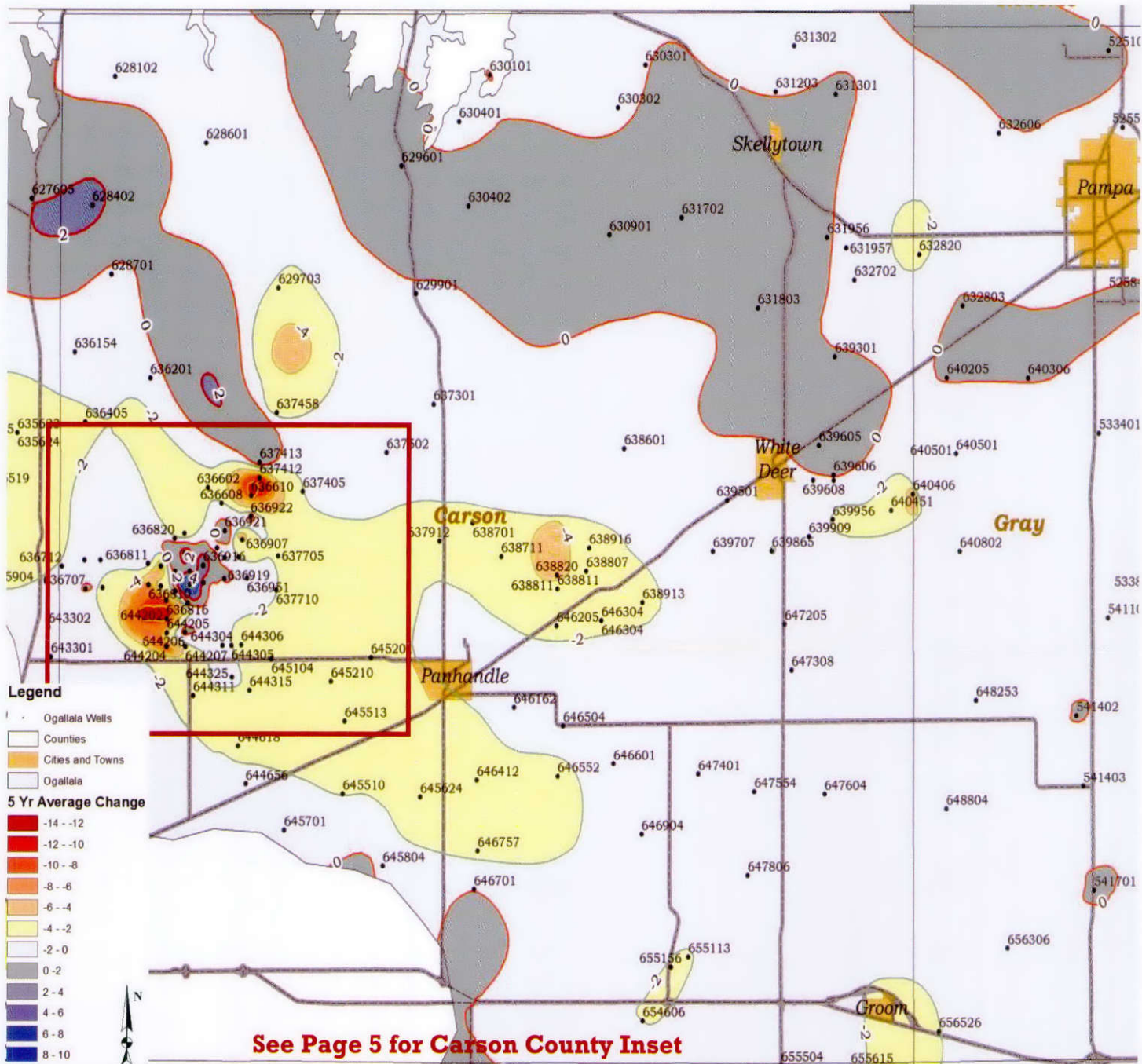


Armstrong County OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps 5 Yr Avg Difference
	2006	2015	2016	10 Yr	1 Yr	
654611	-314.4	-318.7	-319.7	-5.3	-1.0	-0.6
654752	-185.1	-183.9	-183.5	1.6	0.4	0.3
654902		-315.8	-316.2		-0.4	-0.6
655504		-357.6	-358.0		-0.4	-1.0
655511	-353.1	-350.8	-350.5	2.6	0.3	-0.9
655615	-351.3	-361.0	-360.1	-8.8	0.9	-1.2
655617	-349.3	-361.7	-358.3	-9.0	3.4	-0.7
655801	-134.7	-139.0	-140.3	-5.6	-1.3	-0.8
655901	-248.8	-249.4	-250.4	-1.6	-1.0	-0.5
656404	-344.9	-358.3	-358.7	-13.8	-0.4	-3.0
656701	-344.9		-360.5	-15.6		-2.9
656702	-334.9	-340.1	-341.5	-6.6	-1.4	-1.2
661101	-160.9	-154.8	-153.4	7.5	1.4	-0.2
661311	-175.5	-194.7	-197.9	-22.4	-3.2	-5.6
662201	-187.3	-184.5	-185.5	0.8	-2.0	
662501	-185.7	-183.0	-182.2	3.5	0.8	0.2
662901	-222.1		-213.2	3.9		
663203	-173.1	-178.0	-175.4	-2.3	2.6	-1.4
663204		-172.1	-172.7		-0.6	-1.6
663213		-162.0	-161.0		1.0	-0.5
663401	-194.4	-197.2	-196.9	-2.5	0.3	-0.5
663601	-95.5	-96.3	-98.1	-2.6	-1.8	-1.1
663802	-204.9	-204.7	-204.5	0.4	0.2	-0.8
663807			-186.1			
664404	-117.7	-121.5	-121.0	-3.3	0.5	-1.2
664701	-129.0	-147.5	-147.5	-18.5		-2.5
664702	-142.2	-156.8	-155.9	-13.7	0.9	-1.7

Carson County OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps 5 Yr Avg Difference
	2006	2015	2016	10 Yr	1 Yr	
628102	-205.2	-213.7	-210.8	-5.6	2.9	-0.4
628402	-207.0	-201.6	-193.4	13.6	8.2	2.4
628601	-69.0	-68.4	-67.8	1.2	0.6	-0.5
628701	-255.8	-256.1	-255.8		0.3	-0.3
629601	-52.8	-54.1	-49.8	3.0	4.3	1.0
629703	-280.9	-294.3	-292.5	-11.6	1.8	-2.3
629901	-81.6	-84.0	-83.6	-2.0	0.4	-0.1
630101	-29.4	-30.5	-28.3	1.1	2.2	0.1
630301	-150.1	-151.6	-151.4	-1.3	0.2	
630302	-229.2	-225.9	-226.2	3.0	-0.3	-0.1
630401	-190.3	-204.2	-203.4	-13.1	0.8	-0.1
630402	-119.3	-119.9	-119.8	-0.5	0.1	0.5
630901	-327.7	-328.6	-328.7	-1.0	-0.1	0.5
631203	-299.1	-299.9	-300.1	-1.0	-0.2	
631301	-122.9	-123.2	-122.9		0.3	0.1
631302		-249.0	-249.6		-0.6	-0.4
631701	-389.9	-390.8	-390.0	-0.1	0.8	
631702	-276.4	-281.0	-279.3	-2.9	1.7	0.7



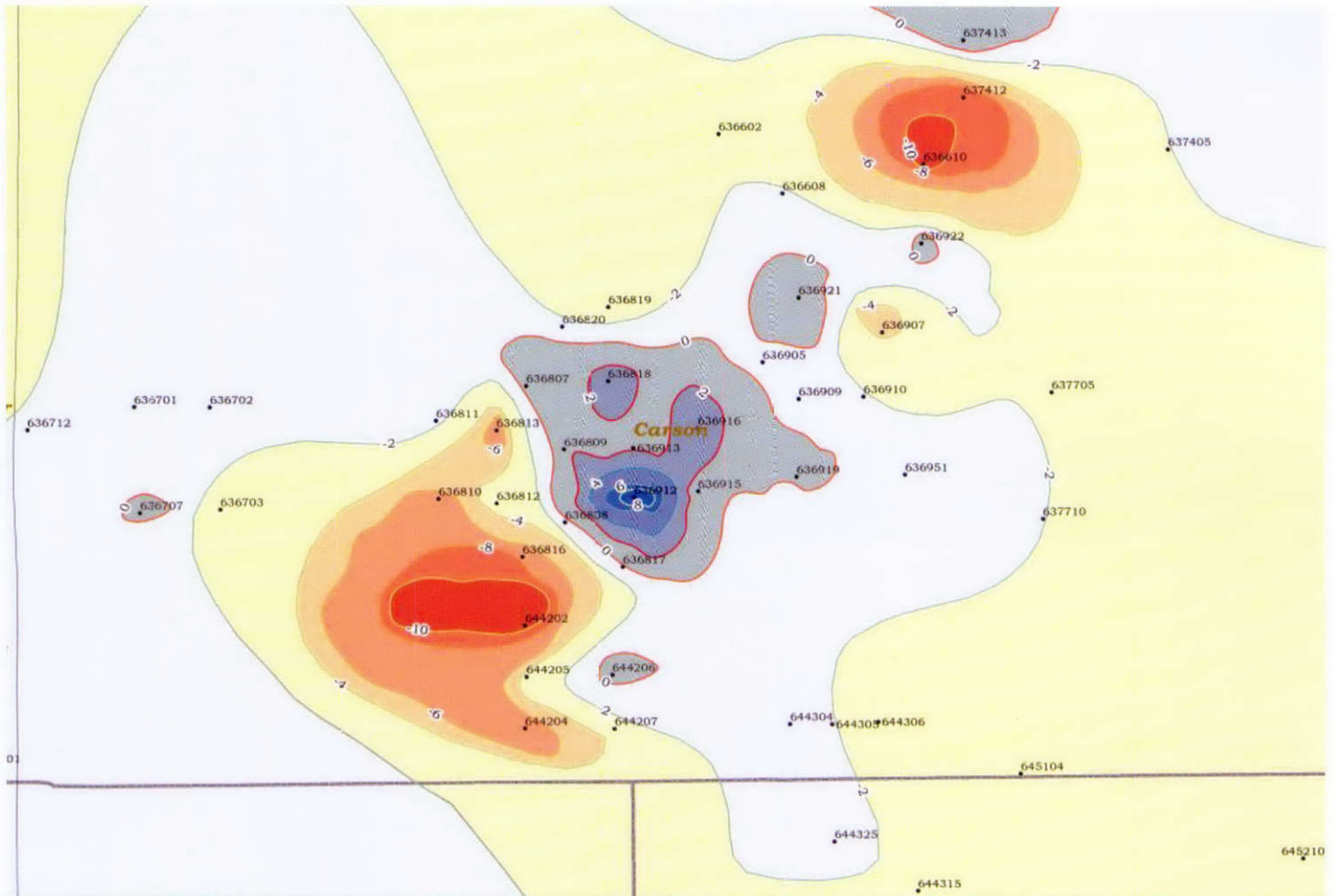
Carson County **OGALLALA** Aquifer 5 Year Average Change



