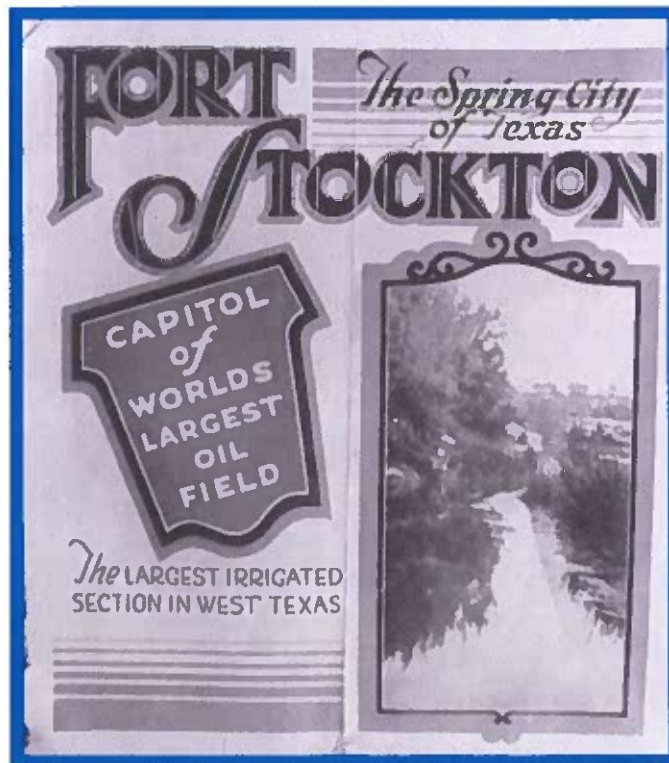


Middle Pecos Groundwater
Conservation District
2023- Annual Report

General Manager: Ty Edwards



Submitted by Ty Edwards, General Manager
02/20/2024

Middle Pecos Groundwater Conservation District 2023 Annual Report

Table of Contents

Letter from General Manager – Ty Edwards

Maps of Pecos County Groundwater Levels:

- **Frequency Distribution 2022/2023**
- **Water Level Surface 2023**
- **Water Level Surface 2022**
- **Water Level Surface 2021**
- **Water Level Surface 2020**
- **Water Level Surface 2019**
- **Water Level Change 2023-2024**
- **Water Level Change 2022-2023**
- **Water Level Change 2012-2024**
- **Water Level Change 2012-2023**
- **Water Level Change 2021-2022**
- **Water Level Change 2012 to 2022**
- **Water Level Change 2020 to 2021**
- **Water Level Change 2012 to 2021**
- **Water Level Change 2019 to 2020**
- **Water Level Change 2012 to 2020**
- **Water Level Change 2018 to 2019**
- **Water Level Surface 2012 to 2019**
- **TexMesonet Weather Station 2023**
- **TexMesonet Weather Station 2022**

Texas Drought Monitor Map:

- **January 2023- December 2023**

Comanche Springs:

- **Comanche Springs**

The Nature Conservancy:

- **Diamond Y/ Euphrasia Spring**

Pecos River:

- **Pecos River- Girvin, Texas**
- **Pecos River- Sheffield, Texas**

Conservation Letters:

- **Rainwater Harvesting**
- **Annual Newspaper Article for Publics Information Regarding Groundwater Conservation**

MIDDLE PECOS GROUNDWATER CONSERVATION DISTRICT

P.O. Box 1644 Fort Stockton, TX 79735 Phone (432)336-0698 Fax (432)336-3407

405 North Spring Drive Fort Stockton, Texas 79735

Email: mpgcd@mpgcd.org

Website: www.middlepecosgcd.org

Directors

Jerry McGuairt, President Janet Groth, Vice President M. R. Gonzalez, Secretary/Treasurer
 Alvaro Mandujano, Jr. Vanessa Cardwell Ronald Cooper
 Weldon Blackwelder Allan Childs Jeff Sims Puja Boinpally Larry Drgac

Employees

Ty Edwards, General Manager
 Office: Gail Reeves Field Technician: Anthony Bodnar

2023 Annual Manager's Report MPGCD Board of Directors

The District continued working towards a resolution for the abandoned wells problem in Pecos County. Our staff and Board spent a significant amount of time and money on addressing the issues. Efforts at the State level allowed for HB 4256 to pass the Texas Legislature providing \$10 Million dollars to plug some abandoned wells in Pecos County. An official complaint has been filed at the Railroad Commission of Texas to plug wells within RRC jurisdiction. The complaint process is ongoing and will continue to work for a solution in 2024. The District continues to tend to MPGCD business in managing the groundwater resources of Pecos County. A summary of that work is below.

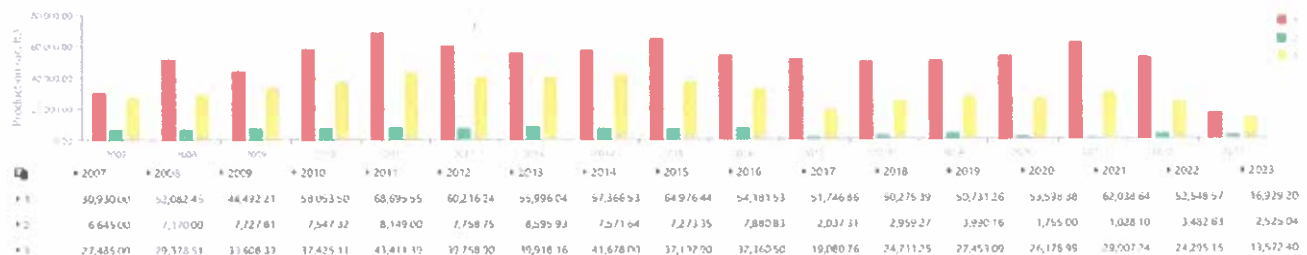
Annual groundwater production and number of registered water wells in the District are:

NUMBER OF WELLS
 3,873 Total
 2,888 Exempt
 975 Non-Exempt

Production Explorer



Management Zone Production Explorer



Wells

- **2023 Rainfall**

The 2023 year began with nearly 60% of Pecos County out of drought while the other 40% was under abnormally dry conditions (Water Data for Texas, 2024). These conditions worsened throughout the spring and into the summer months when much of the county entered severe drought. As the summer season ended, the rains began to fall. By year-end, drought declarations were removed across much of Pecos County. Although drought was not as persistent or as exceptional in 2024, it was a year of very low rainfall totals for much of Pecos County (Figure 1, Figure 2, Appendix A). At the Fort Stockton Pecos County Airport station, the 2023 rainfall total was nearly 70% below its historic annual rainfall average with most county stations observing annual declines. Eastern Pecos County did however record a year-over-year increase (Figure 2).

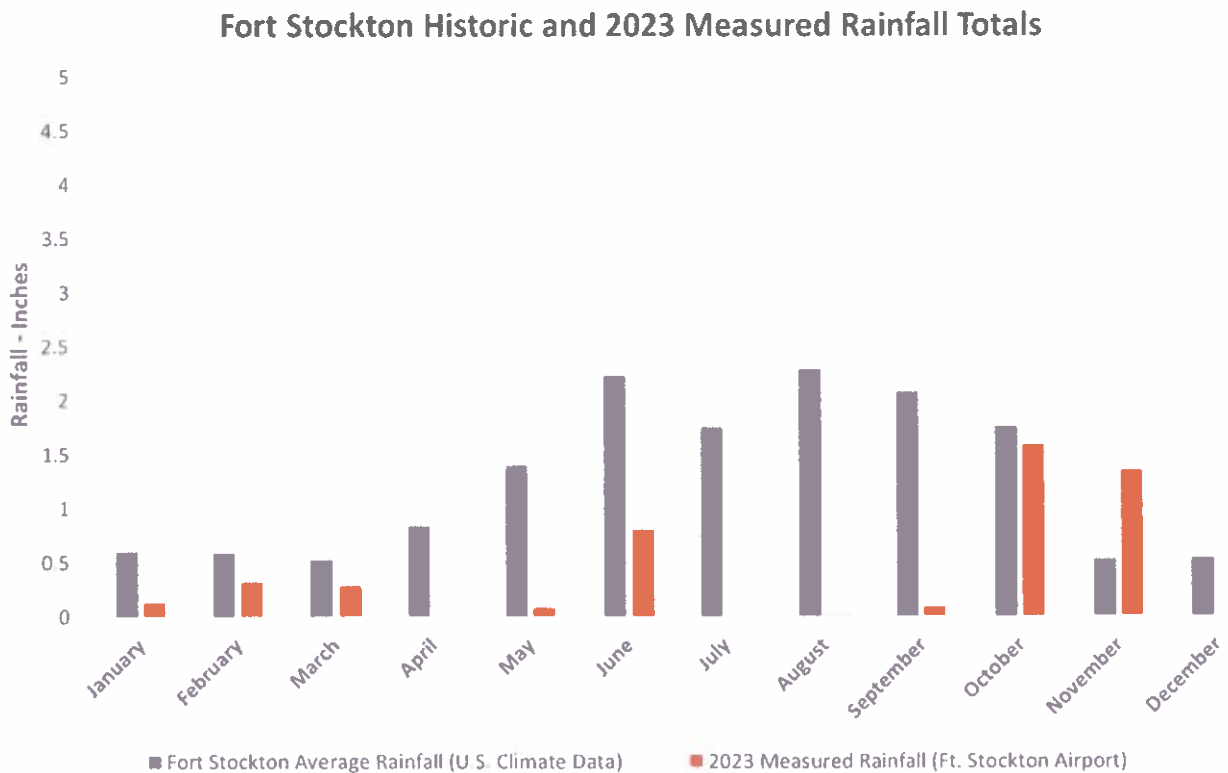


Figure 1 – Fort Stockton, Pecos County, TX Historic and 2023 Measured Rainfall Totals. Historic rainfall data according to the U.S. Climate Data and Center and measured rainfall according to TexMesonet KFST station data.

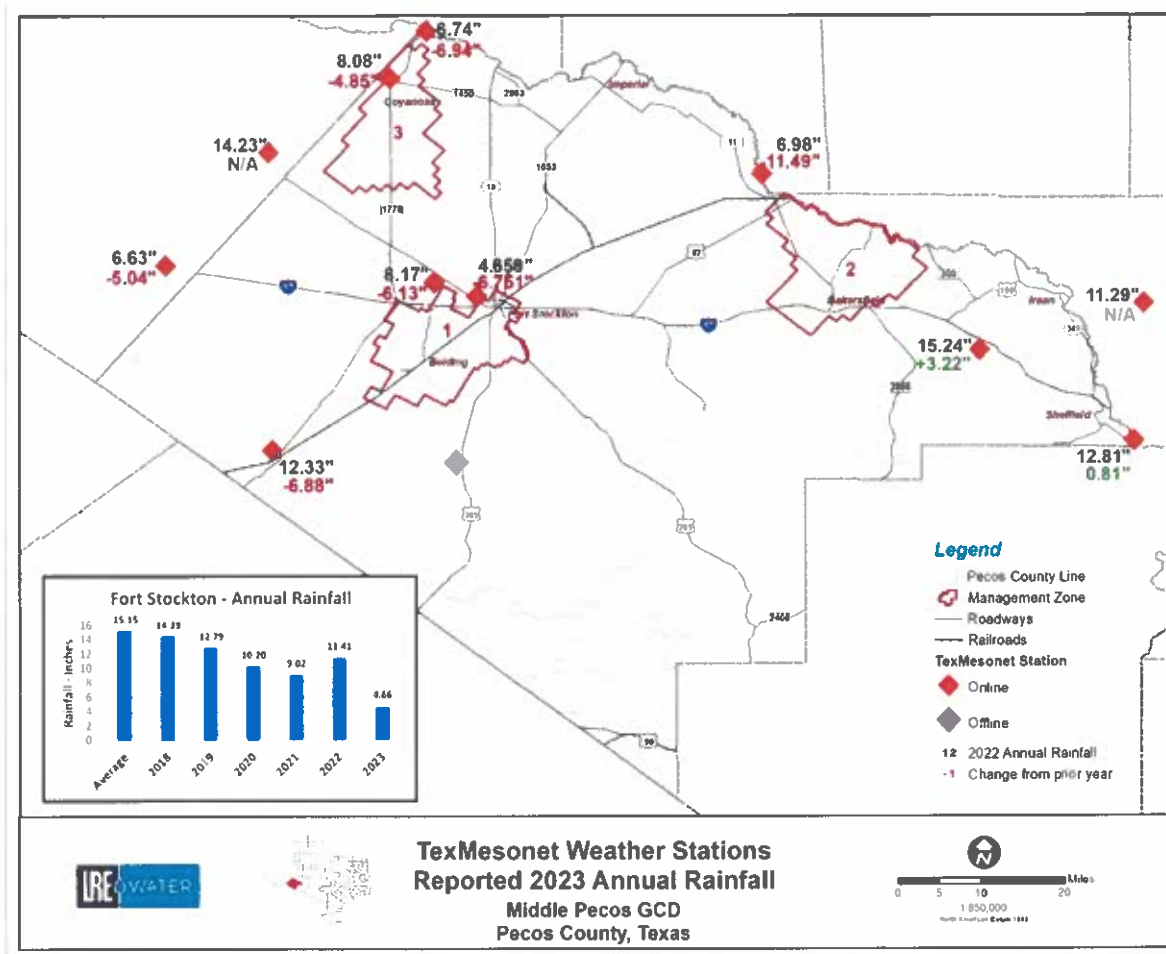


Figure 2 – TexMesonet weather stations across Pecos County, Texas with reported rainfall totals and change from prior year.

- **Winter Water Levels**

Steady water level declines and seasonal fluctuations consistent with drought were observed across the county (Figure 3). In areas with little to no pumping the water levels remained relatively constant. Whereas areas with irrigated croplands (Management Zone 1 and 3) had drawdowns that were noticeably higher. The most significant year-over-year drawdowns are observed in wells west of Fort Stockton. The highest drawdowns were observed at monitor well #360. The historic water level observations suggest that drawdowns are now occurring over a longer duration that in turn is leading to a shorter recovery period (Middle Pecos Groundwater Database, 2024). This could be due to changes in agricultural practices within this area of the county.

Currently, 139 water wells are monitored in Pecos County with 56% remaining stable or showing a gain when compared to their 2022 winter measurement (Figure 4). Of the 58 wells experiencing drawdowns, 46 demonstrated less than 10 feet of decline while only two wells had declines over 20 feet.

When comparing 2011-12 water levels to 2024 measurements, the general trend is flat to slightly downward, with most drawdowns being observed in Management Zone 3 and along the Reeves County border (Figure 5). Monitor well 230 in southern Pecos County has shown the most significant decline

over the period. This is a previously discussed reoccurring trend, however, more recently has shown signs of stability.

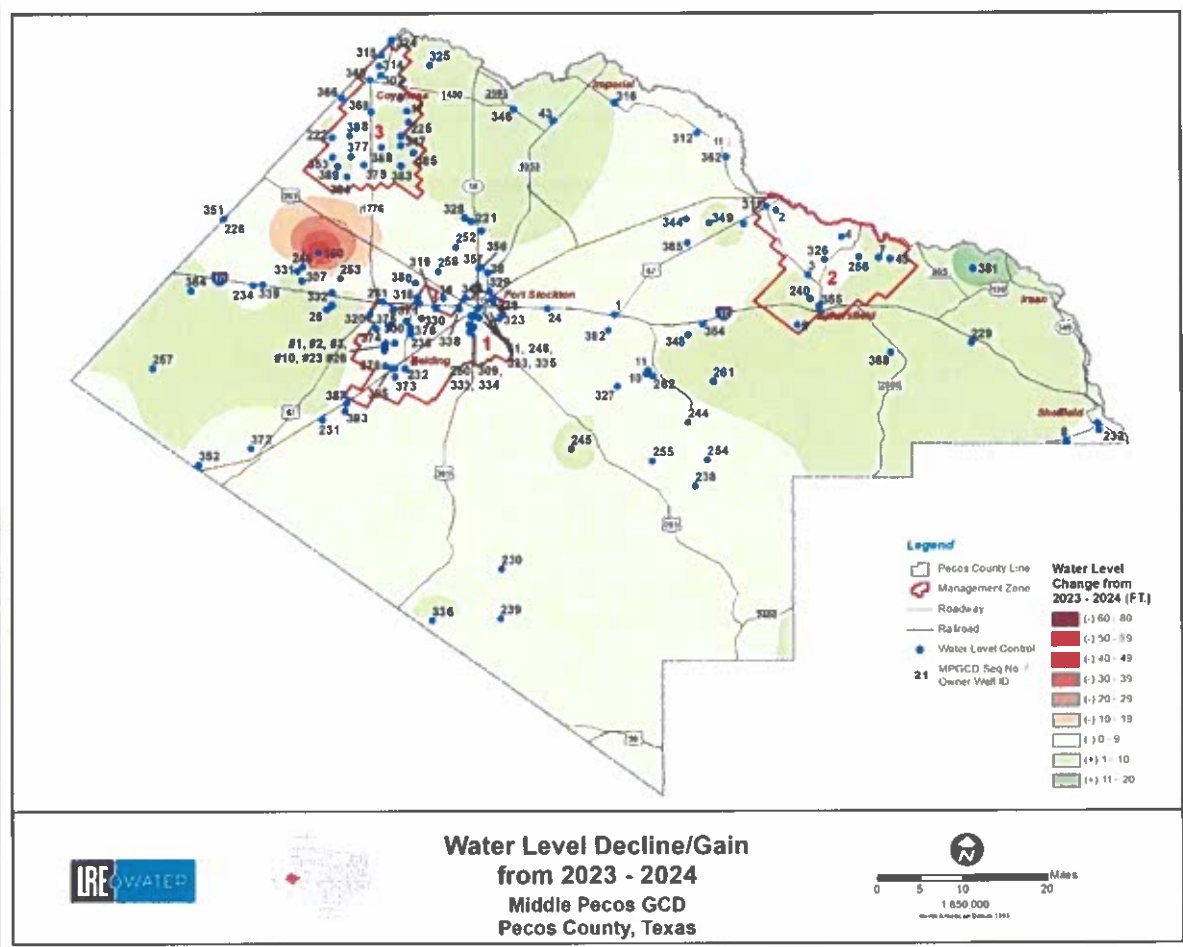


Figure 3 – Pecos County, TX Water Level Decline/Gain from 2023 – 2024. Gains are visible as shades of green while declines are illustrated as yellow to shades of red.

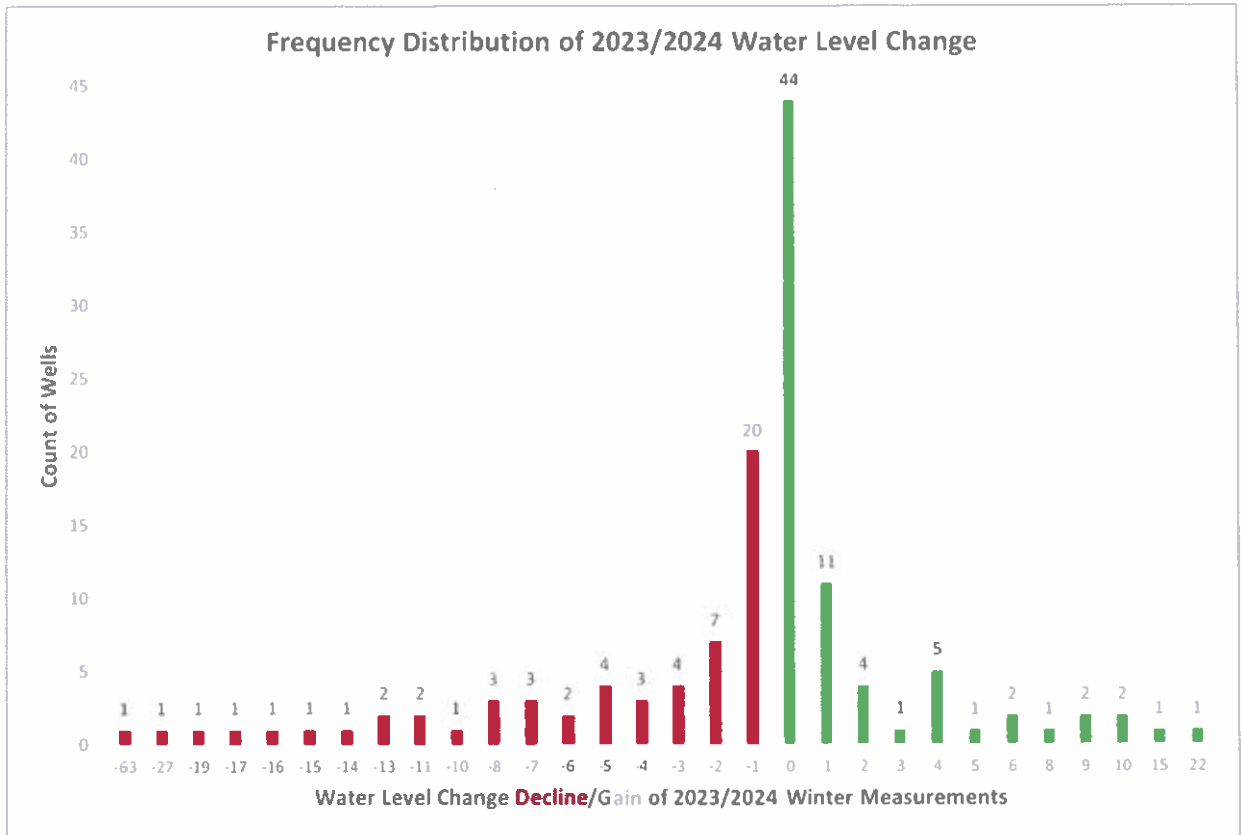


Figure 4 – Monitor well water level change from 2023 to 2024. Red illustrates a year-over-year decline while green illustrates a water level gain (recovery). This chart includes data from the monitor wells where 2023 and 2024 winter measurements were available.

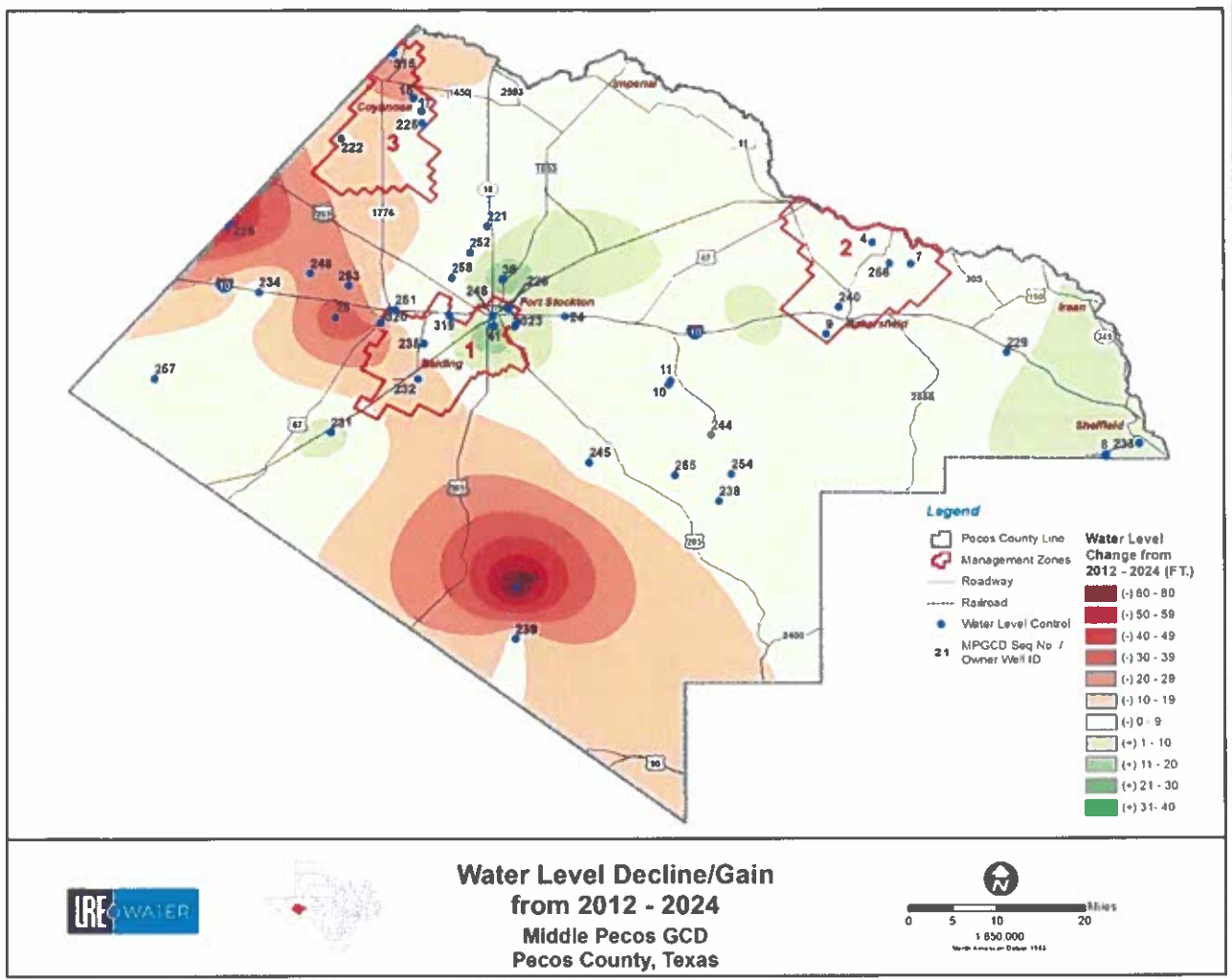


Figure 5 - Pecos County, TX Water Level Decline/Gain from 2012 - 2024. Gains are visible as shades of green while declines are illustrated as yellow to shade of red.

