



Clearwater Underground Water Conservation District

P.O. Box 1989, Belton, Texas 76513

Phone: 254/933-0120 Fax: 254/933-8396

www.cuwcd.org

Leland Gersbach, President

Gary Young

Jody Williams

Scott Brooks

David Cole

Clearwater Staff Reports

July 8, 2020

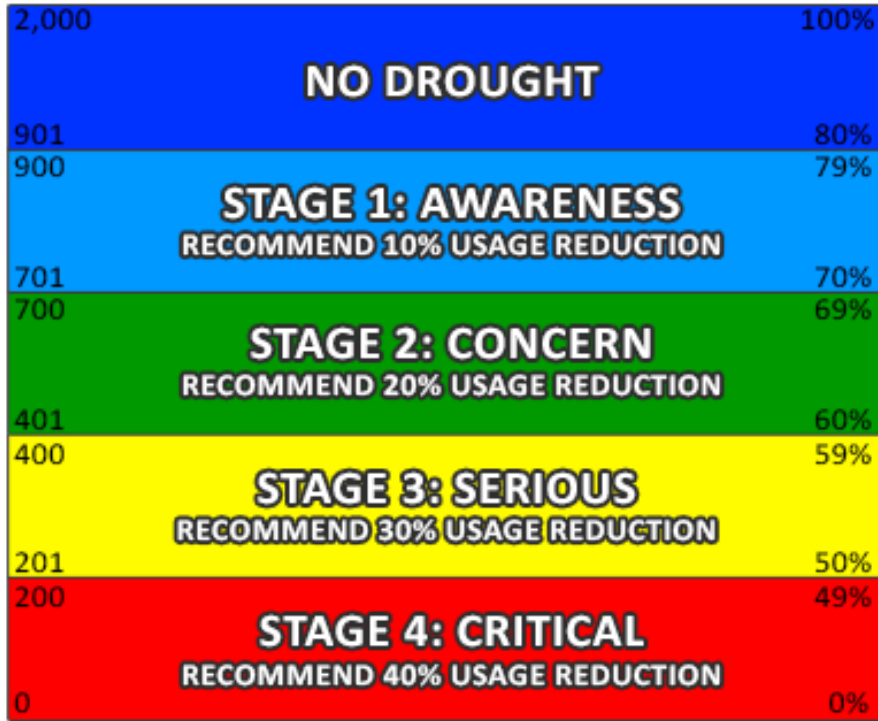
1. Drought Status
2. Educational Outreach Update
3. Monitoring Wells
4. Rainfall/Drought Conditions
5. Well Registrations
6. Non-Exempt Monthly Well Production

Edwards BFZ Aquifer—Drought Status Report

STAGE 1 - AWARENESS

Salado Creek
Spring Discharge

736.66 ac-ft
(month)
12.38 cfs



Precipitation Deficit
Index (PDI)

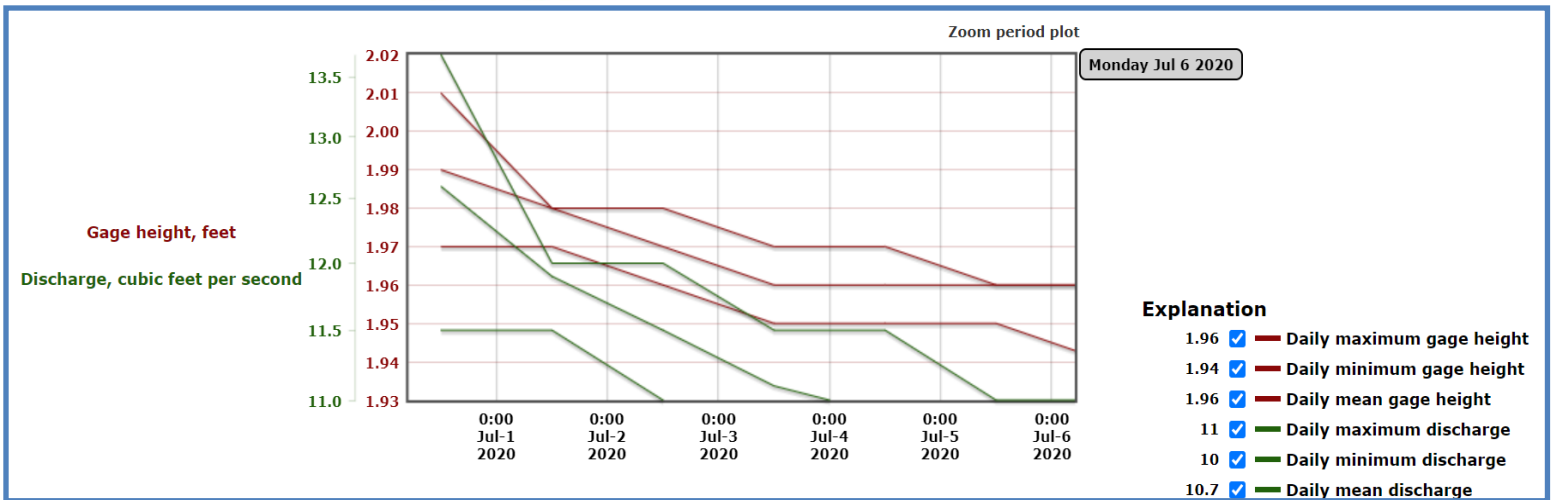
25.14 PDI
77.31 %

AS OF 7/05/2020

PDI is based on a 33" normal yearly average and is a 365 day running total.

USGS 08104300 Salado Ck at Salado, TX

Gage height, feet Discharge, cubic feet per second



- Continue or increase voluntary reduction in various uses.
- Check for and correct all plumbing leaks.
- Re-use or re-circulate water whenever possible.
- No filling of ponds, lakes, tanks, reservoirs, swimming pools or other surface impoundments for holding water that have a total capacity of more than 50,000 gallons, except for public water supply systems. Public water supply systems are encouraged to implement measures to achieve a 10% reduction in water usage.

Edwards BFZ Aquifer

Initiation and Termination of Drought Stages

Initiation of Stages: The Precipitation Deficit Index (PDI), the daily maximum spring discharge, and average spring discharge values shall be monitored and presented to the District Board at the monthly Board meeting. Drought stages shall be triggered when either the PDI or the average spring discharge measured via stream flow gauges in Salado Creek fall below the trigger level for the periods described below:

***PDI:** Monitored daily on a running-year basis over a defined area consisting generally of the area of the Edwards aquifer and contributing areas in Bell and portions of Williamson Counties and which is based on NEXRAD rainfall data provided by the National Oceanic and Atmospheric Administration. The PDI trigger condition must be exceeded for a period of 28 consecutive days.*

***Spring Discharge:** Monitored daily with the daily maximum discharge values averaged over a period of five consecutive days on a running five day basis.*

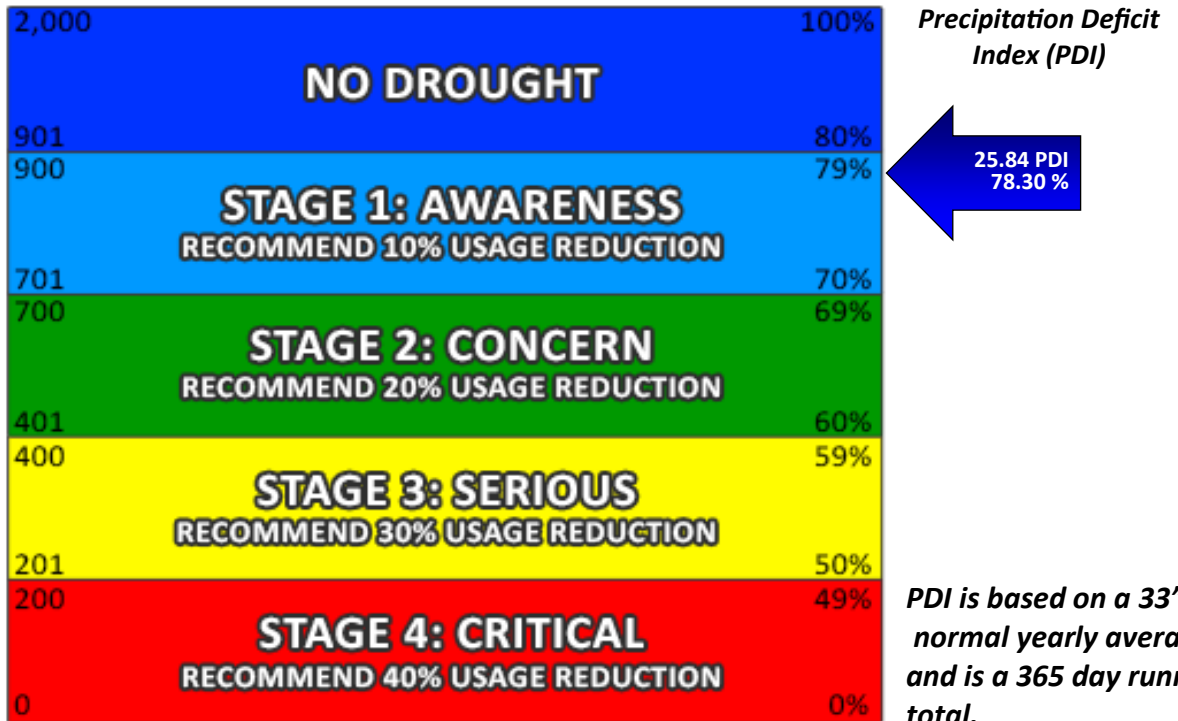
Termination of Stages: Drought stage in effect shall be reduced or terminated when both the PDI and the average spring discharge values are greater than the trigger conditions of the drought stage in effect for t

***PDI:** Monitored daily on a running-year basis over a defined area consisting generally of the area of the Edwards aquifer and contributing areas in Bell and portions of Williamson Counties and which is based on NEXRAD rainfall data provided by the National Oceanic and Atmospheric Administration. The PDI trigger condition must be exceeded for a period of 42 consecutive days.*

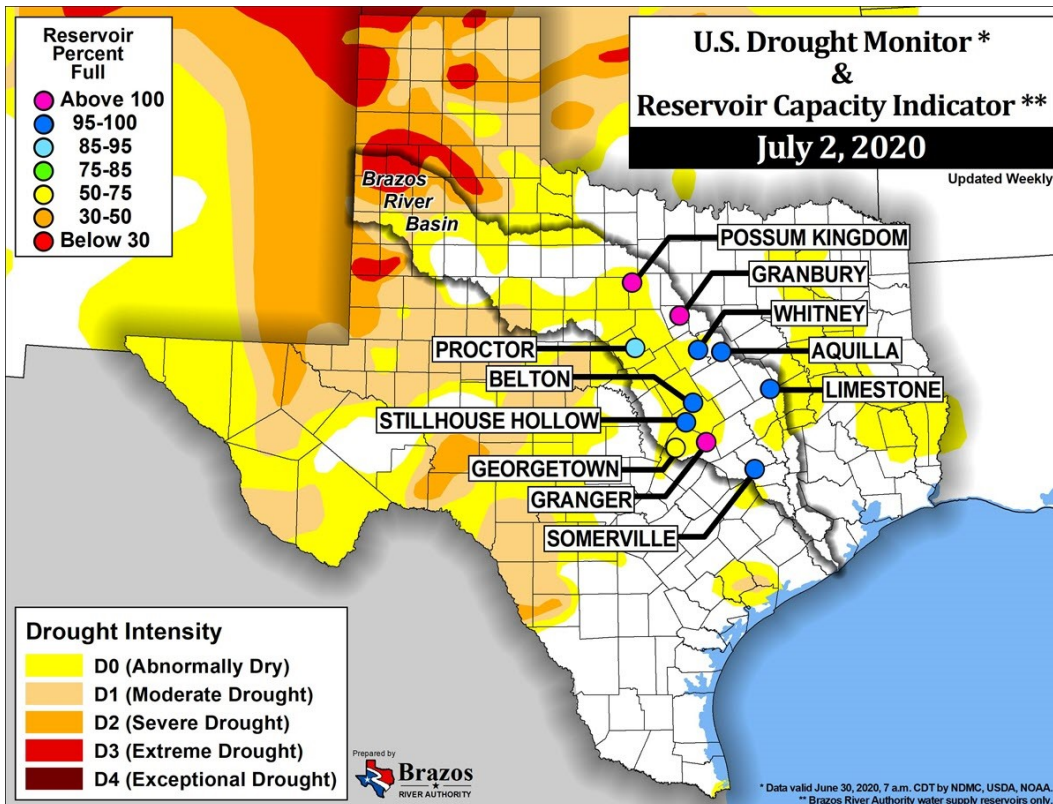
***Spring Discharge:** Monitored daily with the daily maximum discharge values averaged over a period of seven consecutive days on a running seven day basis.*

Trinity Aquifer—Drought Status Report

STAGE 1 - AWARENESS



AS OF 7/05/2020



- Continue or increase voluntary reduction in various uses.
- Check for and correct all plumbing leaks.
- Re-use or re-circulate water whenever possible.
- No filling of ponds, lakes, tanks, reservoirs, swimming pools or other surface impoundments for holding water that have a total capacity of more than 50,000 gallons, except for public water supply systems. Public water supply systems are encouraged to implement measures to achieve a 10% reduction in water usage.

Initiation and Termination of Drought Stages

Initiation of Stages: The Precipitation Deficit Index (PDI) values shall be monitored and presented to the District Board at the monthly Board meeting. Drought stages shall be triggered when the PDI falls below the trigger level for the period described below:

PDI: Monitored daily on a running-year basis over a defined area consisting generally of the area of the Trinity aquifer and contributing areas in Bell and portions of Williamson Counties and which is based on NEXRAD rainfall data provided by the National Oceanic and Atmospheric Administration. The PDI trigger condition must be exceeded for a period of 28 consecutive days.

Termination of Stages: Drought stage in effect shall be reduced or terminated when both the PDI and the average spring discharge values are greater than the trigger conditions of the drought stage in effect for the period described.

PDI: Monitored daily on a running-year basis over a defined area consisting generally of the area of the Trinity aquifer and contributing areas in Bell and portions of Williamson Counties and which is based on NEXRAD rainfall data provided by the National Oceanic and Atmospheric Administration. The PDI trigger condition must be exceeded for a period of 42 consecutive days.



Education Outreach Highlights 7/8/20

1. Goal: Improve our educational outreach efforts and expand our identified audiences (4th-5th grade, high school environmental sciences students, and the real-estate sales community).

Goals and objectives in the Management Plan (A:3, A:4, B,F:1,F:2 pages 22-26).

- All educational events have been canceled due to COVID-19.

2. Improve Communication and Reporting of Usage by well owners who are permitted (HEU or OP) by the district. Goals and objectives in the Management Plan (A:1, A:2, A:3,G:1,G:2, pages 22-23).

- Continue working with HALFF to make improvements to the new platform and correct flaws as needed.
- Most of our permitted users are entering their monthly water usage online now.

3. Increase the District Communication strategically by expanding utilization of a media sources.

Goals and objectives in the Management Plan (A:1, A:2, A:3,G:1,G:2, pages 22-23).

- Continually adding more information to the website to make it a valuable resource to Bell County along with utilizing more social media.