Carson County OGALLALA Aquifer Continued						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	
631803	-395.2	-394.6	-395.0	0.2	-0.4	0.1
631956	-225.1	-226.3	-225.5	-0.4	0.8	0.2
631957	-328.1	-330.6	-331.2	-3.1	-0.6	-0.6
632702	-403.6	-408.5	-407.0	-3.4	1.5	-0.6
636154	-318.2	-321.9	-325.8	-7.6	-3.9	-1.0
636155		-364.2	-372.0		-7.8	

Carson County OGALLALA Aquifer Continued						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	
636201	-357.8	-366.7	-367.1	-9.3	-0.4	-1.1
636403		-358.1	-360.4			-2.3
636404		-380.2	-387.7			-7.5
636405		-423.6	-424.0			-0.4
636602	-480.9	-507.3	-507.3	-26.4		-2.4
636608	-501.2	-522.9	-522.0	-20.8	0.9	-1.9

Carson County Inset **OGALLALA** Aquifer 5 Year Average Change



Carson County OGALLALA Aquifer Continued						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference
636610	-424.0	-486.9	-486.9	-62.9		-10.8
636701			-480.6			-0.7
636702	-451.0	-467.5	-468.0	-17.0	-0.5	-0.6
636703		-494.8	-497.8		-3.0	-2.9
636707	-475.0	-490.1	-478.1	-3.1	12.0	0.5
636712		-419.1	-421.7		-2.6	-1.3
636807	-538.0	-547.4	-540.5	-2.5	6.9	1.2
636808		-555.6	-553.0		2.6	-0.9
636809	-515.0	-531.4	-517.6	-2.6	13.9	1.4
636810	-537.0	-587.2	-582.1	-45.1	5.0	-6.8
636811	-539.0	-550.7	-550.2	-11.2	0.5	-1.2
636812	-537.0	-561.5	-556.9	-19.9	4.6	-2.6
636813	-530.0	-592.4	-580.5	-50.5	11.9	-6.6
636816	-542.9	-567.7	-595.1	-52.2	-27.4	-7.8
636817		-551.2	-561.0		-9.8	-1.6

Carson County OGALLALA Aquifer Continued						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference
636818	-501.0	-528.5	-514.6	-13.6	13.9	2.9
636819	-504.0	-532.4	-534.7	-30.7	-2.3	-3.6
636820	-521.0	-546.8	-539.8	-18.8	6.9	-1.4
636828		-545.0	-542.5		2.5	
636905		-551.9	-550.0		1.9	-1.0
636907	-497.0	-515.0	-514.7	-17.7	0.3	-4.9
636909	-524.0	-542.0	-539.0	-15.0	3.0	-0.3
636910	-489.9	-503.7	-503.0	-13.1	0.7	-1.7
636912		-546.0	-496.3		49.7	9.4
636913	-525.0	-536.7	-534.0	-9.0	2.7	0.1
636914		-525.0			525.0	
636915	-529.0	-542.0	-542.0	-13.0		1.0
636916	-522.0	-558.6	-536.0	-14.0	22.6	3.6
636919	-510.1	-523.2	-521.0	-10.9	2.2	0.1
636920		-550.4	-529.6		20.8	