- In Corporation with local landowners 76 water samples have been collected across Pecos County in 2023.
- **Fort Stockton Holdings** 28,400 ac/ft export permit was renewed for a 3-year permit term effective July 18, 2023-2026, in accordance with District Rule 11.8(f) and Texas Water Code 36.1145. FSH and MPGCD approved a Joint Study to be proactive, to develop scientific data that will provide FSH, the District, and other stakeholders with more certainty about conditions in the Edwards-Trinity Aquifer. FSH agreed to pay \$250,000 to contribute to the study. As of this date the District has installed transducers, which are recording pressure, temperature, and conductivity at the 11 Threshold monitor well sites.

FSH Threshold Well Dashboard is available at <https://mpgcd.halff.com/Dashboard>.

Remaining 2024 Winter 4 Threshold Levels on January 5th, 2024 (Figure 6). These water levels demonstrate relative year-over-year consistency as they are mostly in line with 2022 and 2023 measurements.

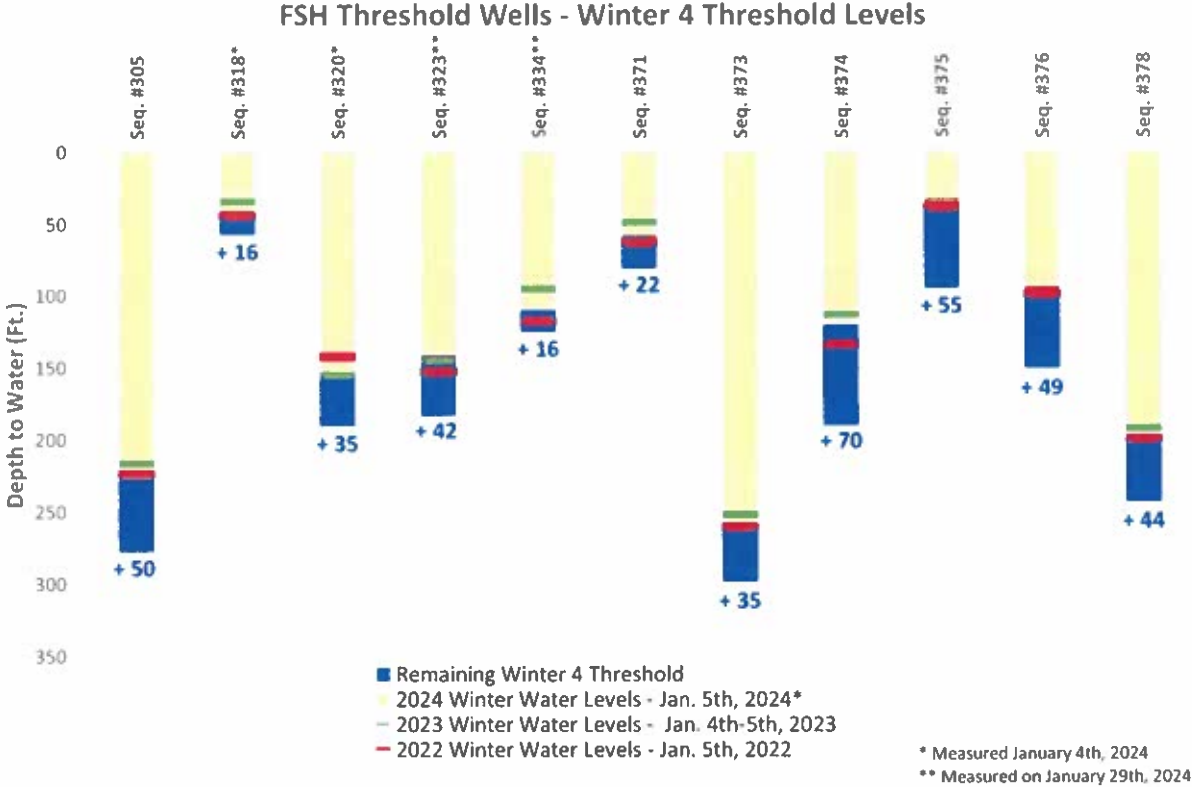


Figure 6 – Remaining Winter 4 Threshold Levels. The remaining threshold drawdown is visible in blue, while prior year measurements are visible as red and green lines.

Cockrell vs MPGCD

A. **Cockrell Investment Partners, L.P. v. MPGCD and its Board President in his official capacity, FSH and Republic Water Company of Texas, L.P., Case No. 23-0742 (Texas Supreme Court)(Cockrell I);**

In Cockrell I, the El Paso Court of Appeals on July 13th denied Cockrell’s motion for rehearing after further briefing thereby affirming the trial court’s ruling in favor of the District’s decision. A new deadline to appeal to the Texas Supreme Court is September 27th by petition for review. A 2nd new deadline to appeal has been approved for October 27th. On November 9th, the District and FSH filed brief responses with the Court advising that in accordance with Rule 53, each party will respond if the court is interested in responses. A Petition for Review is under review by the Court.

B. **Cockrell Investment Partners, L.P. v. MPGCD and its General Manager in his official capacity, and FSH, Case No. 23-0593 (Texas Supreme Court)(Cockrell II);**

In Cockrell II, the El Paso Court of Appeals on July 10th denied Cockrell’s motion for rehearing after further briefing thereby affirming the trial court’s ruling in favor of the District’s decision. The Court of Appeals issued a substitute opinion and judgment with its reasoning that there is no jurisdiction in the courts for Cockrell to pursue its claim, including the reason that Cockrell prematurely filed its lawsuit by not waiting for its motion for rehearing filed at the District to expire. On August 2nd, the Court of Appeals issued a revised opinion and judgment correcting typographical errors. September 18 Cockrell requests extension to file appeal with Texas Supreme Court. On October 25th Cockrell timely filed Petition for Review. On November 9th the District and FSH filed brief responses with the Court advising Rule 53. On November 28 Petition for Review is “under review” by the Court.

C. Cockrell Investment Partners, L.P. v. Ty Edwards, In His Capacity as General Manager, and FSH, Case No. 08-23-00178-CV (El Paso Court of Appeals)(Cockrell III);

In Cockrell III, a hearing in front of Judge Ables occurred on May 30, 2023. The Court ruled in favor of FSH and MPGCD by granting their Pleas to the Jurisdiction. There was a disagreement with Cockrell over the finality of the trial court’s judgment and fee reimbursement, which Judge Ables cleared up by signing a modified order on July 19. August 14th is the deadline for Cockrell to file its appellate brief at the Court of Appeals. Cockrell timely filed and the District and FSH’s appellate briefs were timely filed September 26. On October 13th Cockrell filed a reply brief.

D. Cockrell Investment Partners, L.P. v. Middle Pecos Groundwater Conservation District, Cause No. P-8626-83-CV (83rd District Court)(Cockrell IV); and

In Cockrell IV, the lawsuit was filed on August 17th and served on September 13th by agreement. The District’s answer and counterclaim was timely filed October 9th. FSH has advised that it will intervene and file plea to the jurisdiction.

E. Cockrell Investment Partners, L.P. v. Middle Pecos Groundwater Conservation District, Cause No. P-13031-112-CV (112th District Court)(Cockrell V).

In Cockrell V, the lawsuit was filed on August 23rd and served on September 13th by agreement. The District’s answer and counterclaim was timely filed October 9th. FSH has advised that it will intervene and file plea to the jurisdiction.

- **Diamond Y Spring**-The Nature Conservancy has installed Telemetry in Diamond Y Springs. The Conservancy has created an extensive groundwater monitoring program to track spring flows, water quality, and the health of the pupfish and other species. Over the last few years, we have seen a decrease in flows during the summer months and a recovery in winter months. Diamond Y Spring Preserve protects one of the largest and last remaining Cienega systems in West Texas. The District updated the geologic model in 2021 and 2023, around the Diamond Y Spring area and was able to map several faults. The District has installed 6 full time monitoring wells equipped with In-Situ Transducers recording water level and water quality in real time. This equipment is installed in 5 Edwards Trinity Wells and 1 Rustler Well around the spring area.
- **Santa Rosa Spring**- continues to remain dry. The spring bed is being monitored and we are tracking changes in pressure during rain fall events.

- **Comanche Spring-** is continually monitored for flow, pressure, and conductivity during the Winter Spring Season. Noi Flow at Comanche Spring was measured in Winter of 2023.
- The District was awarded a **FY 21 TWDB Agricultural Water Conservation Grant** for metering in Management Zone 1. Outreach is ongoing and hope to begin installation of meters in early 2024.
- The District drilled a **Monitor Well at the MPGCD Office located at 405 North Spring Drive.** The purpose of the well is for educational monitoring site outside the office. An 8ft Aeromotor windmill has been installed over the well with full time In-Situ monitoring equipment downhole. A full exhibit has been erected at the site.
- **San Andres Abandoned Wells-** Progress has been made on the abandoned well problems in 2023. HB 4256 passed the Texas Legislature with overwhelming support. \$10 Million Dollars has been set aside for TCEQ to start a program to plug some of the wells that qualify.

An official complaint has been filed at the RRC to plug 12 of the abandoned wells. A preliminary hearing has been held with another scheduled for early 2024. If successful several wells at issue could be added to the State well plugging program.

- **PECOS COUTNY GROUNDWATER MODEL Phase 1** of building a groundwater flow model have begun with completion of the model anticipated for 2024. The objective is to develop a tool that would assist the District in groundwater management. The google link for the tech memos is available at:

<https://drive.google.com/drive/folders/1HYj8JRV4omAgKPJWBta-T20hZUbtyaPS>.

Specific uses that are contemplated include:

- DFC development without the need to use regional GAM's.
 - Provide a quantitative basis for future updates to the District's rules that set a threshold on well size/pumping amount for requiring permit applicants to prepare hydrologic reports.
 - Provide a tool that can be used to review permit applications by quantifying the potential impacts of new pumping for any formation/aquifer in the District on a regional scale.
 - Assess the relationship between groundwater pumping and spring flow at Comanche Springs on a monthly time scale.
- The **third round of joint planning** for Groundwater Management **Areas 3 and 7** is complete and the fourth round of joint planning is underway. For this round, the statutory deadline to propose desired future conditions (DFC's) is May 1, 2026, and the deadline to submit final DFC's to the Texas Water Development Board is January 5, 2027. I attended 100% of all the GMA 3 and GMA 7 meetings held in 2023.

https://www.twdb.texas.gov/groundwater/management_areas/gma3.asp

https://www.twdb.texas.gov/groundwater/management_areas/gma7.asp

- The **Region F Water Planning Group** is tasked with developing and adopting a regional water plan in accordance with Texas Senate Bill 1 and Texas Senate Bill 2. The 2021 Region F Plan was submitted to the Texas Water Development Board, and we held our last meeting to adopt the 2021 plan on September 17, 2020. The sixth cycle of regional planning is underway for the 2026 State Water Plan. I am a voting member of Region F representing Groundwater Management Area 3 and have attended 100 percent of the scheduled meetings for Region F in 2023.

<https://www.twdb.texas.gov/waterplanning/rwp/plans/2021/index.asp>

LEGISLATION PASSED DURING THE 88TH REGULAR SESSION THAT AFFECTS GROUNDWATER CONSERVATION DISTRICTS

Legislation Amending GCD Procedures

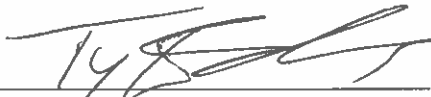
- **HB 1971** –Reduces the number of Board Members required to act on a permit application, for GCD Boards of 10 or more, to a majority of those eligible to vote; Addresses the timing and substance of a GCD Board’s final decision and effectuates SOAH’s proposal for decision (PFD) if a GCD’s Board has not made a decision within 180 days of the SOAH Judge’s issuance of a PFD; Prohibits a conflicted Board Member from joining executive session or voting unless a majority of the Members also have a conflict related to a similar interest; Limits the time for a continuance.
- **HB 2443** – Allows a person with a property interest in groundwater in a GCD to petition the GCD to adopt or modify a rule; Requires GCD to prescribe the form for a petition and the procedure for the submission, consideration, and disposition of the petition; If a GCD denies a petition, requires the GCD explain its reason for denying a petition; No private cause of action created for a decision to accept or deny a petition.

Legislation Relating to Permitting and Fees

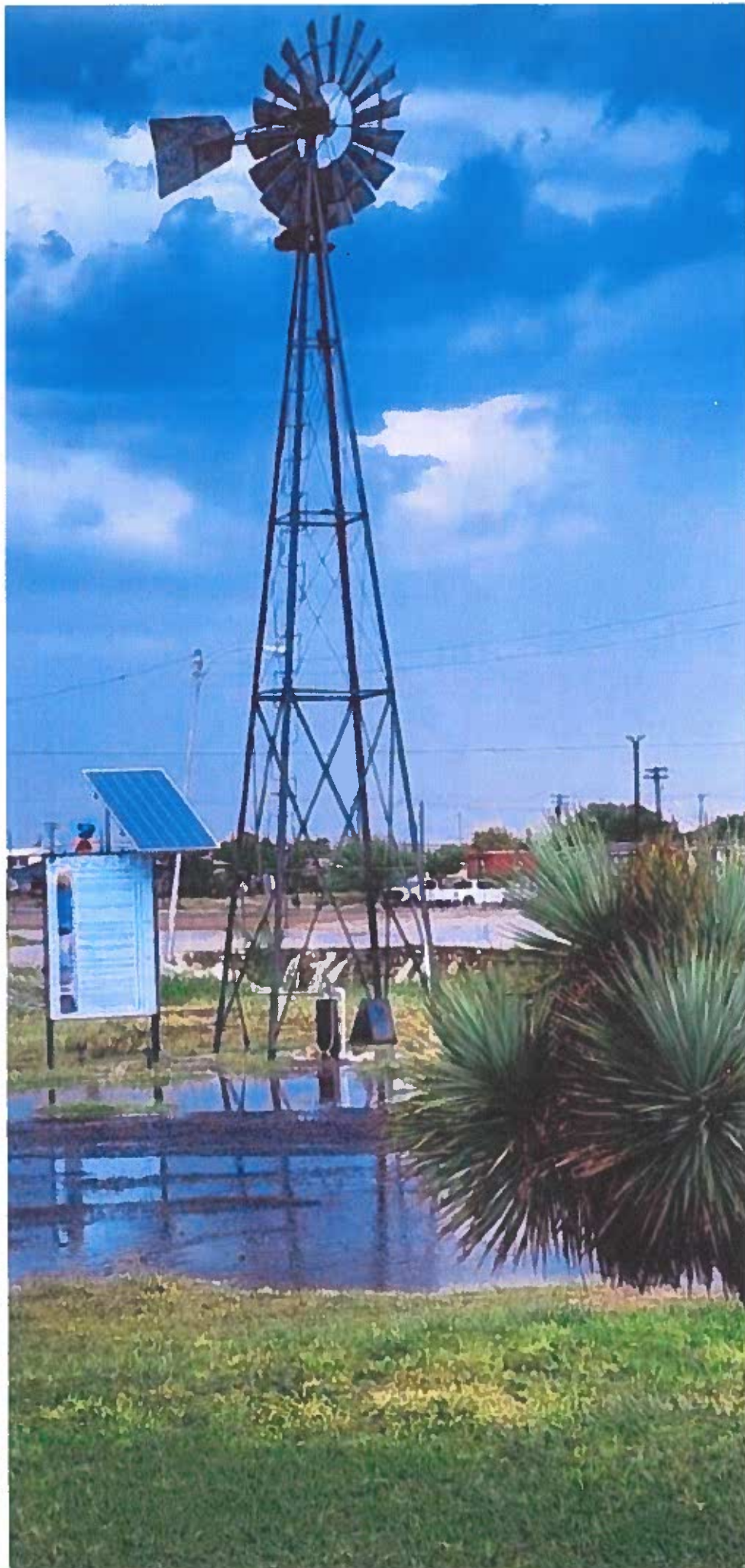
- **HB 3059** – Allows a GCD to charge a maximum export fee up to 20 cents for each one thousand gallons of water (maximum fee to increase by 3% each year) and to use export fee funds for mitigation—to maintain wells, develop or distribute alternative water supplies, and developing aquifer science.
- **SB 1746** – Creates a groundwater production permit exemption for wells drilled for temporary use to supply water for a rig actively engaged in drilling a permitted groundwater production well.

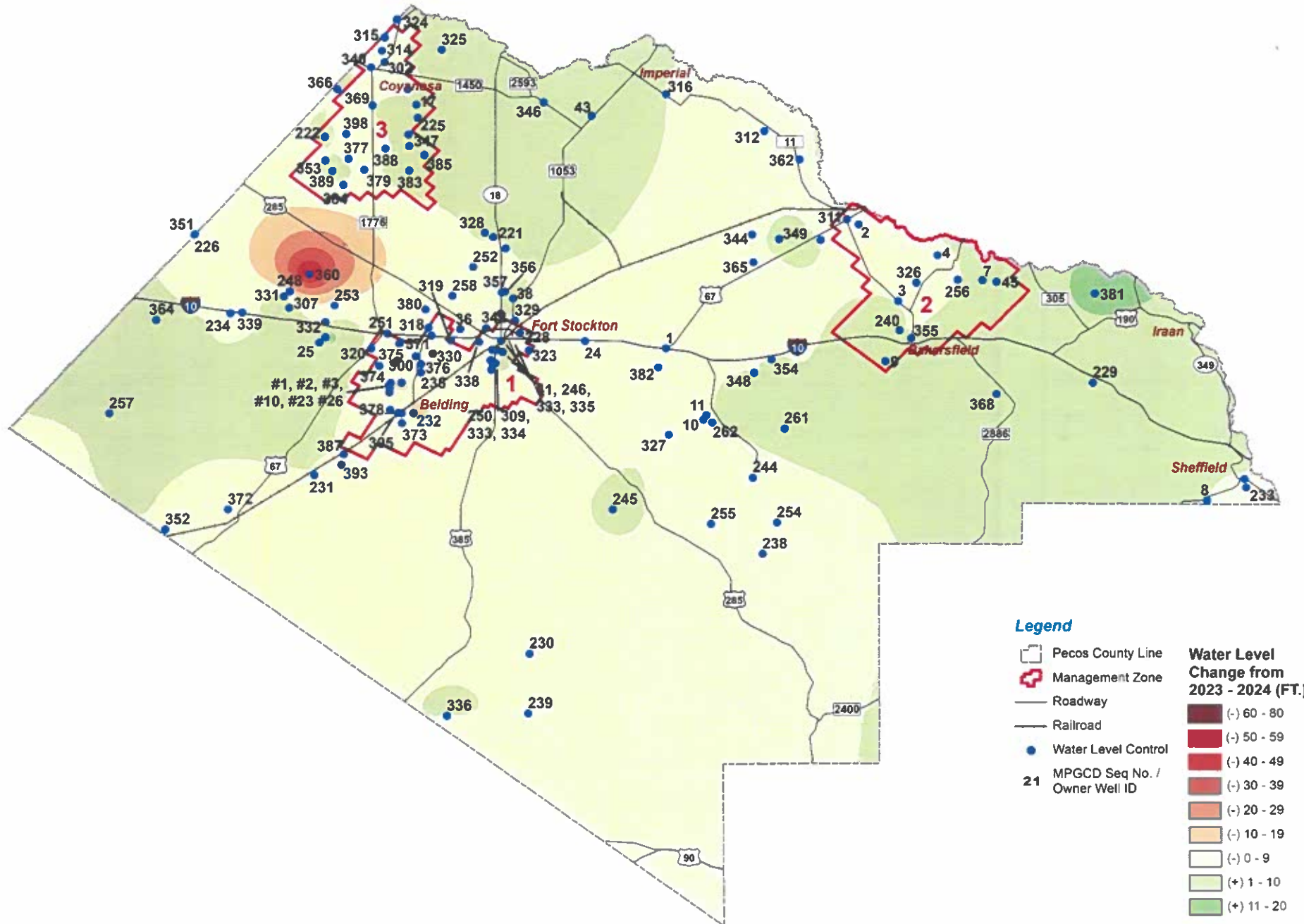
Legislation Relating to DFCs, GAMs and WAMs

- **HB 3278** – Requires each GCD to provide on the GCD’s webpage and to the GMA all materials received during the public comment period, including new or revised GAM run results; Requires public comment at the GMA as the Districts’ Representatives are reviewing the information provided by each GCD and that the explanatory report address public comment before the GCDs and at the GMA.
- As General Manager of the District, I would like to thank MPGCD Directors for all the hard work and time you dedicated to 2023.