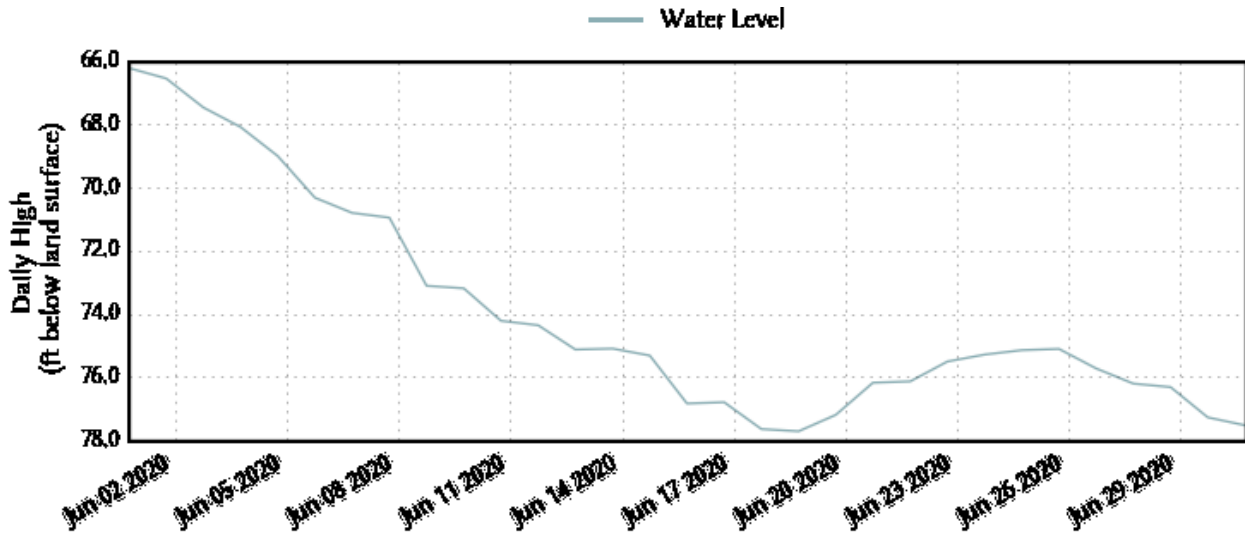
4. Improve Annual Reporting accuracy and timeliness per State mandated Legislation and Management Plan. Goals and objectives in the Management Plan (A:1,2,3,4; B; C; D; E; F; g pages 22-26).

- The 2019 Annual Report was approved at the March meeting.

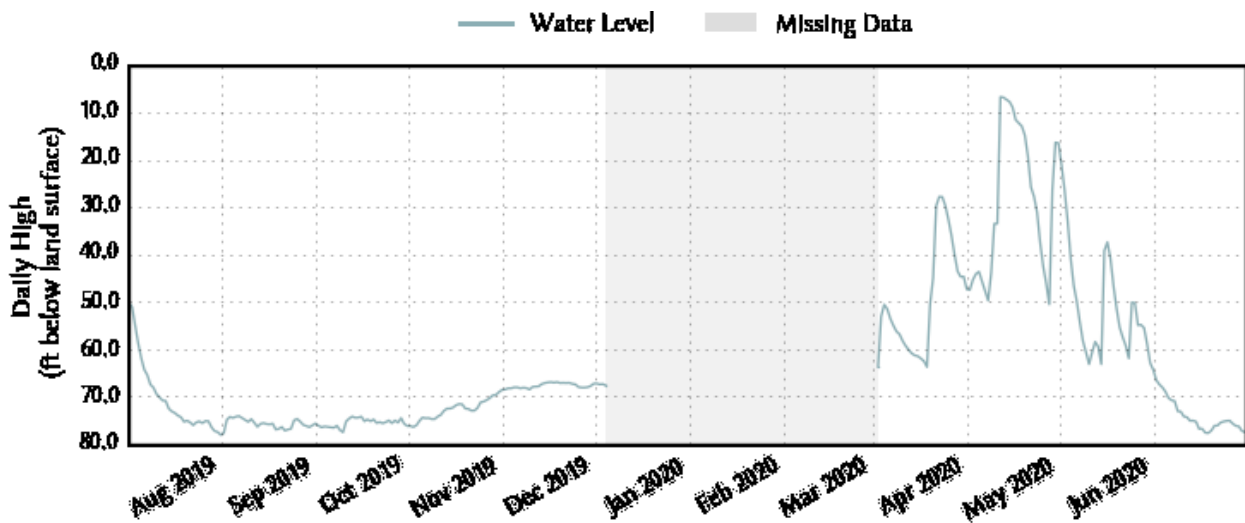
June 2020

Continuous Monitoring Well # 5804628
(Salado Cemetery)
Edwards Aquifer

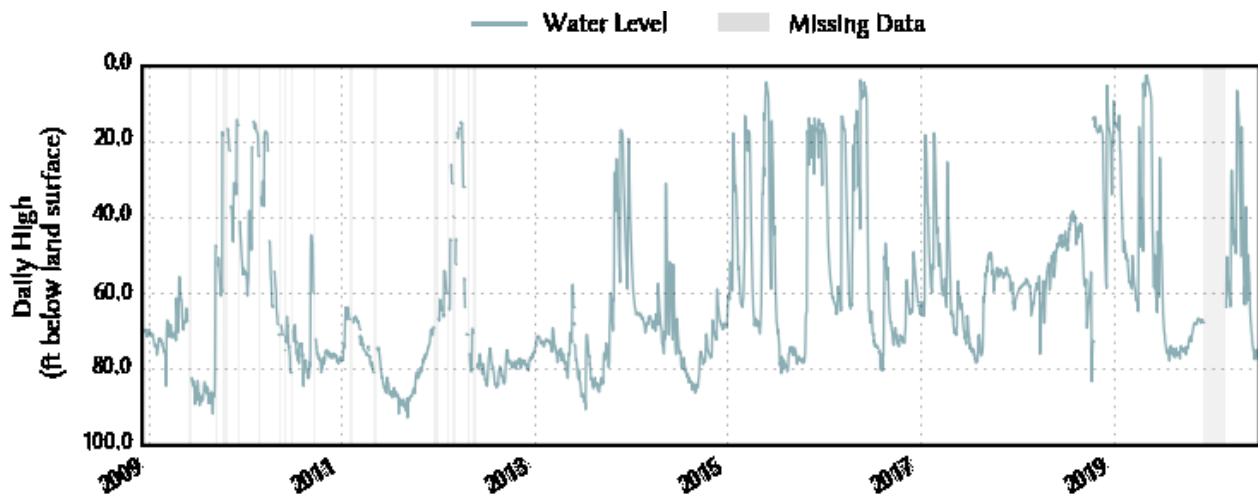
Last 30 Days



1 Year



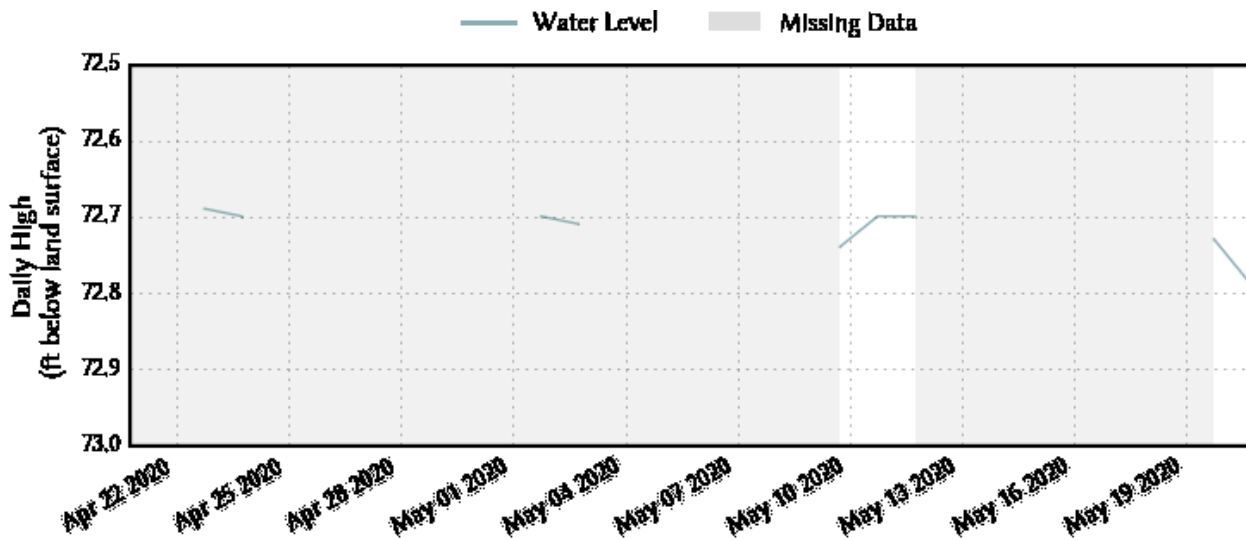
Period Of Record



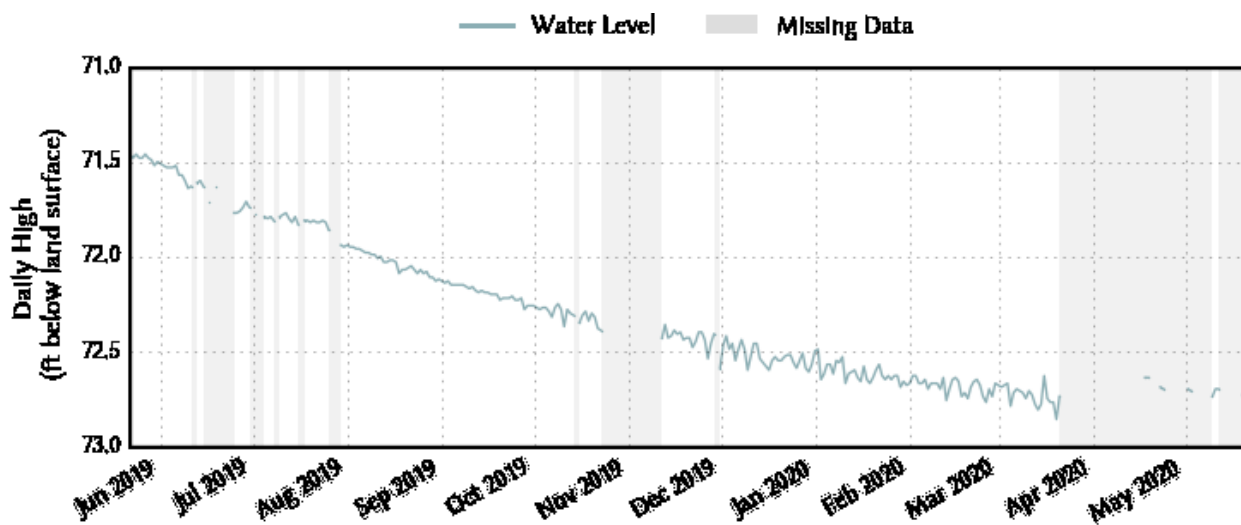
June 2020

Continuous Monitoring Well # 5804702
(FM 2843 - Patterson's Crossing - Salado Creek)
Edwards Aquifer

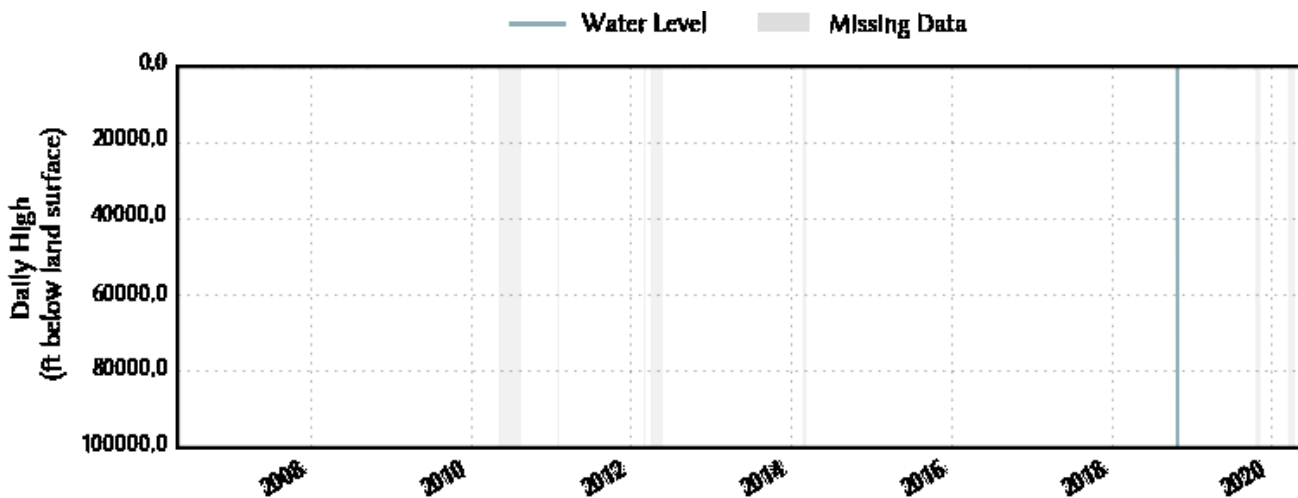
Last 30 Days



1 Year



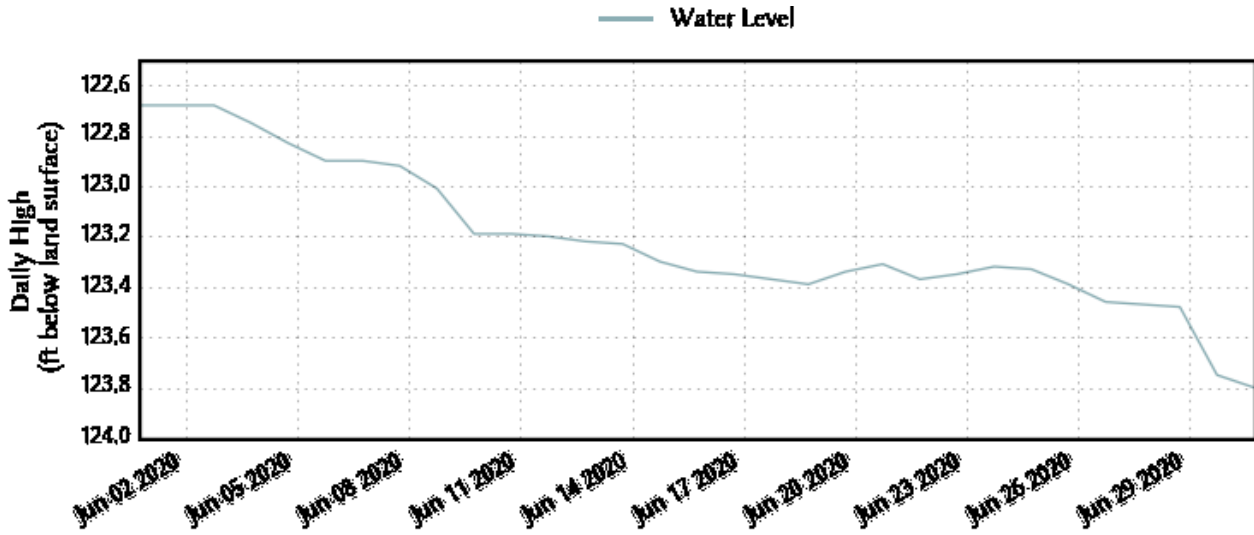
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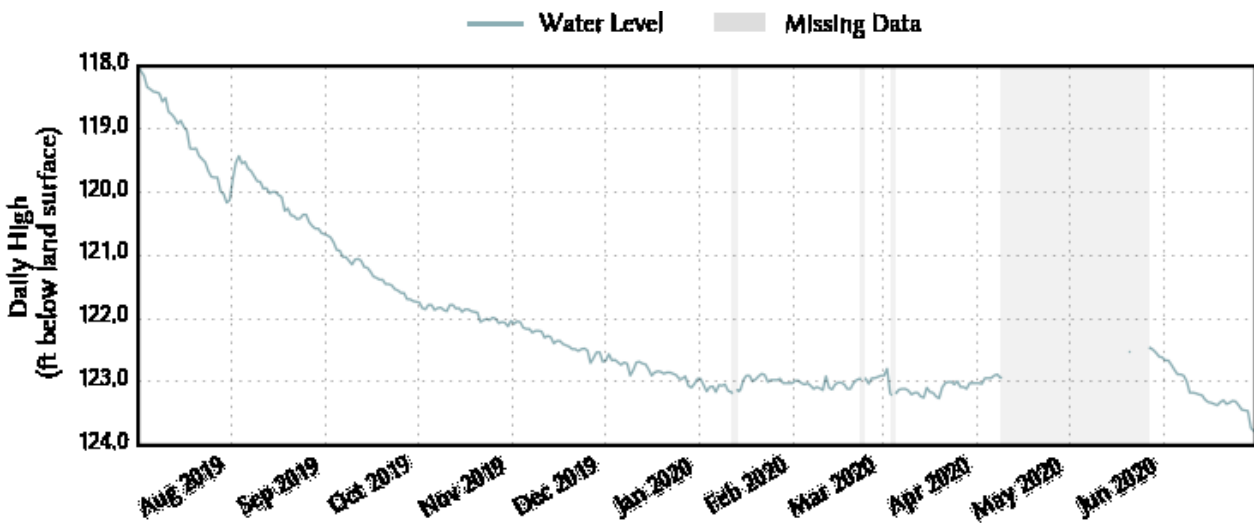
June 2020