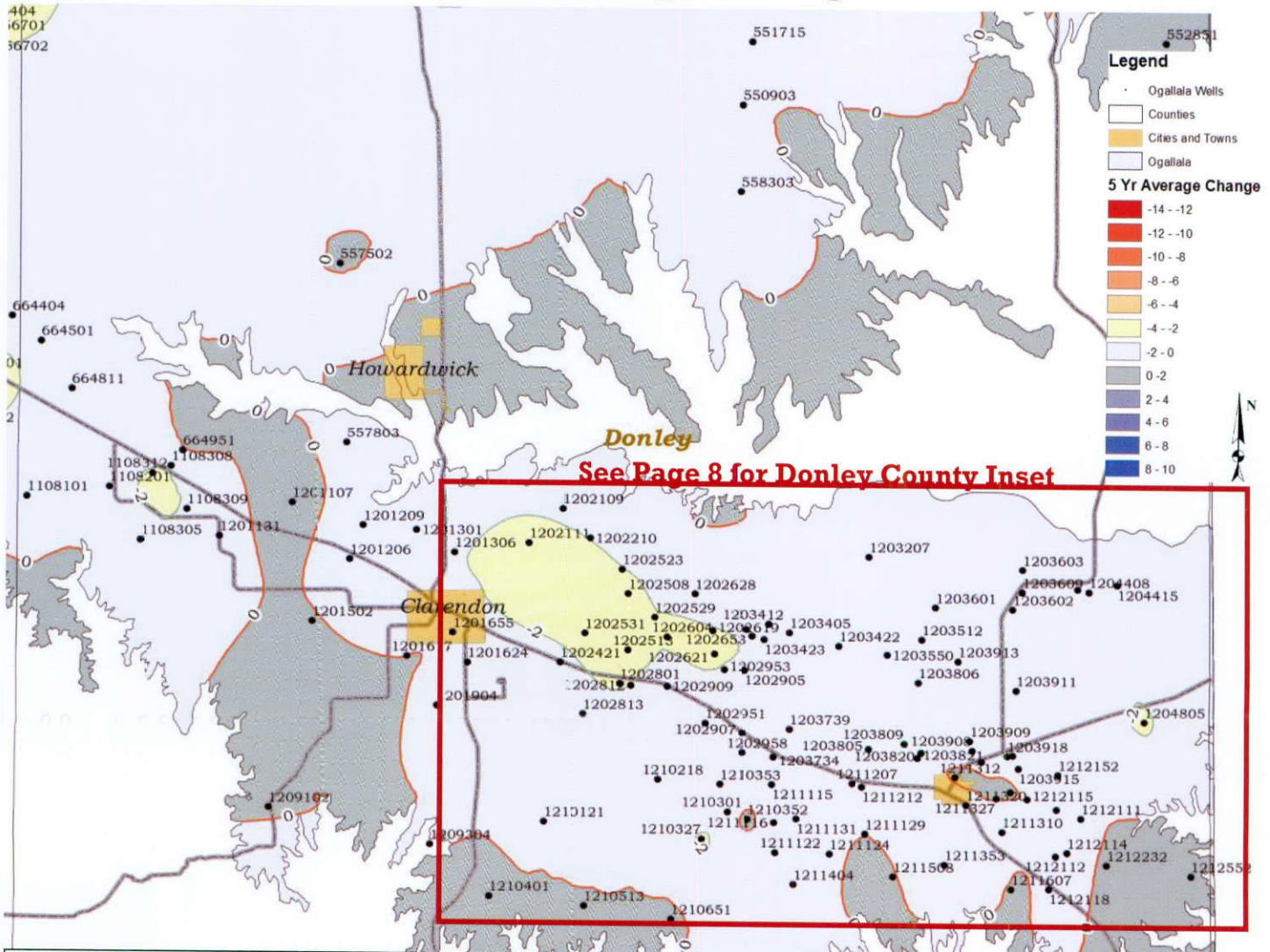


Panhandle Water News

Carson County OGALLALA Aquifer Continued							Carson County OGALLALA Aquifer Continued						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps	Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference		2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference
636921	-512.0	-531.5	-530.0	-18.0	1.5	1.4	644305	-452.0	-492.0	-472.0	-20.0	20.0	-1.7
636922	-460.0	-487.8	-477.6	-17.6	10.2	0.2	644306	-456.0	-472.1	-486.0	-30.0	-13.9	-3.4
636951		-489.0	-487.3		1.7	-0.2	644311	-487.8	-510.5	-512.5	-24.7	-2.0	-3.8
637301	-272.9	-281.2	-281.7	-8.8	-0.5	-0.8	644315	-450.1	-468.4	-468.7	-18.6	-0.3	-2.5
637405	-441.0	-456.3	-456.5	-15.5	-0.2	-2.0	644321		-520.2	-520.4		-0.2	
637412		-475.8	-473.0		2.8	-8.1	644325		-494.4	-495.9		-1.5	-1.1
637413		-485.5	-480.9		4.6	1.7	644618		-461.0	-460.4		0.6	-2.5
637458	-433.5	-447.1	-441.1	-7.6	6.0	-2.7	644656	-434.2		-444.3	-10.1		-1.2
637502	-305.5	-319.0	-319.7	-14.2	-0.7	-1.5	645104	-423.6	-443.7	-444.3	-20.7	-0.6	-2.9
637705	-459.6	-474.4	-476.4	-16.8	-2.0	-2.2	645201	-428.2	-442.3	-443.7	-15.5	-1.4	-3.5
637710	-433.8	-448.9	-449.8	-16.0	-0.9	-2.0	645210	-437.0	-459.9	-460.6	-23.6	-0.7	-3.4
637912	-403.6	-421.7	-421.8	-18.2	-0.1	-2.5	645305	-432.1	-451.1				
638501	-384.1	-391.0					645510	-423.4	-437.6	-438.6	-15.2	-1.0	-2.1
638601	-371.8	-379.0	-377.9	-6.1	1.1	-0.7	645513	-436.9	-453.3	-454.8	-17.9	-1.5	-2.4
638701	-416.3	-428.9	-428.5	-12.2	0.4	-2.2	645624		-425.9	-426.6		-0.7	-2.9
638711	-426.8	-442.5	-441.9	-15.1	0.6	-3.0	645701	-387.8	-392.0	-390.5	-2.7	1.5	-0.4
638807	-405.7	-436.9	-434.1	-28.4	2.8	-3.6	645804	-325.1	-333.4	-330.4	-5.3	3.0	-0.9
638811	-428.7	-450.2	-441.0	-12.3	9.2	-1.4	646162	-378.5	-384.7	-385.7	-7.2	-1.0	-0.9
638820		-446.4	-448.9		-2.5	-4.7	646205	-425.7	-446.7	-445.0	-19.3	1.7	-3.4
638913	-402.2	-430.2	-425.3	-23.1	4.9	-2.5	646302	-374.4	-383.8				
638916	-410.3	-429.7	-431.7	-21.4	-2.0	-3.4	646304		-432.5	-431.5		1.0	-3.1
639301	-397.9	-398.1	-396.4	1.5	1.7	0.1	646412		-424.5	-425.2		-0.7	-3.4
639501	-371.0	-380.5	-379.5	-8.5	1.0	-0.9	646504	-382.3	-394.8	-395.4	-13.1	-0.6	-1.0
639605		-292.6	-289.7		2.9	1.4	646552	-354.3	-362.8	-364.1	-9.8	-1.3	-2.7
639606		-354.5	-350.2		4.3	0.4	646601	-372.2	-377.5	-377.5	-5.3		-0.7
639607		-373.1	-365.4		7.7	-1.7	646701	-380.2	-369.2	-367.9	12.3	1.3	
639608		-360.5	-356.7		3.8	-0.6	646757	-375.3	-394.7	-395.9	-20.6	-1.2	-2.5
639707	-384.9	-399.4	-398.7	-13.8	0.7	-0.7	646904	-362.6	-368.7	-366.5	-3.9	2.2	-0.3
639865	-392.4	-410.0	-407.8	-15.4	2.2	-2.0	647205	-377.7	-381.7	-381.7	-4.0		-0.4
639909	-352.1	-359.2	-359.3	-7.2	-0.1	-1.1	647308	-298.8	-299.2	-298.0	0.8	1.2	-0.4
639956		-384.6	-383.7		0.9	-3.5	647401	-348.6	-354.1	-354.5	-5.9	-0.4	-0.9
640406			-399.3			-4.1	647554	-307.4	-315.5	-314.0	-6.6	1.5	-1.3
640451		-394.1	-392.9		1.2	-3.5	647604	-317.6	-324.4	-322.0	-4.4	2.4	-0.4
640765	-343.2	-355.4					647806	-352.3	-370.0	-368.2	-15.9	1.8	-1.9
644102		-496.8	-494.3		2.5		654606	-373.2	-387.0	-388.5	-15.3	-1.5	-2.0
644202	-538.4	-557.0	-598.9	-60.5	-42.0	-10.6	655113	-371.9	-392.1	-392.0	-20.1	0.1	-2.5
644203	-535.0	-547.1					655156	-373.3	-394.4	-394.5	-21.2	-0.1	-3.0
644204	-485.0	-536.8	-536.8	-51.8		-7.9	656108		-313.3	-311.6		1.7	
644205	-534.0	-550.4	-550.4	-16.4		-3.3							
644206	-534.0	-537.7											
644207	-514.0	-567.6	-537.0	-23.0	30.6	-3.1							
644304	-511.0	-514.1	-527.0	-16.0	-12.9	-1.8							



Donley County **OGALLALA** Aquifer 5 Year Average Change

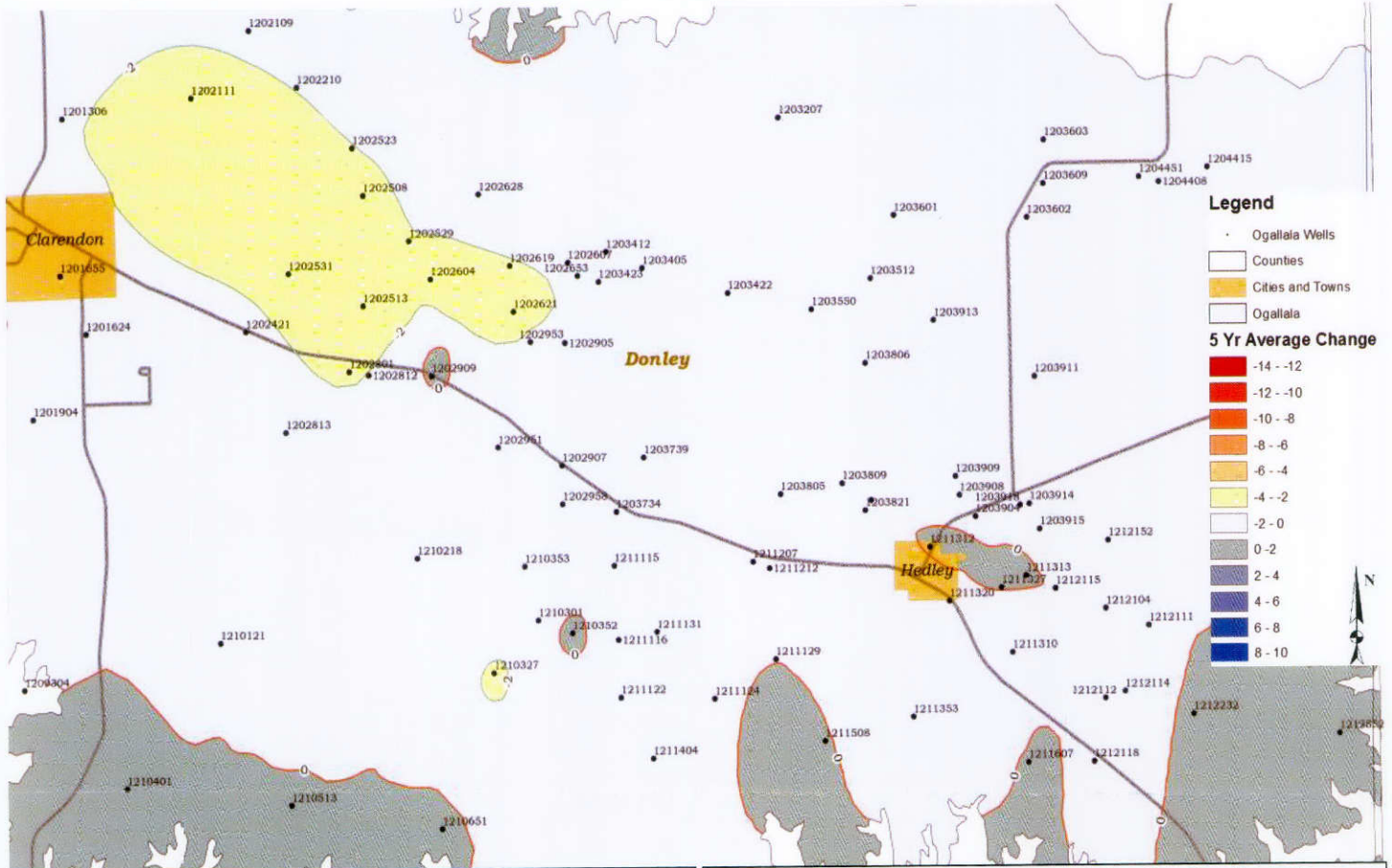


Donley County OGALLALA Aquifer Continued							
Well Number	Depth to Water, in feet			Water Level Difference			Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference	
549952		-252.9	-248.8		4.1		
550701	-119.7	-112.7	-111.0	8.7	1.7		
550801	-108.2						
550903	-106.9	-110.2	-108.1	-1.2	2.1	-0.1	
551715	-112.6	-114.0	-112.8	-0.2	1.2	-0.3	
552851	-124.0	-122.1	-120.3	3.7	1.8	0.2	
557302		-116.9	-114.3		2.6		
557303		-168.8	-165.8		3.0		
557502	-96.2	-98.2	-95.9	0.3	2.3	0.2	
557512	-40.2						
557803	-88.0	-91.8	-90.1	-2.1	1.7	-0.3	
558303	-36.4	-45.5	-44.6	-8.2	0.9	-0.8	

Donley County OGALLALA Aquifer Continued							
Well Number	Depth to Water, in feet			Water Level Difference			Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference	
656506	-353.1	-345.7					
656603	-305.8						
664501	-116.0	-124.7	-125.3	-9.3	-0.6	-1.5	
664811	-96.4	-110.7	-107.2	-10.8	3.5	-1.0	
664951	-64.3	-72.4	-67.9	-3.6	4.5	-0.1	
1108101	-96.2	-105.1	-101.8	-5.6	3.3	-0.6	
1108201	-126.4	-134.4	-129.7	-3.3	4.7	-1.3	
1108305		-107.5	-104.3		3.2	-1.4	
1108308	-66.2	-84.8	-81.6	-15.4	3.2	-1.7	
1108309	-72.6	-92.7	-90.7	-18.1	2.0	-1.9	
1108312	-73.5	-92.0	-89.0	-15.5	3.0	-2.0	
1201101	-99.6						



