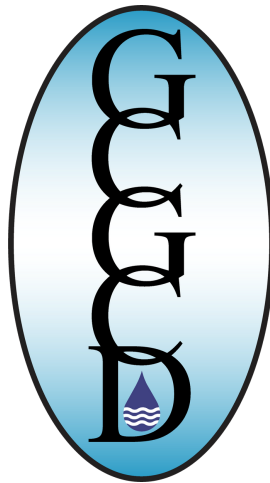


**GUADALUPE COUNTY  
GROUNDWATER CONSERVATION DISTRICT  
WATER LEVEL REPORT  
BY  
WILLIAM B. KLEMT, P.G.  
JANUARY 2024**



**Measurement of Water Level Decline and Achievability of the  
Desired Future Conditions for the Carrizo-Wilcox Aquifer  
within Guadalupe County**

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*William B. Klemt, P.G.*

WILLIAM B.KLEMT  
CONSULTING GEOLOGIST

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1200 Oak Shadow Circle  
Austin, Texas 78758  
(512) 837-2115

February 8, 2024

Kelley Cochran  
Manager  
Guadalupe County GCD  
P.O. Box 1221  
Seguin, Texas 78156

The District's water-level observation wells in Guadalupe County were measured in January 2024. Twelve (12) of the District's current wells are completed in the Carrizo aquifer and twelve (12) in the Wilcox aquifer. Most of the District's current observation wells were used to provide water level change or elevation information. Also used in this report were three Carrizo wells from Gonzales County.

Comparisons of water-level measurements and water-level decline calculations can be made using the tables. The attached maps show well locations and Carrizo - Wilcox water-level information.

#### **Carrizo Water Levels**

The total GCGCD Carrizo water level change (January 2023 - January 2024) was -45.04 feet for 11 wells. The average change per well, -4.1 feet. These wells are either located in the outcrop or close to the outcrop. Largest water-level change was reported in CRWA's PWS wells, 67-34-505 and 67-34-612 (Gonzales County) of + 25.6 and -15.1 feet, respectively. The above CRWA wells were not used in the above change calculations.

Carrizo water levels, from January 2023 to January 2024, changed an estimated -3 feet in the SSLGC Area (Well 67-34-706, and in the CRWA Area, the average water level changed about -8.8 feet (Wells 67-34-302 and 67-34-612).

The Carrizo long-term (2013 - January 2024) water-level declines in the SSLGC and CRWA areas of Guadalupe County are about 26 feet ( about -2.4 feet/year) and 44 feet ( about -4 feet/year), respectively.

#### **Wilcox Water Levels**

The January 2023 - January 2024 Wilcox water-level measurements indicate a total change of -0.49 feet for 8 wells ( average-0.06 feet /well). Not included in the water-level change calculation were the following wells:

- 1) Robert Carter, 67-19-708;
- 2) Flying W (Hwy 123), 67-33-8
- 3) Norvin Vogel, 68-40-204
- 3) CRWA, 67-34-5, average drawdown 9 feet/year (1/2019 - 1/2024)

#### **Carrizo Outcrop Monitor Wells**

The attached Desired Future Condition (DFC) Table for the Carrizo-Wilcox aquifer, in the outcrop, provides the data needed to track progress toward meeting the DFC. The data contained in the Table provides the following information:

- 1) Estimated 2013 water levels;
- 2) Estimated 2013 saturated thickness of the Carrizo and Wilcox aquifers;

- 3) Allowable water level drawdown in order to meet the District's DFC; and
- 4) January 2024 water levels.

Analysis of the Table indicates the total change (2013 - 2024) for the 6 monitor is about -55 feet (0.83 feet/well/year). At this current rate of water-level decline, in the six Carrizo wells, the District should continue to meet DFC requirements until sometime before or after 2060. Water-level declines in the Wilcox are too small, at this time, to be a DFC problem.

However, it is anticipated Carrizo water-level declines will increase moderately within the District due to the addition of the proposed SSLGC Carrizo Well Field in the vicinity of Well 67-34-706. This will increase present-day water level declines in monitor wells MWCZ-1A, 1B, 2 and 8. However, the increased rate of decline will slowly decrease with time as water levels approach a new equilibrium.

summary

In Summary: 1) The average one-year (1/2023 - 1/2024) Carrizo water levels from 11 wells declined -4.1 feet/well; 2) At the present day level of Carrizo pumpage, small to moderate water-level declines, for the most part, are continuing within the District; 3) Additional proposed pumpage is expected to increase the rate of Carrizo water-level declines in the District to a more moderate level; 4) Wilcox water levels remain relatively stable; and 5) It is recommended, the District continue monitoring the chemical quality and field parameters in the District's observation wells in order to detect natural changes or contamination of the ground water.