Continuous Monitoring Well # 5804816
(IH-35 Rest Stop - West)
Edwards Aquifer

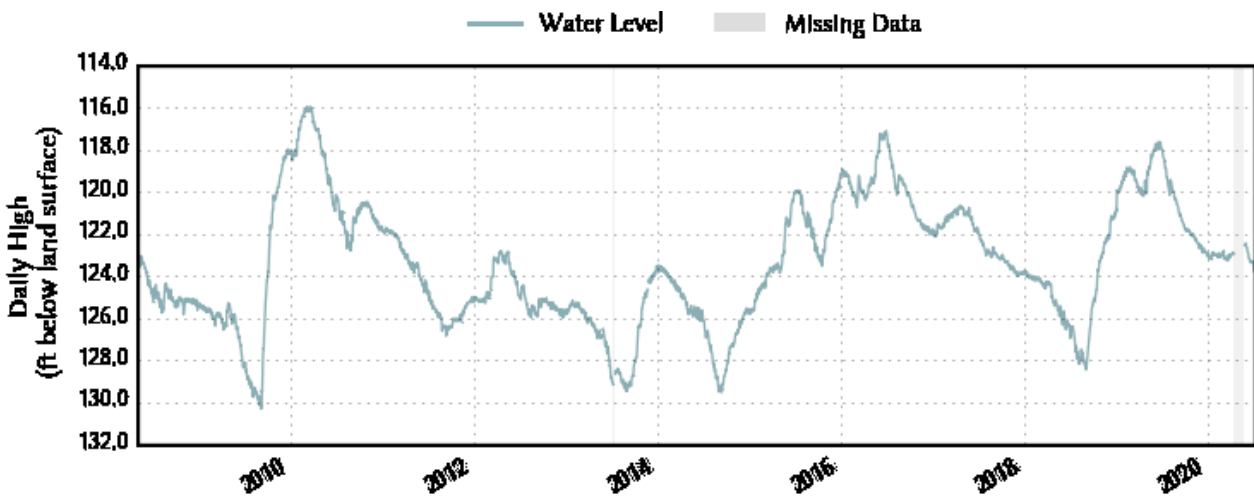
Last 30 Days



1 Year



Period Of Record

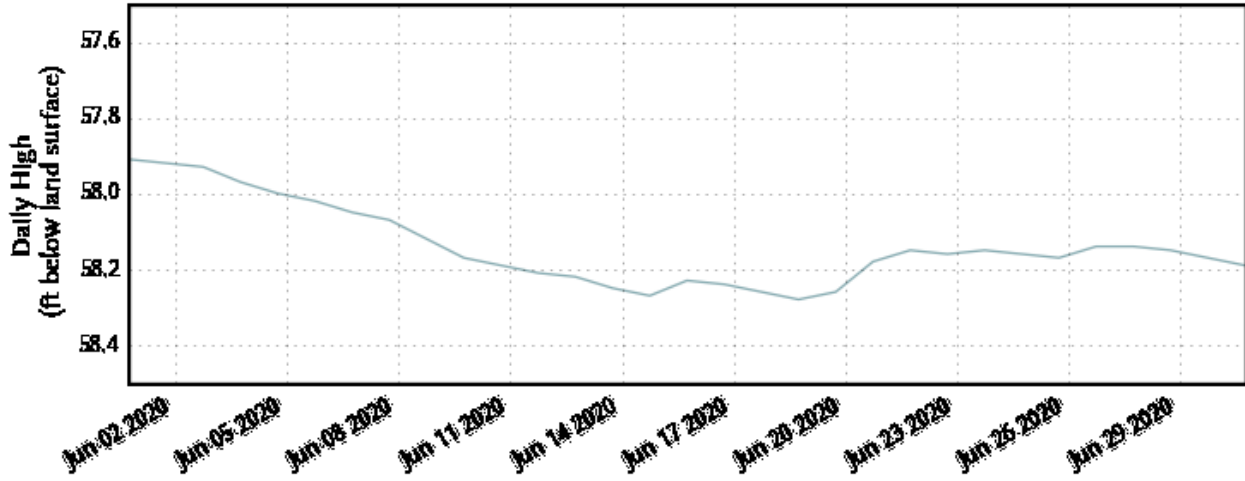


June 2020

Continuous Monitoring Well # 5803702
(Gault Site - Williamson County)
Edwards Aquifer

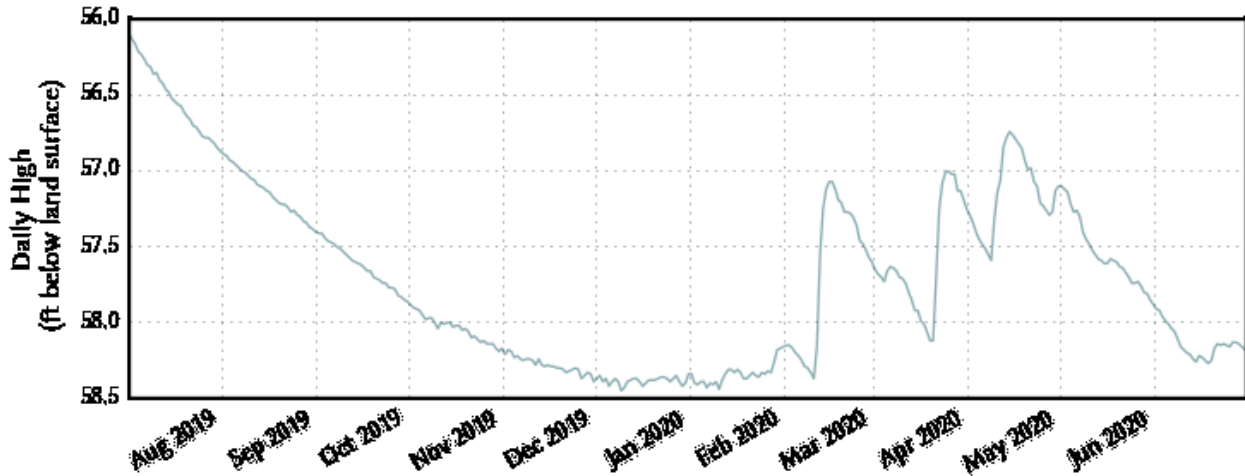
Last 30 Days

— Water Level



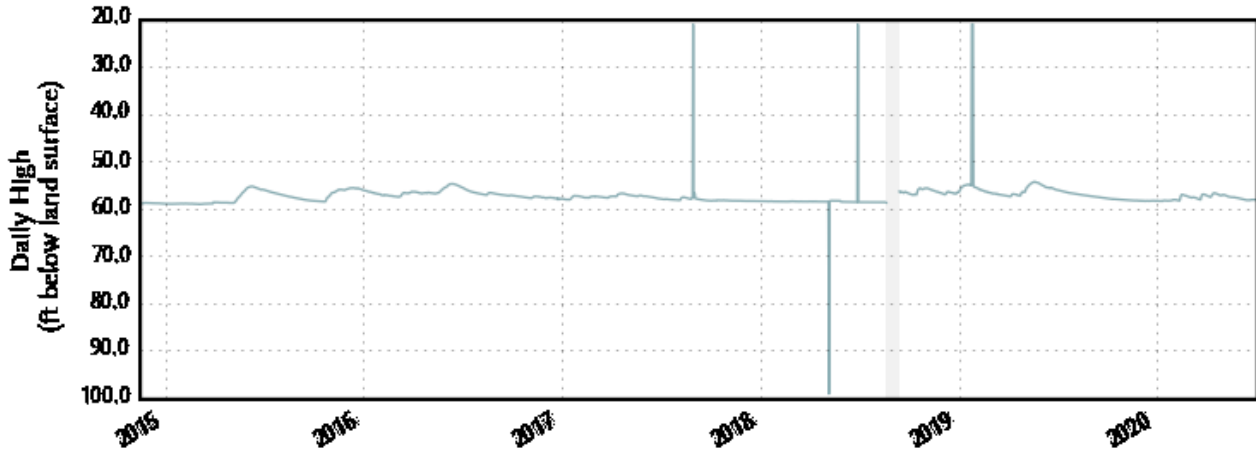
1 Year

— Water Level



Period Of Record

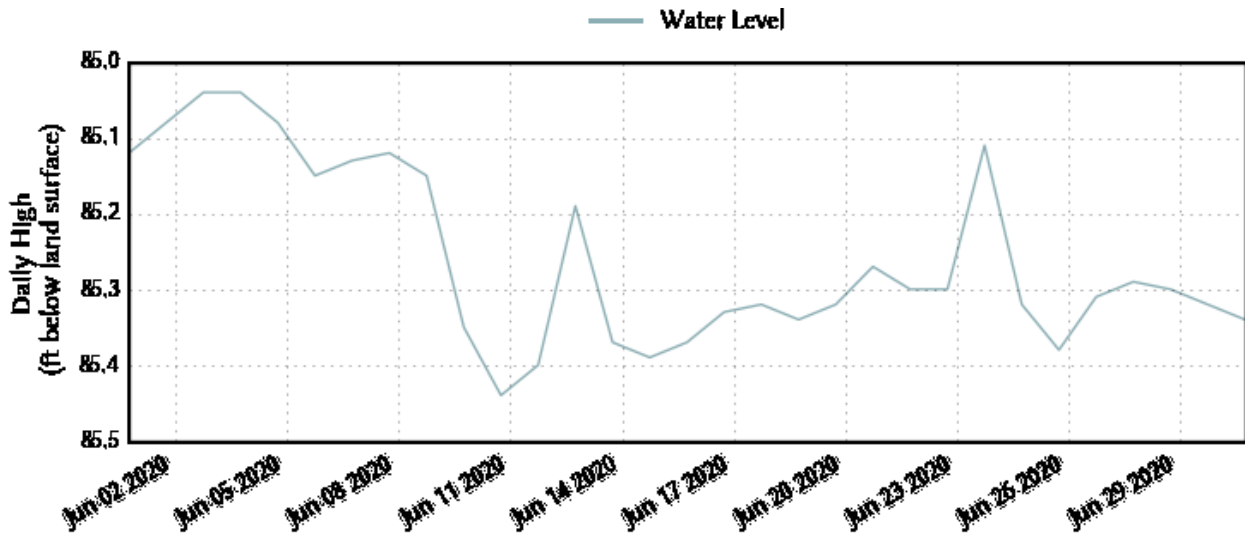
— Water Level ■ Missing Data



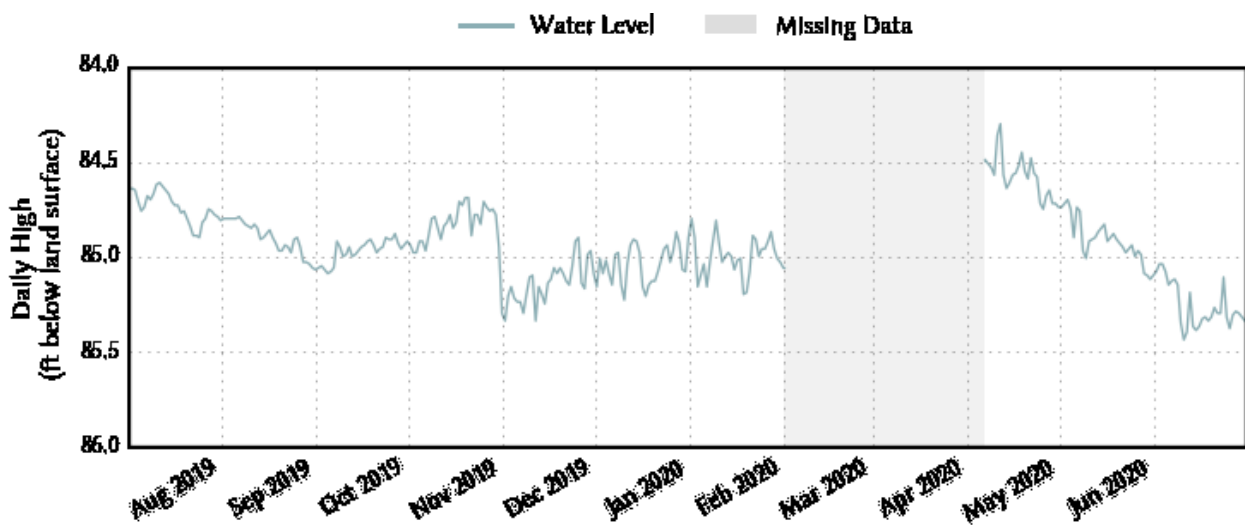
June 2020

Continuous Monitoring Well # 4058201
(Central Texas College - Ranch Rd)
Upper Trinity Aquifer

