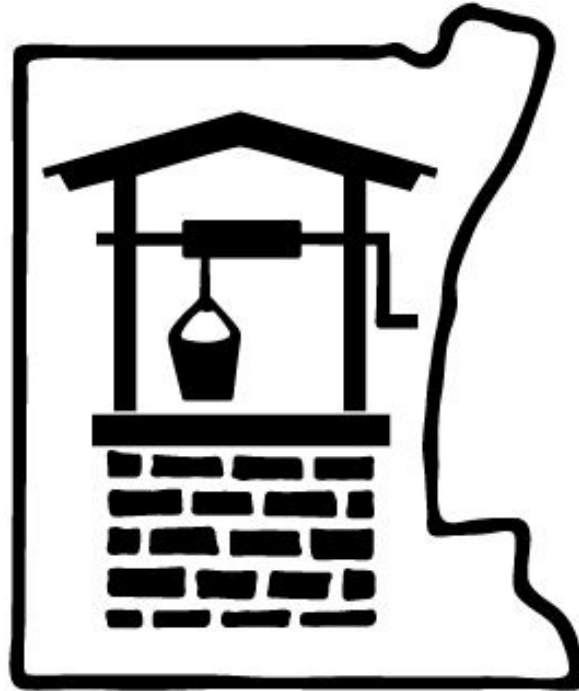


**RUSK COUNTY GROUNDWATER  
CONSERVATION DISTRICT**



**DISTRICT  
ANNUAL REPORT  
2024**

**SEPTEMBER 2023 TO AUGUST 2024**

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**BOARD OF DIRECTORS**

BOBBY BROWN – PRESIDENT

HARRY HAMILTON – VICE PRESIDENT

JOHN LANGSTON – SECRETARY/TREASURER

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RYAN ELLIS - DIRECTOR

**GENERAL MANAGER**

DAVID MILEY

REPORT COMPLETED 10/17/2024

**APPROVED**

NOVEMBER 11, 2024

**DISTRICT MISSION**

*“DEVELOP AND IMPLEMENT A SOUND GROUNDWATER MANAGEMENT PROGRAM TO  
PROTECT AND SUSTAIN THE GROUNDWATER RESOURCES OF THE DISTRICT”*

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**METHODOLOGY FOR TRACKING DISTRICT PROGRESS IN ACHIEVING MANAGEMENT GOALS:**

An annual report will be prepared and presented to the Board of Directors on District performance with regard to achieving management goals and objectives. The presentation of this report will occur within the first quarter of the following fiscal year. The Annual Report will be prepared in a format that will be reflective of the performance standards listed following each management objective. The District will maintain the reports on file for public inspection at the District’s office upon adoption.

**MANAGEMENT PLAN GOALS, OBJECTIVES & PERFORMANCE STANDARDS:**

The Rusk County Groundwater Conservation District has seven management objectives with fifteen goals detailed in the Management Plan, Section 12, adopted September 11, 2023. These objectives and goals provide details along with the performance of the District in attaining these goals as follows.

**12.1. PROVIDING THE MOST EFFICIENT USE OF GROUNDWATER**

**12.1.A. MAINTAIN A WELL REGISTRATION PROCESS**

**OBJECTIVE:** The District will require the registration of all groundwater wells, exempt and non-exempt, new and existing, within the boundaries of the District to be registered in accordance with the District Rules.

**PERFORMANCE STANDARD:** The number of new and existing water wells registered with the District will be provided at the regular District Board meetings and in the District’s Annual Report.

**ACTIVITY AND ACCOMPLISHMENTS:**

At each regular scheduled board meeting, Well Statistics for the month was recorded and reported to the board. Following are well statistics of the year for new, existing, exempt, and non-exempt wells all maintained in the District’s database.

<b>September 1, 2023 - August 31, 2024</b>	
<b>Authorizations to Drill &amp; Produce Water:</b>	68
Authorizations to Drill Denied:	0
Total Authorizations Overall:	2087
<b>Amended Applications:</b>	0
Amended Applications Denied:	0
Total Amended Applications Overall:	19
<b>Rush Applications:</b>	5
Total Rush Applications Overall:	66
<b>Total Registrations Issued, New Wells:</b>	54
Total Registrations Issued, Existing Wells:	13
Total Registrations Overall:	5446
<b>Total Operating Permits (OP) Issued, New Wells:</b>	14
Total Operating Permits Issued, Existing Wells:	2
Total Permits OPs Issued Overall:	168
Total Operating Permits on File:	247
<b>Transfer Inspections Completed:</b>	4
Transfer Inspections Overall:	576
<b>Surface Inspections Completed:</b>	56
Surface Inspections Overall:	706
<b>Large Diameter Wells Registered:</b>	6
Large Diameter Wells Registered Overall:	473
Large Diameter Wells Plugged:	2
Large Diameter Wells Plugged Overall:	69
Plugged Oil and Gas Water Wells Overall:	789
<b>Wells Plugged or Consumed in Mines Total Overall:</b>	1410