Sincerely,



William B. Klemt, P.G.

2/8/24  
WJK

**DESIRED FUTURE CONDITION  
MONITOR WELLS  
(Water Level Measurements are from Land Surface)**

**Carrizo Monitor Wells**

Observation Well	1/2013 Water Level (feet)	1/2013 Sat/Thick (feet)	DFC Available Drawdown (feet)	DFC Water Level (feet)	1/2224 Water Level (feet)
MWCZ-1A	144	276	69	213	151
MWCZ-1B	163	153	39	202	172
MWCZ-2	145	78	20	165	150
MWCZ-3	91	79	20	111	98
MWCZ-7	20	112	28	48	32
MWCZ-8	170	195	49	219	185

**Wilcox Monitor Wells**

MWWX-1 (Carter)	33	316	79	112	35
MWWX-2 (Ulrich)	100	410	103	203	99
MWWX-3 (Beltz)	25	111	28	54	25

Note:

Available Drawdown is estimated by multiplying the January 2013 Saturated Thickness by 25 percent

The DFC Water Level is estimated by adding the Available Drawdown to the January 2013 water level

2/8/24  
WBK

**GCGCD CARRIZO (Cz)/WILCOX (Wx)  
WATER-LEVEL PROGRAM**

Measurements shown are from the measuring point (MP)

<u>Date</u>		<u>WL below MP (ft)</u>
David Baker	67-18-8(7c) MP 1.0 ft >GL	LSD + 622
WS	Lat/Long: 29.654272/97.831397	Depth 232 ft
9/17/15		120.66
1/13/16		119.99
1/17/23		120.60
6/28/23		122.65
9/19/23		121.72
1/22/24		121.43
Robert Carter(Wx)	67-19-708(7b) MP 1.9 ft >GL	LSD +416
WS	Lat/Long:29.657673/97.726433	Depth 295 ft
1/20/13, 33feet (+378) <GL	Sat/thick (2013) = 349 ft (Brac) -33 ft = 316 ft	
1/14/15		036.67
9/14/22		037.82
1/17/23		035.45: oil spill, 100 ft west
6/28/23		037 Estimated
9/18/23		038.26
Fred Blumberg (Wx)	67-25-709 MP 1.5 ft >GL	LSD +525
	Lat/Long:29.530255/97.973638	Depth 160 ft
3/20/00		053
1/21/13		053.20
1/17/23		052.13
6/28/23		053.94
9/19/23		057.11
1/22/24		053.45
Dickie Ullrich(Wx)	67-25-910(9a) MP 0.5 ft >GL	LSD +506
Schaefer	Lat/Long:29.518904/97.887402	Depth (?)
9/02/10		094.60 <MP
1/21/13		099.98 <GL
1/18/23		103.11
6/28/23		123.14
9/19/23		105.75
1/22/24		099.31
Donald Brady(Wx)	67-26-312(7a) Mp 2.0 ft >GL	LSD +568
WS	Lat/Long:29.616036/97.776164	Depth 410
12/1/99		166
1/21/13		163.33
1/17/23		166.08
6/28/23		165 Estimated (186 ft pumping)
9/19/23		176.24
1/22/24		166.75
SH 466 MWCz-7	67-26-9 (39) MP 0.4 ft <GL after 1/28/20	LSD +393
	Lat/Long:29.502032/-97.76655	Plugged back from 250 to 132 ft
		Screen 92 to 132 ft
		B/Cz 132 ft (+261)
Estimated 2002 WL Elev. +376		
1/2013 WL Elev +373 (20 ft <LSD)		Sat/thick (2013) = 132 - 20 = 112 ft
6/12/19		23
1/28/20		26.28(WS), 24.75(e-line)
1/18/23		29.74