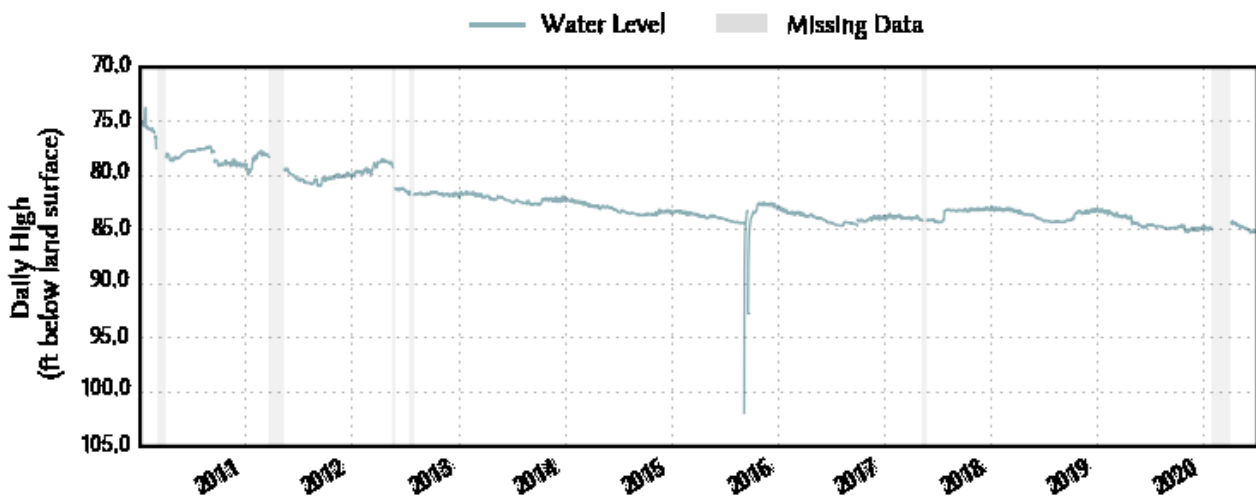
Last 30 Days



1 Year

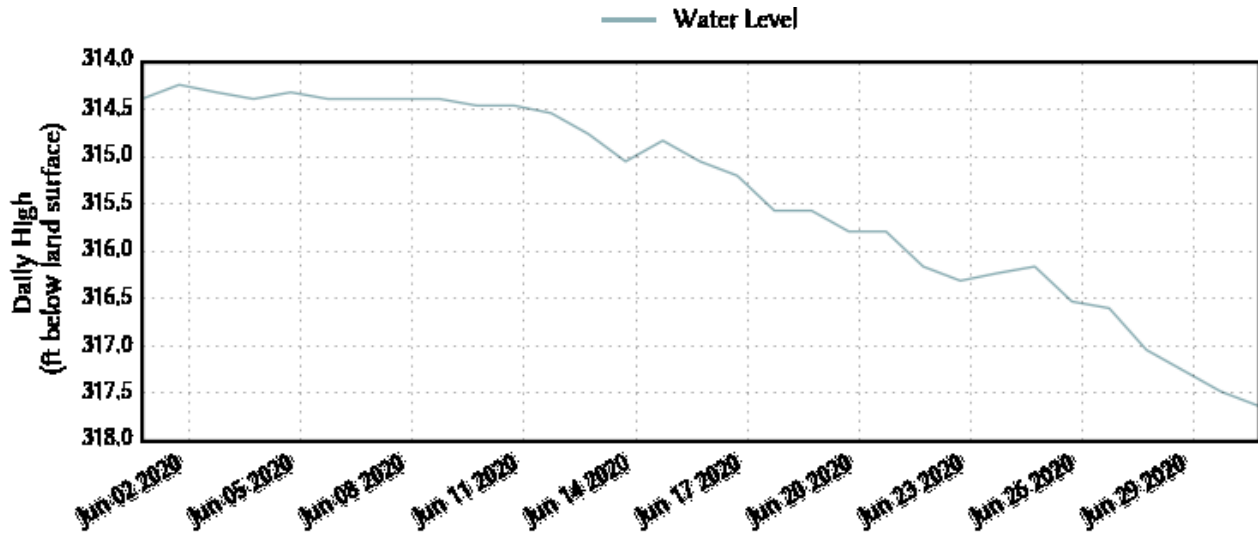


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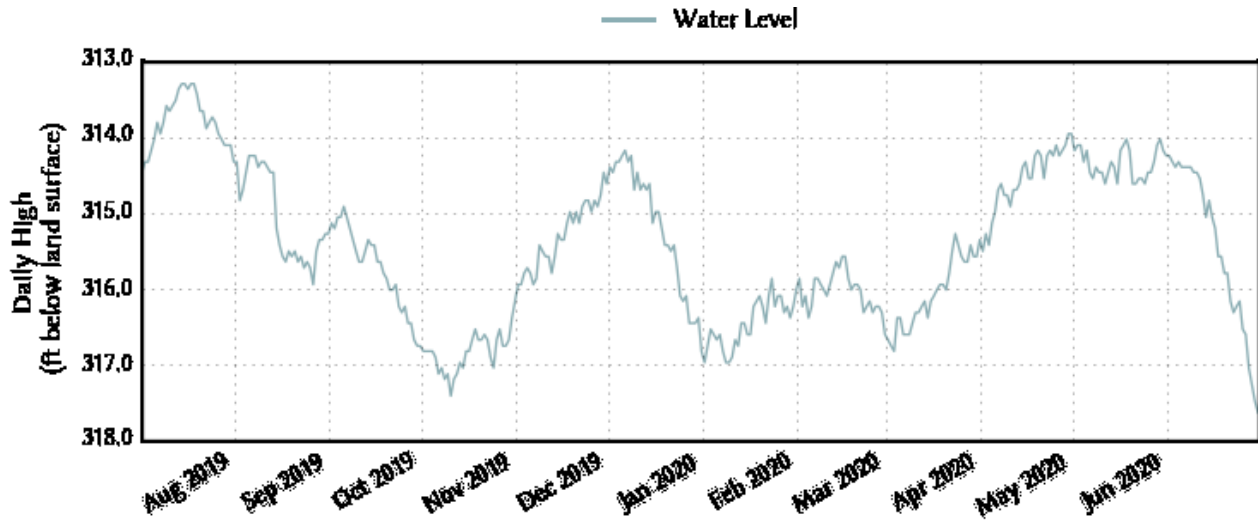


Continuous Monitoring Well # 4057601
(Copperas Cove)
Middle Trinity Aquifer

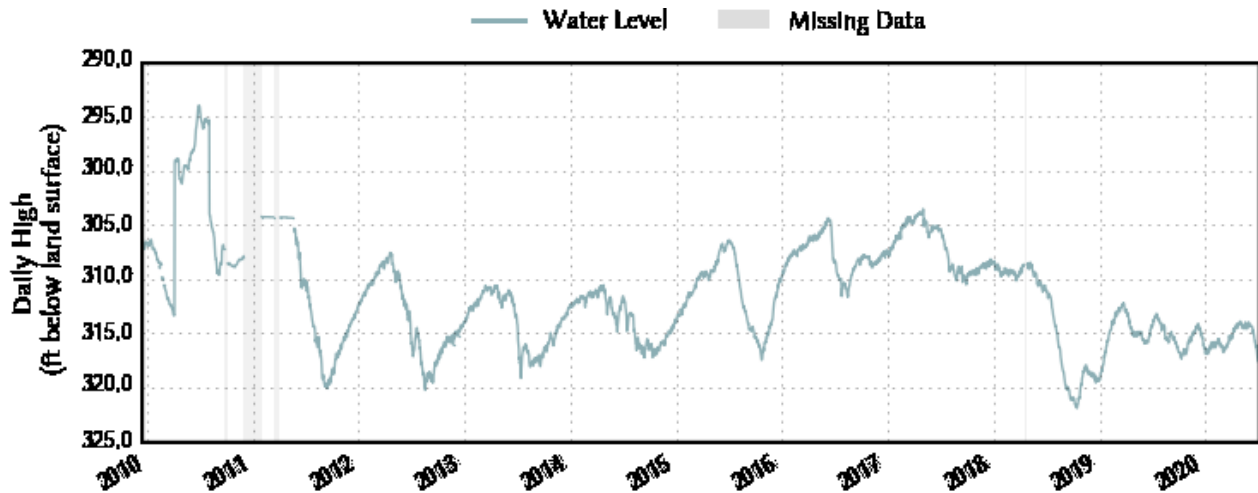
Last 30 Days



1 Year

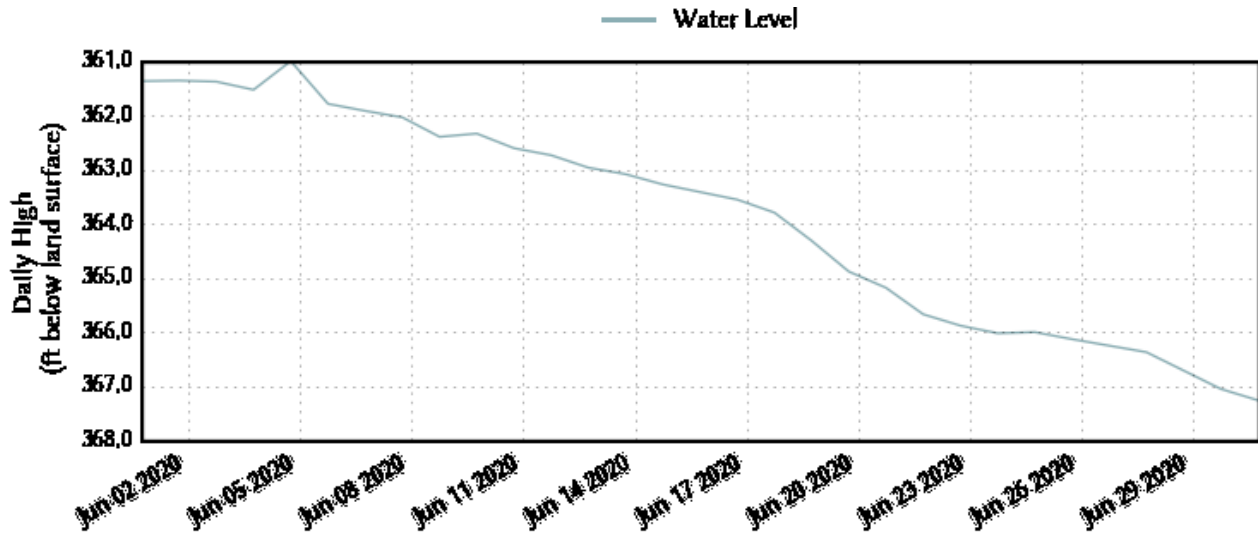


Period Of Record

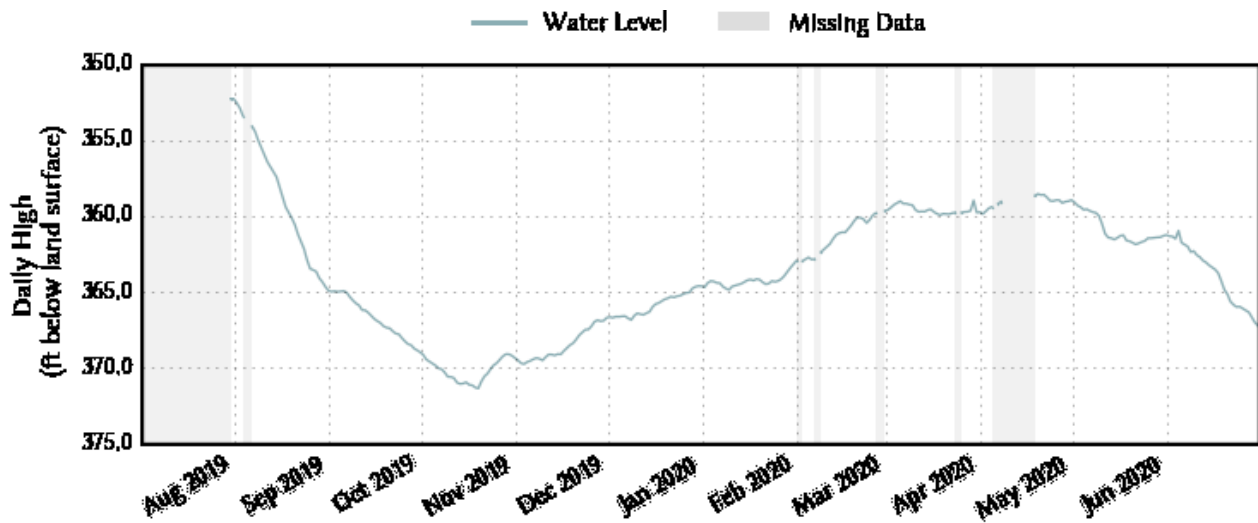


Continuous Monitoring Well # 5802304
(Killeen - River Ridge Ranch Park Well #1)
Middle Trinity Aquifer

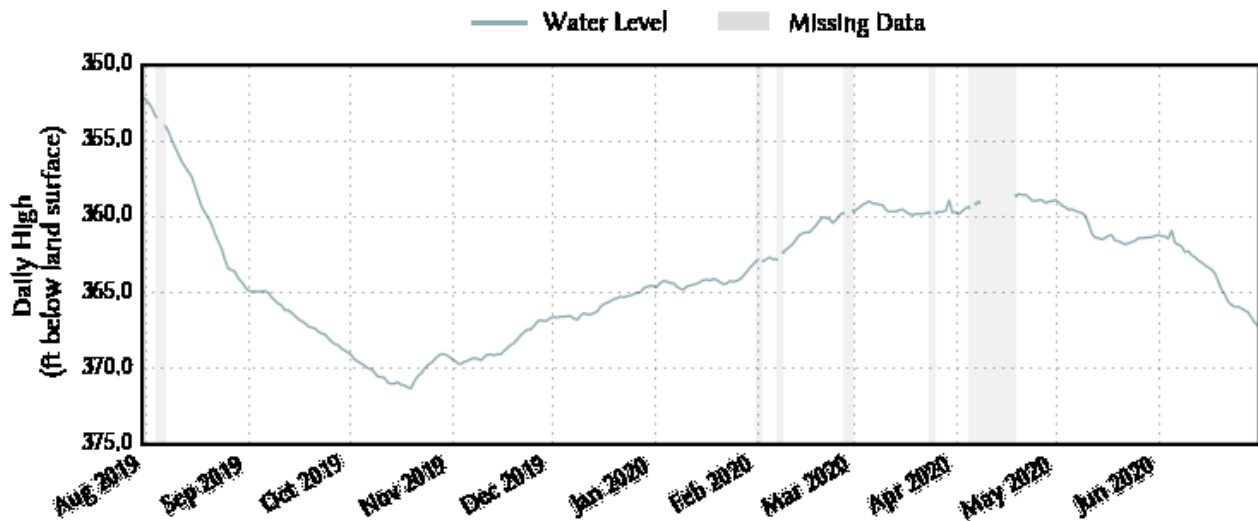
Last 30 Days



1 Year

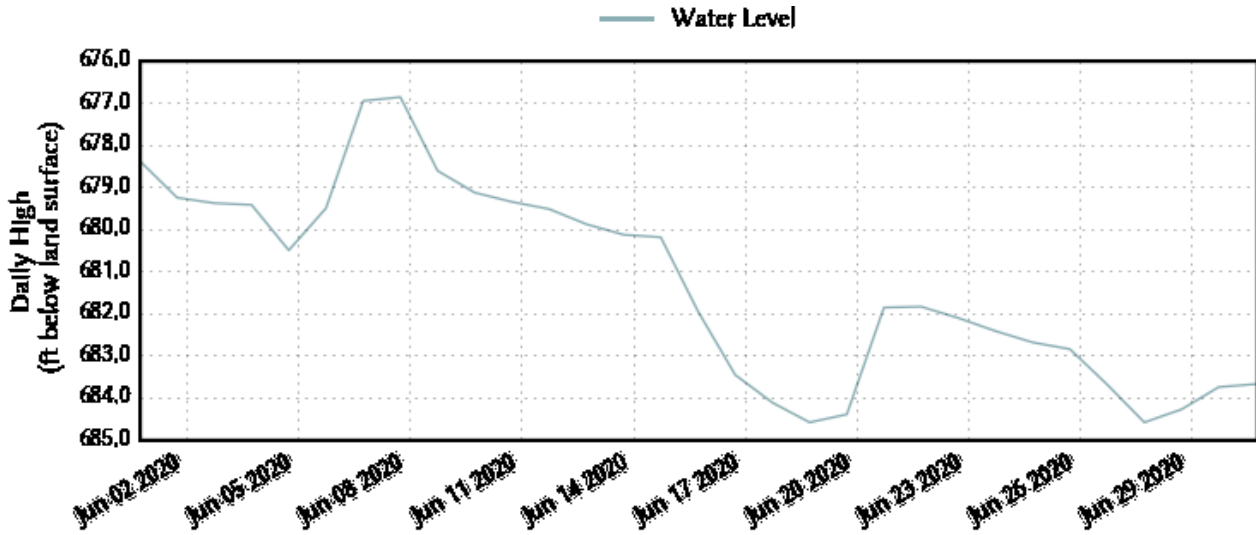


Period Of Record

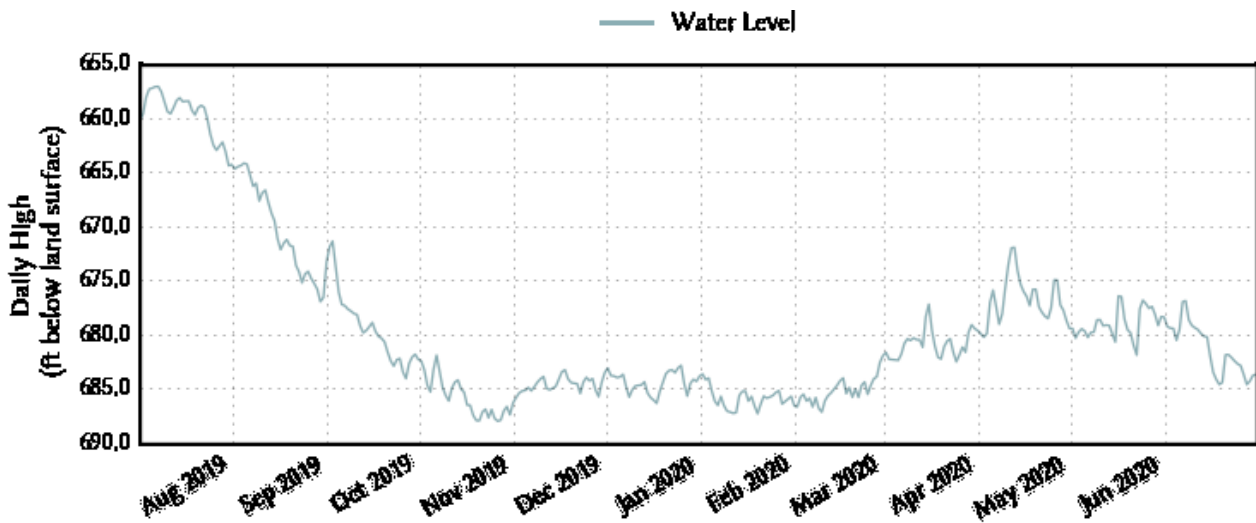


Continuous Monitoring Well # 5803701
(Gault Site - Williamson County)
Middle Trinity Aquifer