Donley County Inset **OGALLALA** Aquifer 5 Year Average Change



Donley County OGALLALA Aquifer Continued						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	
1201102	-34.8		-41.1	-6.3		
1201107	-46.5	-52.9	-44.8	1.7	8.1	0.5
1201131	-53.9	-63.0	-59.2	-5.3	3.8	-0.8
1201206		-75.8	-72.1		3.7	-0.7
1201209		-51.3	-48.0		3.3	-0.7
1201301	-42.9	-61.0	-57.8	-14.9	3.2	-1.5
1201306	-48.7	-72.7	-68.3	-19.6	4.4	-1.7
1201502	-130.0	-134.9	-130.0		4.9	0.1
1201526		-110.9	-106.7		4.2	
1201617	-116.4	-117.9	-115.3	1.1	2.6	
1201624	-93.6	-106.8	-103.8	-10.2	3.0	-0.4
1201655	-55.6	-63.6	-58.8	-3.2	4.8	-0.2
1201688		-56.3				
1201904	-141.7	-145.1	-144.2	-2.5	0.9	-0.2
1202109			-100.0			-1.1
1202111		-115.4	-114.3		1.1	-4.0
1202210	-61.8	-81.7	-81.2	-19.4	0.5	-1.9

Donley County OGALLALA Aquifer Continued						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	
1202421		-35.0	-31.5		3.5	-1.3
1202508		-99.8	-99.7		0.1	-2.9
1202513		-89.4	-89.0		0.4	-3.1
1202523		-97.1	-95.9		1.2	-2.1
1202529		-91.7	-88.7		3.0	-2.2
1202531		-75.4	-75.3		0.1	-3.1
1202532			-75.1			
1202534		-75.3	-74.4		0.9	
1202604	-58.8	-82.6	-80.4	-21.6	2.2	-2.9
1202607	-76.5	-89.1	-85.4	-8.9	3.7	-1.4
1202619		-89.6	-87.0		2.6	-2.2
1202621		-67.5	-66.7		0.8	-2.9
1202627		-89.4				
1202628		-58.9	-59.5		-0.6	-0.7
1202653		-90.4	-89.3		1.1	-1.6
1202801		-47.0	-45.8		1.2	-2.4
1202812	-21.3	-39.5	-36.7	-15.4	2.8	-2.0

Panhandle Water News



Donley County OGALLALA Aquifer Continued

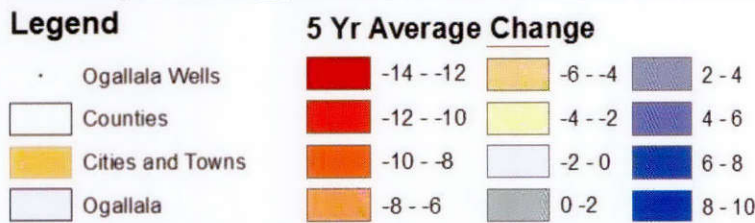
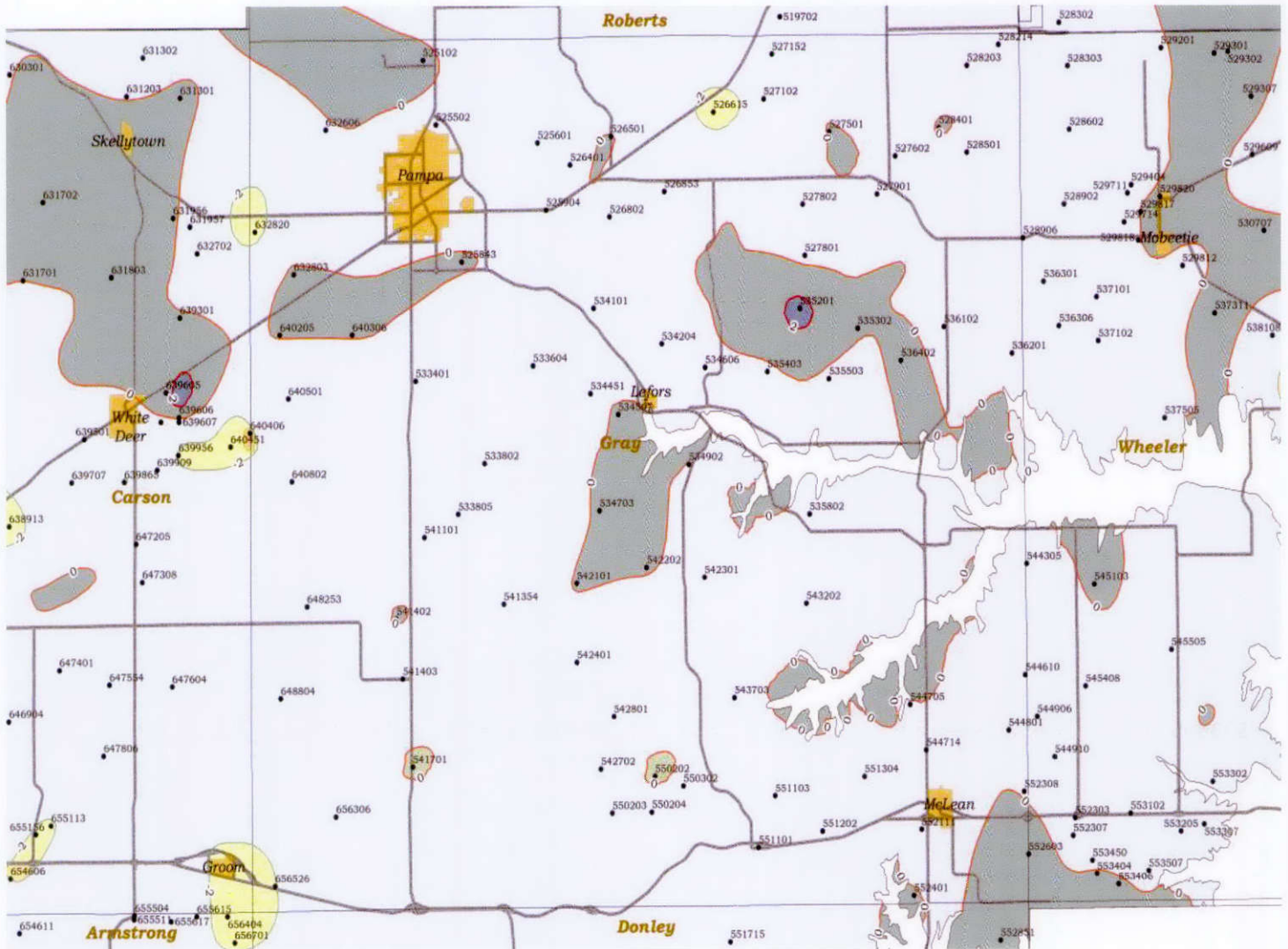
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference
1202813		-85.5	-83.8		1.7	-0.2
1202905		-79.3	-74.7		4.6	-1.7
1202907	-12.2	-19.2	-16.0	-3.8	3.2	-1.0
1202931	-38.6		-42.4	-3.8		
1202951		-25.4	-22.0		3.4	-1.2
1202953		-60.6	-55.2		5.4	-1.6
1202958		-20.3	-15.9		4.4	-1.2
1202959		-72.8				
1203207	-81.4	-84.0	-83.1	-1.7	0.9	-0.3
1203405	-69.2	-79.3	-80.2	-11.0	-0.9	-1.9
1203412		-86.1	-85.1		1.0	-0.9
1203422		-46.3	-44.2		2.1	-0.9
1203423		-99.0	-96.0		3.0	-1.2
1203512		-113.4	-112.3		1.1	-0.3
1203550		-98.9	-96.8		2.1	-0.9
1203551		-115.7				
1203601	-96.7	-103.5	-99.9	-3.2	3.6	-0.4
1203602		-121.0	-118.1		2.9	-1.1
1203603	-87.2	-96.2	-92.8	-5.6	3.4	-0.5
1203609		-122.3	-121.6		0.7	-1.0
1203734		-35.4	-32.5		2.9	-1.1
1203739		-27.1	-25.3		1.8	-0.8
1203805		-72.4	-68.9		3.5	-0.4
1203806	-122.1	-130.0	-126.4	-4.3	3.6	-0.5
1203809		-60.9	-58.3		2.6	-0.2
1203812		-89.4	-86.9		2.5	
1203820		-75.2	-72.7		2.5	-0.3
1203821		-68.0	-66.1		1.9	-0.5
1203904		-71.4	-65.1		6.3	-0.7
1203908		-83.5	-80.6		2.9	-1.3
1203909		-91.5	-88.2		3.3	-1.1
1203911	-44.7	-54.7	-50.6	-5.9	4.1	-0.8
1203913		-104.5	-102.8		1.7	-0.5
1203914		-104.9	-103.2		1.7	-1.4
1203915		-88.6	-85.7		2.9	-0.9
1203917		-51.6	-50.4		1.2	
1203918		-80.5	-79.6		0.9	-0.2
1203920		-52.5	-50.2		2.3	
1204402		-126.4				
1204408		-127.4	-123.0		4.4	-1.7
1204415		-105.4	-101.6		3.8	-1.1
1204451		-137.2	-133.2		4.0	-1.6