6/27/23		30.51	
9/18/23		32.70	
1/22/24		31.9	
Chris Ayotte	67-27-110(2b) MP 2.0 ft >GL		LSD +431
WS	Lat/Long:29.58612/97.7211		Depth 360 ft
2/23/12		063	
1/21/13		059.12	
1/17/23		052.58	
6/28/23		051.87	
9/19/23		053.00	
1/22/24		052.56	
Sagebiel MWCz-3	67-27-4(2d) MP 3.3 ft >GL		LSD +452
Nash Creek WS	Lat/Long:29.546739/-97.720243		Plug back from 270 to 170 ft
			Screen 170 up to 130 ft
			B/Cz 170 ft (+288)
Estimated 2002 WL Elev. +373			
1/2013 WL 91 ft <LSD)		Sat/thick (2013) 79 ft	
2/08/19		091.5 < GL	
1/17/23		092.81	
6/28/23		093.76	
9/18/23		095.27	
1/22/24		101.1	
Pete Kallies(Wx)	67-27-706(2) MP 1.0 >GL		LSD +433
WS	Lat/Long:29.533748/-97.738436		Depth 520 ft
9/24/03		053.24	
1/21/13		055.70	
1/17/23		055.89	
6/28/23		053.40	
9/19/23		056.64	
1/22/24		057.4	
Edward Henk	67-33-602(3b) MP 1.55 ft >GL		LSD +541
WS	Lat/Long:29.424211/-97.879389		Depth 225 ft
8/17/08		108.17	
1/21/13		111.62	
1/17/23		124.04	
6/28/23		124.56	
9/19/23		124.90	
1/22/24		125.82	
Blumberg MWCZ 1-B	67-33-6 MP 3.5 ft >GL		LSD +620
	Lat/Long:29.429658/-97.901995		Depth 319 feet, plug back from 355 feet
			Screen 279 - 319 feet
			B/CZ 316 feet
Estimated 2002 WL Elev. +459			
1/2013		163.06 < GL, 2013 Sat Thick (316 - 163 = 153 ft)	
7/24/20		169.2 < GL after development	
1/18/23		167.95	
6/27/23		170.78	
9/18/23		171.67	
1/22/24		175.15	
Sandy Oaks Tavern	67-33-803(8) MP 1.8 ft >GL		LSD +584
(Pole Cat) WS	Lat/Long:29.381048/-97.956268		Depth (?)
8/1964		125 ft < GL	
1/21/13		152.59	
1/17/23		158.36	
6/28/23		159.36	
9/19/23		159.48	
1/22/24		160.	

Hwy 123 MWCz-2	67-33-8(8a)	MP 3.6 ft >GL	LSD +628
Flying W	Lat/Long: 29.400309/-97.954371		Screen 180 - 220 ft
Estimated 2002 WL Elev. +494			TD 280 ft (+351)
1/20/13 WL 141 ft <GL		B/Cz @ TWCZ-1 (+406 Elev.)	
2/17/18		146.3	
2/20/18		146.25 <GL Reported	
1/15/19		148.87	
147.93			
1/18/23		147.98	
6/27/23		144.98	
9/18/23		146.48	
1/22/24		153.36	
Hwy 123 (Wx)	67-33-8	MP 1.5 ft >GL	LSD +620
Flying W	Lat/Long: 29.409830/-97.954708		Depth 535 ft
6/06/88		140	
6/22/21		148.85	
9/14/22		162.26	
1/18/23		156.95	
6/28/23		159.83	
9/19/23		164.97	
Blumberg MWCz-1A	67-33-9(6d)	MP 3.0 ft >GL	LSD +570
	Lat/Long: 29.413811/-97.887355		Plug back from 477 ft to 420 ft
Estimated 2002 WL Elev. +430			Screen 360 - 420 & 180 -200 ft
1/20/13 WL 144ft <GL)		Sat/thick (2013) 420 -144 = 276 ft	B/Cz 420 ft (+150)
3/12/19		147.5	
4/04/19		147.5	
4/23/19		147.51	
1/18/23		149.19	
6/27/23		145.58	
9/18/23		149.87	
1/22/24		154.14	
Wells Ranch (Cz)	67-34-302(3a)	MP 1.5 ft >GL	LSD +491
WS	Lat/Long: 29.4706/-97.7747		Depth 250 ft
2002		106 Estimated	
4/29/08		110	
1/03/13		118.70	
1/09/23		152.06	
6/01/23		152.11	
9/8/23		153.33	
1/04/24		154.49	
MWCz-8, FM 1117	67-34-4(4b)	MP 0.3 ft <GL	LSD +610
	Lat/Long: 29.452258/97.845193		Depth 415 ft
Estimated 2002 WL Elev. +443			Screen 325 - 365 ft
1/20/13 WL 170 ft <GL)		B/Cz 365 ft (+245)	
7/25/19		Sat/Thick (2013) = 365 - 170 = 195 ft	
8/09/19		179	
1/17/23		178.2	
6/27/23		180.45	
9/18/23		180.84	
1/22/24		181.00	
		184.95	
Bexar Met #2 (Cz)	67-34-505(5)	MP 2.2 ft >GL	LSD +474
Deer stand	Lat/Long: 29.450425/-97.796486		Depth 460 ft
8/20/02		084.09	