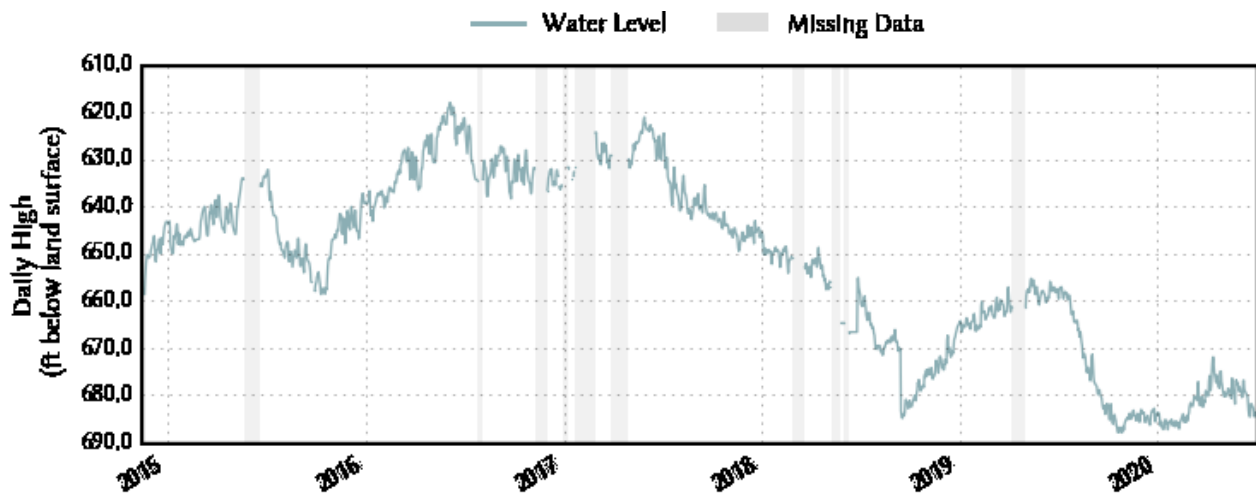
Last 30 Days



1 Year



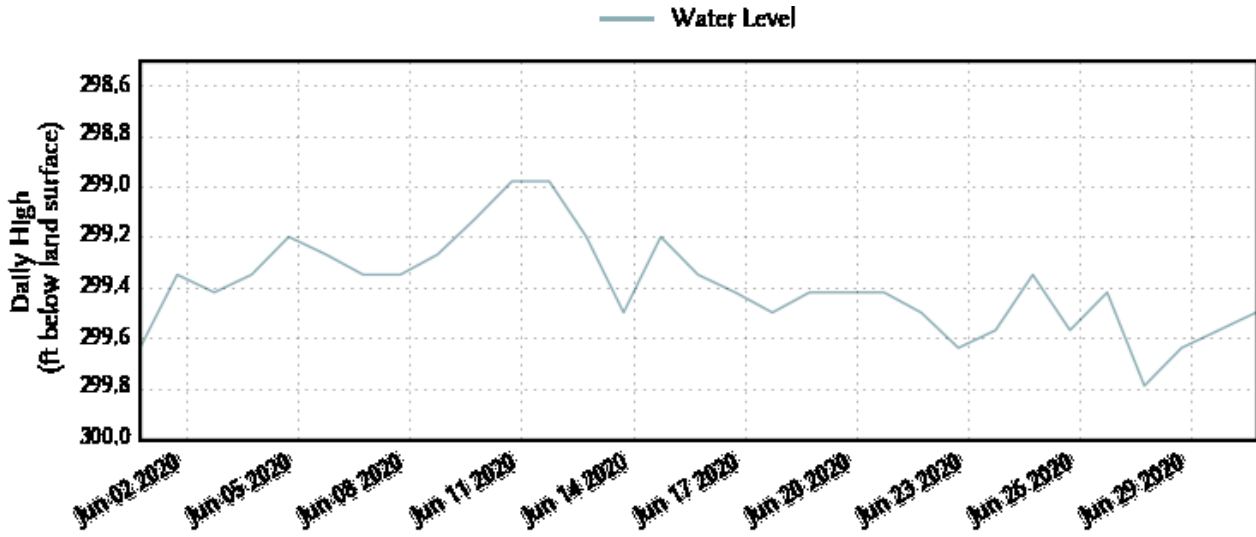
Period Of Record



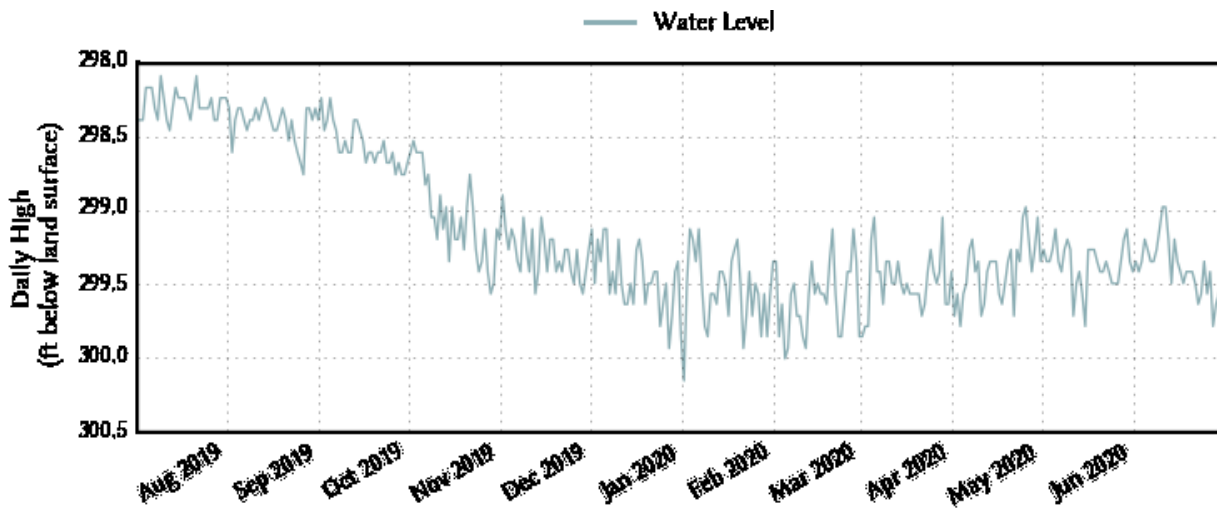
June 2020

Continuous Monitoring Well # 4057602
(Copperas Cove)
Lower Trinity Aquifer

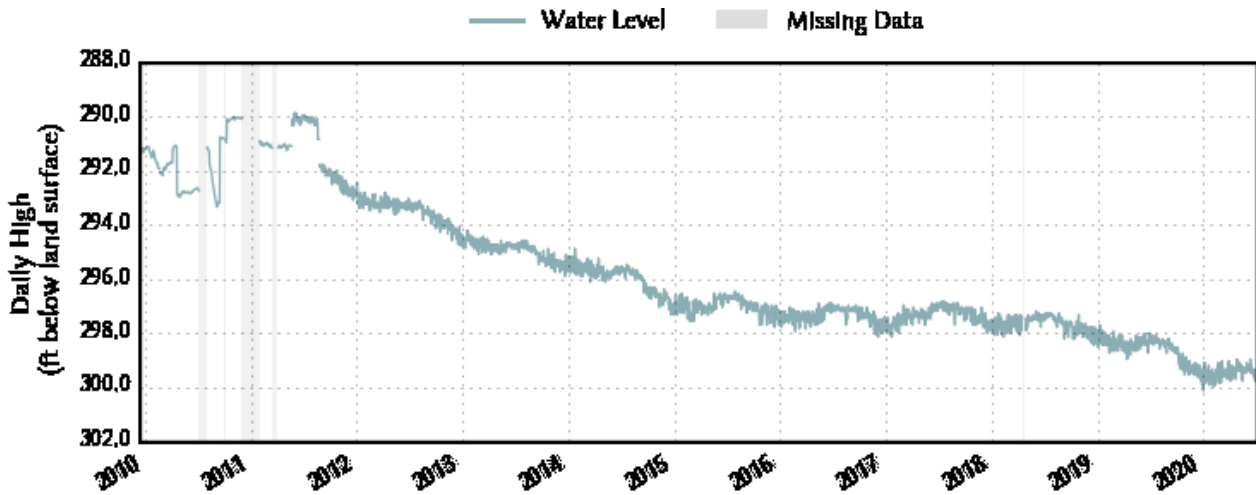
Last 30 Days



1 Year



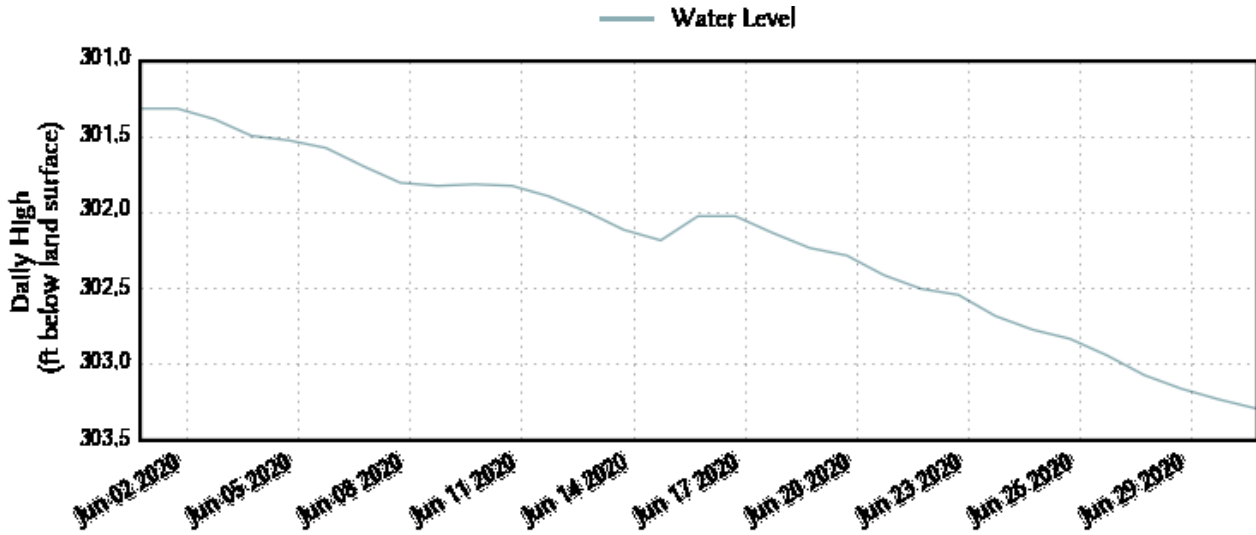
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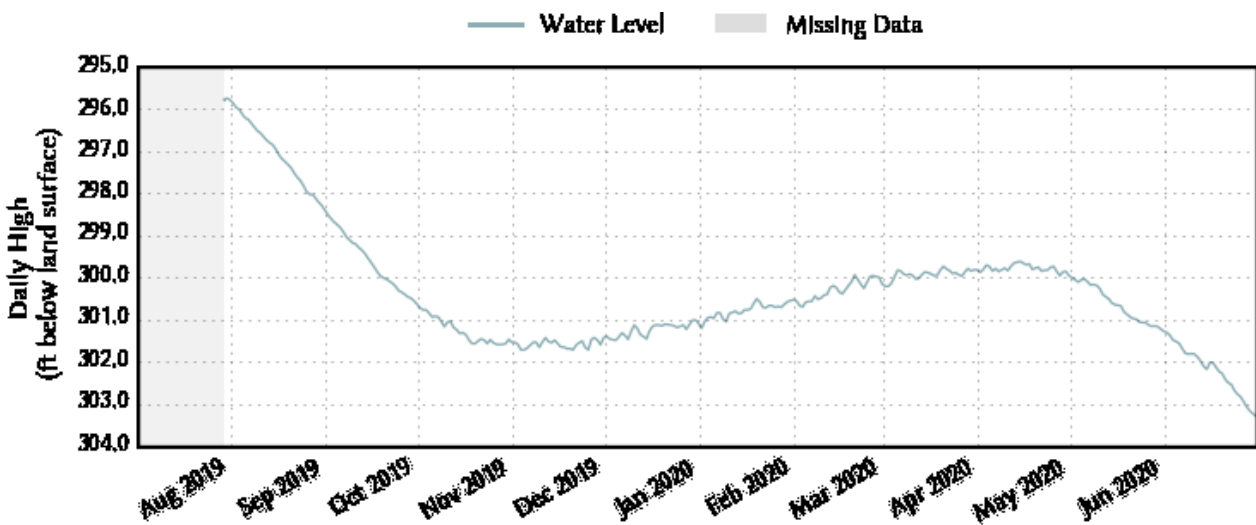
June 2020