Ty Edwards, General Manager

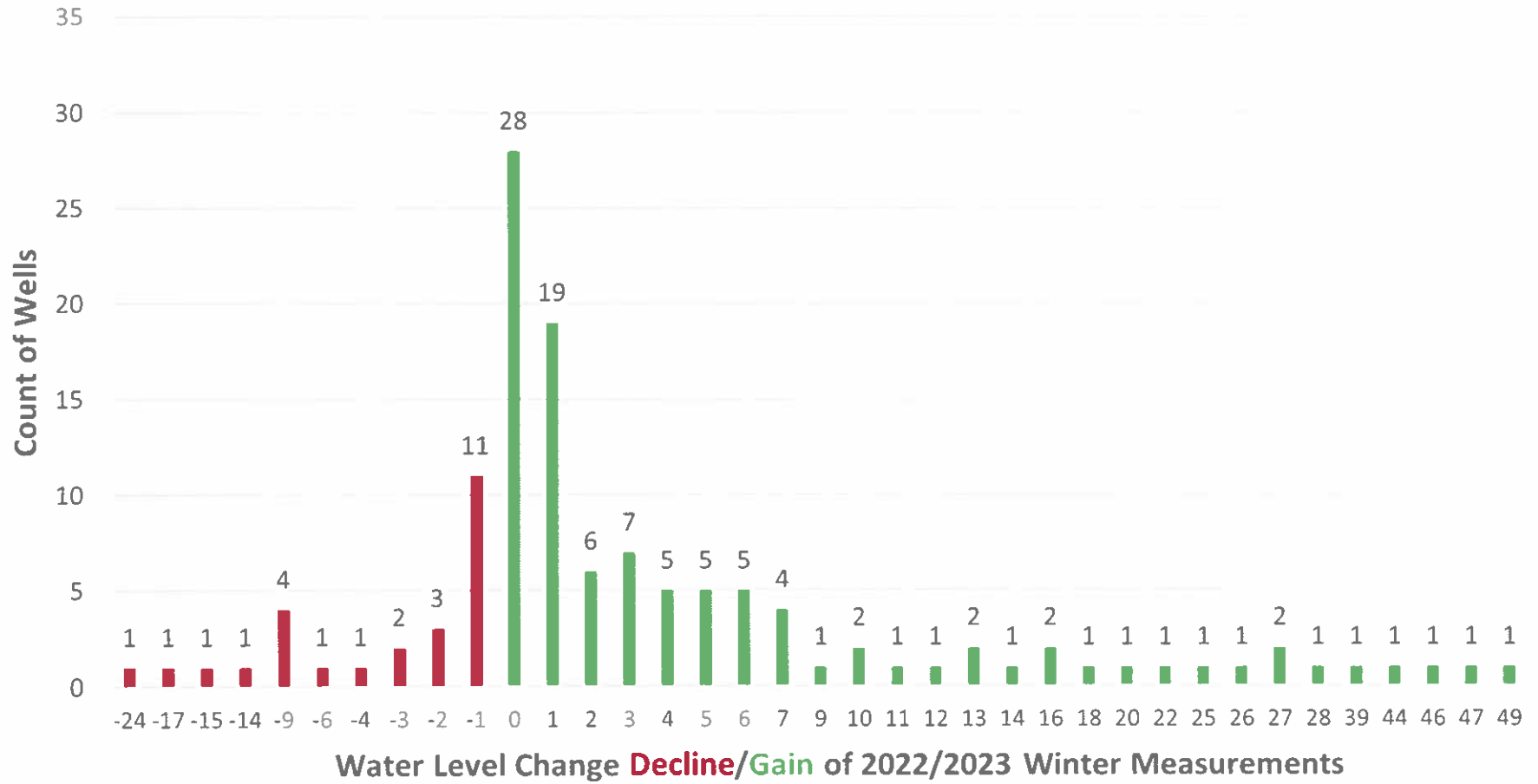


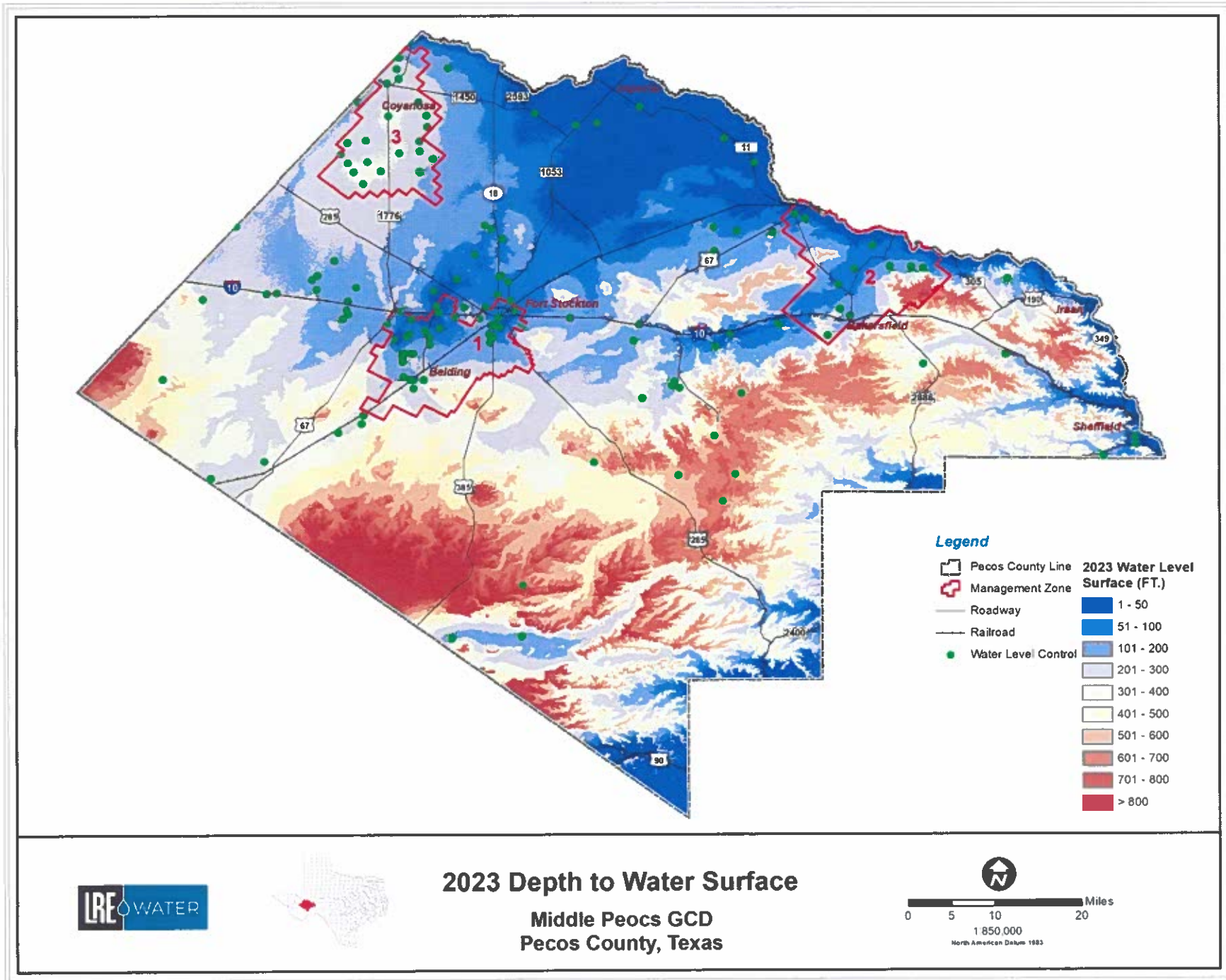


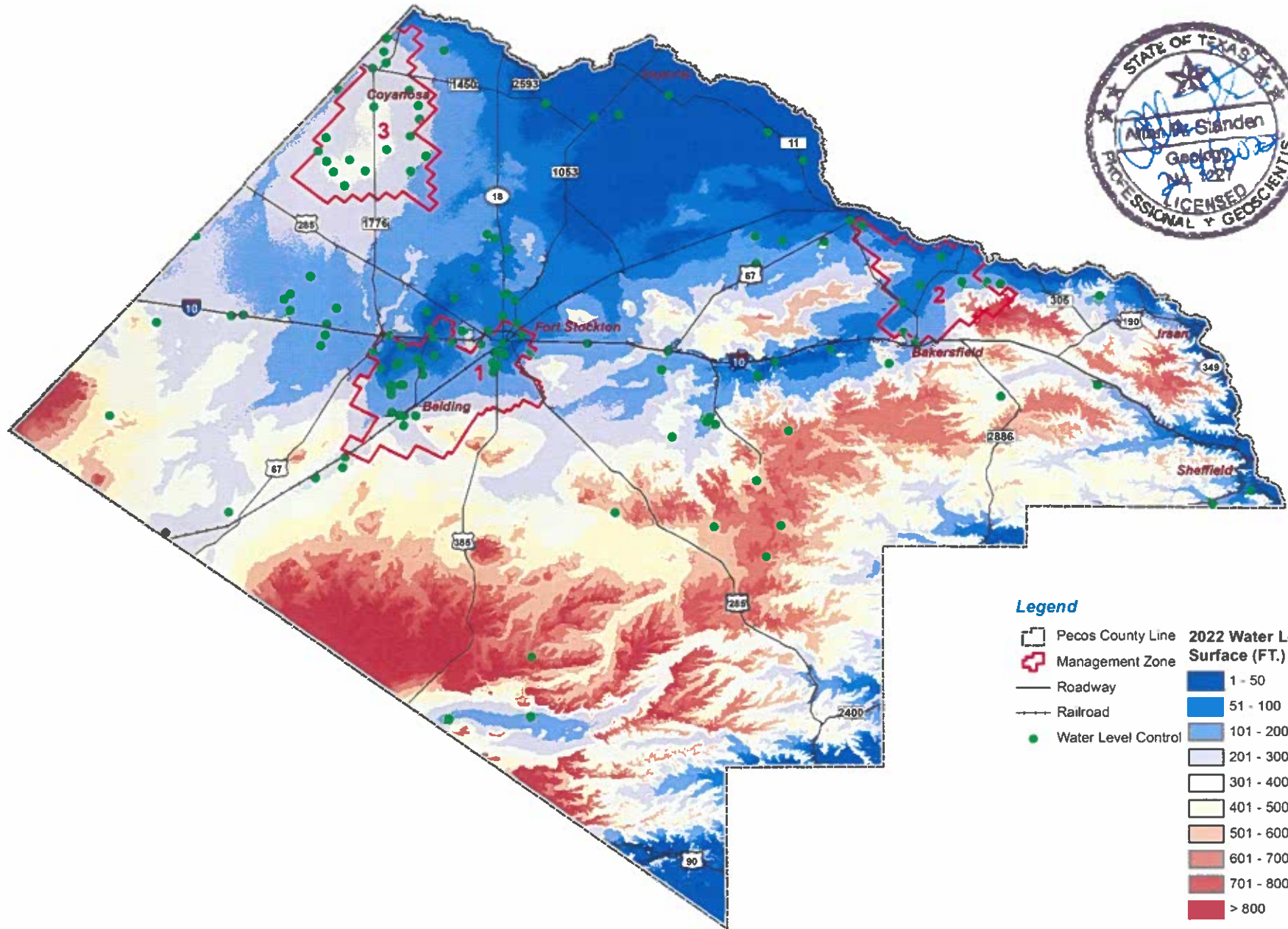
Water Level Decline/Gain from 2023 - 2024 Middle Pecos GCD Pecos County, Texas



Frequency Distribution of 2022/2023 Water Level Change







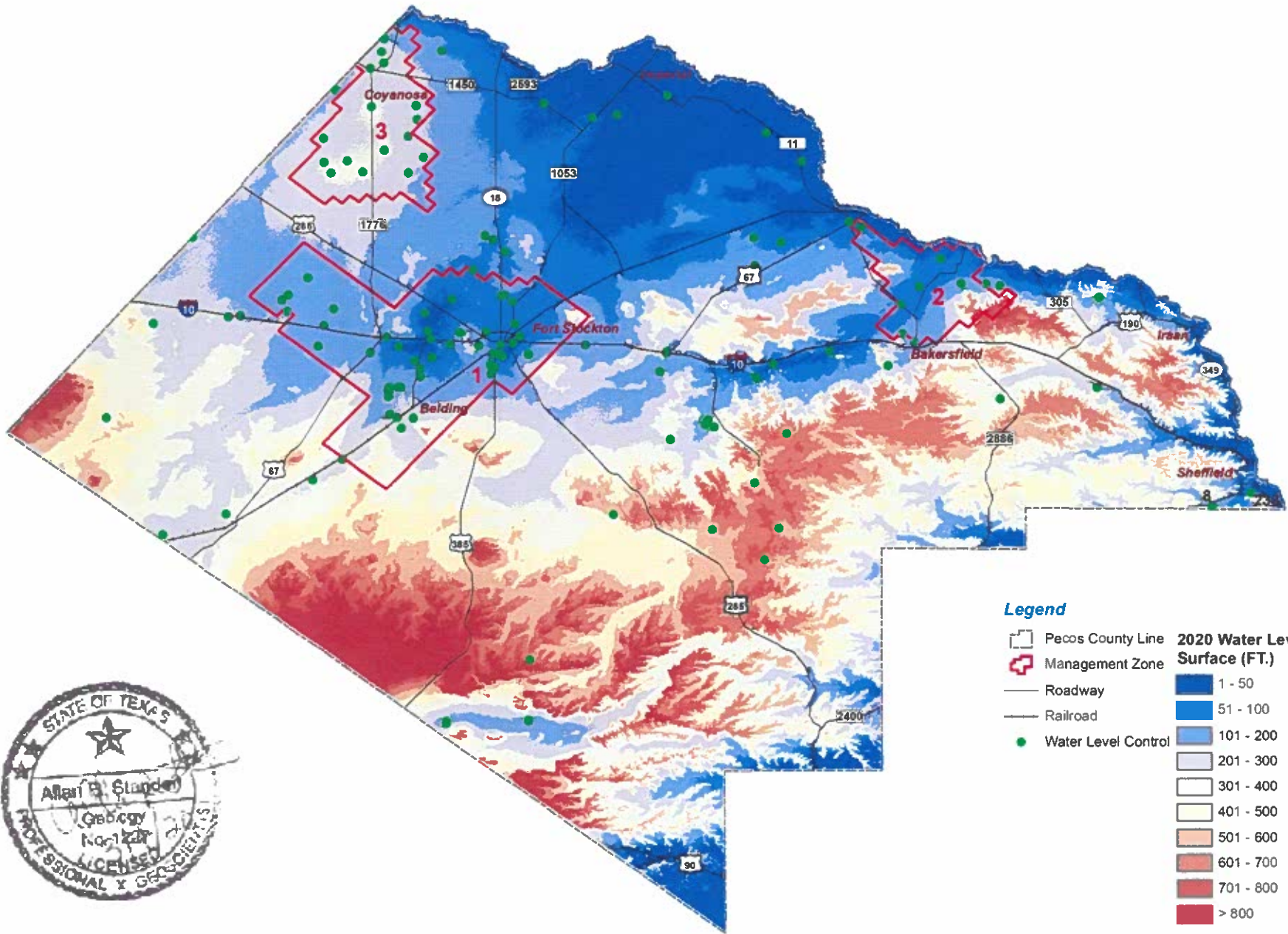
Legend

- | | |
|---------------------|---------------------------------------|
| Pecos County Line | 2022 Water Level Surface (FT.) |
| Management Zone | 1 - 50 |
| Roadway | 51 - 100 |
| Railroad | 101 - 200 |
| Water Level Control | 201 - 300 |
| | 301 - 400 |
| | 401 - 500 |
| | 501 - 600 |
| | 601 - 700 |
| | 701 - 800 |
| | > 800 |



**2022 Depth to Water Surface
Pecos County, Texas**



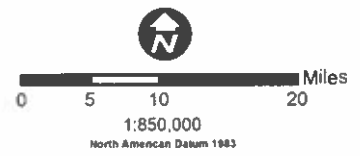


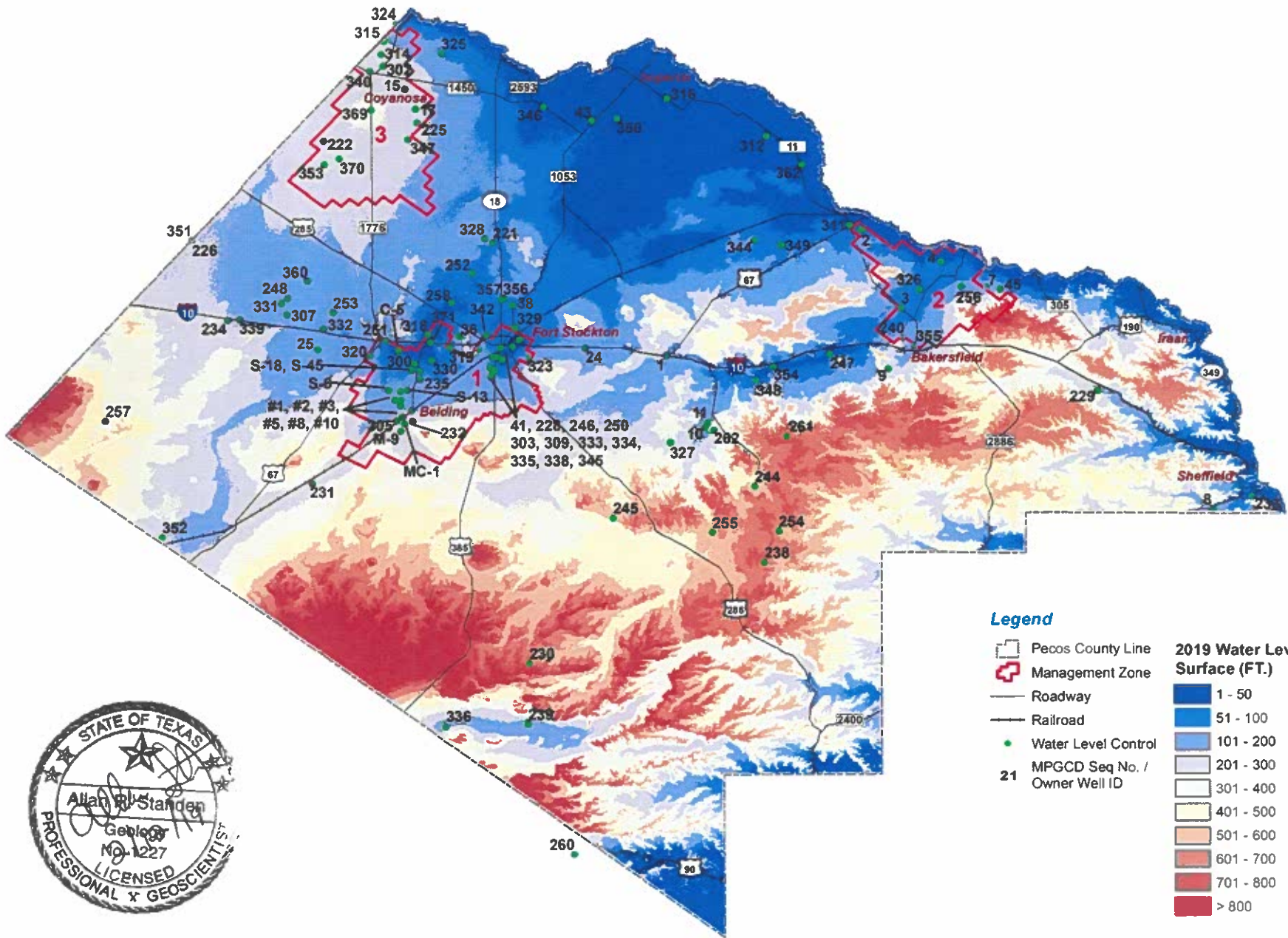
Legend

- Pecos County Line
 - Management Zone
 - Roadway
 - Railroad
 - Water Level Control
- 2020 Water Level Surface (FT.)**
- 1 - 50
 - 51 - 100
 - 101 - 200
 - 201 - 300
 - 301 - 400
 - 401 - 500
 - 501 - 600
 - 601 - 700
 - 701 - 800
 - > 800

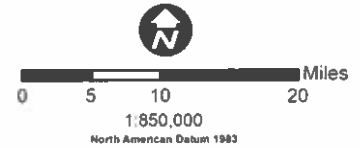


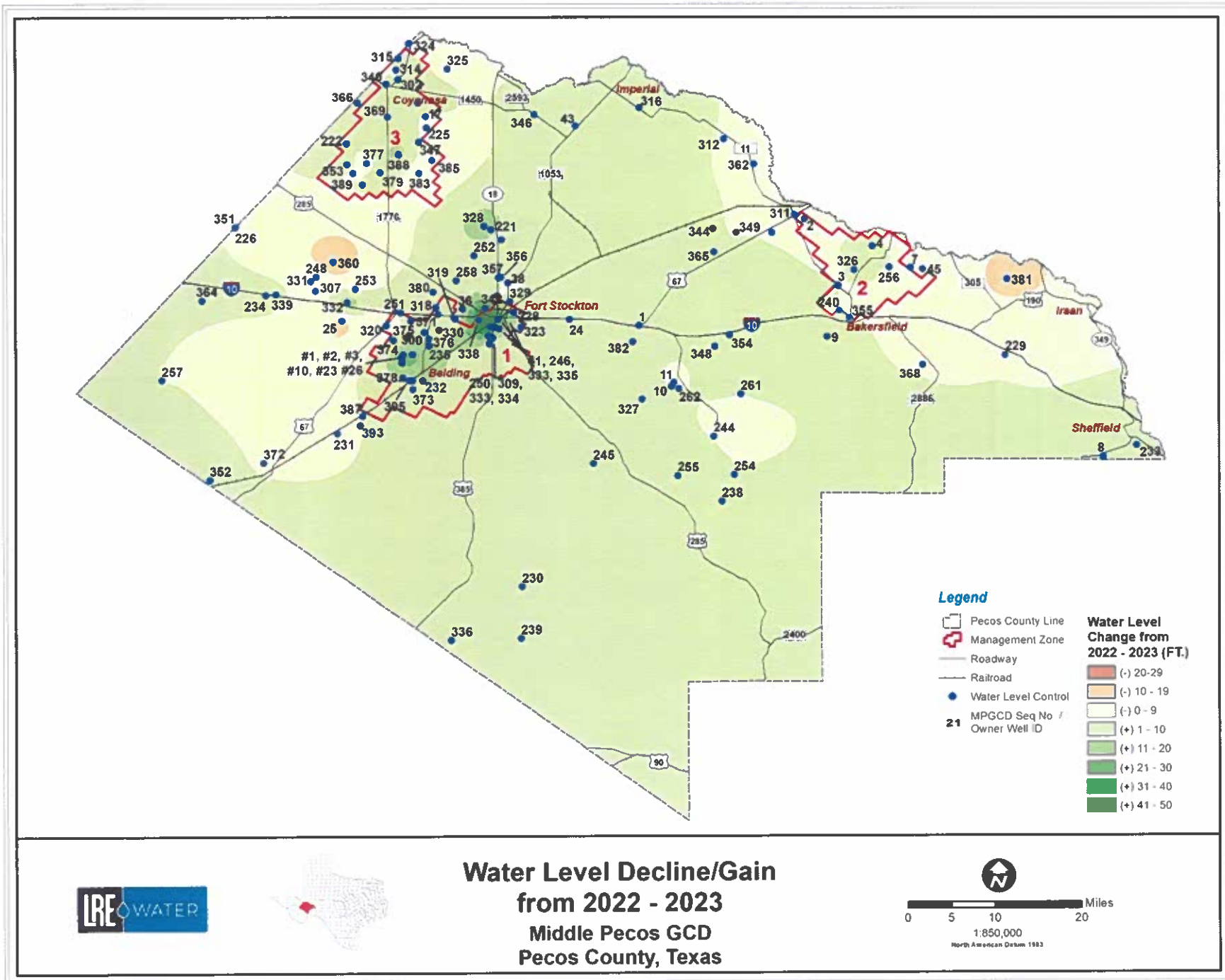
**2020 Depth to Water Level
Pecos County, Texas**