Donley County Continued

1204452		-142.2				
1204711			-57.3			
1204805	-26.0	-38.4	-36.5	-10.5	1.9	-2.2
1209102	-100.1	-101.3	-100.0	0.1	1.3	0.1
1209304	-24.2	-27.0	-24.2		2.8	-0.1
1210121	-129.3	-134.8	-131.6	-2.3	3.2	-0.2
1210218	-62.8	-66.9	-64.2	-1.4	2.7	-0.1
1210301	-2.3	-24.3	-22.0	-19.7	2.3	-1.6
1210305	-34.8	-47.7				
1210310		-37.1				
1210327		-47.0	-45.8		1.2	-2.6
1210352		-44.2	-39.1		5.1	0.5
1210353	-18.9	-29.9	-26.4	-7.5	3.5	-1.1
1210401		-113.0	-110.7		2.3	0.3
1210513		-117.3	-115.5		1.8	0.1
1210651		-66.4	-66.1		0.3	0.3
1211115		-107.8	-106.2		1.6	-0.1
1211116		-117.4	-114.4		3.0	-0.4
1211118		-105.5				
1211122		-114.4	-111.9		2.5	-0.3
1211124		-186.8	-185.3		1.5	-0.3
1211129		-168.6	-167.2		1.4	0.0
1211131		-79.7	-80.3		-0.6	-0.8
1211202		-56.6	-55.8		0.8	0.0
1211207	-117.1	-114.2	-111.4	5.7	2.8	-0.9
1211212		-96.8	-93.5		3.3	-1.3
1211232		-171.7				
1211310	-78.5	-75.6	-73.2	5.3	2.4	-0.1
1211312		-64.0	-61.1		2.9	0.1
1211313		-152.7	-147.4		5.3	0.4
1211320		-89.3	-87.6		1.7	-1.0
1211327		-123.8	-120.8		3.0	
1211353	-104.4	-110.9	-110.3	-5.9	0.6	-1.0
1211404	-196.6	-197.5	-195.7	0.9	1.8	-0.2
1211508	-172.3	-170.0	-168.6	3.7	1.4	0.1
1211607		-143.9	-138.4		5.5	
1212104	-133.5	-127.8	-124.9	8.6	2.9	
1212111		-62.8	-60.6		2.2	-0.2
1212112	-85.3	-89.1	-86.5	-1.2	2.6	-0.4
1212114		-92.0	-88.9		3.1	-0.8
1212115		-126.0	-126.0		0.0	-0.8
1212118		-78.2	-76.1		2.1	-0.1
1212152		-99.6	-97.3		2.3	-0.4
1212232		-108.4	-107.6		0.8	0.3
1212552	-61.2	-63.9	-60.7	0.5	3.2	0.2



Gray County **OGALLALA** Aquifer 5 Year Average Change

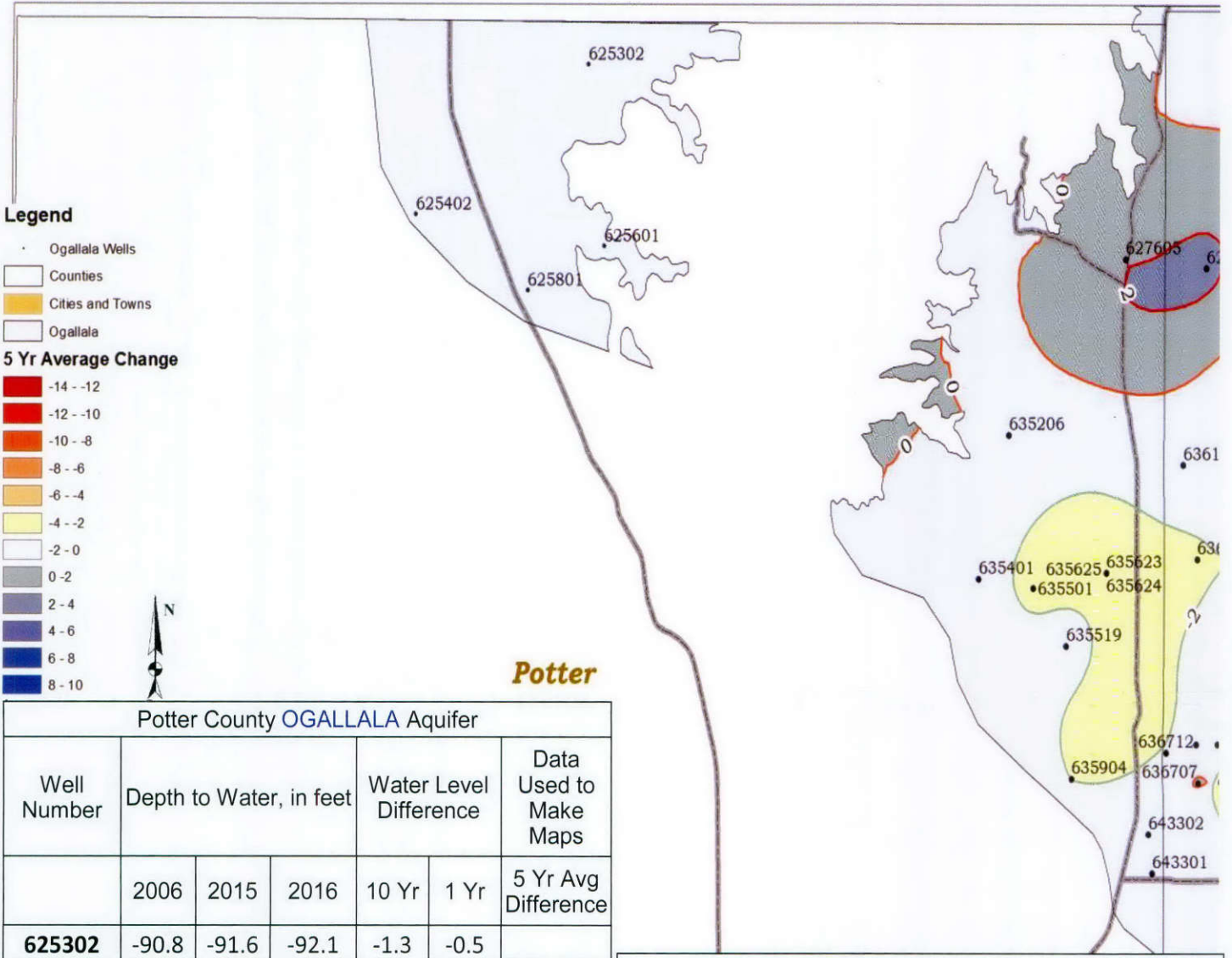


Gray County OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference
525102		-390.8	-389.9		0.9	0.1
525502	-352.8	-352.5	-352.5	0.3		-0.3
525601	-368.9	-372.0	-371.2	-2.3	0.8	-0.1
525843		-378.3	-377.5		0.8	1.0
525904	-363.4	-370.9	-370.5	-7.1	0.4	-0.7
526102		-356.9	-357.8		-0.9	
526401		-377.1	-376.2		0.9	-0.8

Gray County OGALLALA Aquifer Continued						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference
526403		-376.2				
526422		-384.0	-379.2		4.8	
526501		-370.7	-369.2		1.5	
526615		-370.7	-378.3		-7.6	-2.8
526802	-356.6	-358.1	-358.1	-1.5		-0.5
526853		-366.6	-368.3		-1.7	-0.5
52710	-360.2	-364.4	-366.9	-6.7	-2.5	-0.8



Potter County **OGALLALA** Aquifer 5 Year Average Change



Potter County OGALLALA Aquifer						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference
625302	-90.8	-91.6	-92.1	-1.3	-0.5	
625402	-96.2	-97.0	-96.1	0.1	0.9	
625601	-251.1	-248.0	-251.4	-0.3	-3.4	0.7
625801	-88.5	-89.8	-89.9	-1.4	-0.1	0.3
627605	-112.6	-118.1	-114.1	-1.5	4.0	1.9
635203		-249.2	-312.4		-63.2	
635204		-292.0	-335.3		-43.3	
635205		-212.4				
635206		-226.8	-226.9		-0.1	-0.5
635401	-286.8	-289.3	-289.9	-3.1	-0.6	-1.0
635501	-306.7	-325.7	-326.1	-19.4	-0.4	-2.4
635511		-291.1	-350.3		-59.2	
635514		-327.7	-317.3		10.4	
635517		-333.0	-335.0		-2.0	
635518		-329.1	-330.3		-1.2	
635519		-278.9	-282.9		-4.0	-1.4
635612		-369.2	-306.6		62.6	
635613						
635620		-325.0	-368.6		-43.6	

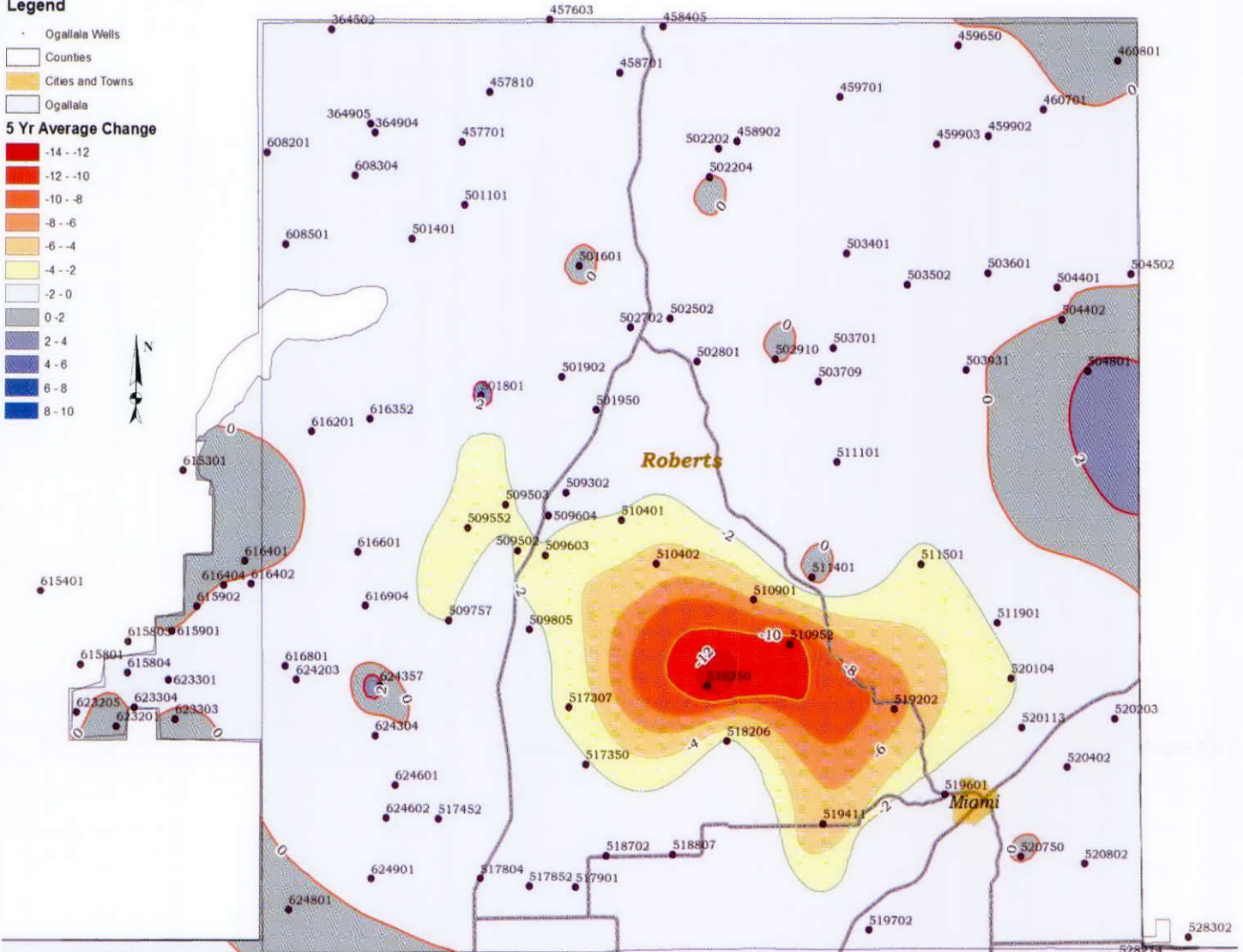
Potter County OGALLALA Aquifer Continued						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference
635621		-338.4	-373.2		-34.8	
635622		-346.1	-424.7		-78.6	
635623		-242.5	-242.6		-0.1	-2.5
635624		-244.6	-247.8		-3.2	-3.3
635904		-256.9	-257.5		-0.6	-2.0
635914		-393.4	-416.0		-22.6	
635915		-392.6	-407.8		-15.2	
635917		-283.0	-206.4		76.6	
635918		-413.6	-414.3		-0.7	
643301	-490.3	-498.4	-495.2	-4.9	3.2	-1.6
643302	-470.6	-490.9	-488.2	-17.6	2.7	-0.6
643353			-438.9			