**Continuous Monitoring Well # 5802303
(Killeen - River Ridge Ranch Park Well #2)
Lower Trinity Aquifer**

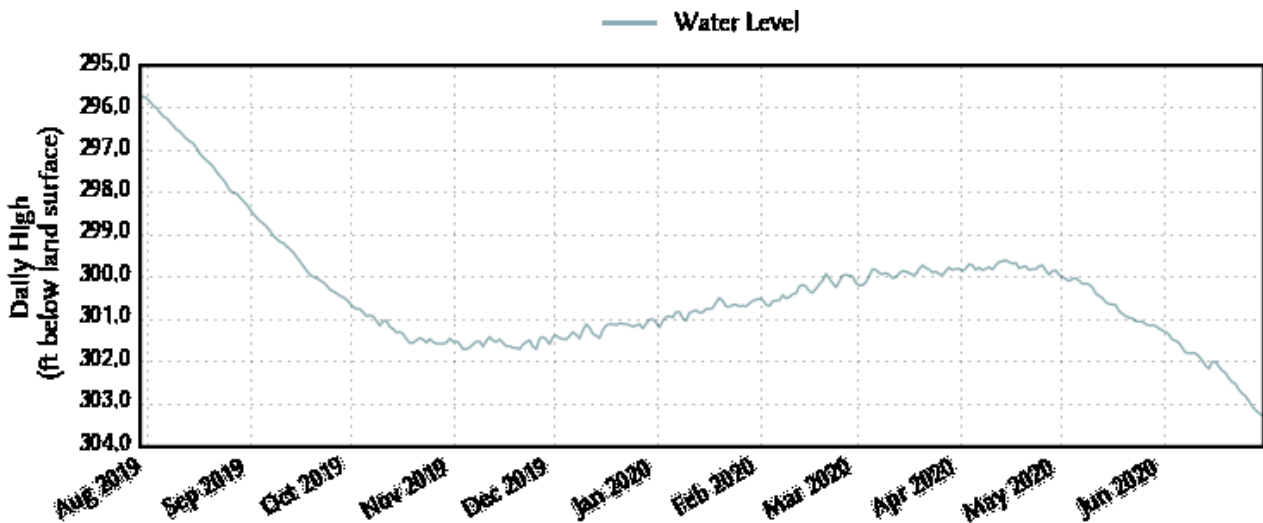
Last 30 Days



1 Year

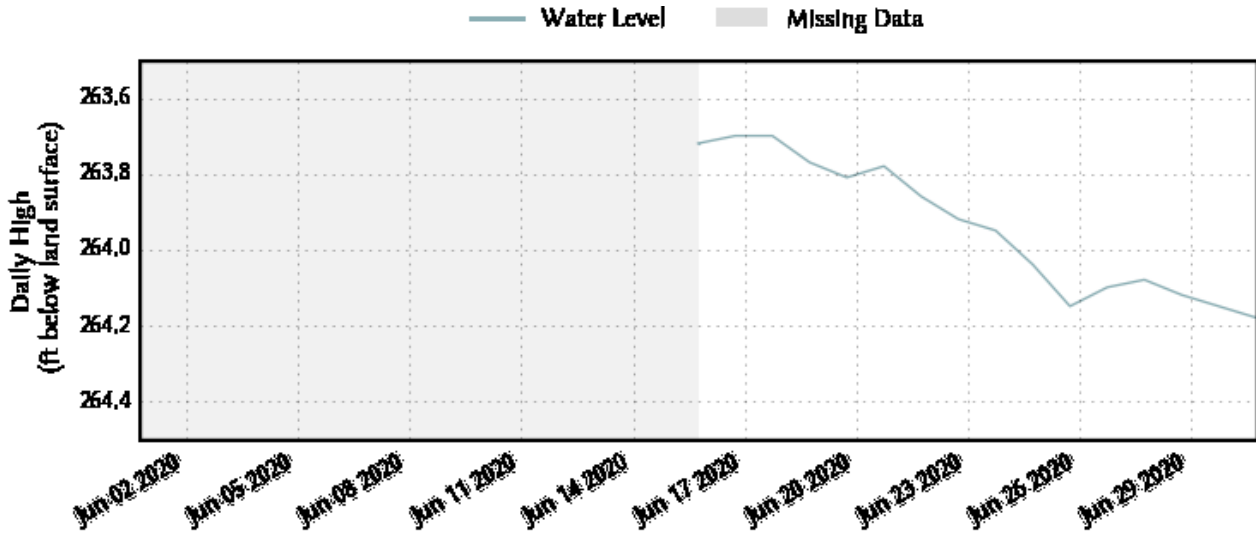


Period Of Record

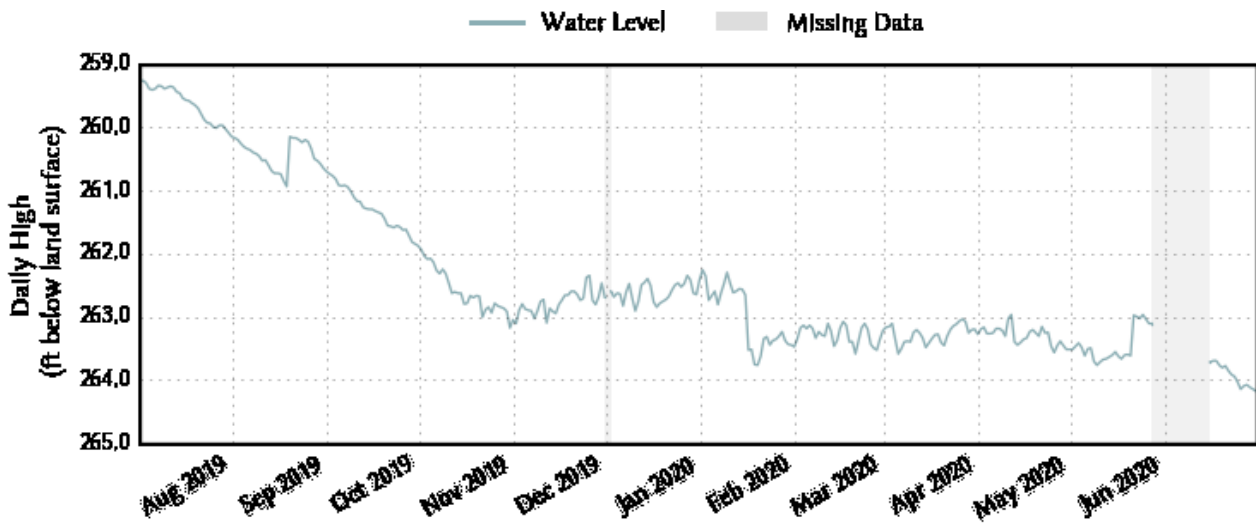


Continuous Monitoring Well # 4061509
(Temple - Pea Ridge Well)
Lower Trinity Aquifer

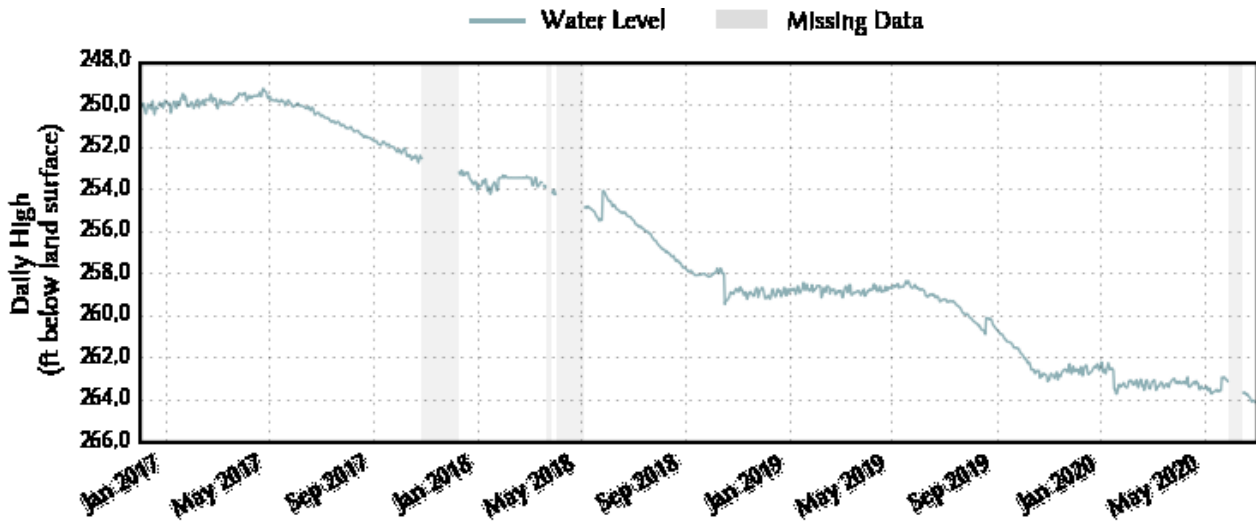
Last 30 Days



1 Year

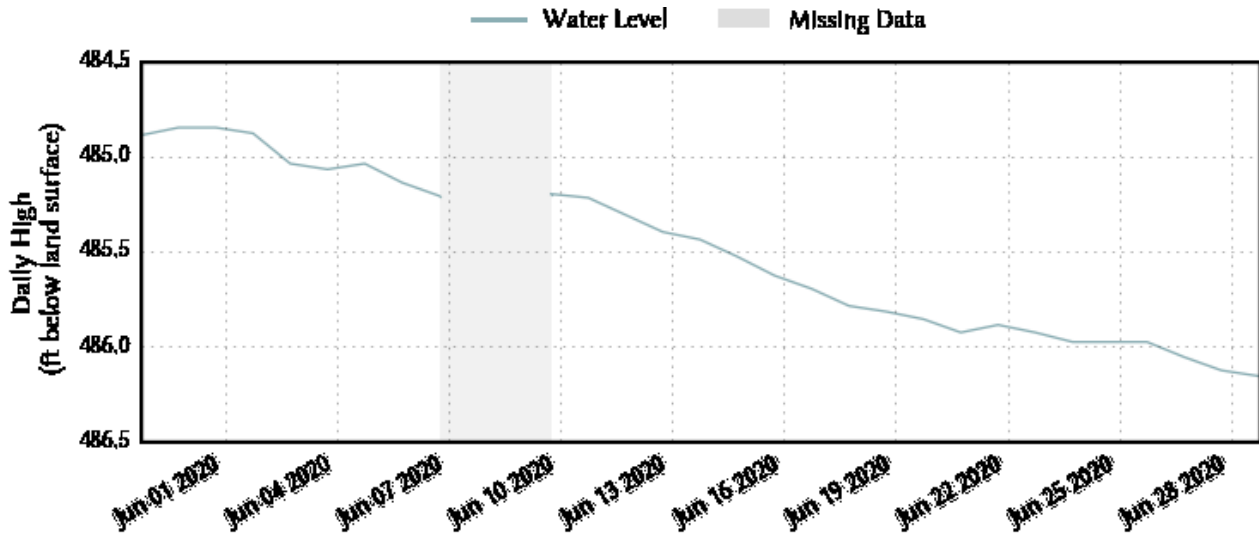


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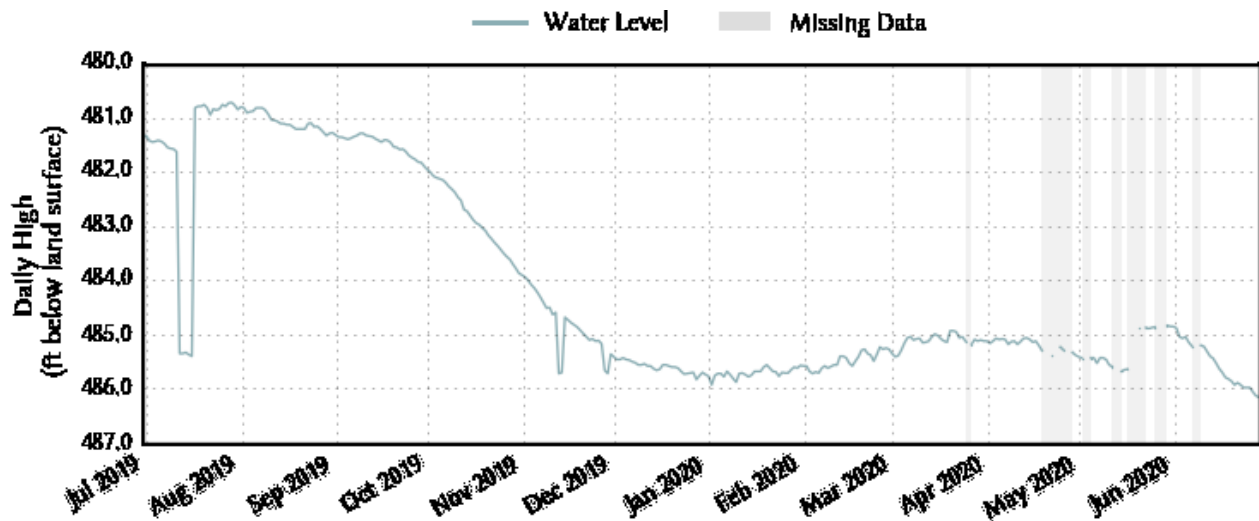


Continuous Monitoring Well # 4054701
(Temple - Cearley Well)
Lower Trinity Aquifer