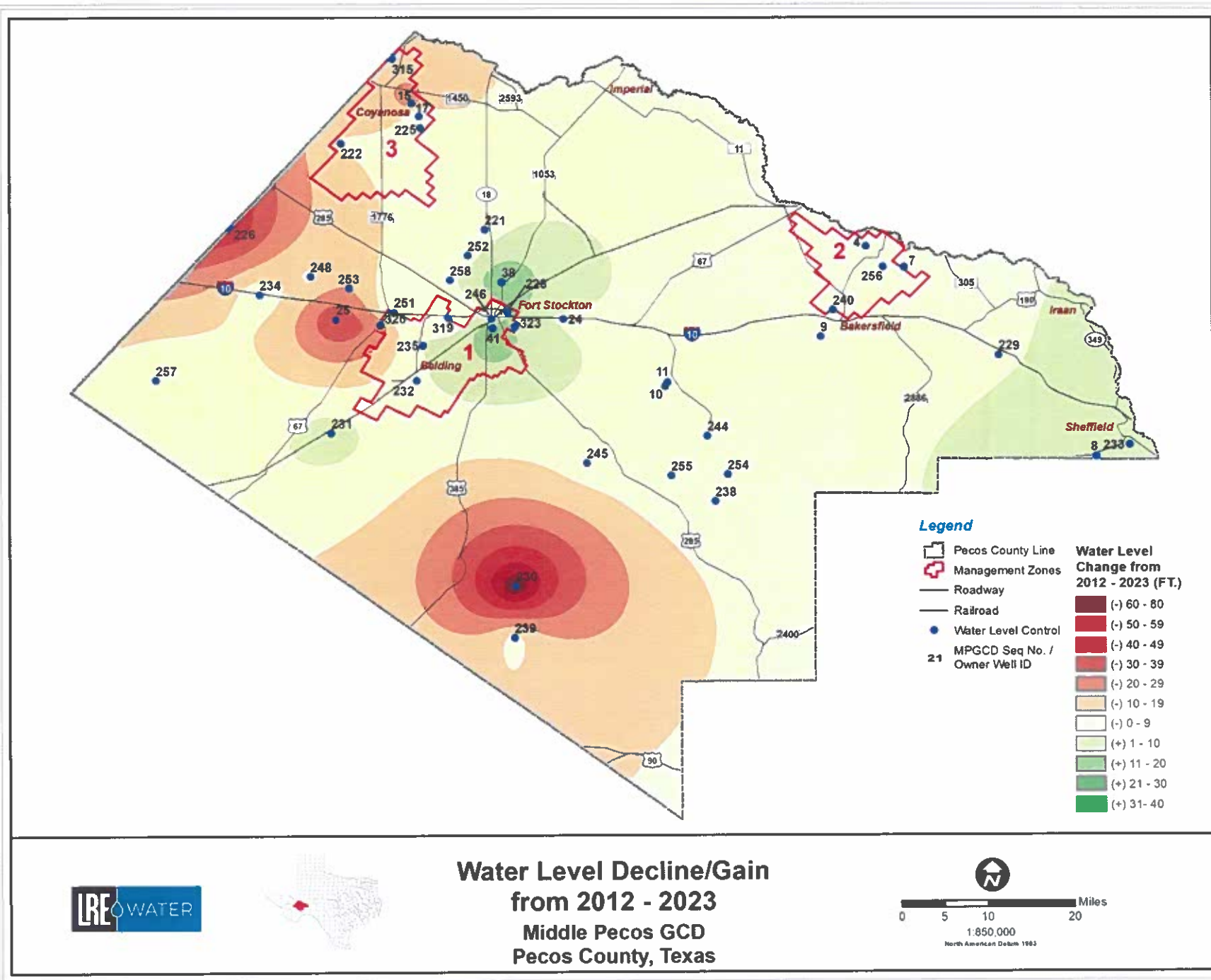




2019 Depth to Water Level Pecos County, Texas

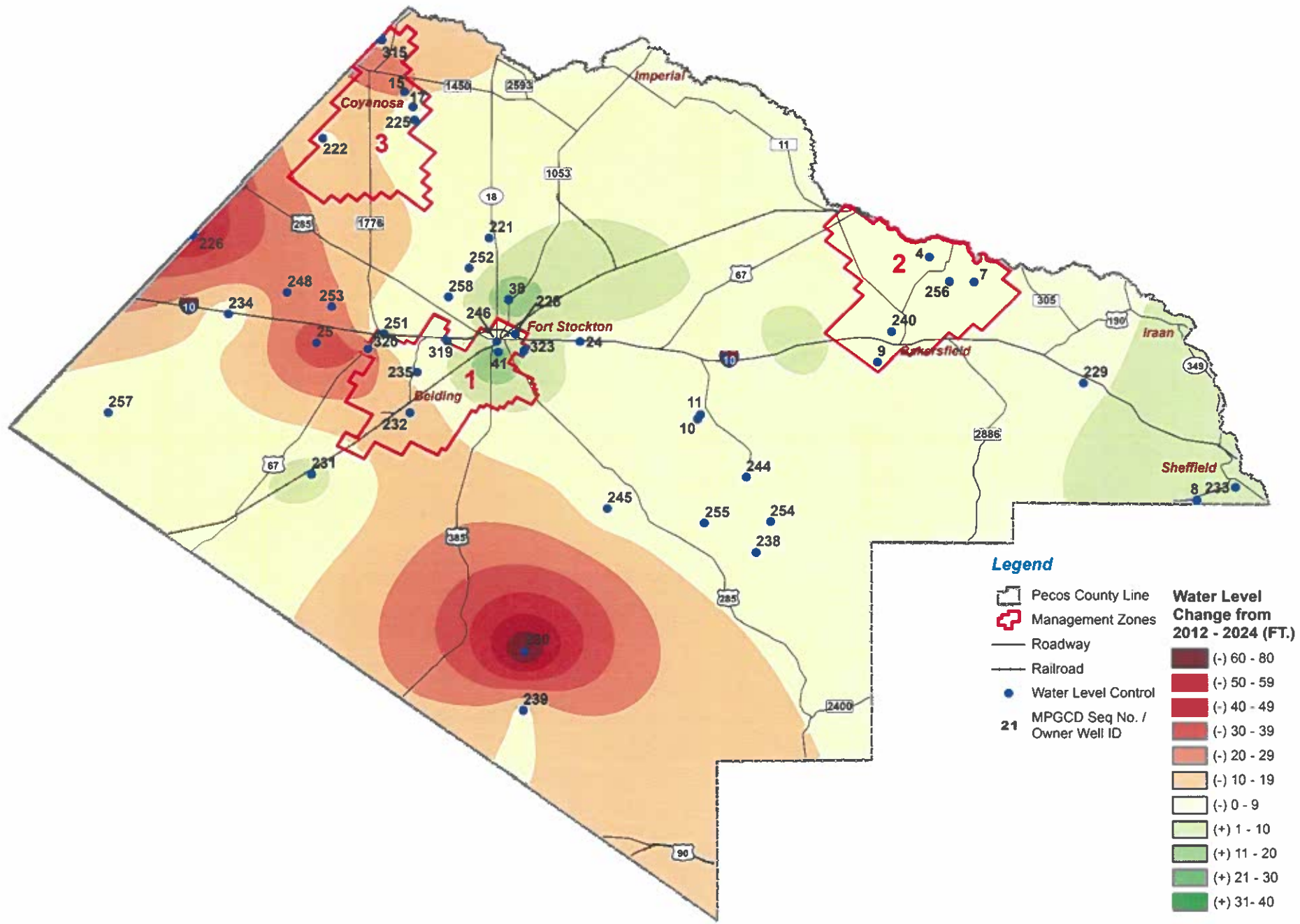






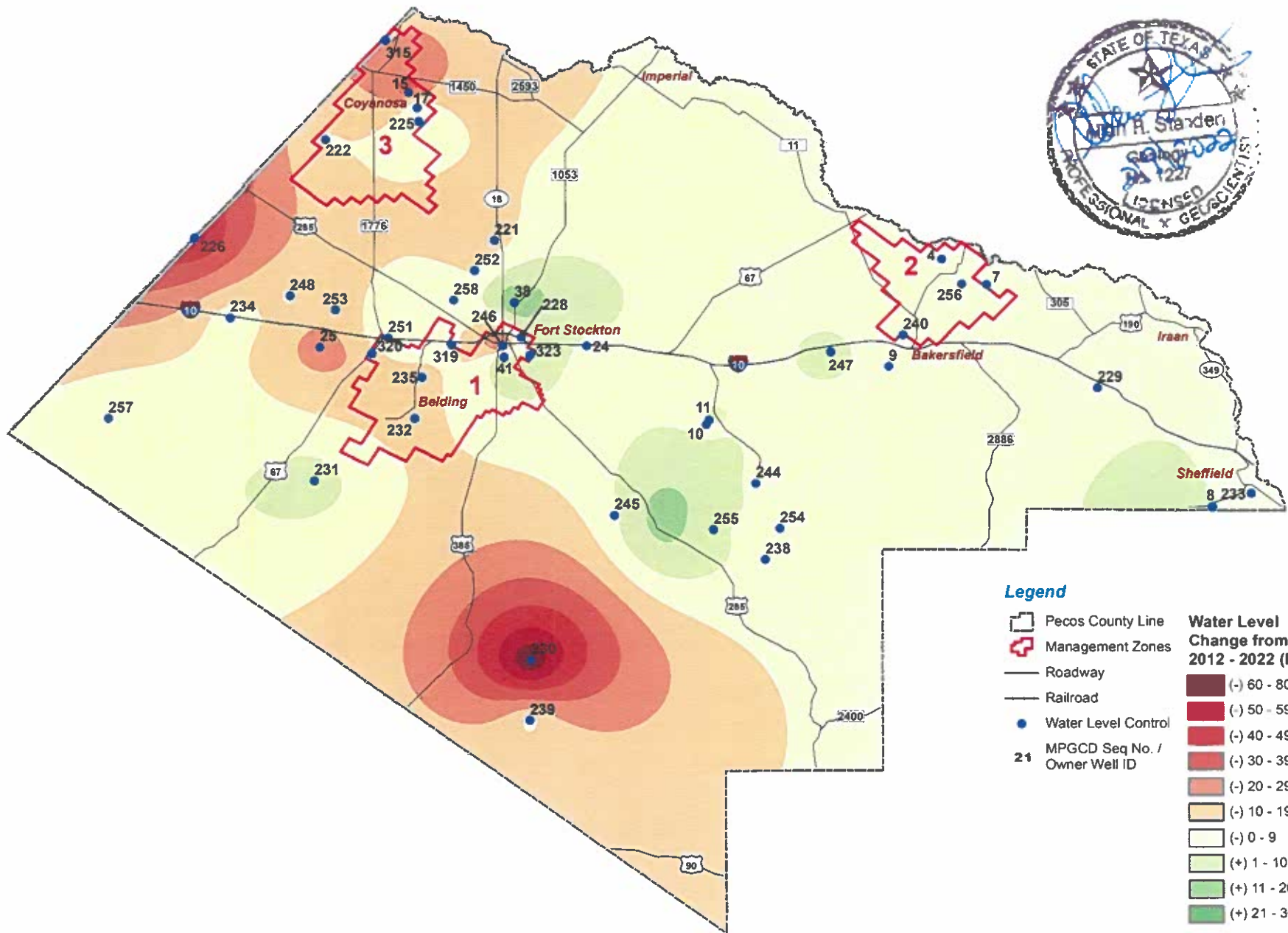
Water Level Decline/Gain
from 2012 - 2023
Middle Pecos GCD
Pecos County, Texas





Water Level Decline/Gain from 2012 - 2024 Middle Pecos GCD Pecos County, Texas

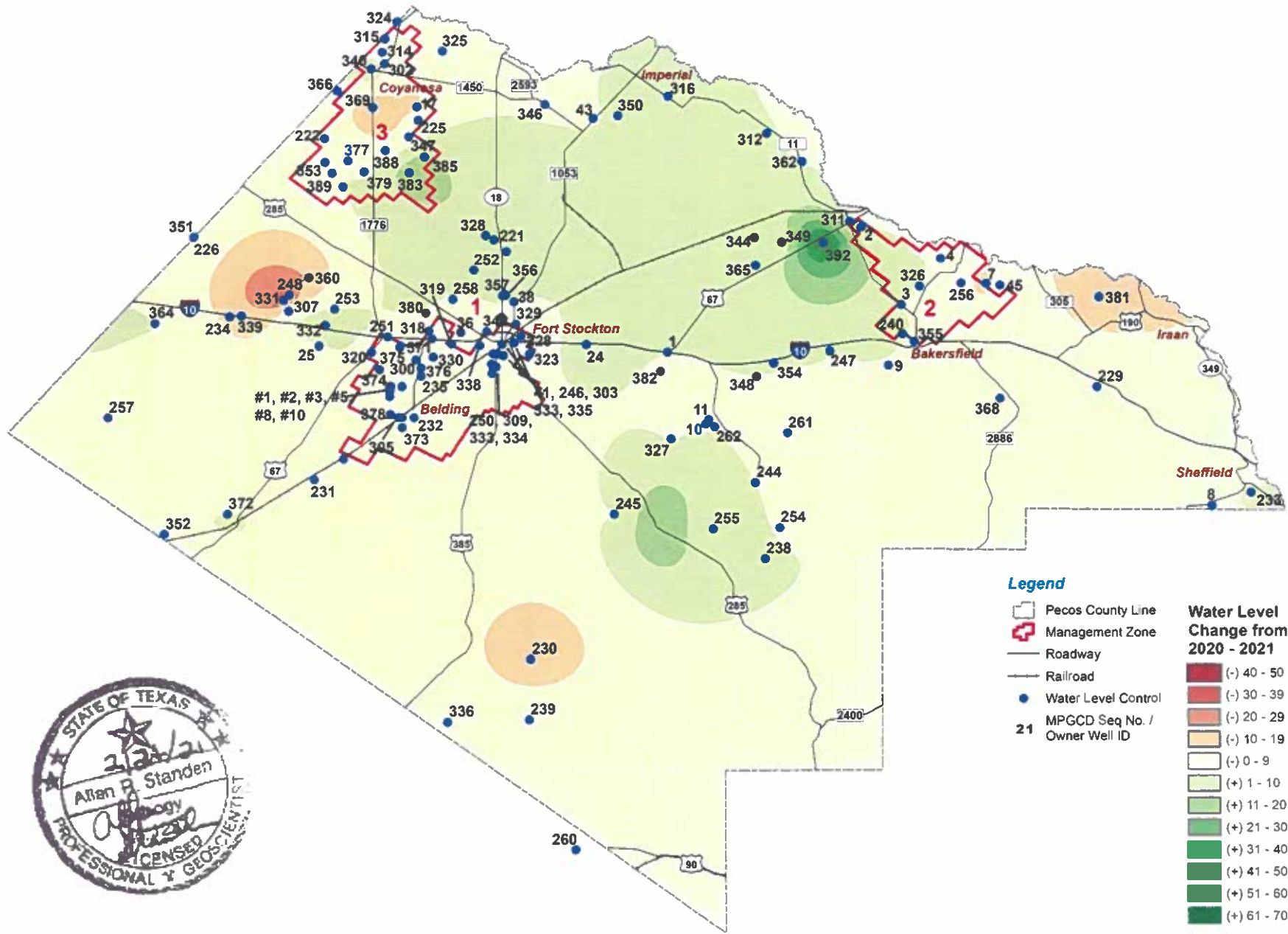




Water Level Decline/Gain from 2012 - 2022

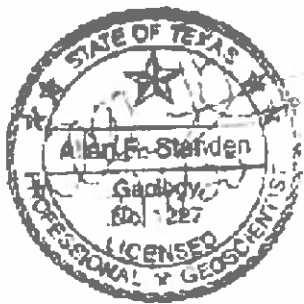
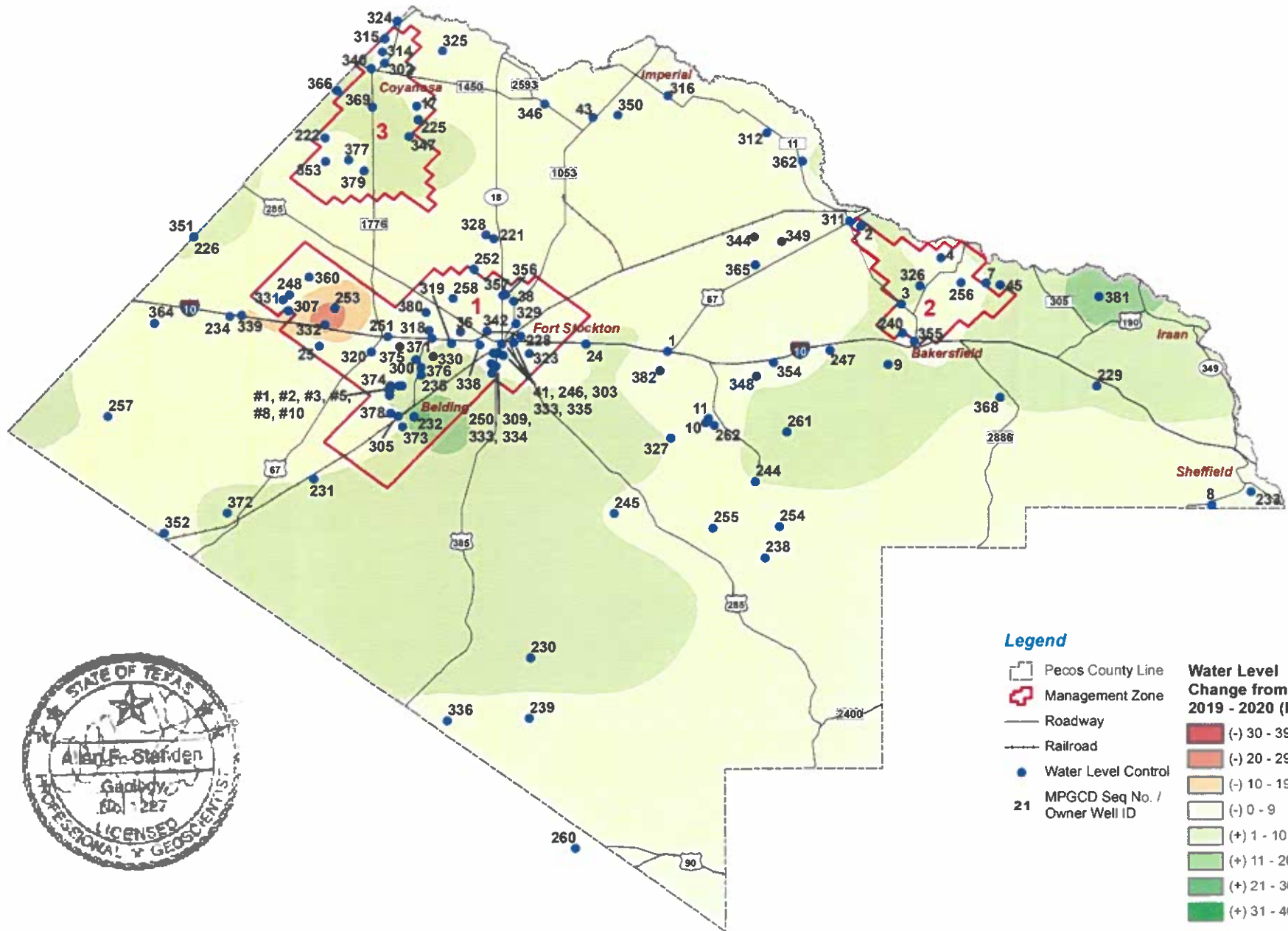
Pecos County, Texas



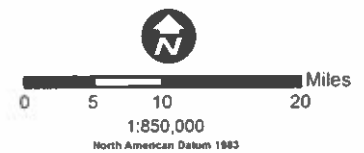


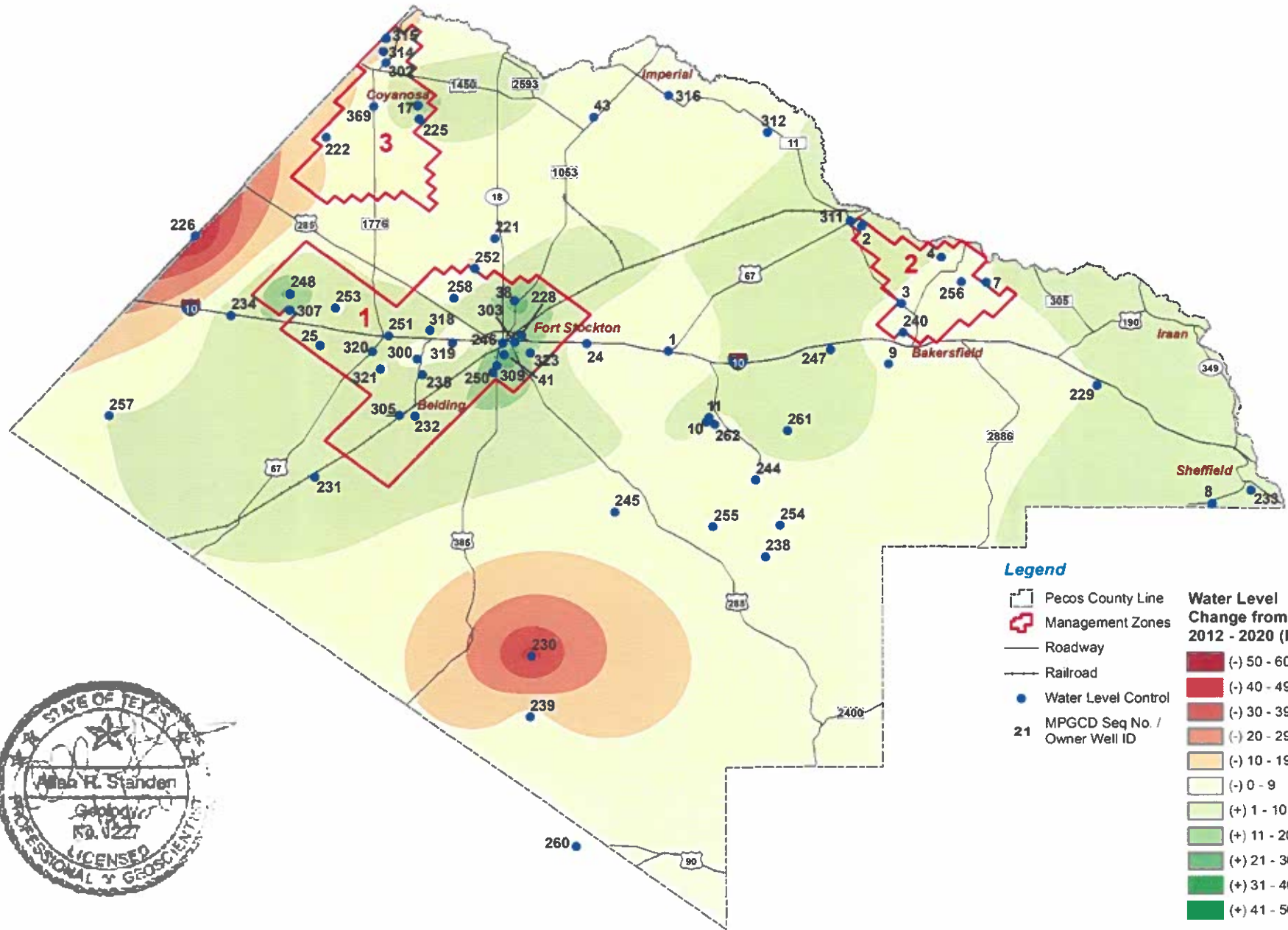
Water Level Decline/Gain from 2020 - 2021 Pecos County, Texas





Water Level Decline/Gain from 2019 - 2020 Pecos County, Texas





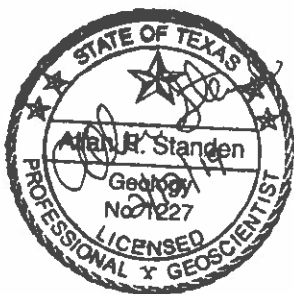
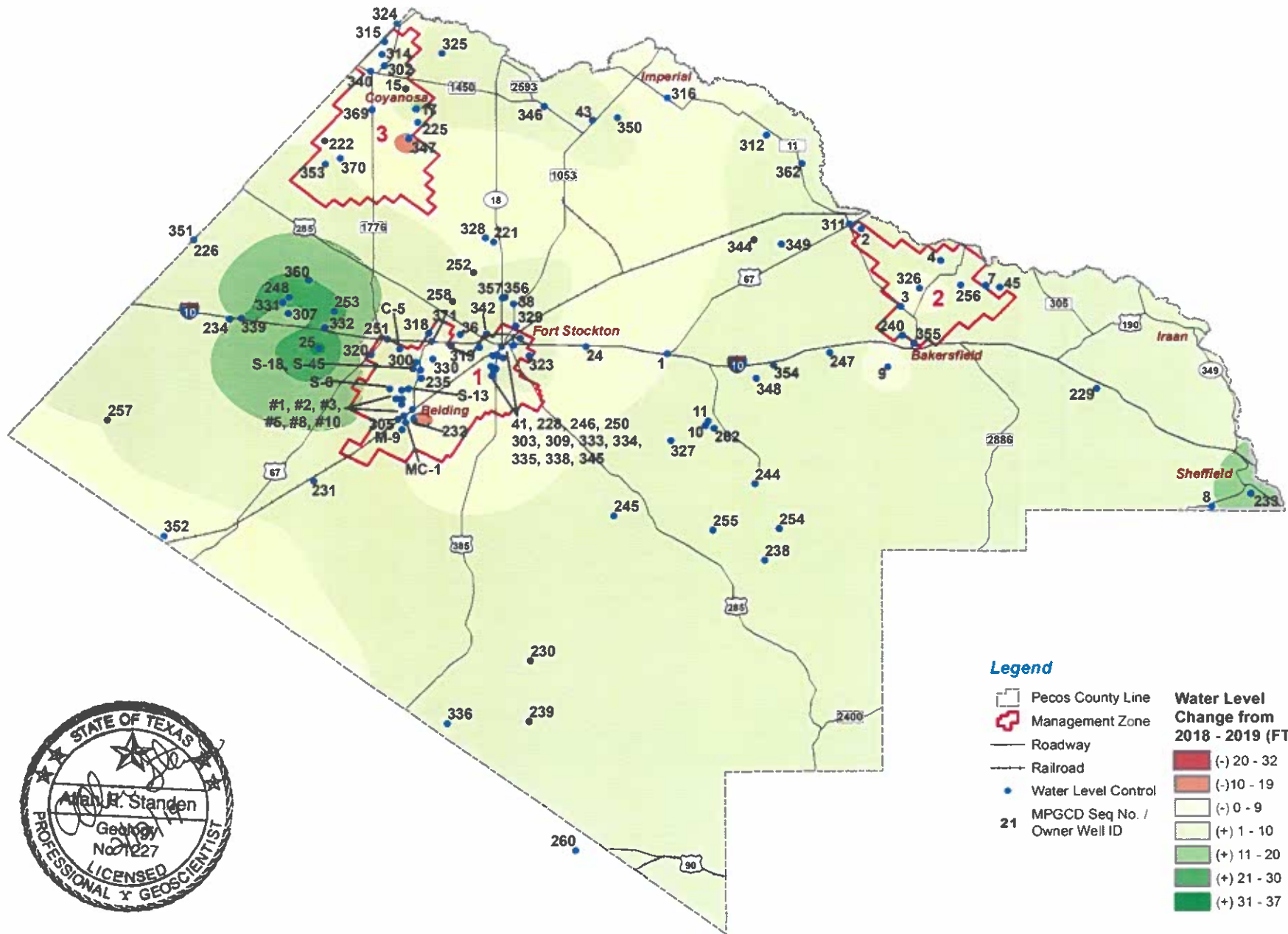
Legend

- Pecos County Line
 - Management Zones
 - Roadway
 - Railroad
 - Water Level Control
 - 21** MPGCD Seq No. / Owner Well ID
- | Water Level Change from 2012 - 2020 (FT.) | |
|---|-------------|
| | (-) 50 - 60 |
| | (-) 40 - 49 |
| | (-) 30 - 39 |
| | (-) 20 - 29 |
| | (-) 10 - 19 |
| | (-) 0 - 9 |
| | (+) 1 - 10 |
| | (+) 11 - 20 |
| | (+) 21 - 30 |
| | (+) 31 - 40 |
| | (+) 41 - 50 |