			102.18
			135.6
			134.0
			135.5
			110.
CRWA (Wx)	67-34-5	MP 2.2 ft >GL	LSD +483
Deer stand #3	Lat/Long: 29.449793/-97.797889		Depth 1602 ft
09/07/16			092.1
10/14/18			149.9
01/02/19			178.2
06/10/22			136.5
06/01/23			175.0
01/10/24			223. From GL
Blumberg #1 (Cz)	67-34-706(6)	MP 2.0 ft >GL	LSD +514
WS	Lat/Long: 29.385406/-97.852584		Depth 770 ft, T/MCz 330 ft(+184)
			Screen 526 - 772 ft
1/21/04			109.10 <GL
1/21/13			121.28
1/17/23			144.45
6/28/23			147.38
9/18/23			150.51
1/22/24			147.5
Baethge (Cz)	67-34-710(6c)	MP 2.0 ft >GL	LSD +468
(Lakey) WS	Lat/Long: 29.411429/-97.836769		Depth (?)
8/17/08			069.84
1/21/13			074.23
1/17/23			100.24
6/28/23			099.73
9/19/23			104.20
1/22/24			103.2
Mundt (Cz)	67-34-7	MP 1.5 ft >GL	LSD +520
	Lat/Long: 29.391694/-97.840694		Depth 444 ft
1/19/22			142.68
Norvin Vogel (Wx)	68-40-204(10a)	MP 1.0 ft >GL	LSD +560
WS	Lat/Long: 29.4929/-98.0703		Depth 90 ft
10/4/85			024
1/15/19 (2013)			025.75
9/14/22			026.92
1/17/23			026.37
6/28/23			026.37
9/19/23			027.03
Belz (Wx)	68-40-401	MP 1.0 ft >GL	LSD +537
	Lat/Long: 29.447778/-98.0950556		Depth 64 ft
1/19/22			027.00
6/15/22			027.05
1/17/23			026.86
6/28/23			026.14 Pumping
9/19/23			027.11
1/22/24			025.34
Randy Schween	68-40-7	Mp 1.74 >GL	LSD +540
	Lat/Long: 29.40888/-98.114721		Depth 180 ft
2/09/02			060
4/05/22			068.38
1/17/23			063.35
6/28/23			072.38