\*Overall: numbers since District or rule creation

#### **12.1.B. MAINTAIN A WELL PERMITTING PROCESS**

**OBJECTIVE:** The District will require all new and existing non-exempt water wells within the boundaries of the District to be permitted in accordance with the District Rules.

**PERFORMANCE STANDARD:** The District will process applications for operating permits of all non-exempt water wells pursuant to the permitting process of the District Rules. A summary of the number of applications for permitted use of groundwater will be provided at the regular District Board meetings and in the District’s Annual Report.

**ACTIVITY AND ACCOMPLISHMENTS:**

At each regular scheduled board meeting, Well Statistics for the month was recorded and reported to the board which includes applications for permitted use.

To find more detail on the District managing groundwater supplies please refer to the District’s Management Plan and Rules all available to the public on the District’s website, [www.rcgcd.org](http://www.rcgcd.org).

See Objective 12.1.A for Activity and Accomplishments regarding District Well Statistics.

**12.1.C. MAINTAIN AN ELECTRONIC DATABASE**

**OBJECTIVE:** Maintain the Districts Groundwater Well Database for registrations, permits, and groundwater production volume. The database shall include information deemed necessary by the District to enable effective monitoring and regulation of groundwater in the District.

**PERFORMANCE STANDARD:** The District will document all new and existing wells in the District’s database. All new and existing wells documented will be included in the District’s Annual Report.

**PERFORMANCE STANDARD:** The District will include a summary of the estimated volume of water produced within Rusk County in the District’s Annual Report.

**ACTIVITY AND ACCOMPLISHMENTS:**

The District operates a web-based Groundwater Well Database. All registrations, permits, and groundwater production volumes are accessible from the database for District use.

See Objective 12.1.A for Activity and Accomplishments regarding District Well Statistics.

See Appendix A, for Activity and Accomplishments related to documenting groundwater production.

See Appendix B, for Activity and Accomplishments related to documented new and existing wells in the District’s database.

**12.2. CONTROLLING AND PREVENTING WASTE OF GROUNDWATER**

**12.2.A. DISSEMINATE INFORMATION ON WASTE PREVENTION**

**OBJECTIVE:** The District will provide information on an annual basis for the purpose of educating the public on elimination, reduction, and prevention of the waste of groundwater. The District will use at least one of the following methods to provide information to the public annually:

- a. Distribute literature packets or brochures;
- b. Conduct public or school presentations;
- c. Sponsor an educational program or course;
- d. Provide information on the District’s web site;
- e. Submit an article for publication with local papers;
- f. Present displays at public events.

**PERFORMANCE STANDARD:** A summary of the District’s efforts to disseminate information on waste prevention will be included in the District’s Annual Report.

**ACTIVITY AND ACCOMPLISHMENTS:**

The District disseminated waste prevention and conservation literature, materials, and demonstrations to the public in the following ways:

- A. September 2023:
  - a. Facebook postings: track drought conditions and rain amounts
  - b. Website posting: track drought conditions and rain amounts
- B. October 2023:
  - a. Website posting: track drought conditions and rain amounts
  - b. Facebook posting: information on Proposition 6 (Texas Water Fund)
- C. November 2023:
  - a. Website posting: track drought conditions and rain amounts
  - b. Facebook posting: Temporary water Conservation Alert for South Rusk County Water Supply
- D. December 2023: Website posting: track drought conditions and rain amounts
- E. January 2024: Website posting: track drought conditions and rain amounts
- F. February 2024:
  - a. Facebook postings: Information on District’s new water Quality testing program.
  - b. Website posting: track drought conditions and rain amounts
- G. March and April 2024: Website posting: track drought conditions and rain amounts.
- H. May 2024:
  - a. Facebook page postings: TWDB water awareness
  - b. Website posting: track drought conditions and rain amounts
- I. June and July 2024: Website posting: Track drought conditions and rain amounts
- J. August 2024:
  - a. Facebook page postings: Water Wisely article
  - b. Website posting: track drought conditions and rain amounts
- K. District Press Release in the Henderson Daily:
  - a. August 2024, Upcoming Fiscal Year for the Groundwater District.