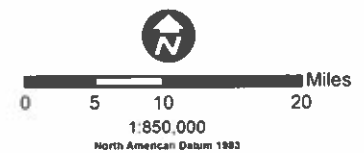


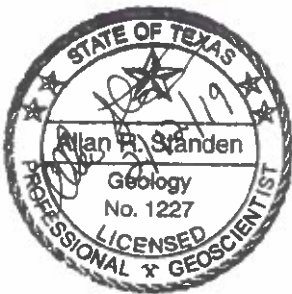
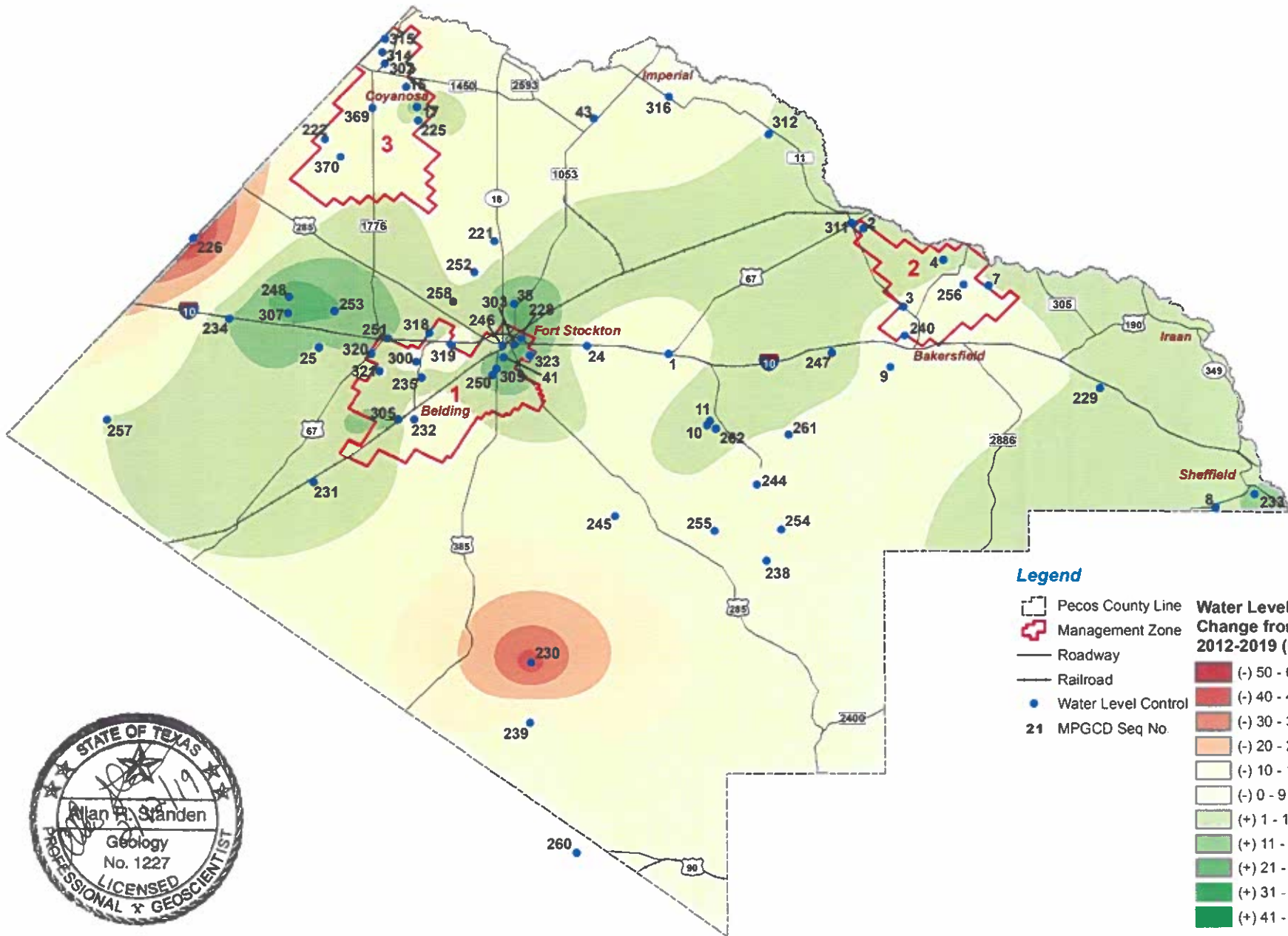
**Water Level Decline/Gain
from 2012 - 2020
Pecos County, Texas**





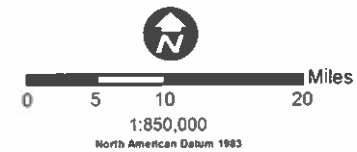
Water Level Decline/Gain from 2018 - 2019 Pecos County, Texas

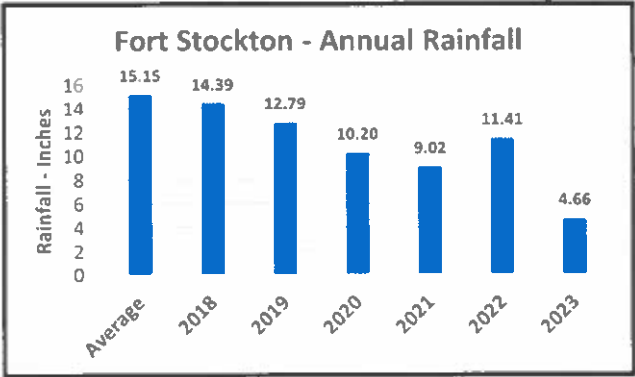
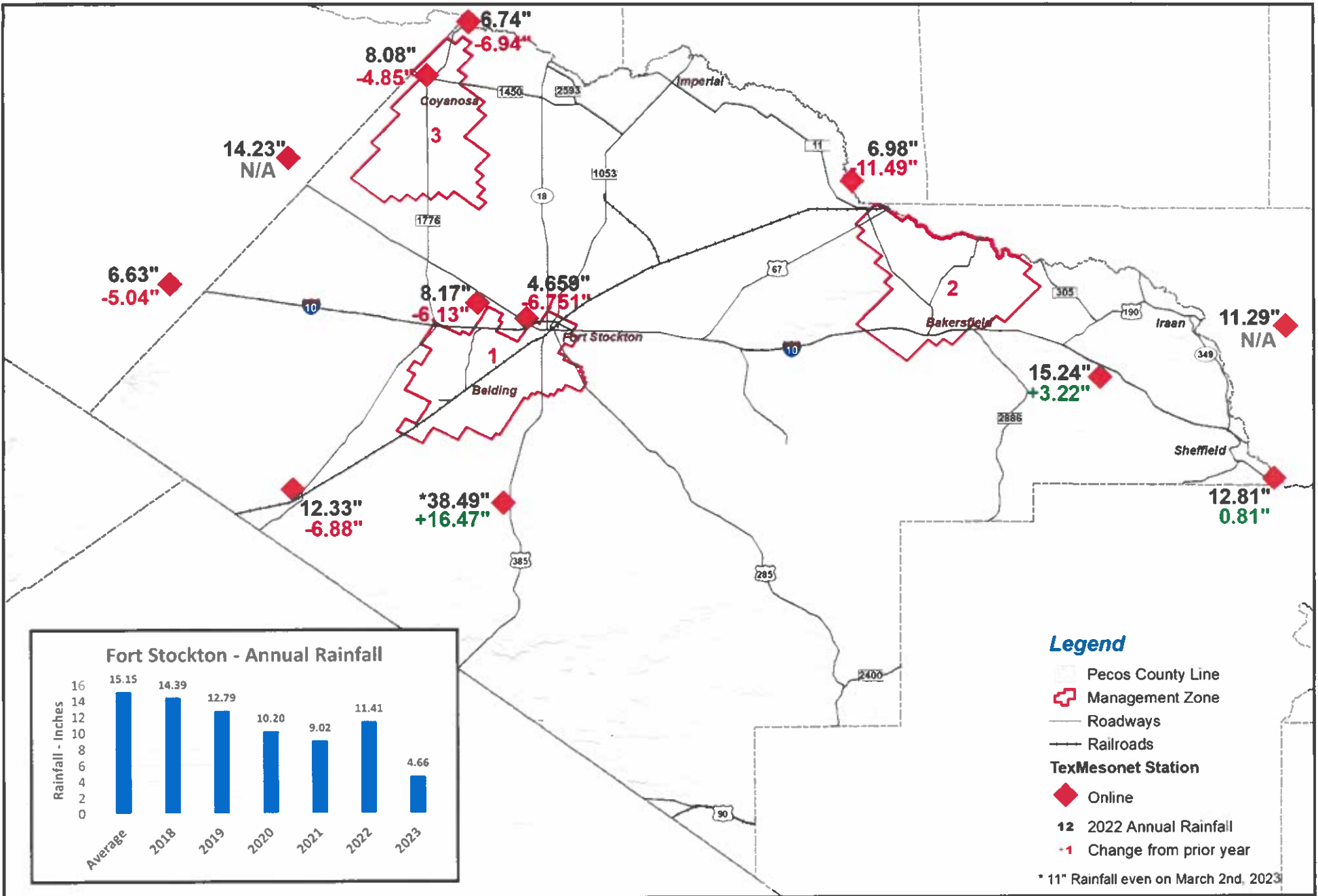




Water Level Decline/Gain from 2012 - 2019

Pecos County, Texas





Legend

- Pecos County Line
- Management Zone
- Roadways
- Railroads
- TexMesonet Station**
- Online
- 12** 2022 Annual Rainfall
- +1** Change from prior year

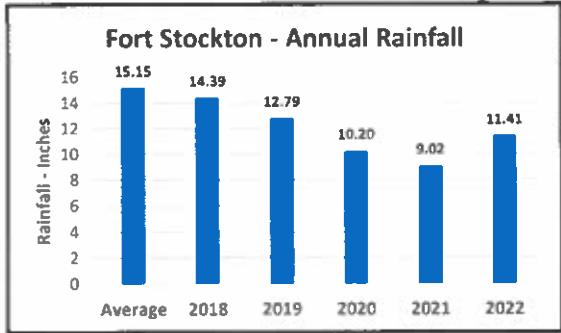
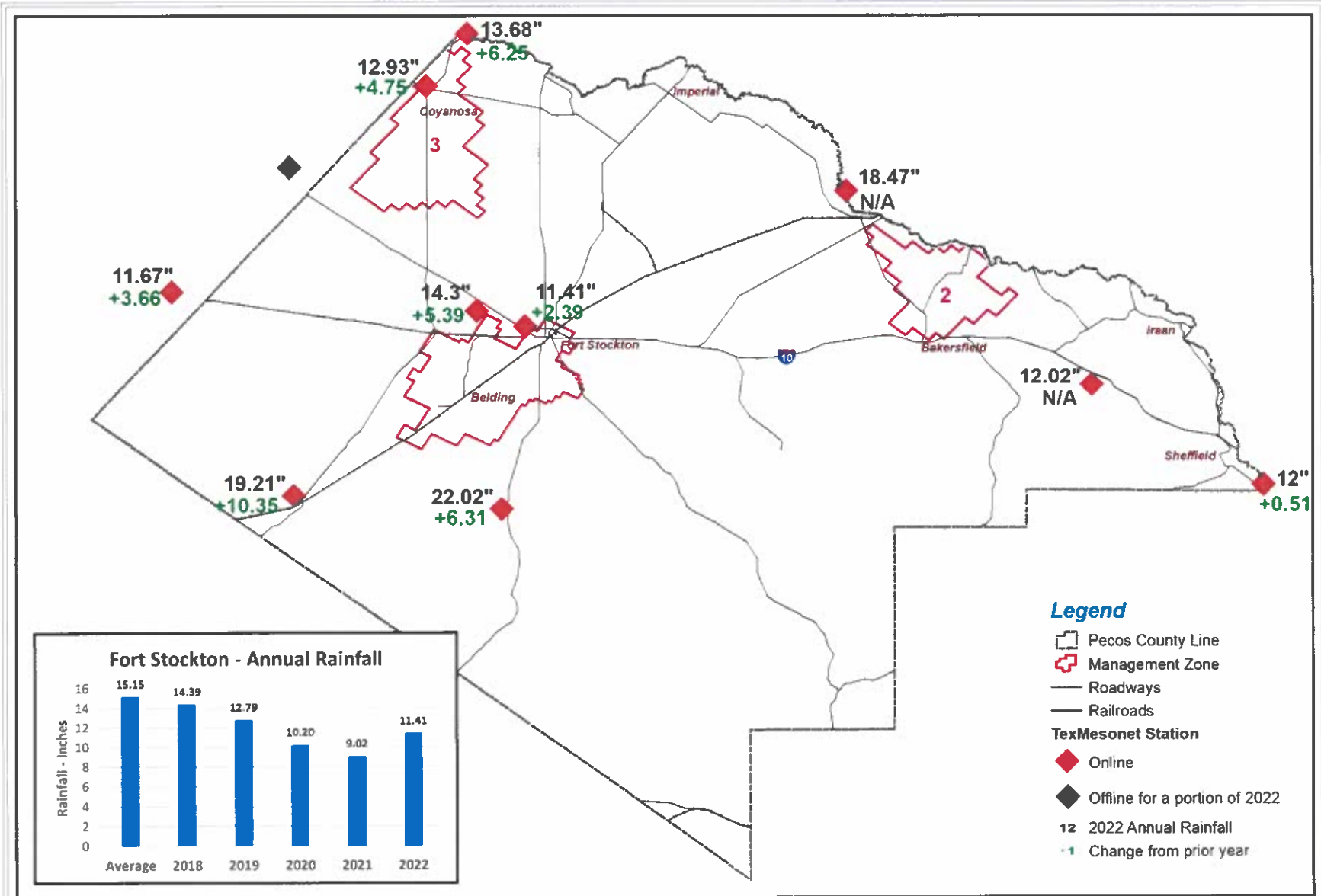
* 11" Rainfall even on March 2nd, 2023



**TexMesonet Weather Stations
Reported 2023 Annual Rainfall**

Middle Pecos GCD
Pecos County, Texas





Legend

- Pecos County Line
- Management Zone
- Roadways
- Railroads
- TexMesonet Station**
- Online
- Offline for a portion of 2022
- 2022 Annual Rainfall
- Change from prior year

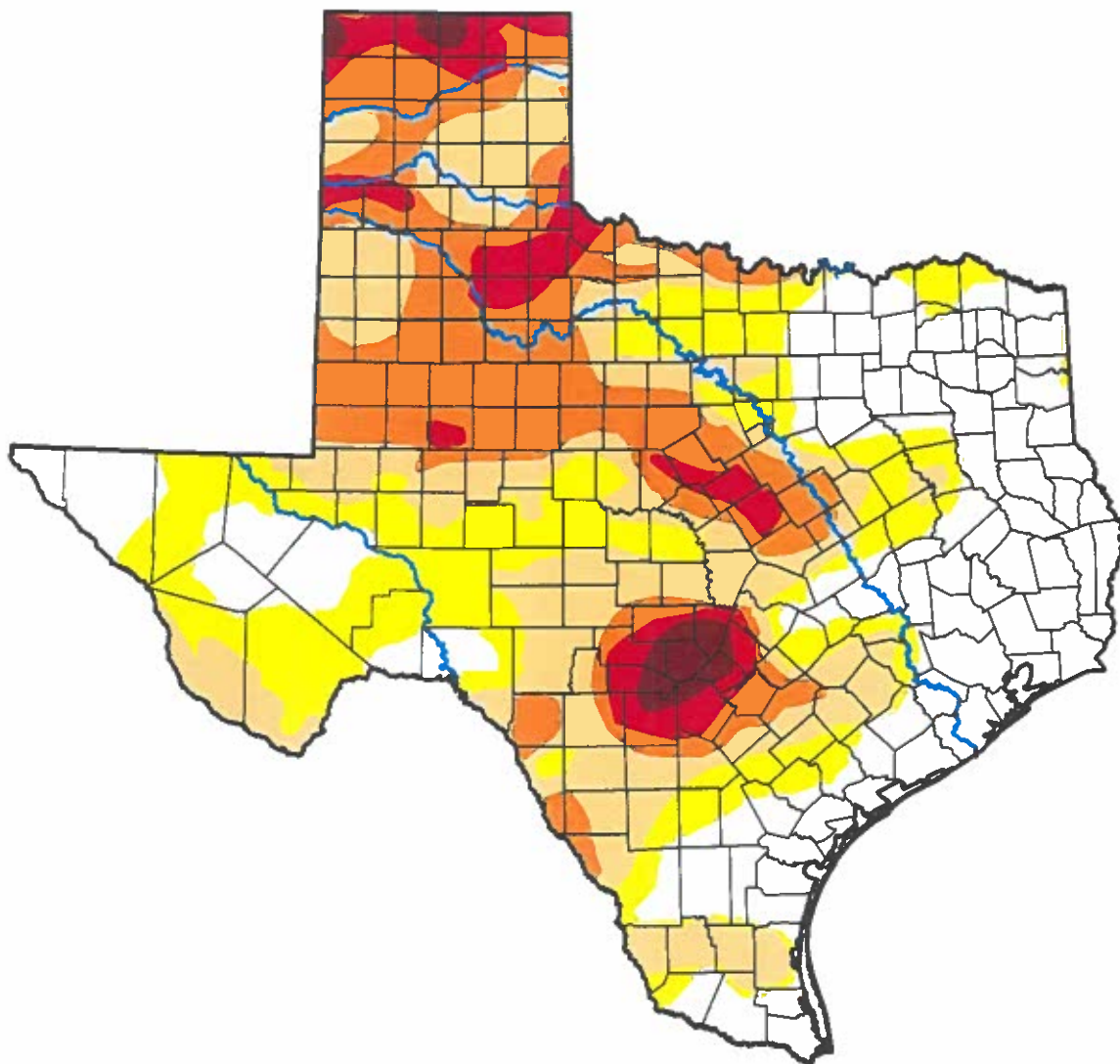


**TexMesonet Weather Stations
with 2022 Annual Rainfall**
Middle Pecos GCD
Pecos County, Texas



U.S. Drought Monitor Texas

January 3, 2023
(Released Thursday, Jan. 5, 2023)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|------|
| Current | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Last Week <i>12-27-2022</i> | 27.57 | 72.43 | 48.59 | 25.88 | 7.13 | 1.24 |
| 3 Months Ago <i>10-04-2022</i> | 10.94 | 89.06 | 71.07 | 43.13 | 14.01 | 1.63 |
| Start of Calendar Year <i>01-03-2023</i> | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Start of Water Year <i>09-27-2022</i> | 14.96 | 85.04 | 61.36 | 31.61 | 8.82 | 1.06 |
| One Year Ago <i>01-04-2022</i> | 7.58 | 92.42 | 79.83 | 54.25 | 16.69 | 0.00 |

Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

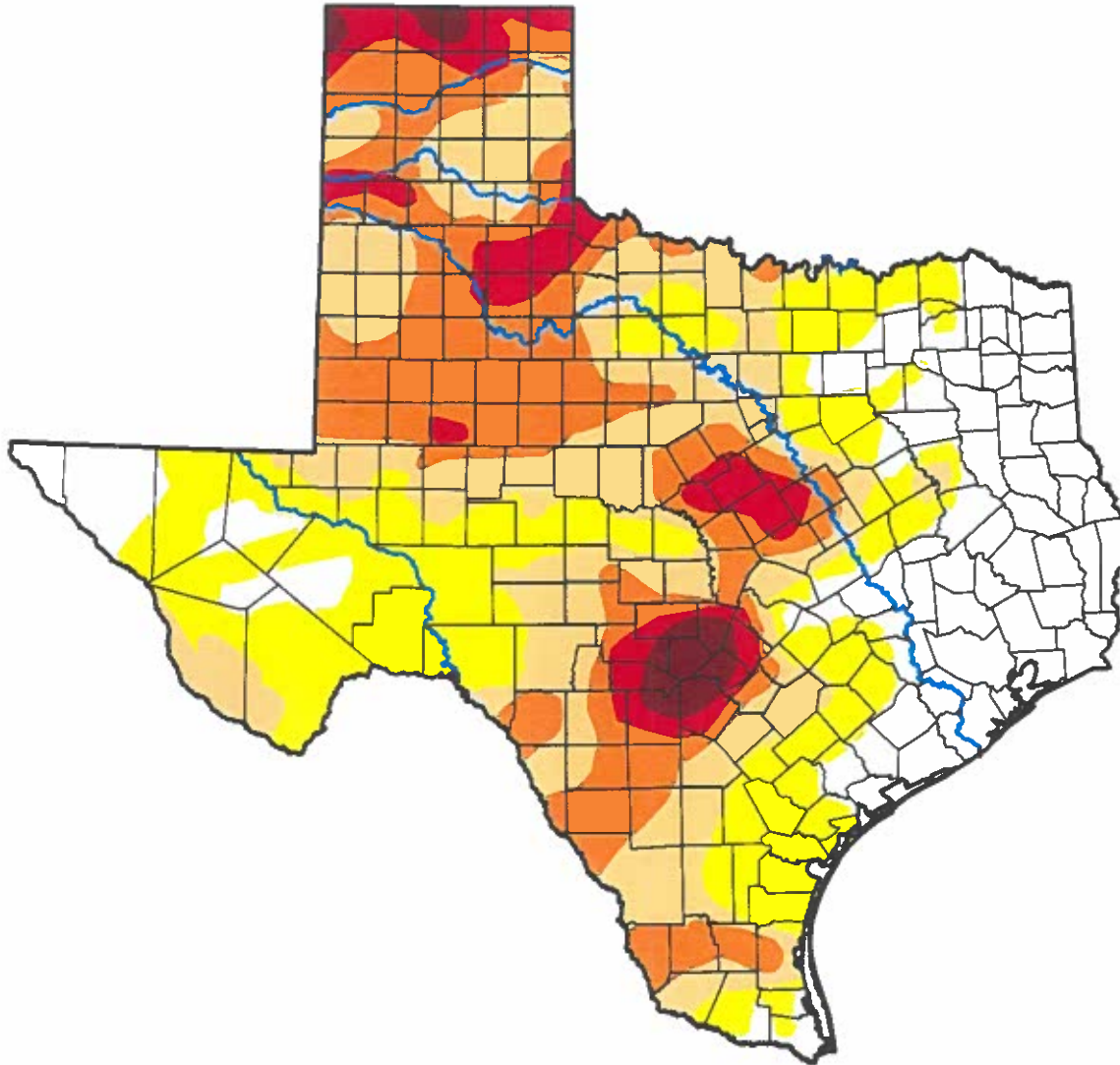
Brad Pugh
CPC/NOAA



U.S. Drought Monitor

Texas

February 7, 2023
 (Released Thursday, Feb. 9, 2023)
 Valid 7 a.m. EST



Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|------|
| Current | 21.63 | 78.37 | 53.15 | 28.67 | 7.89 | 1.82 |
| Last Week <i>01-31-2023</i> | 19.54 | 80.46 | 53.35 | 28.62 | 7.89 | 1.80 |
| 3 Months Ago <i>11-08-2022</i> | 9.80 | 90.20 | 64.84 | 40.18 | 14.86 | 1.73 |
| Start of Calendar Year <i>01-03-2023</i> | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Start of Water Year <i>09-27-2022</i> | 14.96 | 85.04 | 61.36 | 31.61 | 8.82 | 1.06 |
| One Year Ago <i>02-08-2022</i> | 11.83 | 88.17 | 78.09 | 55.00 | 23.88 | 0.00 |

Intensity:



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Author:

Brian Fuchs
 National Drought Mitigation Center



U.S. Drought Monitor

Texas

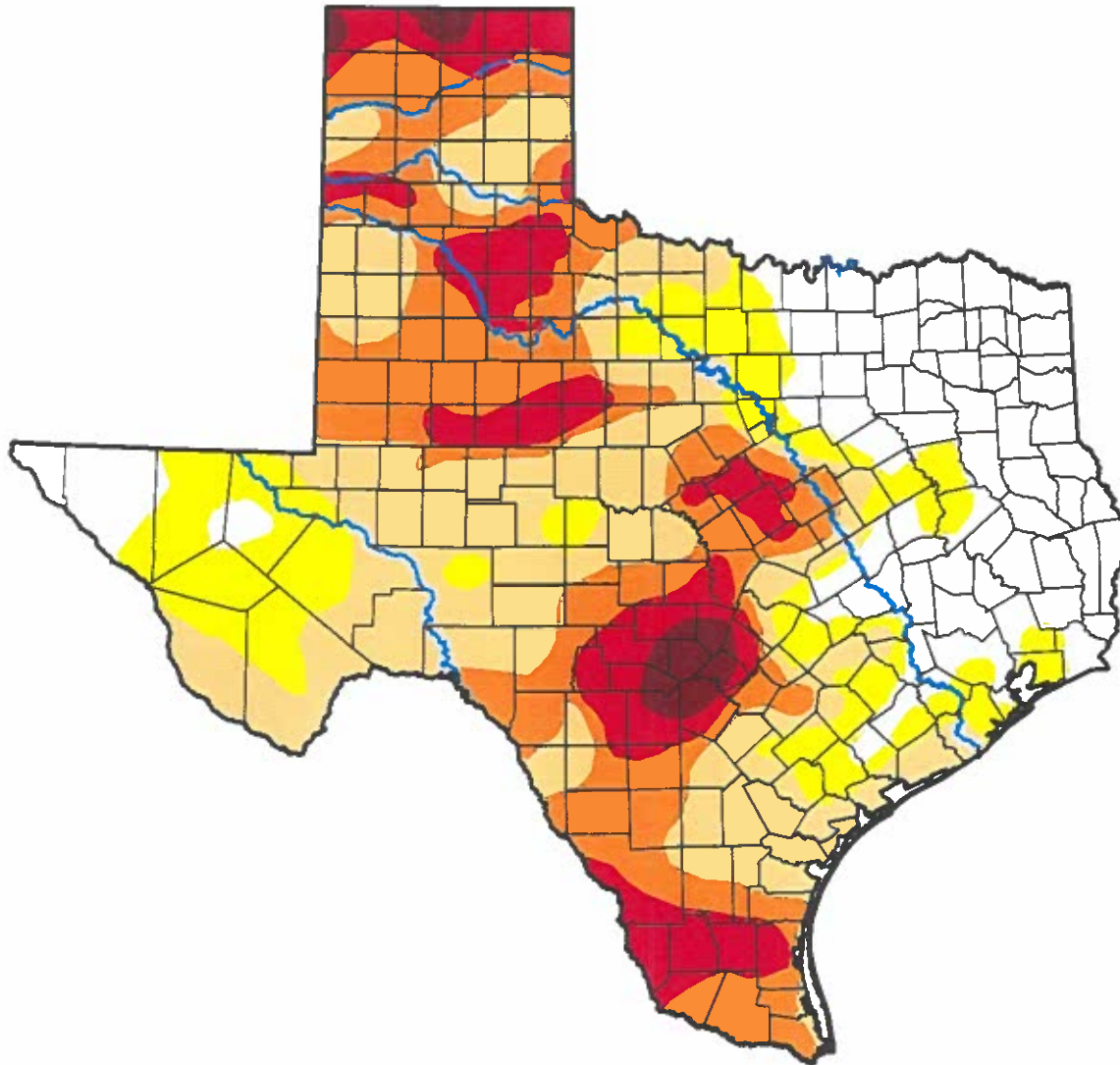
March 7, 2023

(Released Thursday, Mar. 9, 2023)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|------|
| Current | 20.52 | 79.48 | 64.01 | 35.54 | 13.41 | 1.84 |
| Last Week <i>02-28-2023</i> | 21.85 | 78.15 | 62.21 | 32.63 | 12.27 | 1.84 |
| 3 Months Ago <i>12-06-2022</i> | 25.79 | 74.21 | 52.44 | 29.26 | 9.23 | 1.39 |
| Start of Calendar Year <i>01-03-2023</i> | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Start of Water Year <i>09-27-2022</i> | 14.96 | 85.04 | 61.36 | 31.61 | 8.82 | 1.06 |
| One Year Ago <i>03-08-2022</i> | 3.95 | 96.05 | 89.93 | 68.43 | 36.38 | 6.39 |