Hutchinson and Roberts County **OGALLALA** Aquifer

Legend

- Ogallala Wells
- Counties
- Cities and Towns
- Ogallala
- 5 Yr Average Change**
- 14 - -12
- 12 - -10
- 10 - -8
- 8 - -6
- 6 - -4
- 4 - -2
- 2 - 0
- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10



Roberts County **OGALLALA** Aquifer Continued

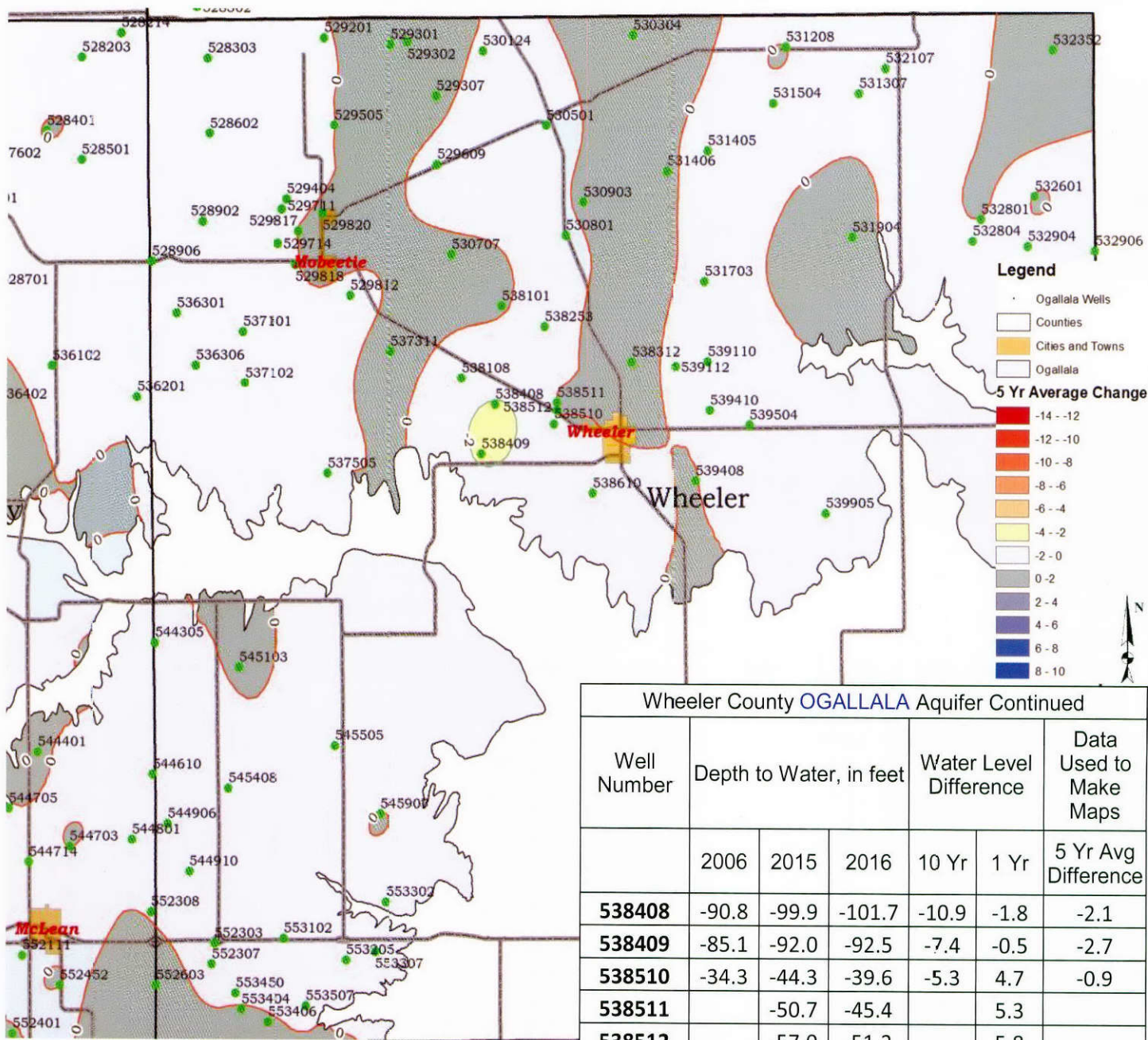
Roberts County **OGALLALA** Aquifer Continued

Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference
510953	-184.8	-260.2				
511101	-287.5	-292.9	-291.5	-4.0	1.4	-0.7
511201	-292.4	-295.2				
511401	-343.2	-328.1	-328.0	15.2	0.1	
511501	-306.8	-319.0	-320.4	-13.6	-1.4	-2.4
511702	-400.7		-453.8	-53.1		
511901		-281.6	-282.1		-0.5	-1.7
512102		-281.5				
517203		-329.6				
517207		-200.6	-201.2		-0.6	
517307		-131.6	-133.7		-2.1	-2.4
517350	-341.0	-349.3	-351.8	-10.8	-2.5	-1.8
517452	-357.9		-361.5	-3.6		-0.6

Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	215	2016	10 Yr	1 Yr	5 Yr Avg Difference
517802	-399.9	-407.7				
517804		-406.2	-405.5		0.7	-0.9
517852	-404.3	-410.9	-409.7	-5.4	1.2	-0.7
517901	-393.6	-397.1	-397.0	-3.4	0.1	-0.8
518101	-323.8	-355.0				
518206		-460.6	-459.5		1.1	-2.0
518250	-334.6	-483.4	-474.4	-139.8	9.0	-12.3
518301	-357.9					
518702	-388.2	-392.0	-391.1	-2.9	0.9	-0.3
518807		-375.0	-376.0		-1.0	-0.7
519103		-429.7	-430.2		-0.5	
519202	-368.0	-390.0	-392.1	-24.1	-2.1	-6.9
519411		-364.2	-366.5		-2.3	-4.8



Wheeler County OGALLALA Aquifer 5 Year Average Change



Wheeler County OGALLALA Aquifer Continued						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference
537311	-24.5	-26.6	-25.3	-0.8	1.3	0.2
537505	-63.2	-69.9	-63.7	-0.5	6.2	-0.1
538101	-5.8	-8.0	-6.4	-0.6	1.6	0.1
538108	-122.5	-126.6	-130.2	-7.7	-3.6	-0.7
538253	-95.1	-98.4	-98.6	-3.5	-0.2	-0.8
538312		-61.1	-54.5		6.6	1.3

Wheeler County OGALLALA Aquifer Continued						
Well Number	Depth to Water, in feet			Water Level Difference		Data Used to Make Maps
	2006	2015	2016	10 Yr	1 Yr	5 Yr Avg Difference
538408	-90.8	-99.9	-101.7	-10.9	-1.8	-2.1
538409	-85.1	-92.0	-92.5	-7.4	-0.5	-2.7
538510	-34.3	-44.3	-39.6	-5.3	4.7	-0.9
538511		-50.7	-45.4		5.3	
538512		-57.0	-51.2		5.8	
538610	-65.1	-70.4	-69.7	-4.6	0.7	-0.6
539110	-74.9	-76.5	-76.3	-1.4	0.2	-0.5
539112		-43.6	-41.5		2.1	-0.6
539408	-7.3	-8.5	-5.0	2.3	3.5	
539410		-32.9	-29.7		3.2	-0.2
539504	-47.7	-50.8	-44.9	2.8	5.9	-1.0
539905	-35.9	-41.9	-37.8	-1.9	4.1	-0.8
544305	-90.8	-88.1	-88.3	2.5	-0.2	-0.2
544906	-106.5	-108.4	-109.0	-2.5	-0.6	-0.3
544910		-91.9	-94.0		-2.1	-0.4
545103	-6.7	-6.7	-6.3	0.4	0.4	
545408	-106.4	-109.2	-109.2	-2.8		-0.2
545505	-106.7	-104.8	-104.2	2.5	0.6	-0.2