9/19/23  
1/22/24

070.00  
064.85

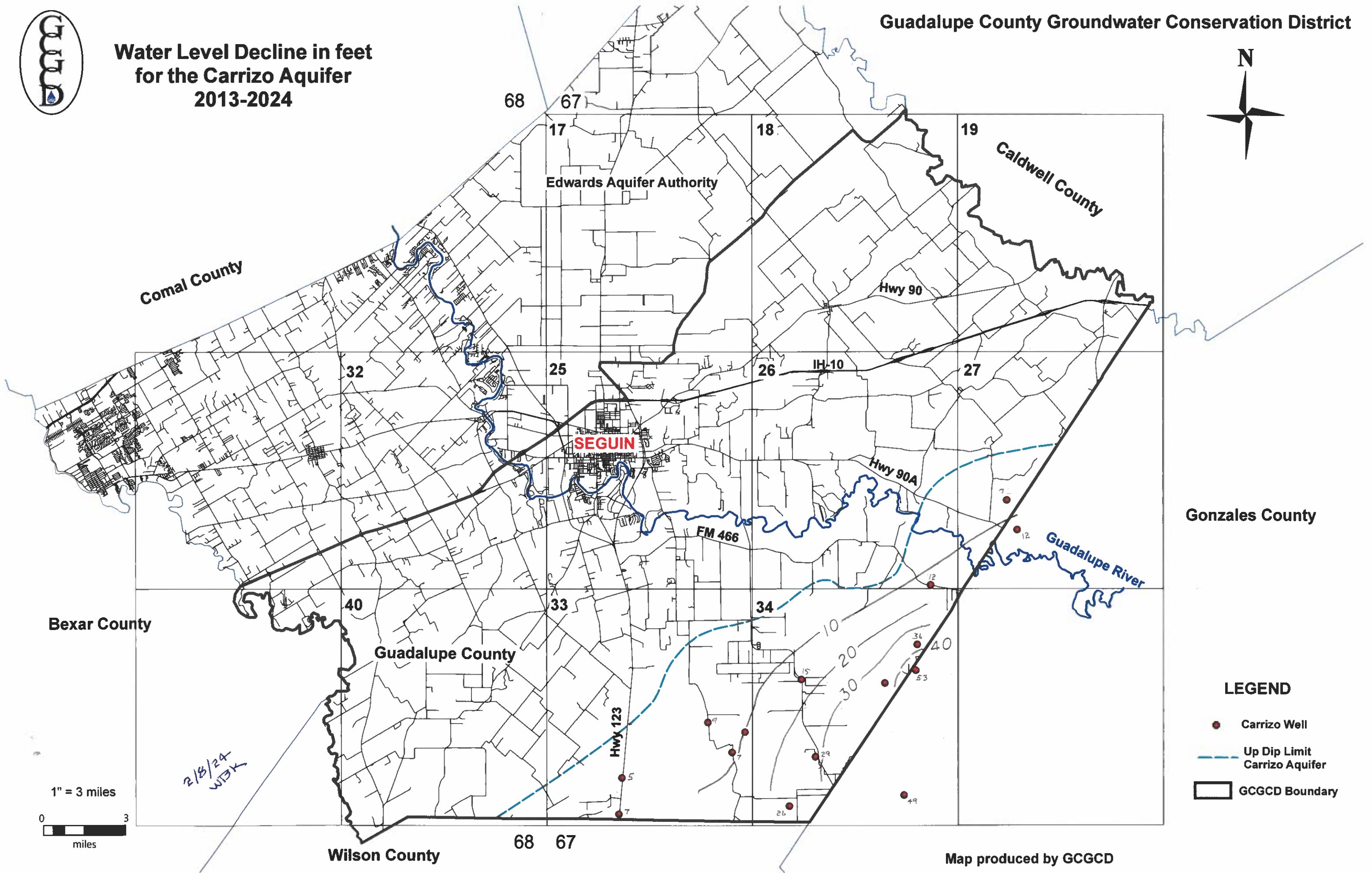
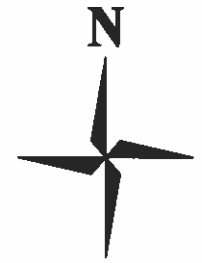
### GCUWCD WATER LEVELS

<b>James Miller (Cz)</b>	<b>67-27-705</b>	<b>MP 0.5 ft &gt;GL</b>	<b>LSD +391</b>
	<b>Lat/Long:29.530824/-97.71026</b>		<b>Depth (?)</b>
8/20/02			030.07
1/03/13			036.58
1/09/23			048.70
6/01/23			046.70
9/08/23			049.02
1/04/24			049.05
<b>Bexar Met #3</b>	<b>67-34-612</b>	<b>MP 2.2 ft &gt;GL</b>	<b>LSD +465</b>
<b>Harden #1 Tommy's Well</b>	<b>Lat/Long: 29.457182/-97.775855</b>		<b>Depth 680 ft</b>
8/20/02			075.13 MP 1.5 ft >GL
1/03/13			096.8
1/06/23			134.9
6/08/23			132.0
9/06/23			107.2
1/02/24			150.
<b>Thyra Harvey(Cz)</b>	<b>67-34-904</b>	<b>MP 1.2 ft &gt;GL</b>	<b>LSD +410</b>
	<b>Lat/Long:29.39102/-97.782671</b>		<b>Depth (?)</b>
10/25/00			032.17 Barry Miller
01/17/12			054.57
1/09/23			098.02
6/01/23			092.53
9/26/23			096.07
1/04/24			103.51