Intensity:



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Author:

Deborah Bathke
National Drought Mitigation Center



droughtmonitor.unl.edu

U.S. Drought Monitor

Texas

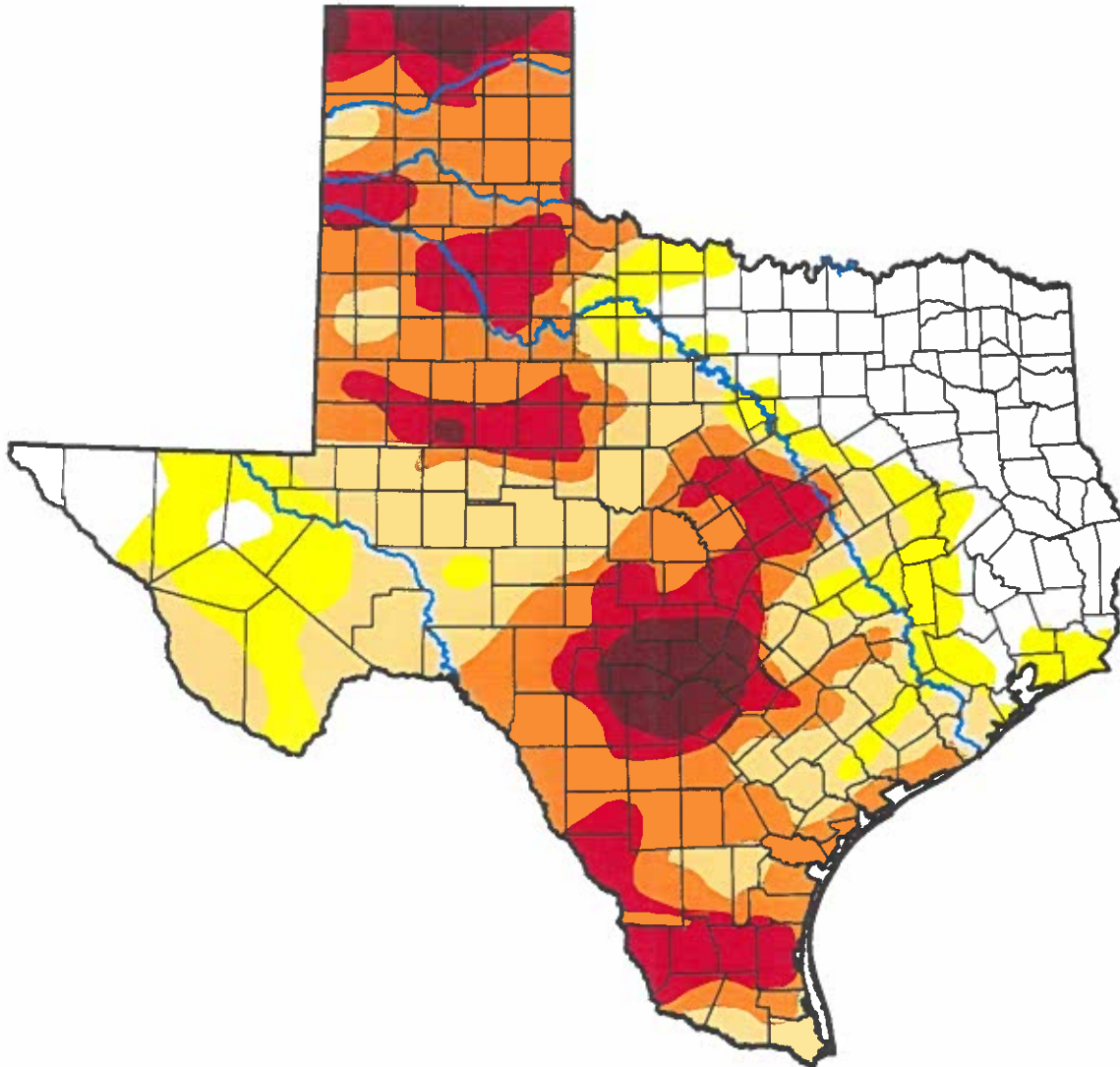
April 4, 2023

(Released Thursday, Apr. 6, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|------|
| Current | 19.10 | 80.90 | 66.89 | 45.25 | 18.98 | 4.19 |
| Last Week <i>03-28-2023</i> | 19.12 | 80.88 | 67.24 | 46.39 | 17.33 | 3.78 |
| 3 Months Ago <i>01-03-2023</i> | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Start of Calendar Year <i>01-03-2023</i> | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Start of Water Year <i>09-27-2022</i> | 14.96 | 85.04 | 61.36 | 31.61 | 8.82 | 1.06 |
| One Year Ago <i>04-05-2022</i> | 4.95 | 95.05 | 84.73 | 71.45 | 40.56 | 9.78 |



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

David Simeral
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U.S. Drought Monitor

Texas

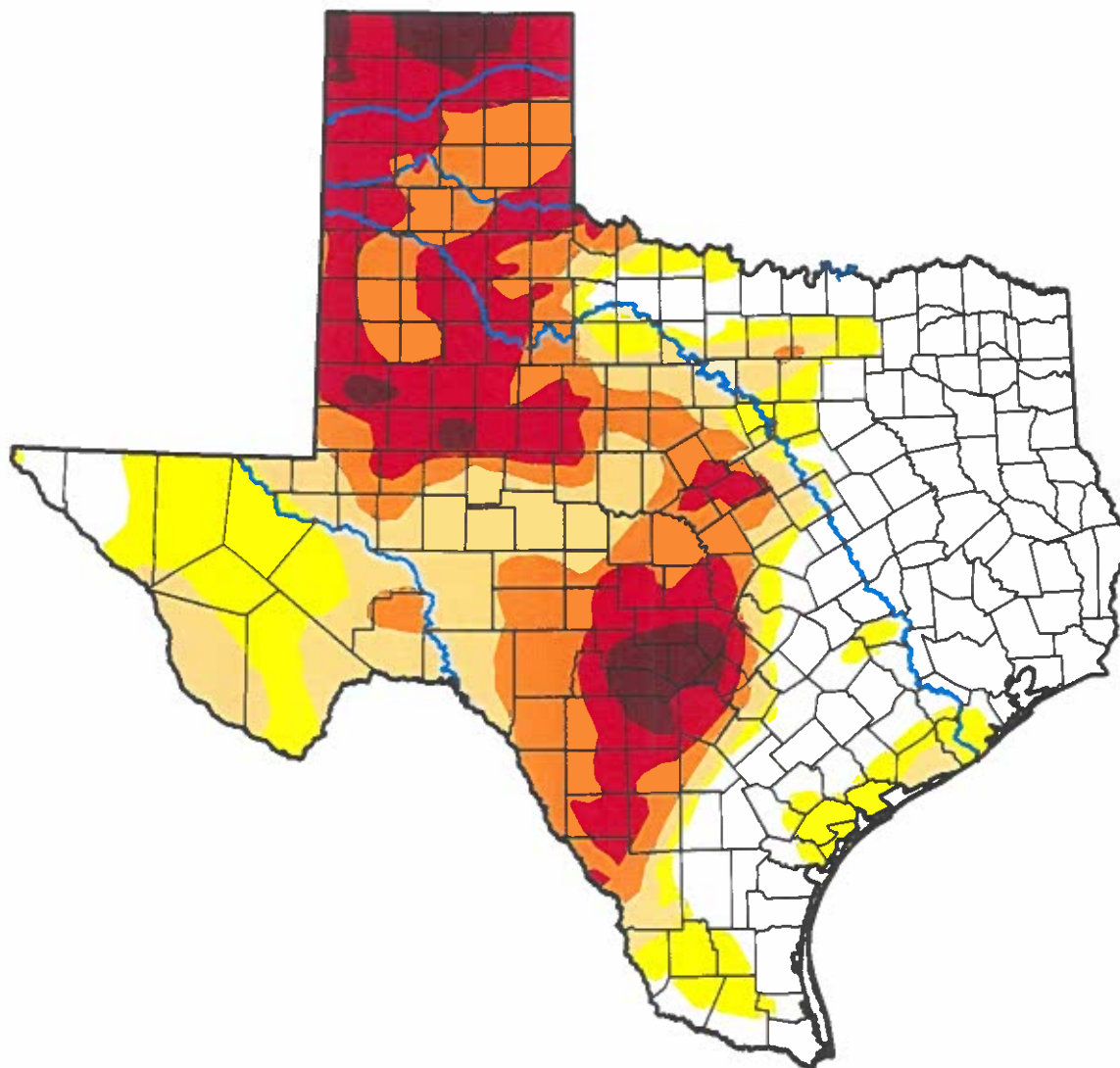
May 2, 2023

(Released Thursday, May 4, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|-------|
| Current | 31.81 | 68.19 | 53.66 | 37.73 | 20.66 | 3.37 |
| Last Week <i>04-25-2023</i> | 26.78 | 73.22 | 55.32 | 38.21 | 16.58 | 3.50 |
| 3 Months Ago <i>01-31-2023</i> | 19.54 | 80.46 | 53.35 | 28.62 | 7.89 | 1.80 |
| Start of Calendar Year <i>01-03-2023</i> | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Start of Water Year <i>09-27-2022</i> | 14.96 | 85.04 | 61.36 | 31.61 | 8.82 | 1.06 |
| One Year Ago <i>05-03-2022</i> | 8.83 | 91.17 | 80.02 | 67.29 | 50.91 | 23.19 |



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Brad Pugh
CPC/NOAA



droughtmonitor.unl.edu

U.S. Drought Monitor

Texas

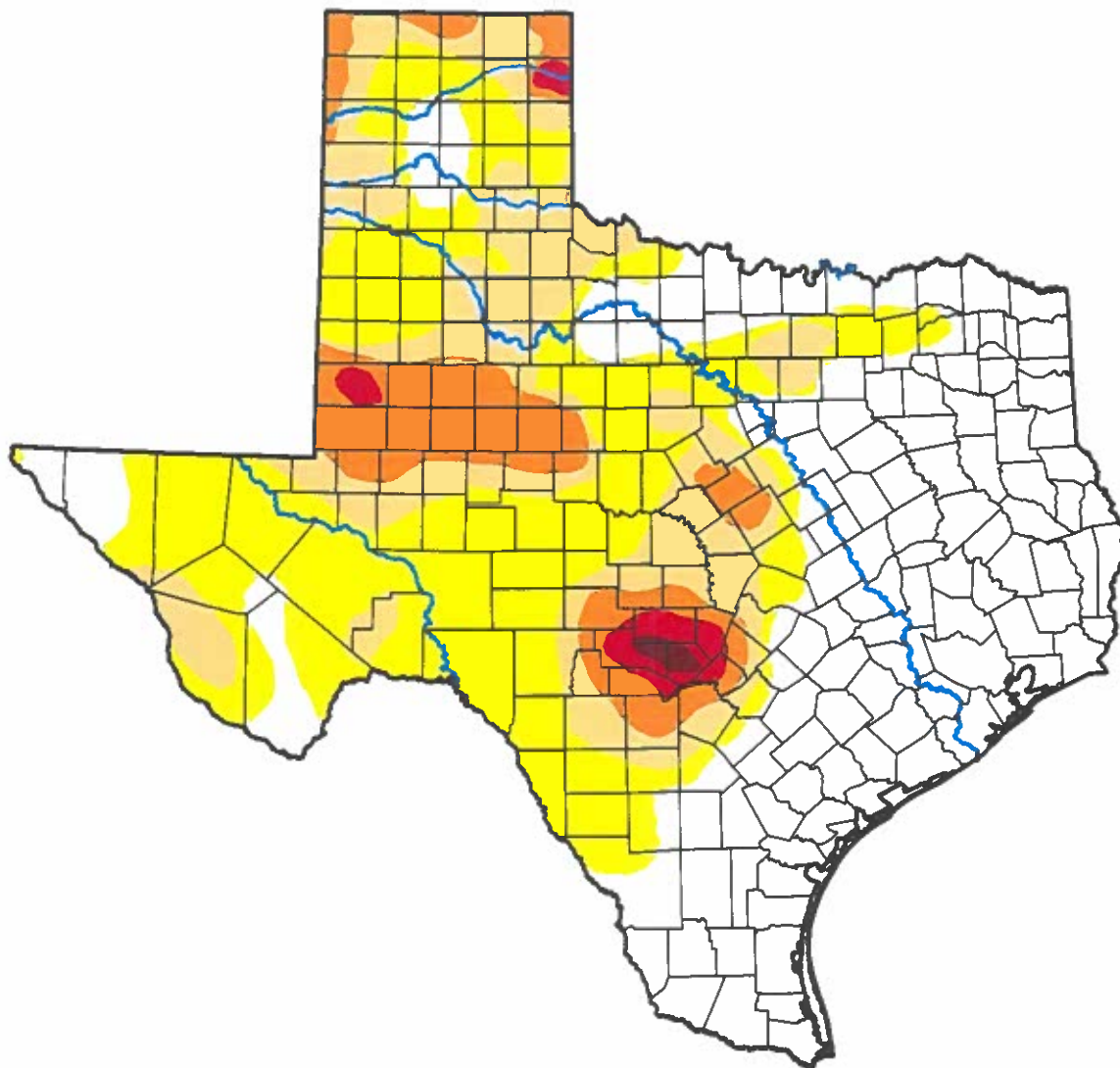
June 6, 2023

(Released Thursday, Jun. 8, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|-------|
| Current | 41.15 | 58.85 | 27.63 | 10.45 | 1.79 | 0.29 |
| Last Week <i>05-30-2023</i> | 39.95 | 60.05 | 33.52 | 16.16 | 4.71 | 0.29 |
| 3 Months Ago <i>03-07-2023</i> | 20.52 | 79.48 | 64.01 | 35.54 | 13.41 | 1.84 |
| Start of Calendar Year <i>01-03-2023</i> | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Start of Water Year <i>09-27-2022</i> | 14.96 | 85.04 | 61.36 | 31.61 | 8.82 | 1.06 |
| One Year Ago <i>06-07-2022</i> | 11.75 | 88.25 | 78.81 | 64.99 | 40.11 | 15.60 |



Intensity:



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Author:

Lindsay Johnson
National Drought Mitigation Center



droughtmonitor.unl.edu

U.S. Drought Monitor

Texas

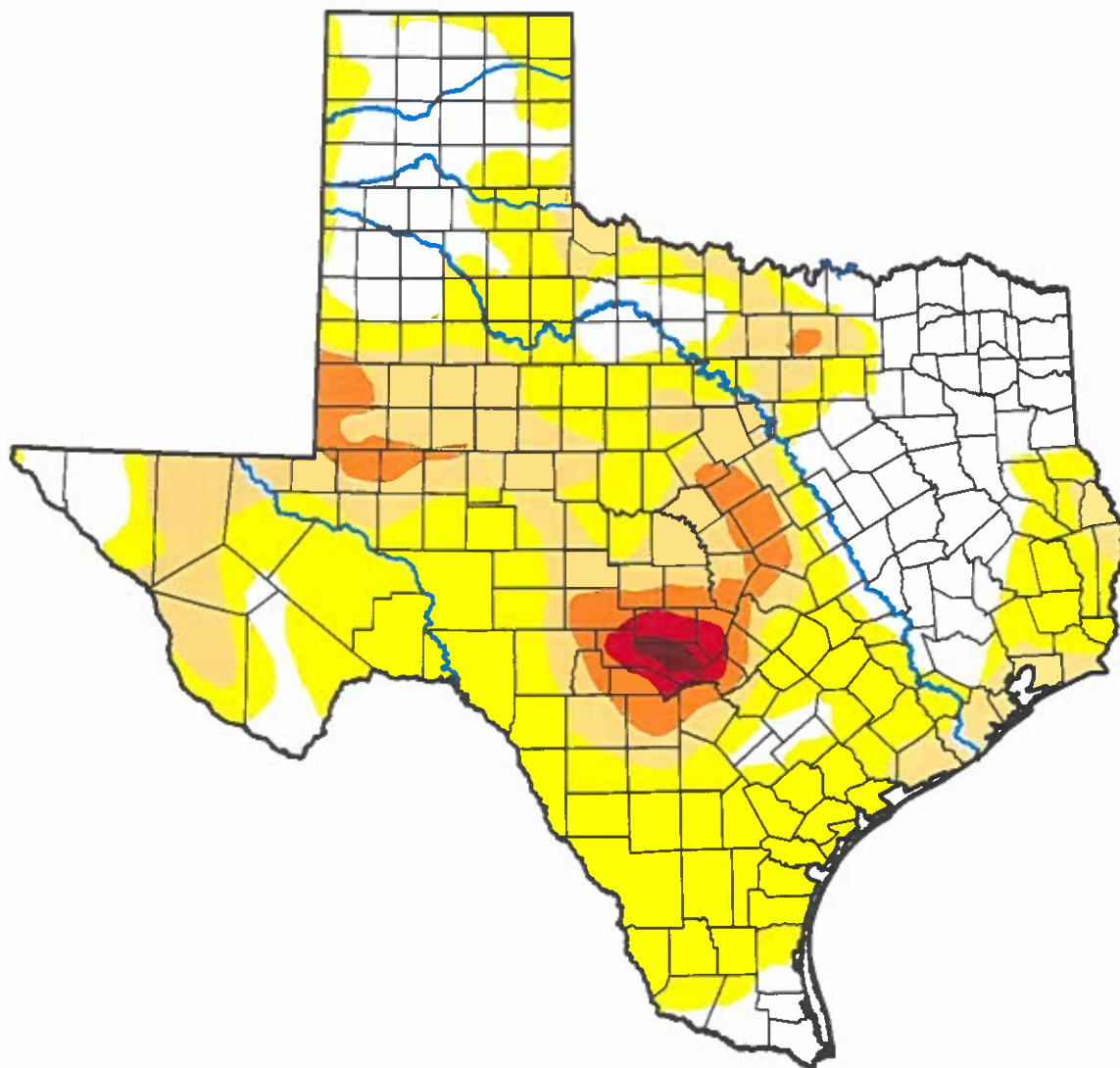
July 4, 2023

(Released Thursday, Jul. 6, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|-------|
| Current | 27.86 | 72.14 | 27.25 | 6.64 | 1.37 | 0.29 |
| Last Week <i>06-27-2023</i> | 30.71 | 69.29 | 24.38 | 6.05 | 1.37 | 0.29 |
| 3 Months Ago <i>04-04-2023</i> | 19.10 | 80.90 | 66.89 | 45.25 | 18.98 | 4.19 |
| Start of Calendar Year <i>01-03-2023</i> | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Start of Water Year <i>09-27-2022</i> | 14.96 | 85.04 | 61.36 | 31.61 | 8.82 | 1.06 |
| One Year Ago <i>07-05-2022</i> | 2.47 | 97.53 | 86.79 | 66.05 | 45.91 | 16.11 |



Intensity:



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Author:

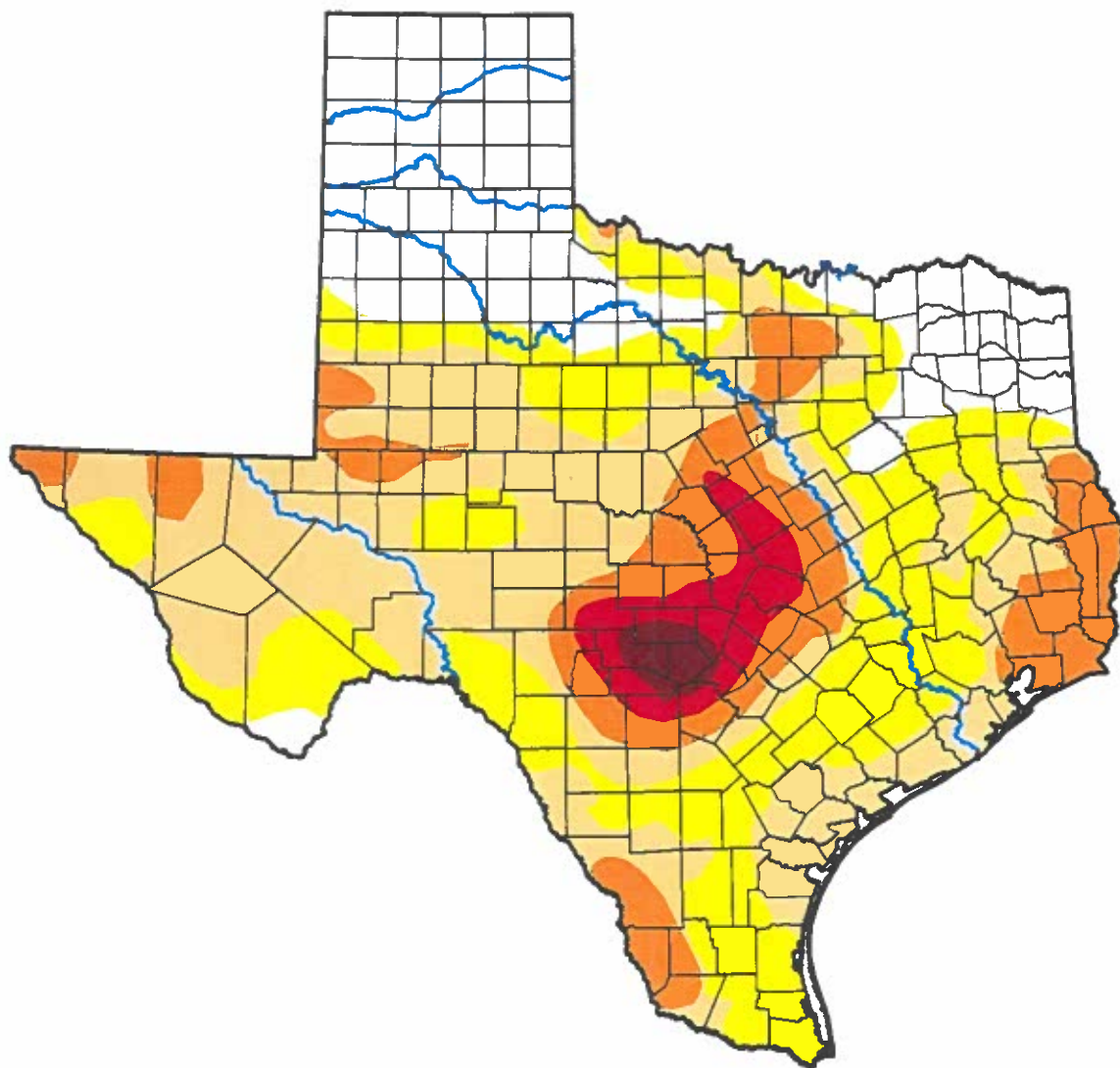
Curtis Riganti
National Drought Mitigation Center



droughtmonitor.unl.edu

U.S. Drought Monitor Texas

August 1, 2023
(Released Thursday, Aug. 3, 2023)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|-------|
| Current | 21.20 | 78.80 | 52.09 | 19.26 | 4.81 | 1.06 |
| Last Week <i>07-25-2023</i> | 21.67 | 78.33 | 48.61 | 18.01 | 4.81 | 1.06 |
| 3 Months Ago <i>05-02-2023</i> | 31.81 | 68.19 | 53.66 | 37.73 | 20.66 | 3.37 |
| Start of Calendar Year <i>01-03-2023</i> | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Start of Water Year <i>09-27-2022</i> | 14.96 | 85.04 | 61.36 | 31.61 | 8.82 | 1.06 |
| One Year Ago <i>08-02-2022</i> | 0.82 | 99.18 | 97.11 | 87.92 | 61.86 | 21.31 |