Panhandle Water News



Wheeler County Continued

545907	-52.0	-48.4				
552303	-42.4	-46.3	-46.1	-3.7	0.2	-0.6
552307	-73.5	-79.2	-78.4	-4.9	0.8	-0.5
553102	-60.9	-73.7	-72.2	-11.3	1.5	-1.7
553205		-32.3	-30.9		1.4	-0.4
553302	-22.6	-27.2	-23.3	-0.7	3.9	
553307		-39.8	-40.8		-1.0	-0.5
553404	-7.5	-11.8	-7.8	-0.3	4.0	
553406		-11.1	-7.0	-7.0	4.1	0.1
553450	-39.0	-43.0	-41.3	-2.3	1.7	-0.3
553507		-41.2	-39.3		1.9	-0.5

Armstrong, Carson and Potter Counties DOCKUM Aquifer

Well Number	Depth to Water, in feet			Water Level Difference	
	2006	2015	2016	10 Yr	1 Yr
625101		-677.1			
625701			-154.9		
633201	-84.9	-86.9	-84.8	0.1	2.1
633301	-65.3	-69.6	-64.0	1.3	5.6
633401		-77.4			
634703	-86.0	-87.1	-86.6	-0.6	0.5
635201			-258.6		
635301	-299.7	-314.4	-315.0	-15.3	-0.6
635626		-319.3	-376.7		-57.4
635801	-135.9	-131.4	-132.7	3.2	-1.3
641102	-100.7	-100.0	-97.3	3.4	2.7
641104	-139.4	-147.7	-146.7	-7.3-262.3	1.0
641310	-41.9	-39.1	-44.7	-2.8	-5.6
641613	-98.2	-110.6	-96.7	1.5	13.9
641703	-306.5	-309.6	-305.3	1.2	4.3
641802	-117.3	-100.7	-91.0	26.3	9.7
641803	-128.9				
641856		-139.4	-130.0		9.4
641931	-64.5	-70.6	-59.2	5.3	11.4
642409	-65.8	-71.0	-71.1	-5.3	-0.1
642421		-177.9			
642427		-155.9	-145.3		10.6
642502	-80.6	-78.5			
642714	-86.9	-84.7	-70.8	16.1	13.9
642719	-128.7	-135.4	-139.3	-10.6	-3.9
642902	-223.7	-224.1	-226.2	-2.5	-2.1
642903			-179.6		
643421	-180.1	-177.9	-177.9	2.2	0.0
643602	-320.7	-318.7	-317.3	3.4	1.4
643606		-268.2	-267.1		1.1
643901	-210.2	-205.6	-208.6	1.6	-3.0

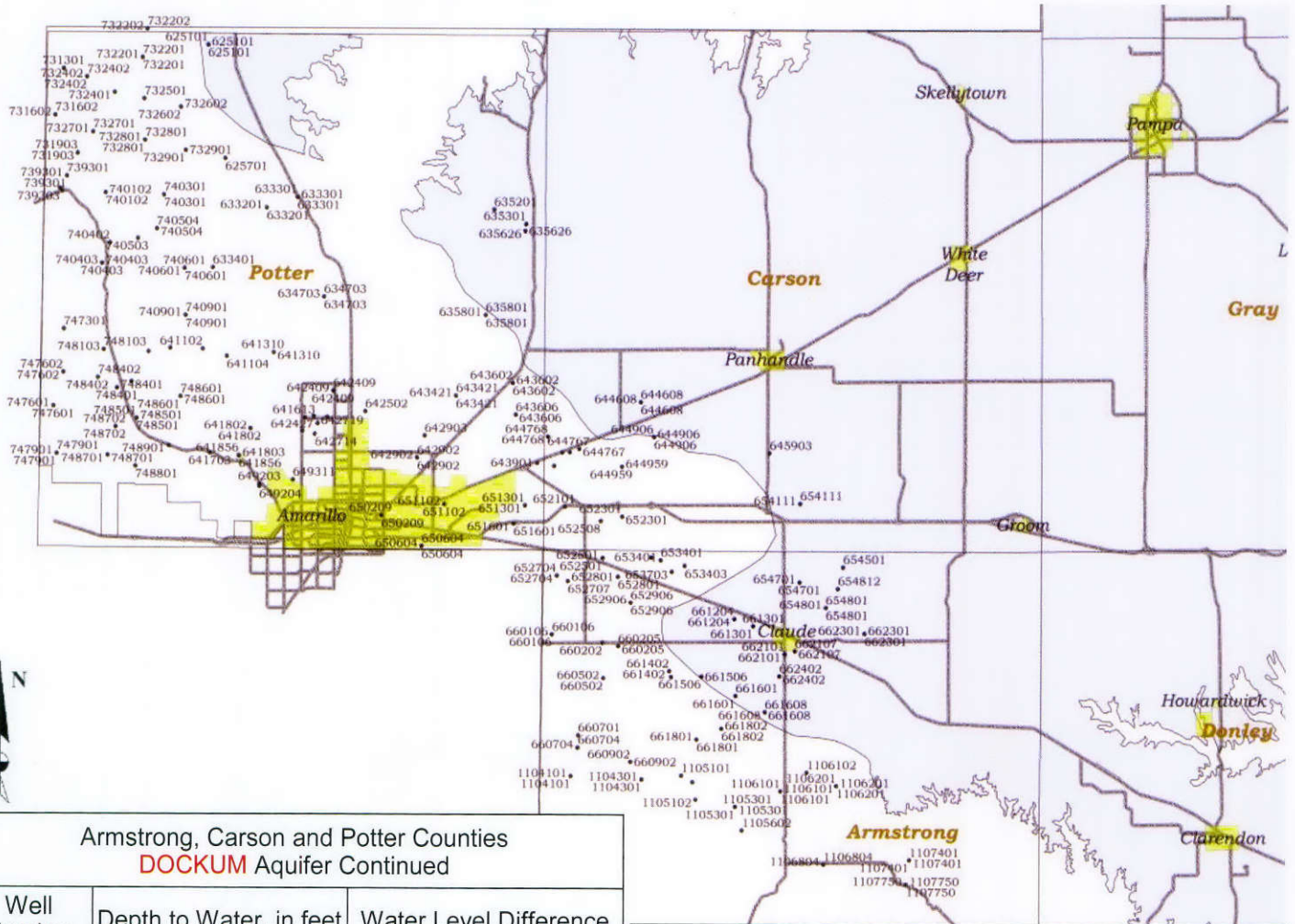
Armstrong, Carson and Potter Counties

DOCKUM Aquifer Continued

Well Number	Depth to Water, in feet			Water Level Difference	
	2006	2015	2016	10 Yr	1 Yr
644608	-430.1	-470.6	-468.7	-38.6	1.9
644701	-250.9	-247.4	-246.6	4.3	0.8
644763	-236.1	-233.1	-232.5	3.6	0.6
644766	-227.4	-224.6	-220.1	7.3	4.5
644767	-265.2	-261.8	-259.4	5.8	2.4
644768	-270.4	-266.7	-265.1	5.3	1.6
644906	-349.1	-350.3	-349.6	-0.5	0.7
644959	-221.0	-221.0	-220.4	0.6	0.6
645903			-406.8		
649201	-113.2	-117.0			
649203	-105.1	-116.6	-98.0	7.1	18.6
649204	-123.5	-131.8	-109.2	14.3	22.6
649311	-57.5	-58.1	-55.5	2.0	2.6
650209		-200.4	-198.0		2.4
650604	-201.2	-197.6	-196.7	4.5	0.9
651102	-176.0	-172.0	-170.7	5.3	1.3
651301		-207.9	-207.3		0.6
651601	-194.7	-192.8	-192.0	2.7	0.8
652101	-190.2	-192.5	-194.8	-4.6	-2.3
652301	-198.5	-200.1	-198.5	0.0	1.6
652501	-201.6	-201.1	-201.2	0.4	-0.1
652508	-201.4	-201.3	-200.3	1.1	1.0
652603	-168.4				
652704	-170.9	-173.4	-171.8	-0.9	1.6
652707	-229.5	-224.2	-224.2	5.3	0.0
652801	-172.6	-175.9	-176.2	-3.6	-0.3
652906	-116.8	-126.7	-125.9	-9.1	0.8
653401		-166.1	-166.3		-0.2
653403	-181.2	-182.7	-182.1	-0.9	0.6
653703	-184.0	-185.1	-183.0	1.0	2.1
654111		-344.1	-343.6		0.5
654501	-253.1				
654701	-252.9	-252.0	-252.0	0.9	
654801	-293.5	-291.4	-291.1	2.4	0.3
654812		-255.9	-255.6		0.3
660106	-211.3	-208.7	-208.7	2.6	0.0
660202		-163.6	-163.9		-0.3
660205	-161.7	-163.6	-163.7	-2.0	-0.1
660502	-156.8	-152.1	-152.2	4.6	-0.1
660701	-186.1		-192.0		
660704		-191.0			-1.0
660902	-212.1	-212.7	-211.3	0.8	1.4
661204	-166.7	-164.6	-165.0	1.7	-0.4