# Water Level Decline in feet for the Carrizo Aquifer 2013-2024

Guadalupe County Groundwater Conservation District

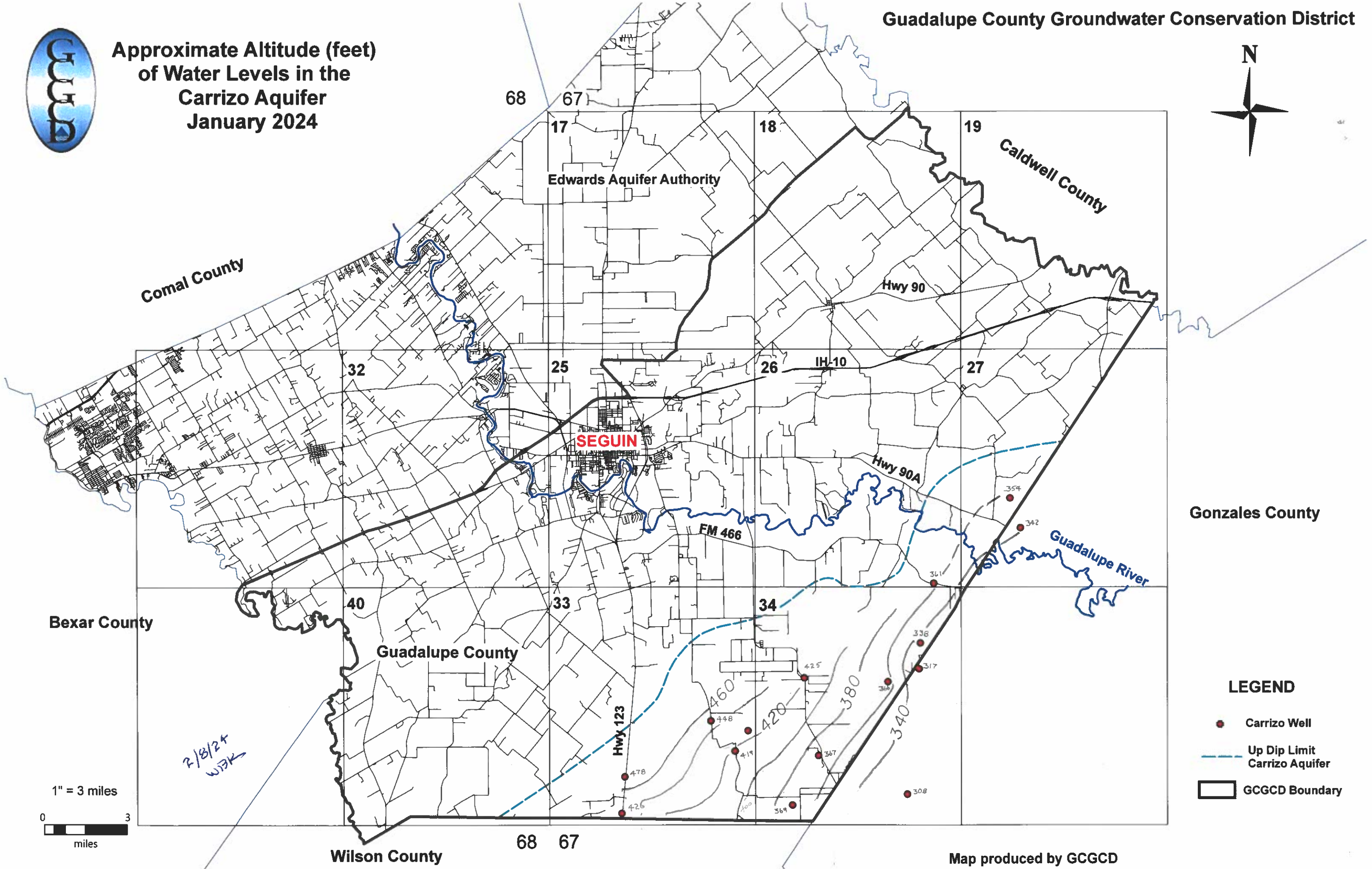
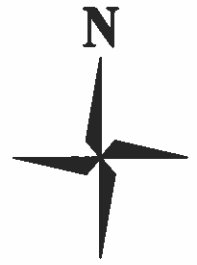