Intensity:



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Author:

Brian Fuchs
National Drought Mitigation Center

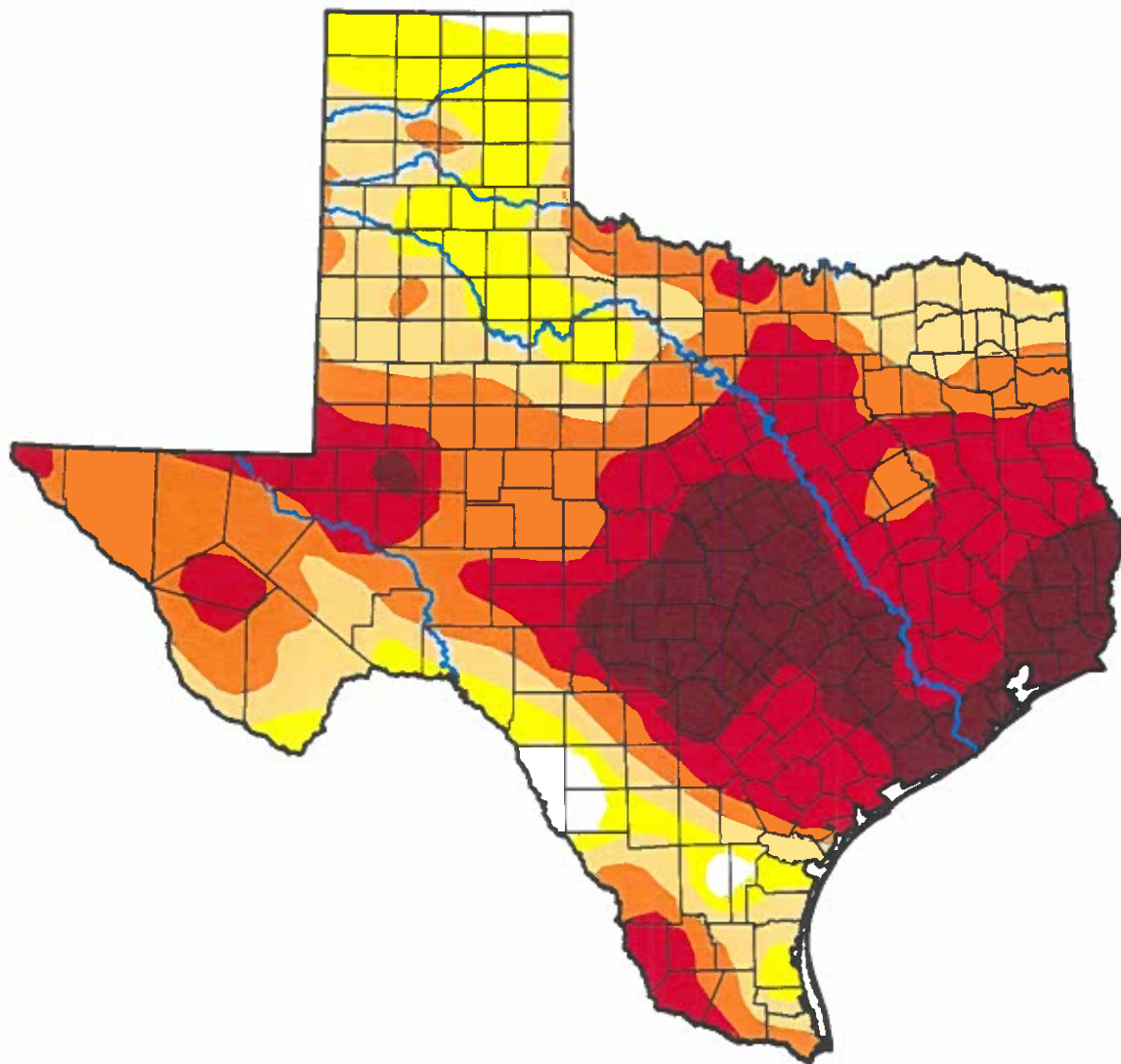


droughtmonitor.unl.edu

U.S. Drought Monitor

Texas

September 5, 2023
 (Released Thursday, Sep. 7, 2023)
 Valid 8 a.m. EDT



Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|-------|
| Current | 1.61 | 98.39 | 85.68 | 66.45 | 40.53 | 14.76 |
| Last Week <i>08-29-2023</i> | 1.55 | 98.45 | 75.83 | 61.41 | 32.33 | 12.64 |
| 3 Months Ago <i>06-06-2023</i> | 41.15 | 58.85 | 27.63 | 10.45 | 1.79 | 0.29 |
| Start of Calendar Year <i>01-03-2023</i> | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Start of Water Year <i>09-27-2022</i> | 14.96 | 85.04 | 61.36 | 31.61 | 8.82 | 1.06 |
| One Year Ago <i>09-06-2022</i> | 20.57 | 79.43 | 62.32 | 33.57 | 9.26 | 0.90 |

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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Author:

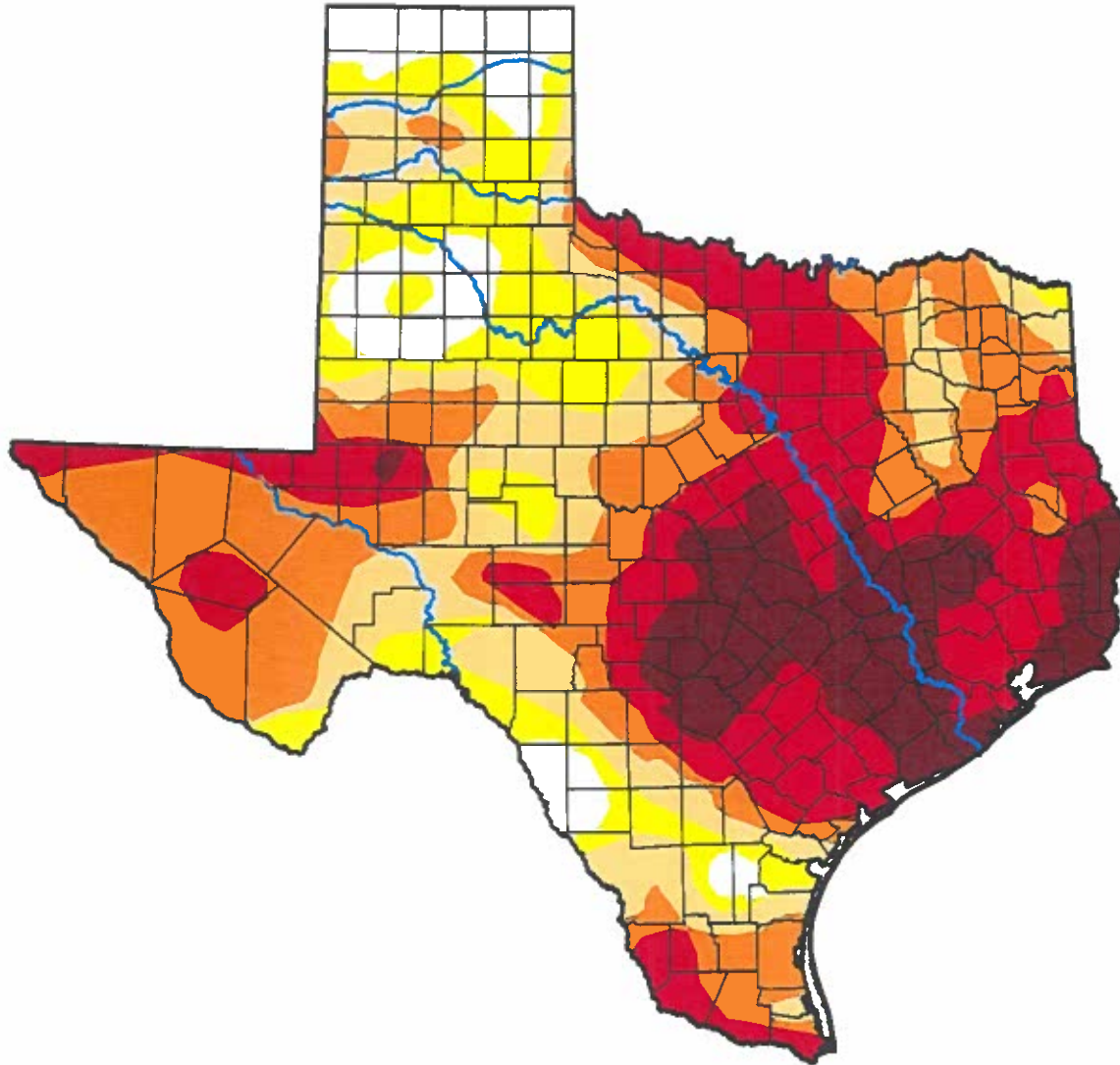
Richard Tinker
 CPC/NOAA/NWS/NCEP



U.S. Drought Monitor

Texas

October 3, 2023
 (Released Thursday, Oct. 5, 2023)
 Valid 8 a.m. EDT



Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|-------|
| Current | 6.88 | 93.12 | 79.86 | 61.97 | 37.15 | 12.78 |
| Last Week <i>09-26-2023</i> | 3.03 | 96.97 | 80.64 | 59.66 | 38.06 | 12.68 |
| 3 Months Ago <i>07-04-2023</i> | 27.86 | 72.14 | 27.25 | 6.64 | 1.37 | 0.29 |
| Start of Calendar Year <i>01-03-2023</i> | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Start of Water Year <i>09-26-2023</i> | 3.03 | 96.97 | 80.64 | 59.66 | 38.06 | 12.68 |
| One Year Ago <i>10-04-2022</i> | 10.94 | 89.06 | 71.07 | 43.13 | 14.01 | 1.63 |

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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Author:

Brad Pugh
 CPC/NOAA

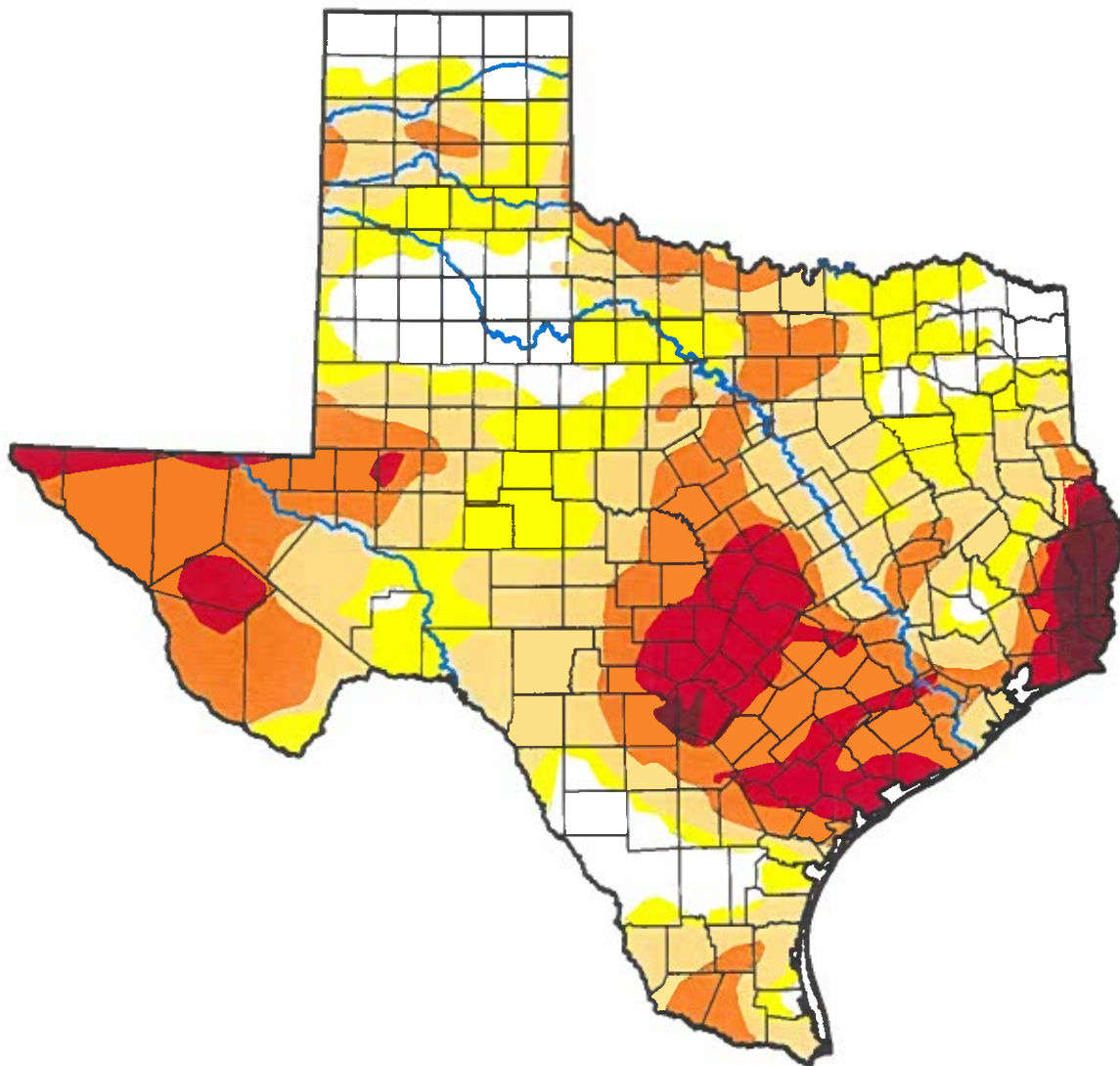


droughtmonitor.unl.edu

U.S. Drought Monitor

Texas

November 7, 2023
 (Released Thursday, Nov. 9, 2023)
 Valid 7 a.m. EST



Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|-------|
| Current | 13.62 | 86.38 | 65.36 | 35.90 | 10.88 | 1.86 |
| Last Week <i>10-31-2023</i> | 13.61 | 86.39 | 65.37 | 38.54 | 10.94 | 1.78 |
| 3 Months Ago <i>08-08-2023</i> | 13.97 | 86.03 | 68.76 | 34.27 | 7.87 | 1.18 |
| Start of Calendar Year <i>01-03-2023</i> | 28.84 | 71.16 | 49.90 | 26.60 | 7.41 | 1.60 |
| Start of Water Year <i>09-26-2023</i> | 3.03 | 96.97 | 80.64 | 59.66 | 38.06 | 12.68 |
| One Year Ago <i>11-08-2022</i> | 9.80 | 90.20 | 64.84 | 40.18 | 14.86 | 1.73 |

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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Author:

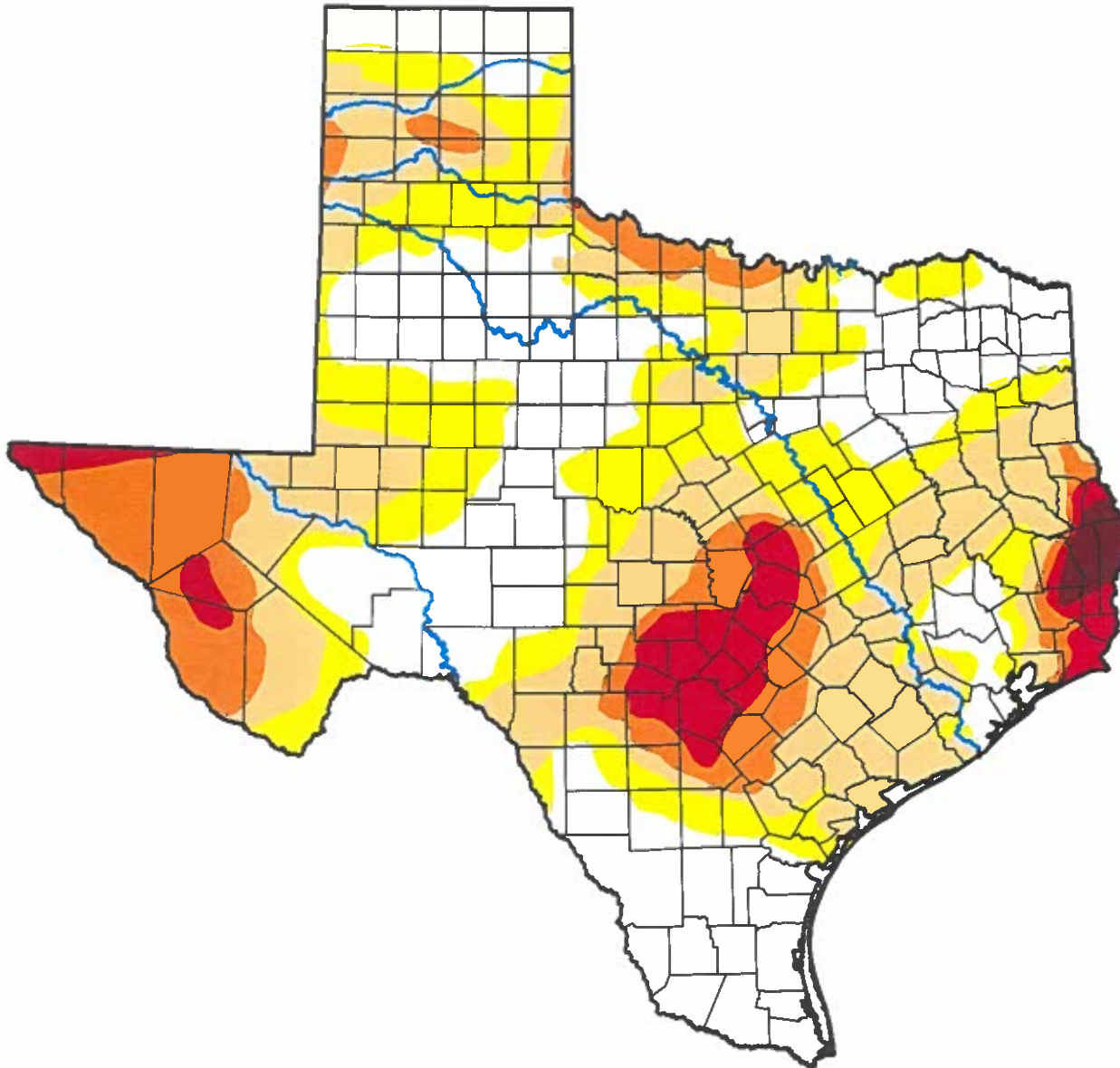
Lindsay Johnson
 National Drought Mitigation Center



U.S. Drought Monitor

Texas

December 12, 2023
(Released Thursday, Dec. 14, 2023)
Valid 7 a.m. EST



Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

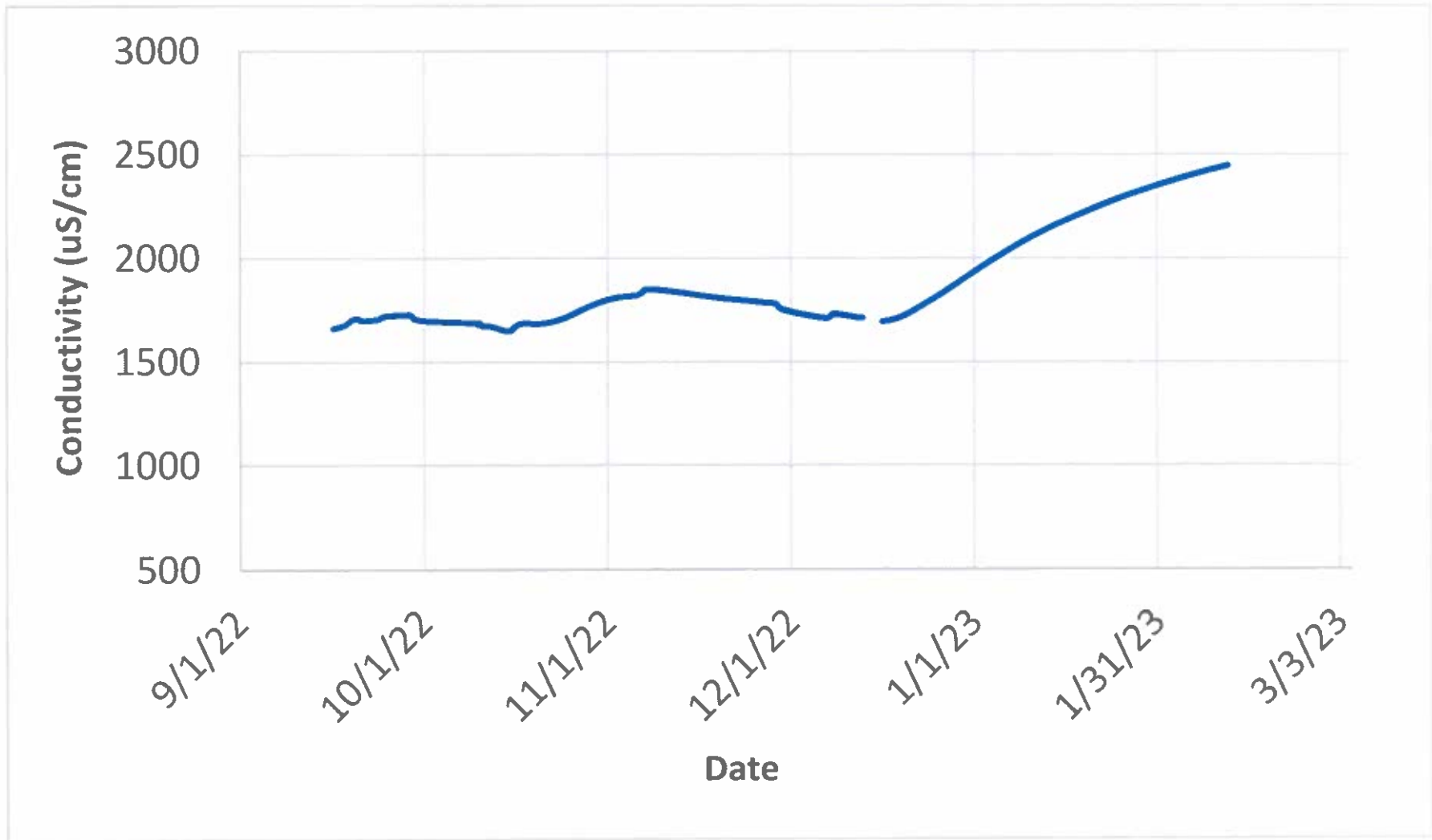
Curtis Riganti
National Drought Mitigation Center