- i. District Ad, shows service area, aquifer, and directors.
  - ii. Tax & Budget Notice.
- L. The District maintains a native, drought tolerant landscape around the District office to serve as an example of plants that can be utilized to minimize waste and promote conservation. The landscape and practice is promoted on the District's website.
- M. The District's Website hosts several different educational pieces readily available to the public. Specific topics by section on the website regarding waste prevention and conservation are as follows: Monitoring Programs, District Groundwater Geology and Groundwater Resources, Groundwater Well Education, Recharge Enhancement, Water Conservation, Youth Education Program, Groundwater Well Education, Conservation Education, and finally the District's Current Events, News, and Articles. Total website visitation for the year was 763.

### **12.2.B. IDENTIFY WASTEFUL PRACTICES**

**OBJECTIVE:** The District will identify wasteful practices within the boundaries of the District through the following methods:

- a. Track water loss for all water utilities within the District;
- b. Enforce District Rule 9.2.5 requiring inspection and/or plugging of oil and gas groundwater wells.

**PERFORMANCE STANDARD:** The District will include a summary of the total volume of water loss from water utilities in the District's Annual Report.

**PERFORMANCE STANDARD:** The District will include the total oil and gas groundwater wells inspected and plugged each fiscal year in the District's Annual Report.

#### **ACTIVITY AND ACCOMPLISHMENTS:**

Through Rule 9.2.5 continued efforts to eliminate comingling of aquifers zones of different quality and prevent waste of water from one zone to another.

See Objective 12.A.1. Activity and Accomplishments for oil and gas groundwater wells inspected and plugged.

See Appendix A, for summary of water loss of Rusk County water utilities.

### **12.3. ADDRESSING CONJUNCTIVE SURFACE WATER MANAGEMENT ISSUES**

#### **12.3.A. PARTICIPATING IN THE REGIONAL WATER PLANNING PROCESS**

**OBJECTIVE:** The District will attend at least one East Texas Regional Water Planning Group (Region I) and the North East Texas Regional Water Planning Group (Region D) meeting each fiscal year.

**PERFORMANCE STANDARD:** The District will participate in the regional planning process by attending at least one meeting of Region I and

Region D meetings each fiscal year. A report will be presented at a regular board meeting of the District on conjunctive surface water issues of the appropriate Regional Water Planning Groups. Attendance of meetings for Region I and Region D will be included in the District’s Annual Report.

**ACTIVITY AND ACCOMPLISHMENTS:**

<b>RWPG</b>	<b>Meeting Date</b>	<b>District Representative</b>
I	10/4/2023	D. Miley
I	1/10/2024	D. Miley
I	2/15/2024	D. Miley
D	10/4/2023	N/A
D	2/21/2024	D. Miley

District representatives attended a Regional Water Planning Group (RWPG) I meetings and RWPG D meetings. Following attendance of RWPG I and D meetings a report was provided to the District Board of status and activities at the following regular board meeting. Following are dates that District Representatives attended and participated in the

RWPG D & I meetings:

**12.4. ADDRESSING NATURAL RESOURCE ISSUES**

**12.4.A. MONITOR WATER LEVELS**

**Objective:** The District will manage and maintain its existing water level monitoring program. The District will monitor water levels within the District boundaries at least annually and will be recorded in the District’s database.

**PERFORMANCE STANDARD:** A description of the number of wells measured and the monitoring results of the year will be included in the District’s Annual Report.