Map produced by GCGCD



**Approximate Altitude (feet)  
of Water Levels in the  
Carrizo Aquifer  
January 2024**

**Guadalupe County Groundwater Conservation District**



**Gonzales County**

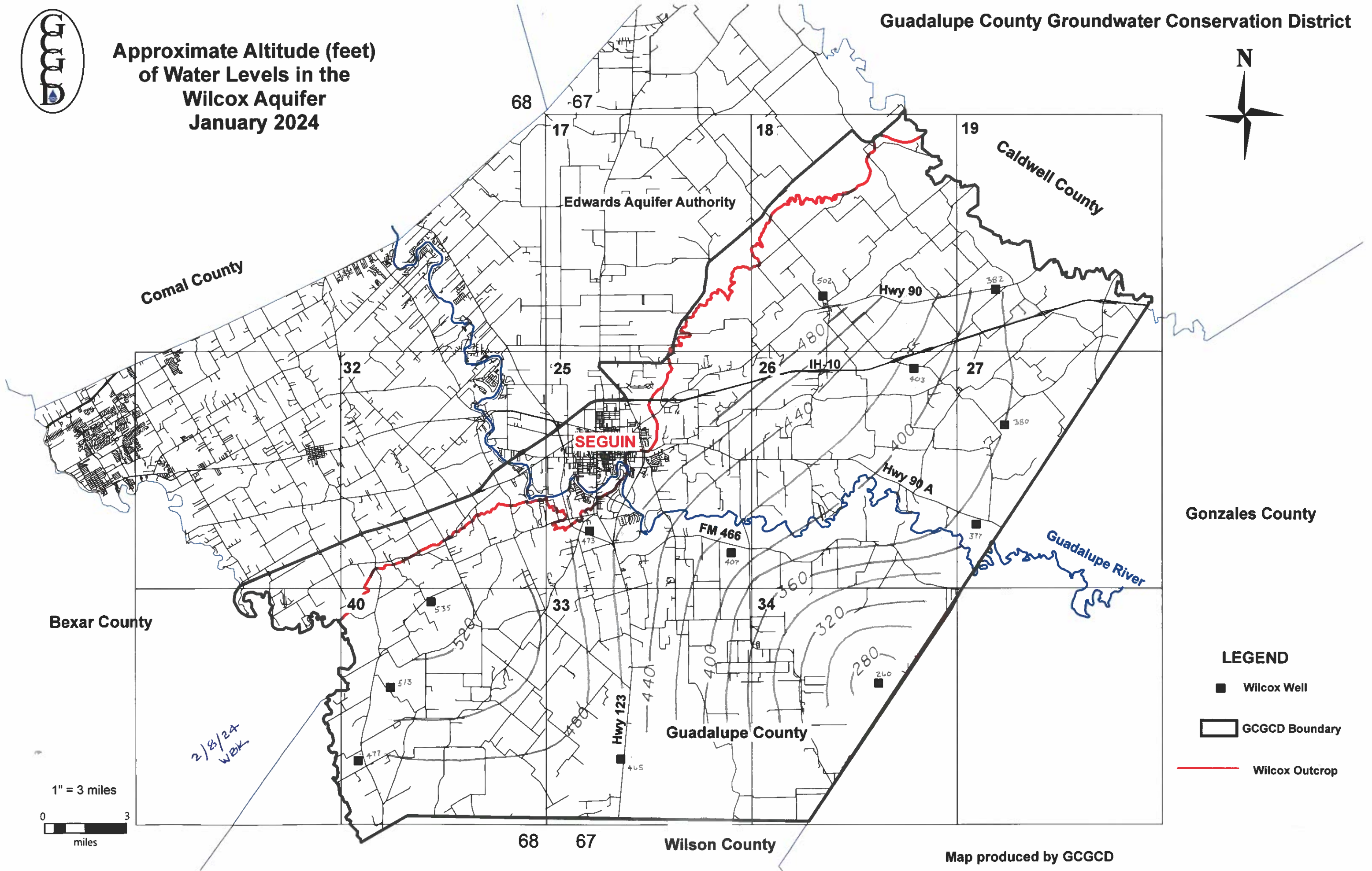
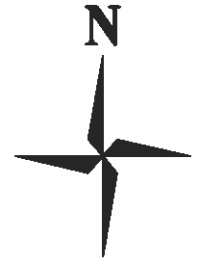
**LEGEND**

- Carrizo Well
- Up Dip Limit Carrizo Aquifer
- GCGCD Boundary



**Approximate Altitude (feet)  
of Water Levels in the  
Wilcox Aquifer  
January 2024**

**Guadalupe County Groundwater Conservation District**



**Gonzales County**

**LEGEND**

■ Wilcox Well

▭ GCGCD Boundary

— Wilcox Outcrop

**Bexar County**

**Guadalupe County**

**Wilson County**

**Edwards Aquifer Authority**

**Caldwell County**

**Comal County**

**SEGUIN**

*2/8/24  
WOK*

1" = 3 miles



Map produced by GCGCD