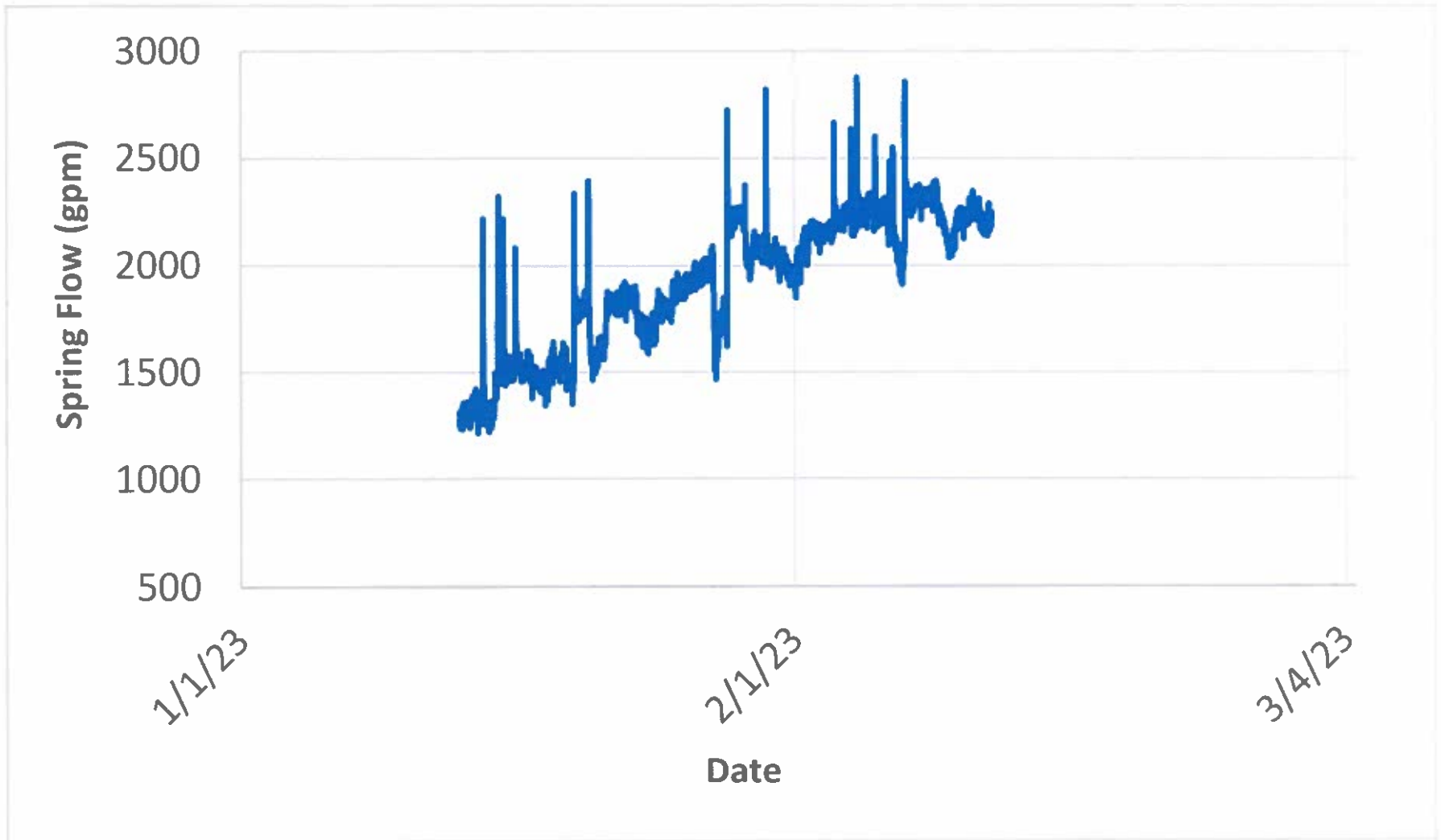
droughtmonitor.unl.edu



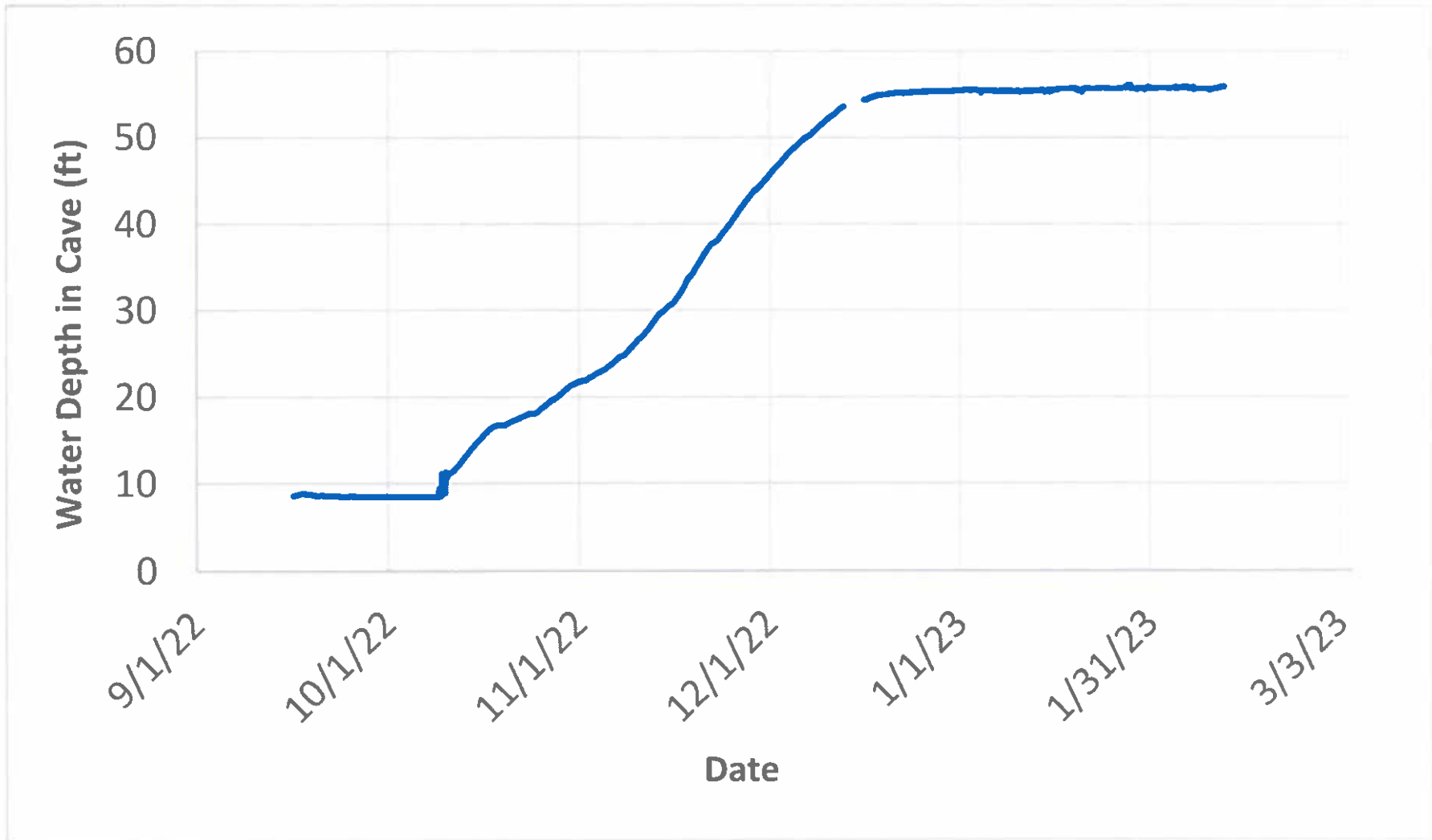
Comanche Springs Cave - Conductivity (uS/cm)



Comanche Springs - Flow (gpm)



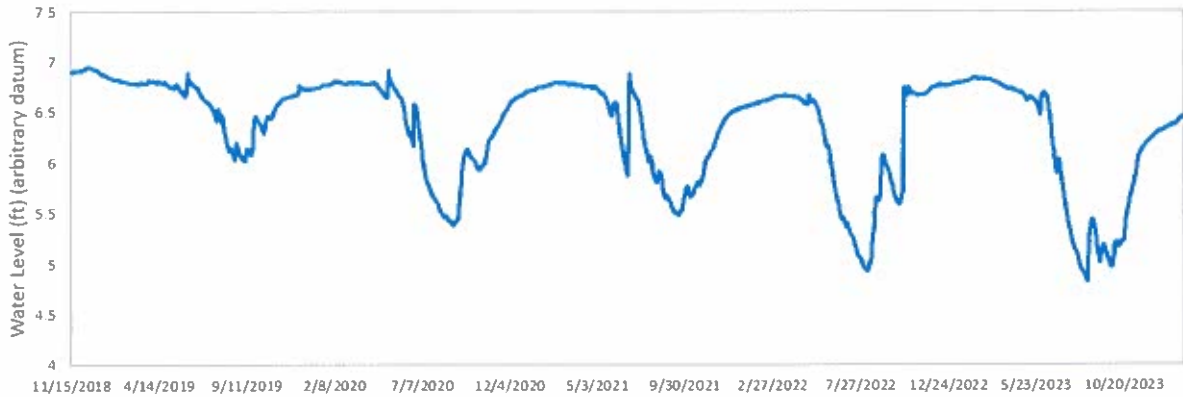
Comanche Springs Cave - Gauge Depth (ft)



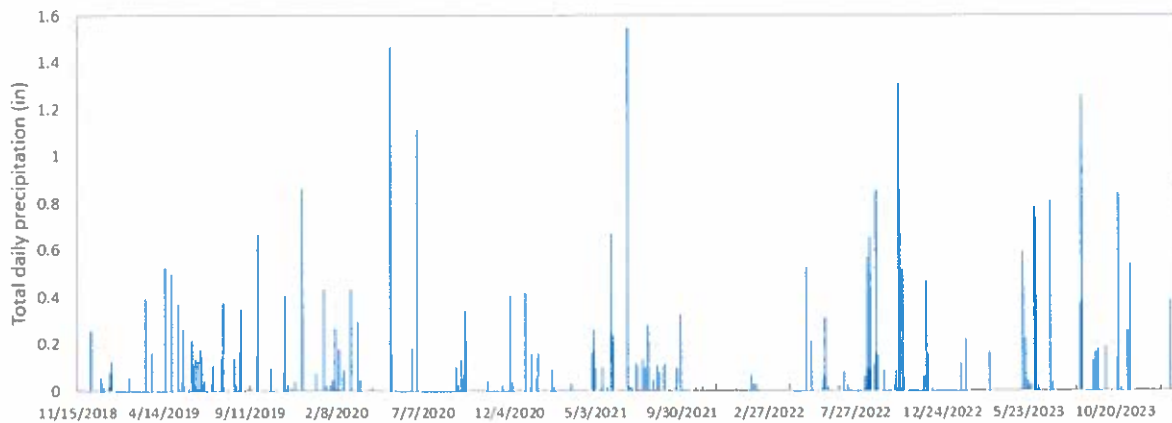
Diamond Y Spring

The Nature Conservancy/UT Bureau of Economic Geology 11/15/2018-1/31/2024

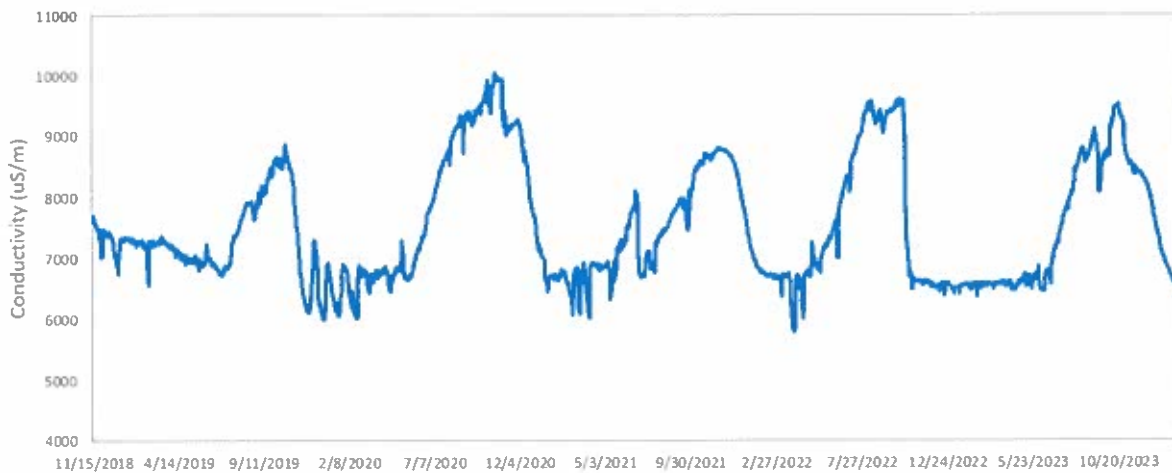
Diamond Y Spring - Water Level (11/15/2018 - 1/31/2024)



Diamond Y Spring - Precipitation (in) (11/15/2018 - 1/31/2024)

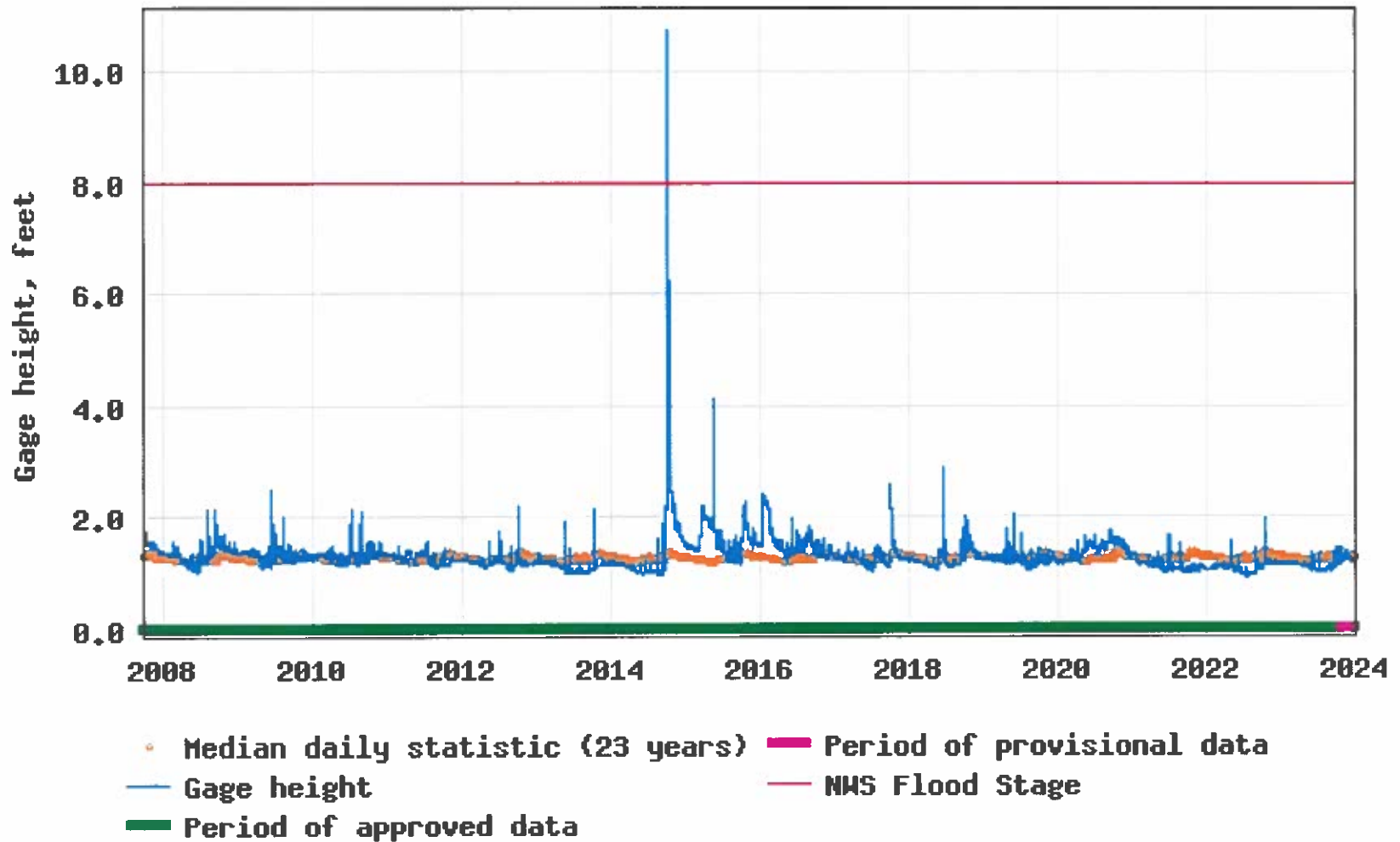


Diamond Y Spring - Conductivity (uS/m) (11/15/2018 - 1/31/2024)



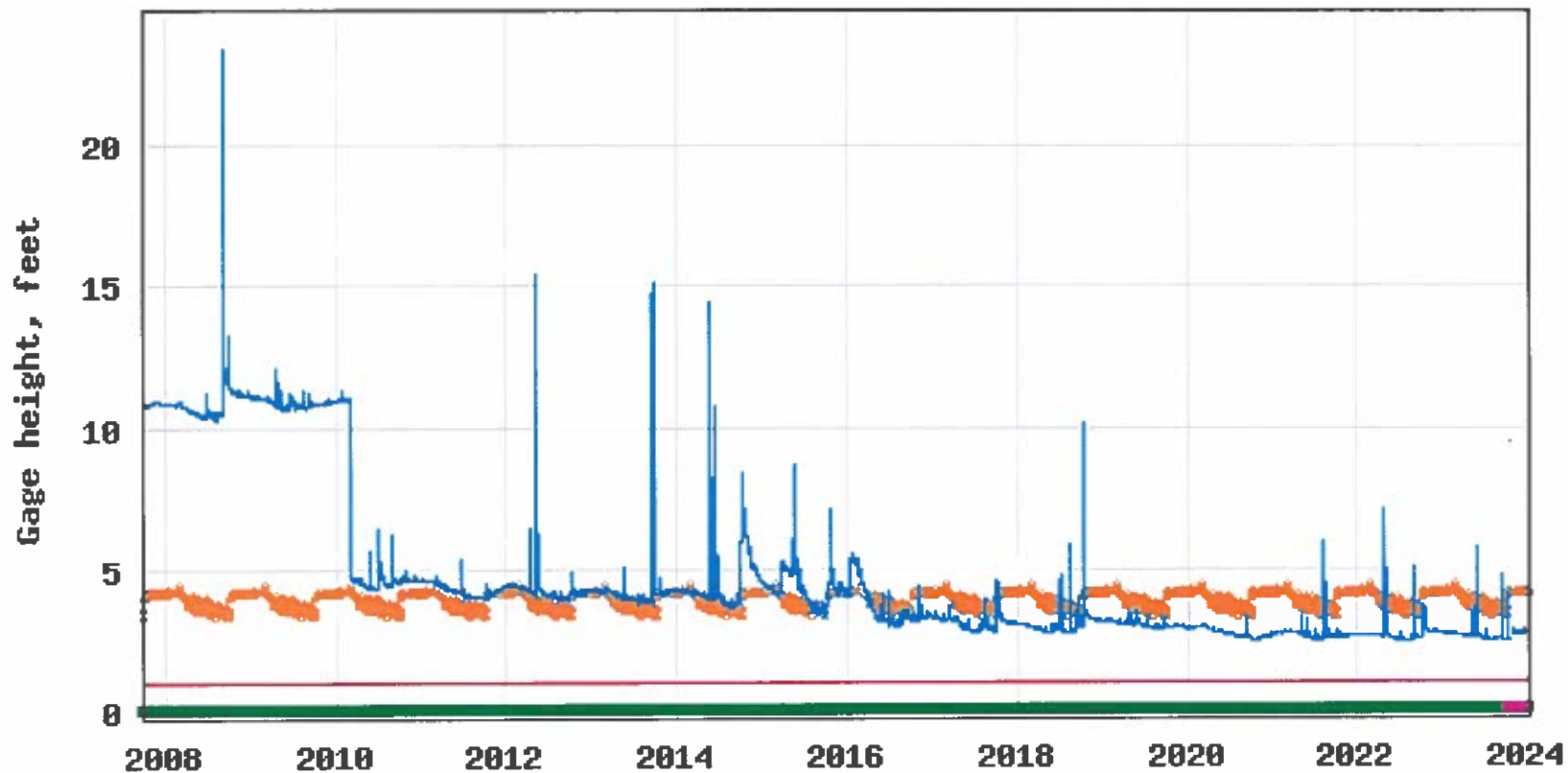


USGS 08446500 Pecos Rv nr Girvin, TX





USGS 08447000 Pecos Rv nr Sheffield, TX



- Median daily statistic (15 years)
- Gage height
- Period of approved data
- Period of provisional data
- Operational limit (minimum)

Rainwater Harvesting



For centuries, people have relied

on rainwater harvesting to supply water for household, landscape, livestock, and agricultural uses. Before the advent of large centralized water supply systems, rainwater was collected from roofs and stored on site in tanks known as cisterns. With the development of large, reliable water treatment and distribution systems and more affordable well drilling equipment, rain harvesting was all but forgotten, even though it offered a source of pure, soft, low-sodium water.

A renewed interest in this time-honored approach of collecting water has emerged in Texas and elsewhere because of escalating environmental and economic costs of providing water by centralized water systems or by well drilling. The health benefits of rainwater and potential cost savings associated with rainwater collection systems have further spurred this interest.

Texas is one of only a few states in the nation that has devoted a considerable amount of attention to rainwater harvesting and has enacted many laws regulating the practice of collecting rainwater.

- Texas Tax Code 151.355 allows for a state sales tax exemption on rainwater harvesting equipment.
- Texas Property Code 202.007 prevents homeowners associations from banning rainwater harvesting installations.
- Texas House Bill 3391 requires rainwater harvesting system technology to be incorporated into the design of new state buildings and allows financial institutions to consider making loans for developments using rainwater as the sole source of water supply.

For in-depth descriptions of rules in Texas and other states, visit the [National Conference of State Legislatures](#).

Recent Maps

Texas Rain Catcher Award Winners



Protect, Conserve and Prevent Waste of Groundwater

Our mission at *Middle Pecos Groundwater Conservation District (MPGCD)* is to develop and implement an efficient, economical and environmentally sound groundwater management program to protect, maintain and enhance the groundwater resources of the District, and to communicate and administer to the needs and concerns of the citizens of Pecos County associated with these groundwater resources.

We have an 11-member Board of Directors that is elected by the citizens of Pecos County. There are two directors representing each county precinct, one representing the City of Fort Stockton, one representing the City of Iraan, and one representing Pecos County at large. Your current Directors are: Jerry McGuairt, Janet Groth, Weldon Blackwelder, Puja Boinpally, Vanessa Cardwell, Allan Childs, Jr., Ronnie Cooper, Larry Drgac, M. R. Gonzalez, Alvaro Mandujano, Jr., and Jeff Sims.

In keeping an eye on Pecos County groundwater, the District monitors 128 water wells that are scattered throughout Pecos County. We check water quality analysis and depth of water levels monthly.

The public is invited to join us at our monthly Board Meetings that are normally held on the 3rd Tuesday of each month at our office located at 405 North Spring Drive in Fort Stockton, Texas. Our agendas are posted on our website 72 hours before our meetings and can be reviewed at: <https://www.middlepecosgcd.org/>.

MPGCD requires water well owners to register all water well(s) with the District. A non-potable analysis can be provided by the District at no cost. MPGCD can carry out the overall responsibility of protecting our water supply by knowing where and how many wells we have in Pecos County. Examples of protection are oil/gas activity, excessive water production, monitoring water levels/analysis, and contamination.

Our office is willing to discuss any concerns, issues, etc., pertaining to our most precious natural resource – GROUNDWATER. You may contact us at 432-336-0698 or come by 405 North Spring Drive, Fort Stockton, Texas.

Efforts to Control and Prevent Waste of Groundwater and Promote Conservation

To promote conservation and prevent waste of groundwater related to agricultural, the following are the best management practices as stated by the Texas Water Development Board Conservation Division : * Irrigation water use management - irrigation scheduling, measurement of irrigation water use, crop residue management and conservation tillage, irrigation audit; * land management systems – furrow dikes, land leveling, contour farming, conversion of supplemental irrigated farm land to dry land, brush management; * on-farm water delivery systems – lining of on-farm irrigation ditches, replacement of on-farm irrigation ditches and pipelines, low-pressure center pivot sprinkler irrigation systems, drip/micro-irrigation systems, gated and flexible pipe for field water distribution systems, surge flow for field water distribution systems, and linear move sprinkler irrigation systems; * Water district delivery systems – lining of district delivery systems, replacement of irrigation district canals and lateral canals with pipelines; * Miscellaneous systems – tailwater recovery and reuse system, nursery production systems.

Other ways to promote conservation and prevent waste of groundwater: Sweep rather than hose driveways and other areas; use drip irrigation rather than spray irrigation; wash your car at a car wash; downsize your lawn area and/or Xeriscape; irrigate during the coolest part of the day; never water on windy days; protect plants with mulch and compost to reduce water loss; install low flow shower heads; insulate hot water pipes; reduce showering time; operate dishwasher and washing machine on full loads; install an aerator on kitchen faucet; and turn the water off while brushing teeth and on to rinse. If you see signs of contaminating substances on the surface, remember it could end up contaminating the water source below, so please report to us if you find signs of contamination that need to be checked out.

Middle Pecos Groundwater Conservation District 2023

| Directors | | |
|--------------------------|---|--|
| Jerry McGuairt | President: Director Since February 19, 2013 | Precinct 1 |
| Janet Groth | Vice President: Director Since June 15, 2010 | Precinct 1 |
| M. R. Gonzalez | Secretary/Treasurer: Director Since December 11, 2000 | Precinct 2 |
| Puja Boinpally | Director Since April 18, 2017 | Precinct 2 |
| Weldon Blackwelder | Director Since August 16, 2011 | Precinct 3 |
| Larry Drgac | Director Since August 13, 2019 | Precinct 3 |
| Alvaro Mandujano, Jr. | Director Since November 5, 2002 | Precinct 4 |
| Ronnie Cooper | Director Since September 15, 2009 | Precinct 4 |
| Vanessa Cardwell | Director Since July 21, 2009 | City of Fort Stockton |
| Jeff Sims | Director Since November 8, 2016 | City of Iraan |
| Allan Childs, Jr. | Director Since November 8, 2016 | At Large |
| Current Employees | | |
| Ty Edwards | General Manager: Since January 17, 2017 | Assistant Manager: Since December 2, 2013 |
| Gail Reeves | Office Secretary: Since June 3, 2013 | |
| Anthony Bodnar | Field Technician: Since May 7, 2018 | |
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