**ACTIVITY AND ACCOMPLISHMENTS:**

**AQUIFER MONITORING**

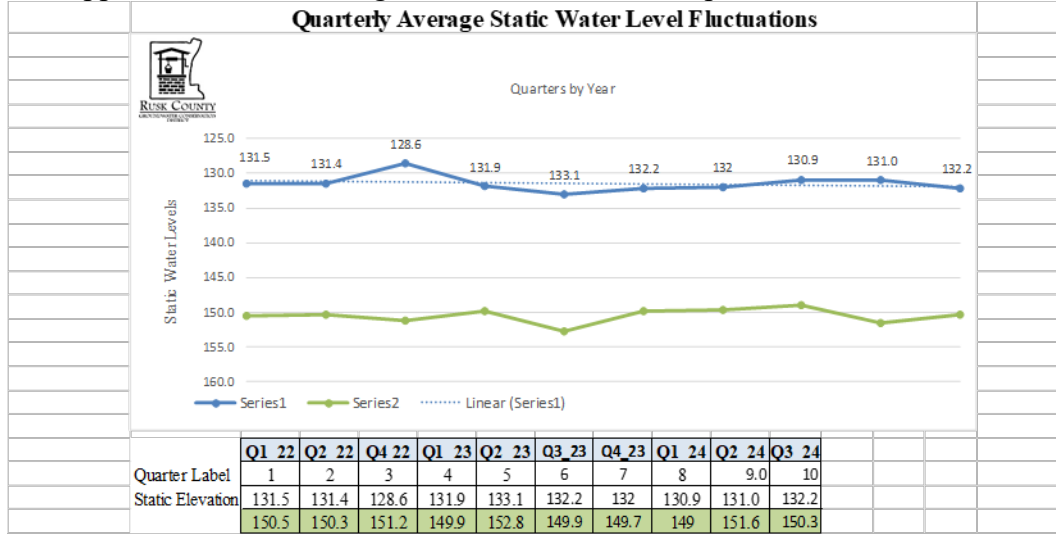
**MONTHLY:** The District collects static water level readings at an average of 16 monitor wells monthly.

**QUARTERLY:** The District collects static water level readings at an average of 50 monitor wells quarterly. As wells are plugged by owners the District shifts its wells monitored and numbers accordingly. This data is maintained in the District’s database.

**REAL-TIME STATIONS:** The District has 4 real-time stations recorded by transducers. Data from these monitor wells is uploaded daily via satellite to the Texas Water Development Board site and is linked to the District website for real-time coverage locally.

Data is collected in the field and evaluated by depth to water from surface and is kept in the District’s database. The District’s quarterly average aquifer levels by Depth to Water are displayed in the following graph.

See Appendix A, for annual groundwater elevations report.



**12.4.B. ADDRESS ABANDONED AND NUISANCE WELLS**

**OBJECTIVE:** The District will encourage the plugging of abandoned and nuisance groundwater wells. The District will conduct inspections of groundwater wells within the District’s boundaries to encourage proper maintenance of groundwater wells and to document abandoned and nuisance groundwater wells that pose a risk to the District’s groundwater resources.

**PERFORMANCE STANDARD:** A description of the number of wells inspected, the number of wells in violation, and the number of wells brought into compliance or plugged will be included in the District’s Annual Report.

**ACTIVITY AND ACCOMPLISHMENTS:**

The District promotes its Abandoned Well Program to assist and encourage well owners financially and legally with the task of capping or plugging an abandoned or nuisance groundwater well.

The District conducts healthy well inspections of existing wells, newly drilled wells, and down-hole inspections of groundwater wells for oil and gas rig supply and exploration. This assists the District in identifying potential risks to the aquifer and those well owners by eliminating public health and safety risks of groundwater commingling and abandonment. All inspected wells and recorded and kept on file at the District Office and on the District’s Database.

A description of wells identified through the District’s healthy well inspection program is outlined below:

<b>District Abandoned &amp; Nuisance Well Prevention</b>					
<b>September 1, 2023 - August 31, 2024</b>	<b>2023-2024</b>	<b>2022-2023</b>	<b>2021-2022</b>	<b>2020-2021</b>	<b>2019-2020</b>
<b>Transfer Inspections Completed:</b>	4	7	2	1	6
<b>Surface Inspections Completed:</b>	56	65	41	34	95
<b>Wells sent Notice of Violation:</b>	1	6	3	3	4
<b>Wells brought into compliance:</b>	2	12	3	0	4
<b>Wells Plugged or Consumed in Mines:</b>	5	47	12	97	102
<b>Well Plugging Reimbursements:</b>	0	0	0	0	0

**12.5. ADDRESSING DROUGHT CONDITIONS**

**12.5.A. DROUGHT CONTINGENCY PLAN**

**OBJECTIVE:** The District will implement its Drought Contingency Plan if conditions meet the criteria listed in the plan. The District will evaluate its Drought Contingency Plan annually to determine if any amendments are necessary and properly respond to drought conditions locally.

**PERFORMANCE STANDARD:** A summary of the evaluation of the District’s Drought Contingency Plan and any revisions to the plan for proper response to drought conditions will be included in the District’s Annual Report.

**ACTIVITY AND ACCOMPLISHMENTS:**

The District’s DCP was evaluated as required annually, February 13, 2024 by the District’s Board of Directors and General Manager. It was determined no amendments were needed. The Board identified the plan as reviewed.