Armstrong, Carson and Potter Counties DOCKUM Aquifer Well Locations



Armstrong, Carson and Potter Counties
DOCKUM Aquifer Continued

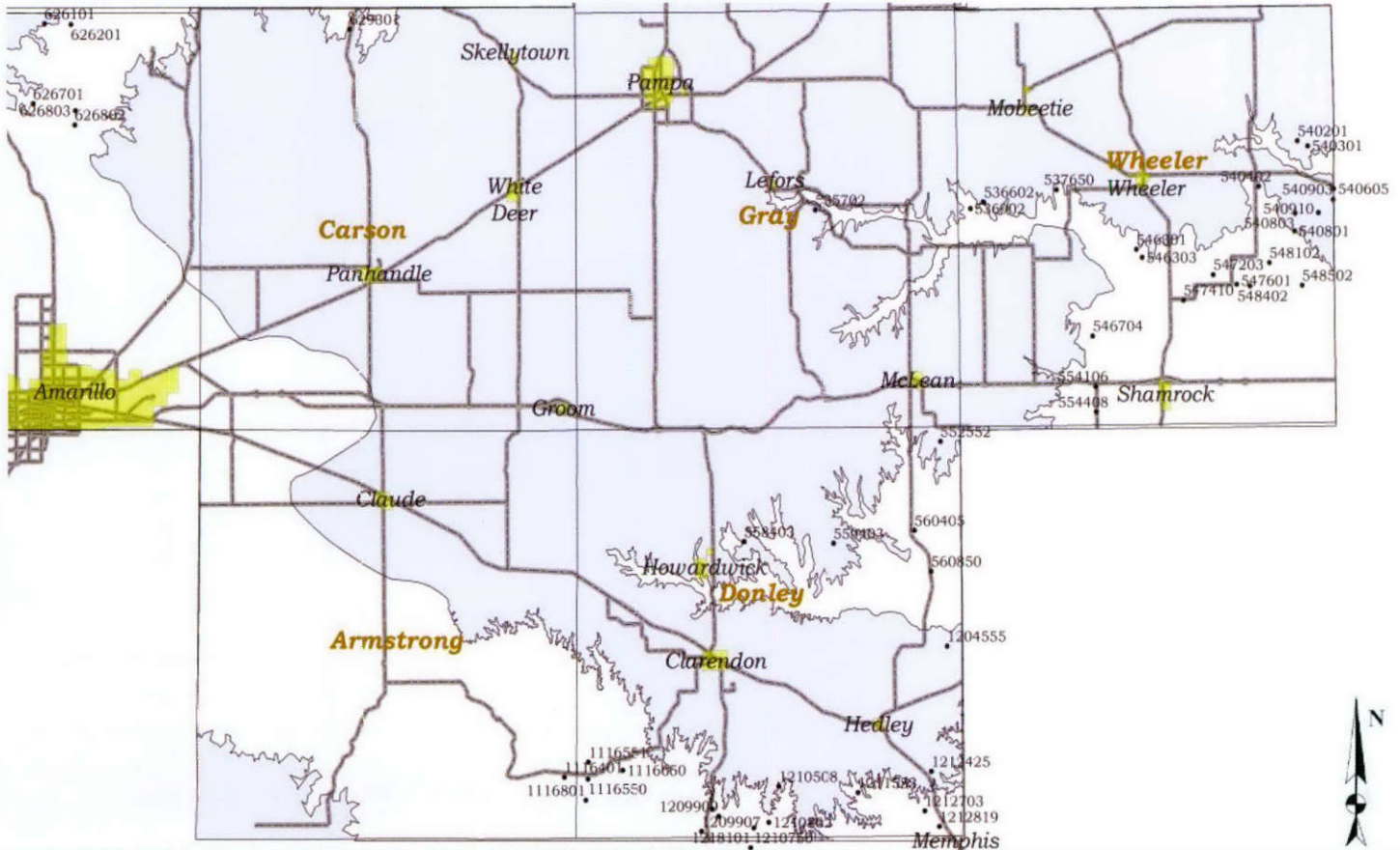
Well Number	Depth to Water, in feet			Water Level Difference	
	2006	2015	2016	10 Yr	1 Yr
661301	-159.3	-157.7	-156.8	2.5	0.9
661401	-164.3				
661402		-185.2	-185.0		0.2
661506		-160.8	-161.5		-0.7
661601	-171.7	-170.5	-170.8	0.9	-0.3
661608	-162.0	-164.6	-165.1	-3.1	-0.5
661801	-163.3	-162.5	-162.1	1.2	0.4
661802	-157.9	-157.1	-156.6	1.3	0.5
662101	-207.7	-208.8	-208.3	-0.6	0.5
662107	-172.5	-186.2	-184.4	-11.9	1.8
662301	-279.8	-284.2	-284.5	-4.7	-0.3
662402	-146.8	-148.8	-150.5	-3.7	-1.7
731301	-25.4				
731602		-146.9	-149.3		-2.4
731903		-25.0	-22.3	-22.3	2.7
732201	-160.8	-163.8	-162.5	-1.7	1.3
732202		-65.4	-61.9	-61.9	3.5
732401	-35.7	-31.0	-30.7	5.0	0.3
732402	-6.3	-31.7			

Armstrong, Carson and Potter Counties
DOCKUM Aquifer Continued

Well Number	Depth to Water, in feet			Water Level Difference	
	2006	2015	2016	10 Yr	1 Yr
732501	-71.4	-61.3	-60.4	11.0	0.9
732602	-40.6	-39.6	-38.3	2.3	1.3
732701		-39.5	-26.2	-26.2	13.3
732801	-131.8	-134.3	-134.4	-2.6	-0.1
732901	-170.6	-171.5	-171.6	-1.0	-0.1
739301	-4.7	-5.2	-4.8	-0.1	0.4
739302	-130.5				
739303			-97.8		
740102	-25.7	-28.6	-24.7	1.0	3.9
740301		-164.8	-166.0		-1.2
740402	-85.6	-85.6	-85.3	0.3	0.3
740403	-63.5	-59.2	-59.4	4.1	-0.2
740503	-31.5	-31.9	-31.1	0.4	0.8
740504	-25.3	-27.3	-26.2	-0.9	1.1
740601	-78.0	-75.5	-74.8	3.2	0.7
740901	-123.4	-130.6	-134.0	-10.6	-3.4



Armstrong, Carson, Donley, Gray, Potter and Wheeler Counties **WHITEHORSE** Aquifer Well Locations



Armstrong, Carson and Potter Counties DOCKUM Aquifer Continued					
Well Number	Depth to Water, in feet			Water Level Difference	
	2006	2015	2016	10 Yr	1 Yr
747301	-38.7				
747601	-38.2	-38.1	-28.9	9.3	9.2
747602	-54.7	-82.9	-77.8	16.9	5.1
747901	-114.8	-115.6	-115.5	-0.7	0.1
748103	-41.9	-40.8	-40.4	1.5	0.4
748201	-137.6				
748301	-57.0	-70.2	-64.4	-7.4	5.8
748401	-42.4	-41.6	-49.0	-6.6	-7.4
748402	-26.3	-28.7	-26.5	-0.2	2.2
748501	-26.1	-29.9	-29.4	-3.3	0.5
748502	-81.9				
748601	-143.6	-134.2	-117.0	26.6	17.2
748701	-81.5	-81.3	-83.0	-1.5	-1.7
748702	-35.8	-45.4	-44.5	-7.7	0.9
748801	-40.8	-43.4	-42.5	-1.7	0.9
748901	-75.2	-77.4	-74.6	0.6	2.8
1104101	-200.9	-204.0	-202.9	-2.0	1.1
1104301	-302.8	-301.4	-300.4	2.4	1.0

Armstrong, Carson and Potter Counties DOCKUM Aquifer Continued					
Well Number	Depth to Water, in feet			Water Level Difference	
	2006	2015	2016	10 Yr	1 Yr
1105101	-188.8	-183.4	-182.4	6.4	1.0
1105102	-160.9				
1105104	-174.5	-174.0	-173.3	1.2	0.7
1105301	-157.5	-158.0	-157.8	-0.3	0.2
1105602	-173.8				
1106101	-175.5	-173.6	-173.3	2.2	0.3
1106102	-162.4				
1106201	-159.7	-160.1	-160.2	-0.5	-0.1
1106804	-221.1		-217.1	4.0	
1107401	-116.1	-121.4	-117.0	-0.9	4.4
1107750	-124.5	-123.4	-124.1	0.4	-0.7

Armstrong, Carson and Potter Counties WHITEHORSE Aquifer Continued					
Well Number	Depth to Water, in feet			Water Level Difference	
	2006	2015	2016	10 Yr	1 Yr
554408	-24.1	-21.8	-22.9	1.2	-1.1
558403	-18.5	-30.6	-26.2	-7.7	4.4

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Armstrong, Carson, Donley, Gray, Potter and Wheeler Counties WHITEHORSE Aquifer Continued					
Well Number	Depth to Water, in feet			Water Level Difference	
	2006	2015	2016	10 Yr	1 Yr
559403	-74.9	-73.5	-73.6	1.3	-0.1
560405		-39.7	-42.3		-2.6
560850	-100.1		-111.1	-11.0	
626101	-30.4	-32.9	-31.3	-0.9	1.6
626201	-113.3	-106.7			
626701	-45.7	-44.4	-38.0	7.7	6.4
626802	-56.3	-48.9	-48.5	7.8	0.4
626803	-34.9	-44.3	-41.4	-6.5	2.9
629301	-179.5	-185.8	-184.5	-5.0	1.3
1116401	-65.5	-60.1	-59.2	6.3	0.9
1116550	-119.2	-118.8	-117.9	1.3	0.9
1116551	-127.5	-138.4	-132.4	-4.9	6.0
1116650	-6.1	-8.0	-6.8	-0.7	1.2
1116801	-51.5	-50.5	-48.7	2.8	1.8
1204555	-4.2		-6.2	-2.0	
1209901	-67.4	-58.8	-59.1	8.3	-0.3
1209907		-36.6	-34.2		2.4

Armstrong, Carson, Donley, Gray, Potter and Wheeler Counties WHITEHORSE Aquifer Continued					
Well Number	Depth to Water, in feet			Water Level Difference	
	2006	2015	2016	10 Yr	1 Yr
1209909	-152.4	-157.6			
1210508	-25.3				
1210750	-50.9	-61.1	-58.3	-7.4	2.8
1210802	-141.3	-130.3	-127.6	13.7	2.7
1211553	-26.8	-26.8	-24.0	2.8	2.8
1212425		-39.0	-35.4		3.6
1212703	-37.2				
1212819		-34.5	-31.3		3.2
1218101		-30.0			