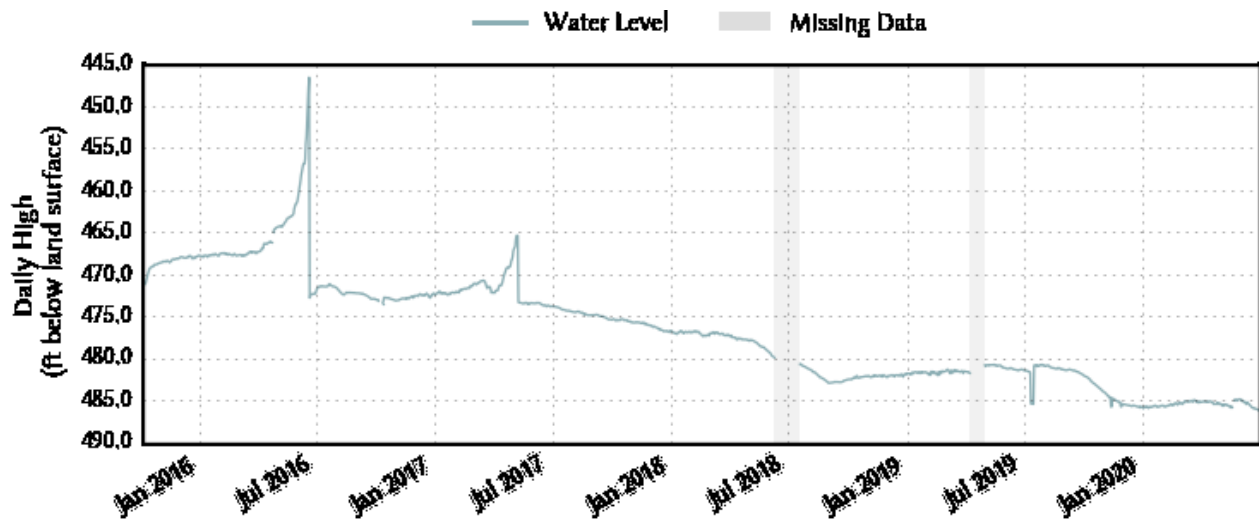
Last 30 Days



1 Year



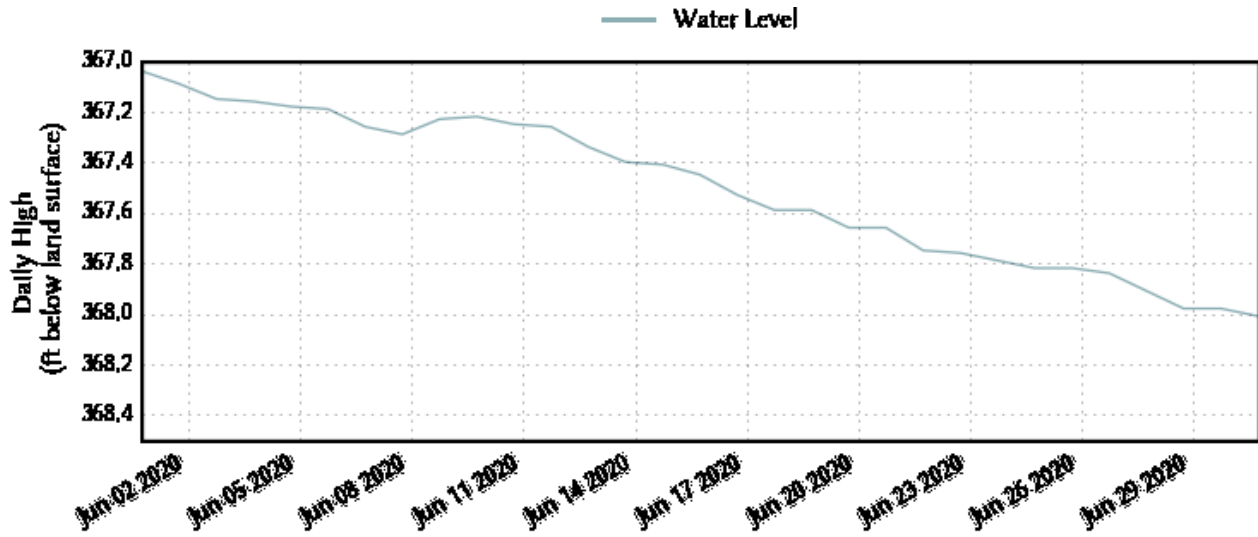
Period Of Record



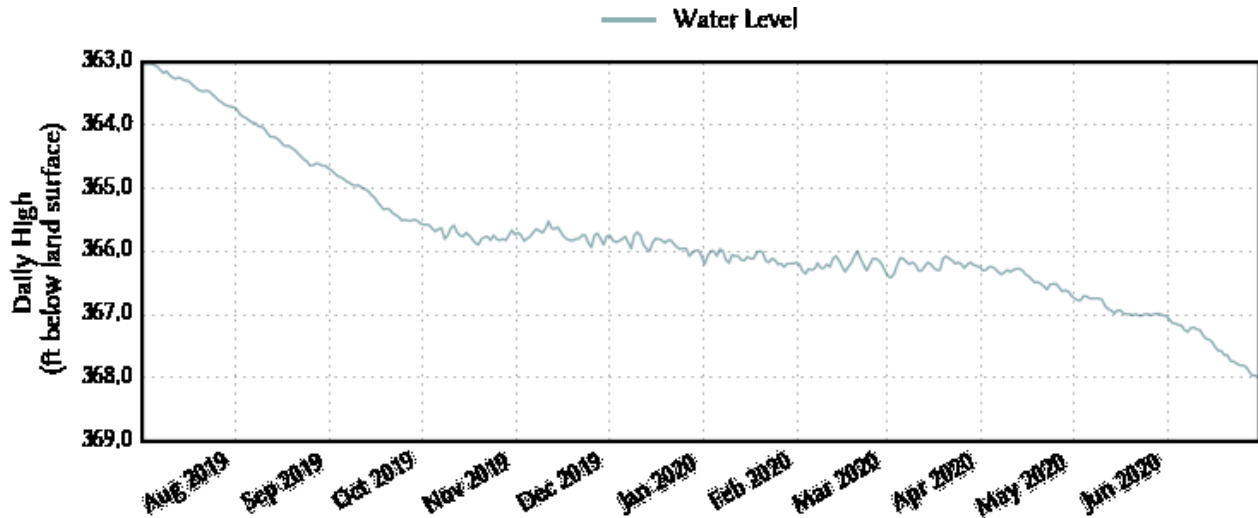
June 2020

Continuous Monitoring Well # 4062501
(Temple - Acres Well)
Lower Trinity Aquifer

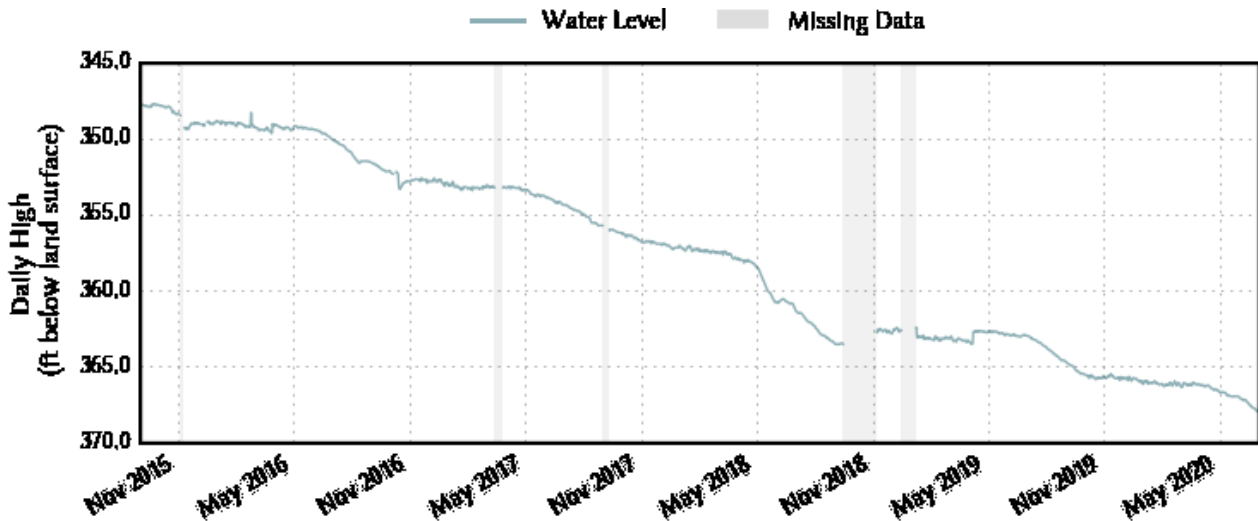
Last 30 Days



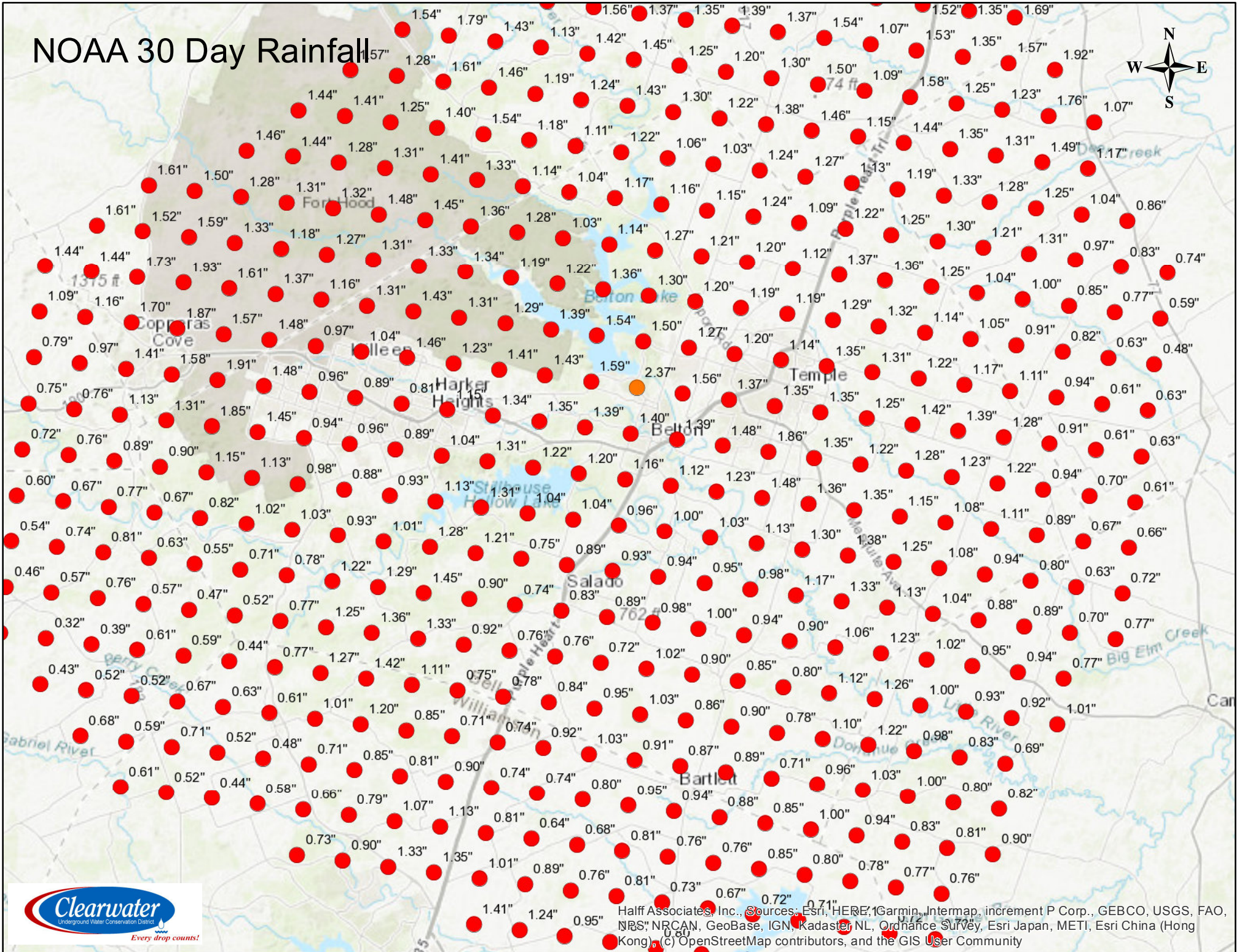
1 Year



Period Of Record

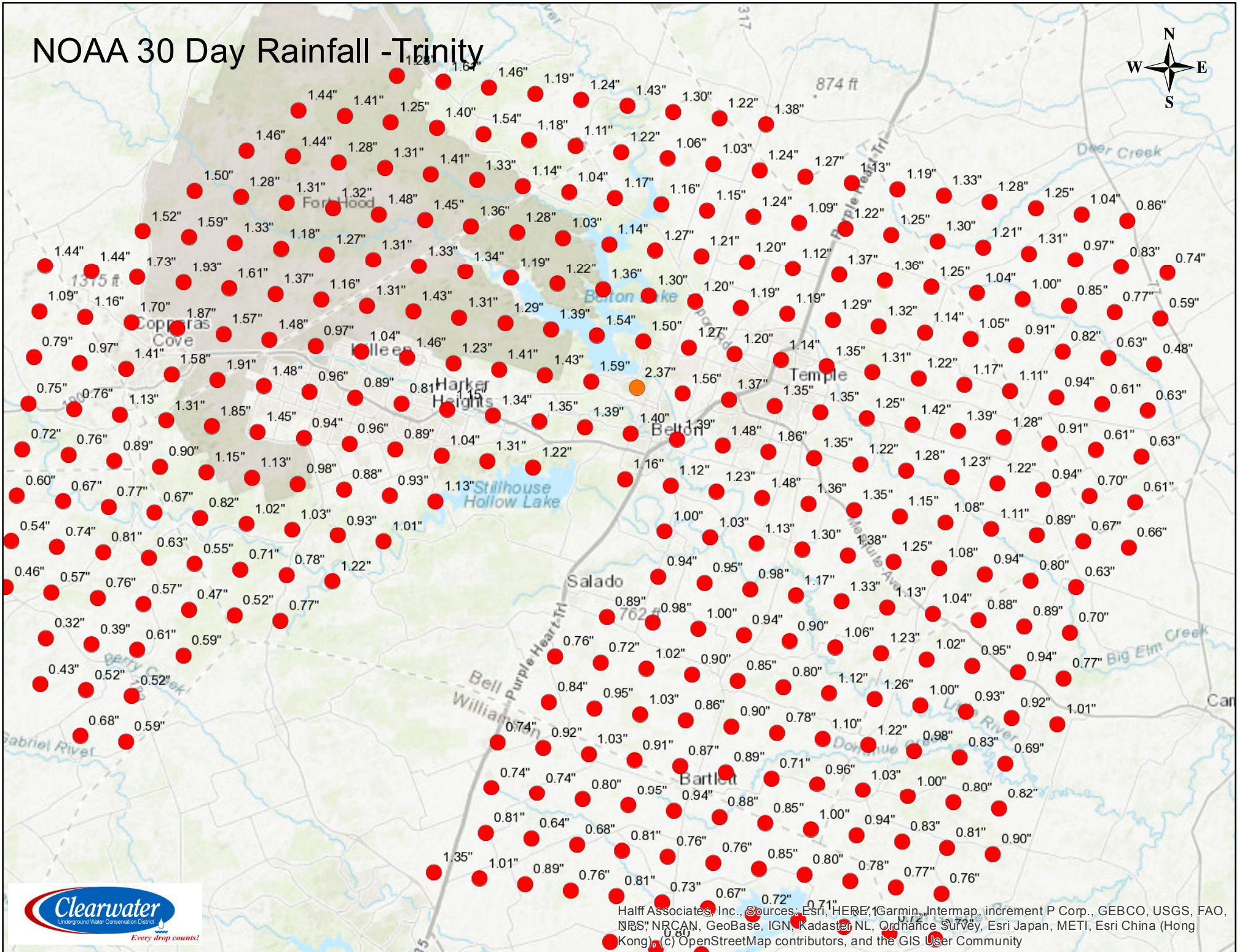


NOAA 30 Day Rainfall



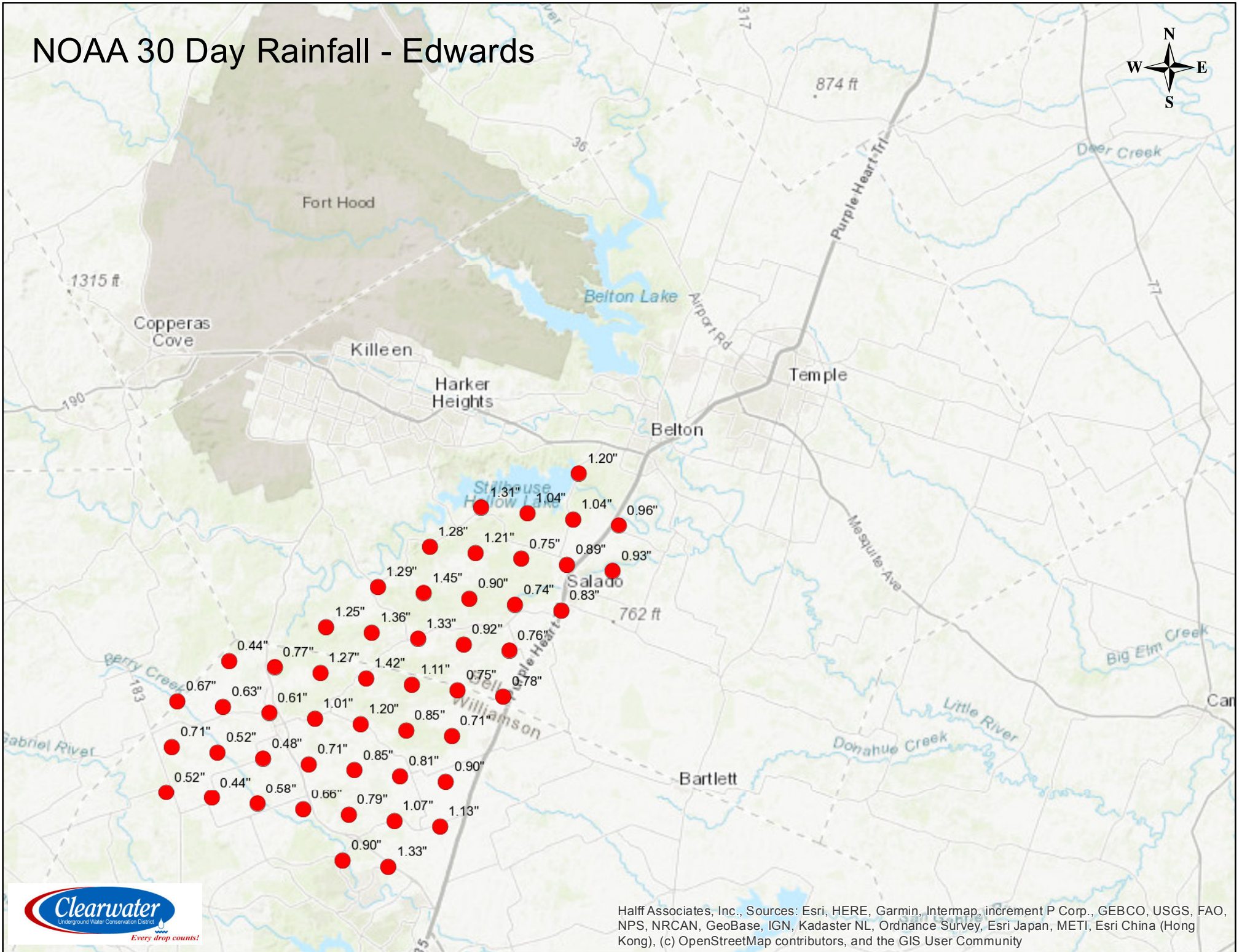
Half Associates, Inc., Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NRS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

NOAA 30 Day Rainfall - Trinity



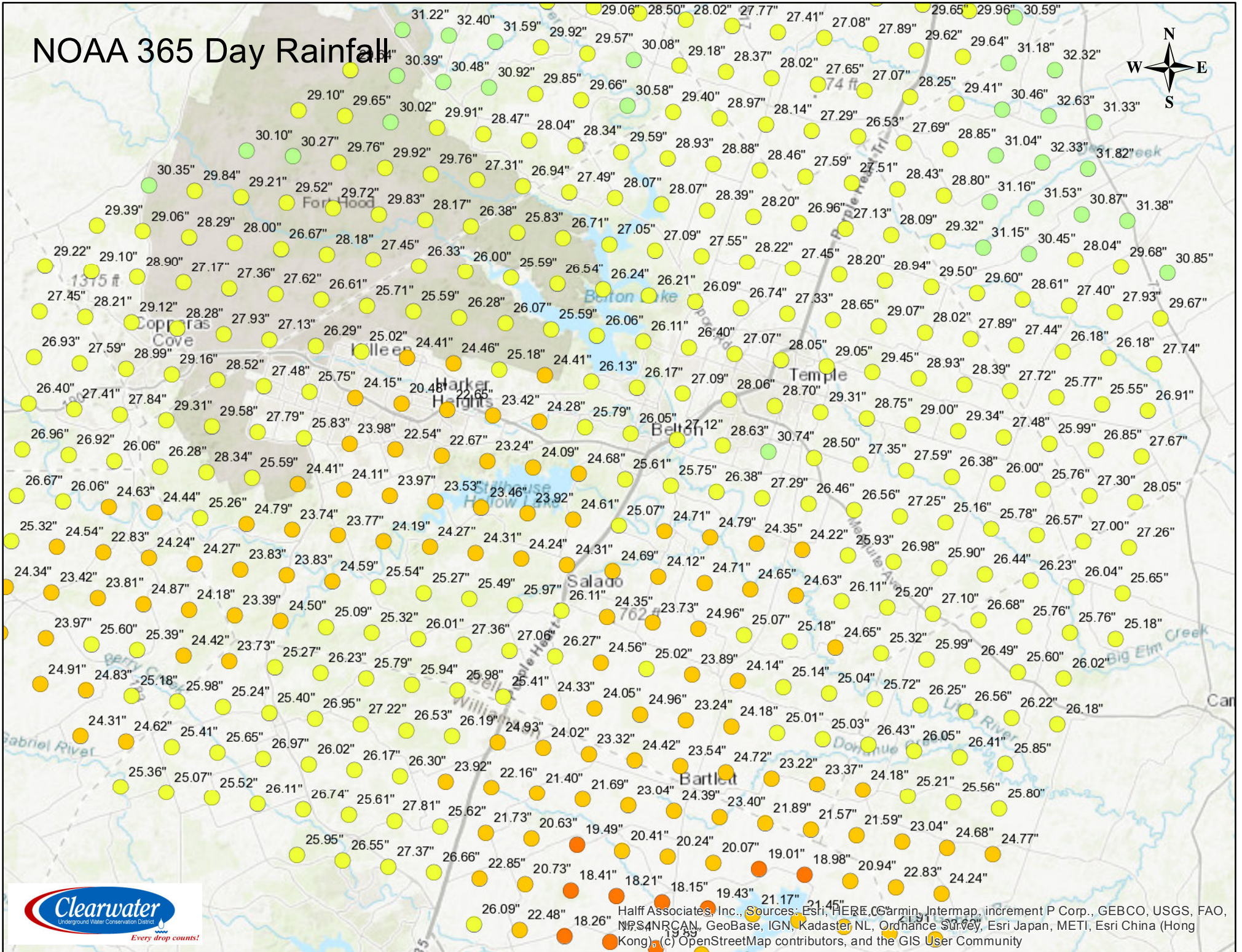
Half Associates, Inc., Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NRS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

NOAA 30 Day Rainfall - Edwards



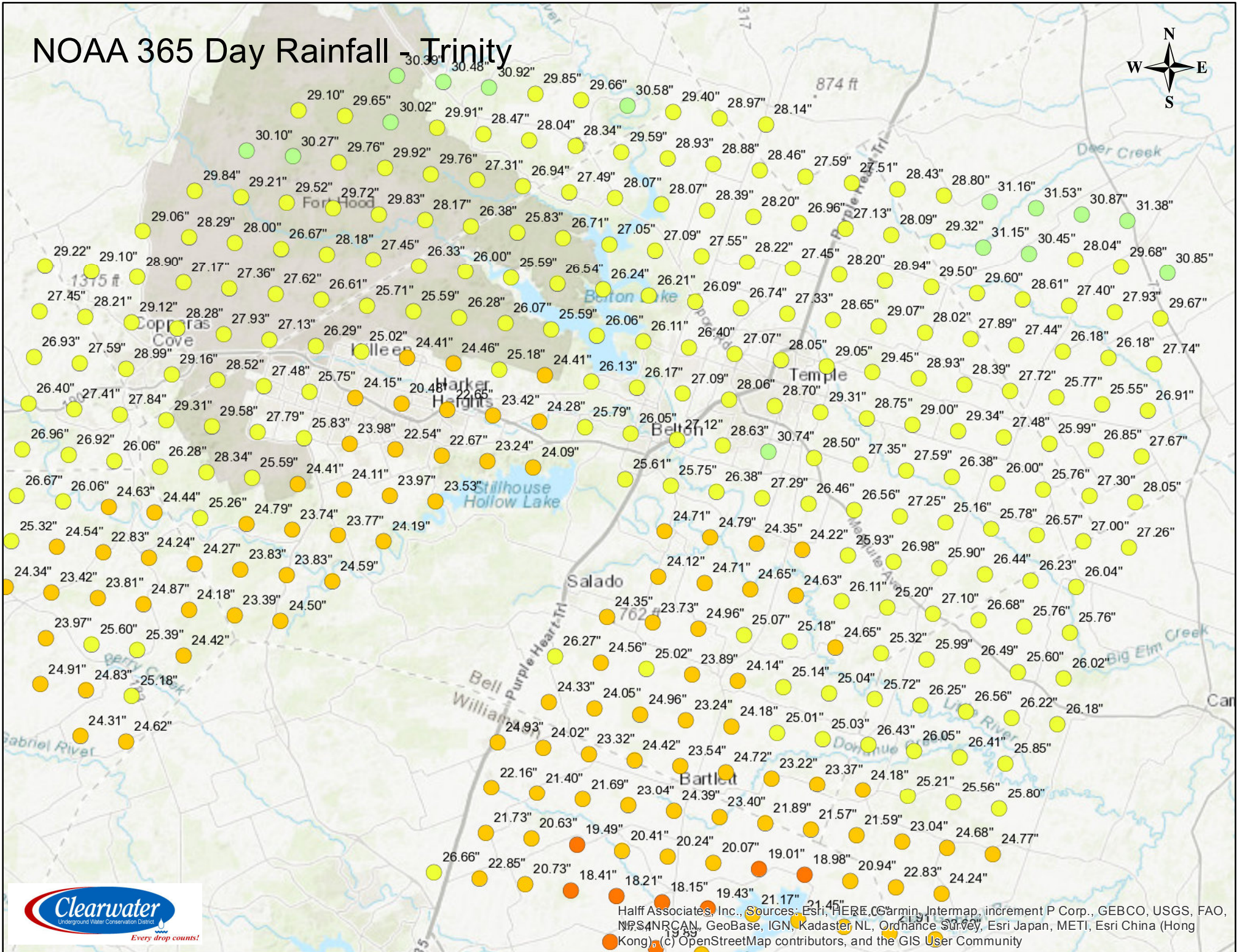
Half Associates, Inc., Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

NOAA 365 Day Rainfall



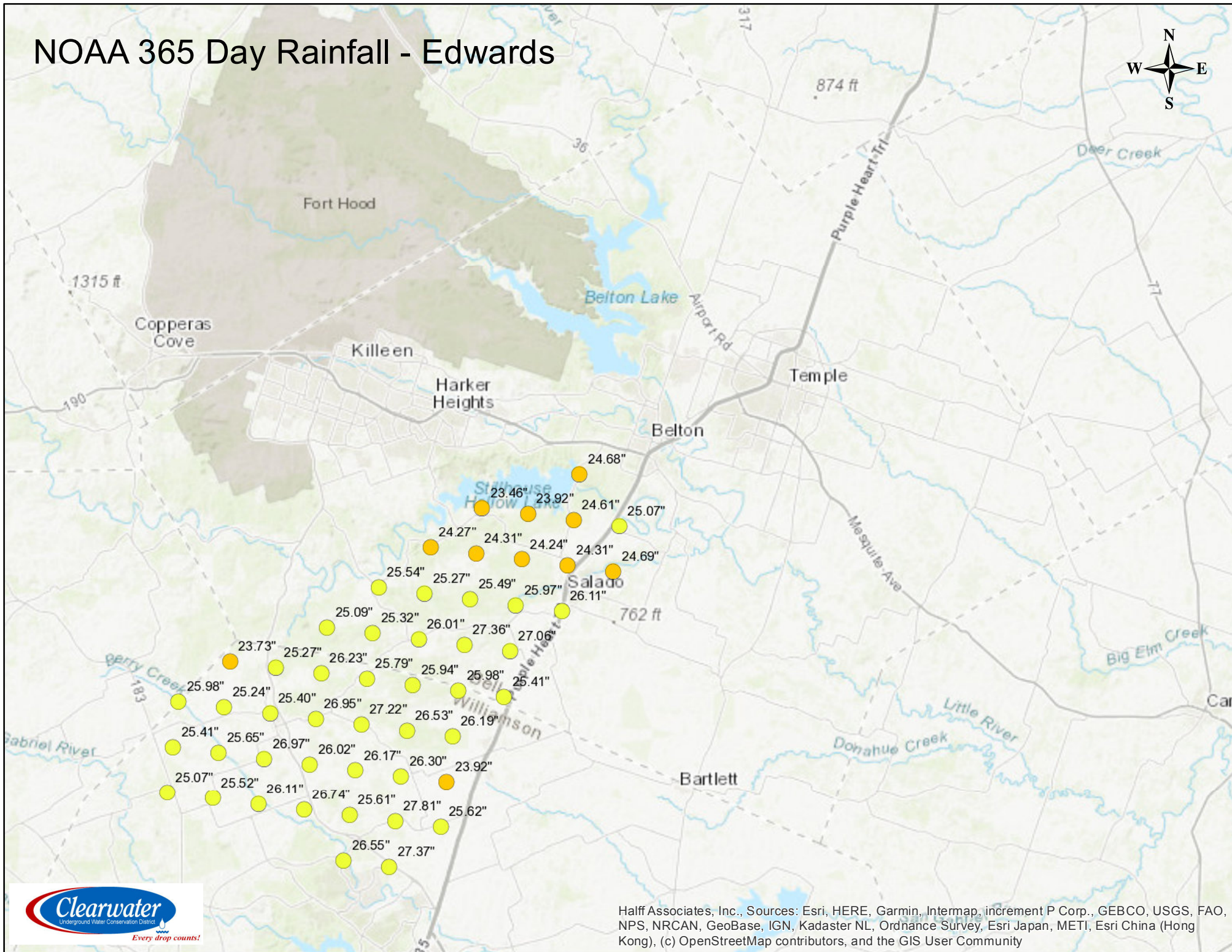
Half Associates, Inc., Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

NOAA 365 Day Rainfall - Trinity



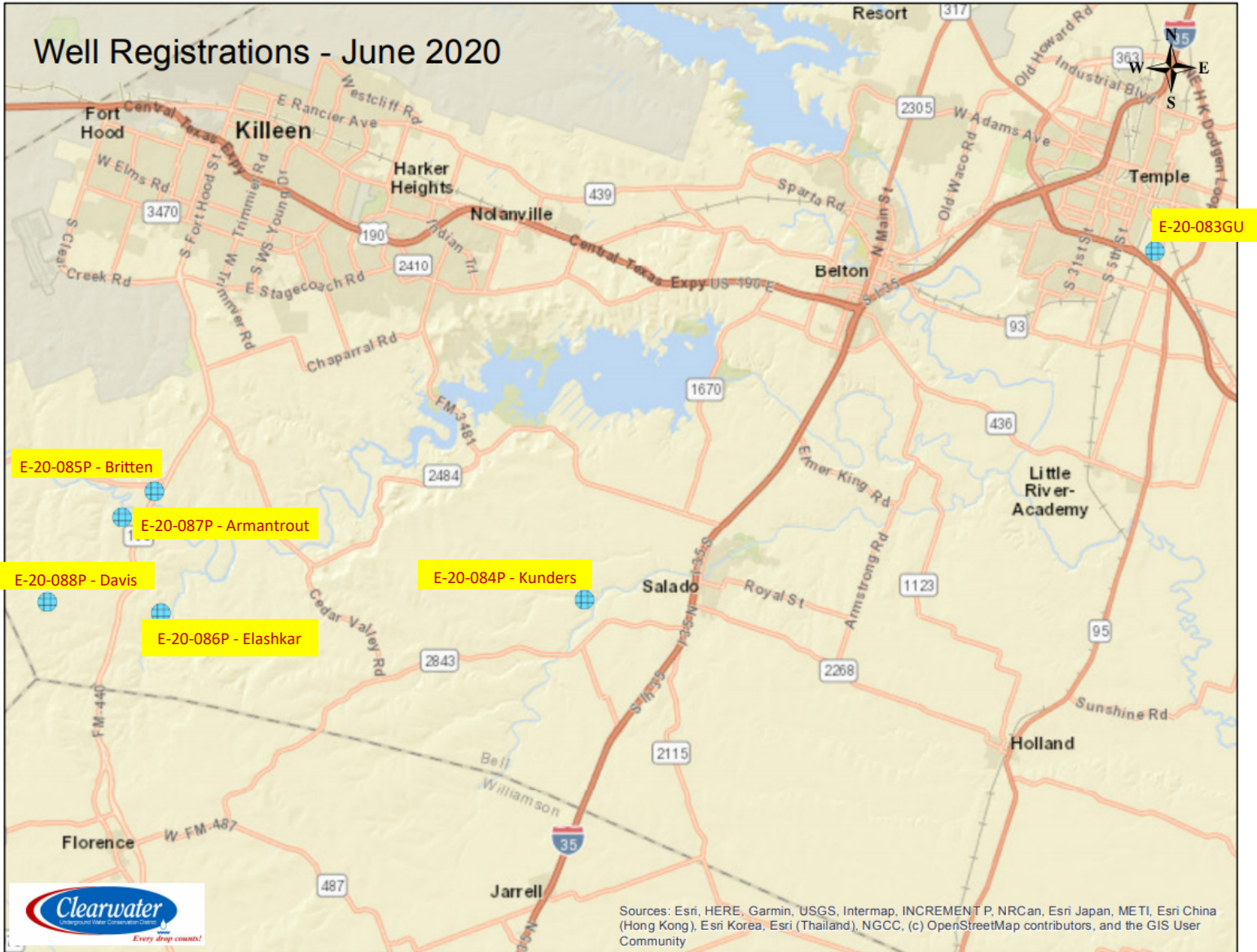
Half Associates, Inc., Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

NOAA 365 Day Rainfall - Edwards



Half Associates, Inc., Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Well Registrations - June 2020



<u>Well #</u>	<u>Name</u>	<u>Address</u>	<u>City</u>	<u>Aquifer</u>	<u>Depth</u>	<u>Use</u>	<u>Status</u>
E-20-083GU	Unknown	3000 Illinois Ave Suite 100	Killeen	?	30 ft	Domestic	Plugged
E-20-084P	Todd Kunders	1685 Trails End	Salado	Undeclared	880 ft	Domestic	Proposed
E-20-085P	Ilana Britten	16663 St. Hwy 195	Killeen	Undeclared	600 ft	Domestic	Proposed
E-20-086P	Kareem Elashkar	260 Tootsie	Killeen	Undeclared	500 ft	Domestic	Proposed
E-20-087P	Jesse Armantrout	1285 River Ridge Ranch Rd	Killeen	Undeclared	500 ft	Domestic	Proposed
E-20-088P	Troy Davis	22409 Wolfridge Rd	Killeen	Undeclared	500 ft	Domestic	Proposed

Year	Exempt Wells		Non-Exempt Wells			Monitor Wells		Total
	Grandfathered	New	Grandfathered	Class 1	Class 2	Water	Envr	
2002 - 2019	4352	1013	104	33	52	25	121	5700
2020 - Jan	4	1	0	0	0	0	0	5
Feb	0	4	0	1	1	0	0	6
Mar	0	0	0	0	4	1	0	5
Apr	60	2	0	0	0	0	0	62
May	0	10	0	0	0	0	0	10
June	1	5	0	0	0	0	0	6
July								0
Aug								0
Sept								0
Oct								0
Nov								0
Dec								0
Total 2020	65	22	0	1	5	1	0	94
Totals	4417	1035	104	34	57	26	121	5794

Adjustments

Adjustment Type	Exempt Wells		Non-Exempt Wells			Monitor Wells		Total
	Grandfathered	New	Grandfathered	Class 1	Class 2	Water	Envr	
2002-Present	4417	1035	104	34	57	26	121	5794
Never Drilled	N/A	-27	N/A	-3	-4	0	-1	-35
Plugged	-203	-42	-18	-2	-1	-2	-53	-321
Totals	4214	966	86	29	52	24	67	5438