**12.5.B. TRACK DROUGHT CONDITIONS**

**OBJECTIVE:** The District will monitor drought conditions using a suitable source such as the U.S. Drought Monitor or the Palmer Drought Severity Index Map.

**PERFORMANCE STANDARD:** Link’s on the District’s web page to the Palmer Drought Severity Index, U.S. Drought Monitor, and the TWDB’s website on drought will be made available to the public.

**PERFORMANCE STANDARD:** A summary of monitored drought conditions will be provided at the regular District Board meetings and in the District’s Annual Report.

**ACTIVITY AND ACCOMPLISHMENTS:**

Drought conditions are tracked in the District and surrounding area with the Palmer Drought Severity Index Map and the Texas Drought Monitor once a month and presented at the Monthly Board meetings. The Palmer Drought Severity Index Map, Texas Drought Monitor, and the TWDB's website on drought are made available to the public on the District's web page, <http://rcgcd.org/monitoring-programs/>.

The majority of the fiscal year experienced above average rainfall for an extended period, with abnormally dry conditions occurring during late summer of 2024.

## **12.6. ADDRESSING CONSERVATION, RECHARGE ENHANCEMENT, AND RAINWATER HARVESTING**

### **12.6.A. PUBLIC EDUCATION TO EMPHASIZE WATER CONSERVATION**

**OBJECTIVE:** In coordination with efforts in waste prevention, the District will provide information on an annual basis to promote conservation. The District will use at least one of the following methods to provide information to the public annually:

- a. Distribute literature packets or brochures;
- b. Conduct public or school presentations;
- c. Sponsor an educational program or course;
- d. Provide information on the District's web site;
- e. Submit an article for publication with local papers; and
- f. Present displays at public events.

**PERFORMANCE STANDARD:** A summary of the District's efforts to disseminate information on water conservation will be included in the District's Annual Report.

#### **ACTIVITY AND ACCOMPLISHMENTS:**

See Objective 12.2.A for Activity and Accomplishments regarding efforts to disseminate information on water conservation.

### **12.6.B. RECHARGE ENHANCEMENT**

**OBJECTIVE:** To continue education on the diversity of the resource, the District will provide information relating to recharge enhancement on the District web site.

**PERFORMANCE STANDARD:** Information that has been provided on the District web site will be included or summarized in the District's Annual Report.

#### **ACTIVITY AND ACCOMPLISHMENTS:**

Recharge Enhancement education and external links are made available to the public on the District's web page in the Education Tab at, <http://rcgcd.org/205-2/>. This material provides information on groundwater movement and aquifer characteristics regarding recharge enhancement within Rusk County.

#### **12.6.C. RAINWATER HARVESTING**

**OBJECTIVE:** The District will promote rainwater harvesting by providing information about rainwater harvesting on the District web site.

**PERFORMANCE STANDARD:** Information that has been provided on the District web site will be included or summarized in the District's Annual Report.

#### **ACTIVITY AND ACCOMPLISHMENTS:**

Rainwater Harvesting education and external links are made available to the public on the District's web page in the Education Tab at, <http://rcgcd.org/rain-water-harvesting/>. This material provides information for an alternative water supply, reducing stress on our area aquifers, and complexity of the unit's design.

#### **12.7. ADDRESSING THE DESIRED FUTURE CONDITIONS OF THE GROUNDWATER RESOURCES**

##### **12.7.A. MANAGE AND MAINTAIN A WATER LEVEL MONITORING PROGRAM**

**OBJECTIVE:** The District will manage and maintain its existing water level monitoring program. The District will monitor water levels within the District boundaries at least annually and will be recorded in the District's database, as part of Objective 12.4.A. The District will evaluate water level trends and compare to the DFCs adopted by the District's.

**PERFORMANCE STANDARD:** A description of the number of wells measured and the monitoring results of the year will be included in the District Annual Report.

**PERFORMANCE STANDARD:** An annual comparison of water level changes to the District's DFC will be evaluated and included in the District's Annual Report.

#### **ACTIVITY AND ACCOMPLISHMENTS:**

See Objective 12.4.A. Activity and Accomplishments for the District managing and maintaining its existing water level monitoring program and results.

See Appendix A for annual comparison of water level changes to the District's DFC.

##### **12.7.B. MONITOR ESTIMATE ANNUAL PRODUCTION**

**OBJECTIVE:** The District will estimate total annual groundwater production for each aquifer based on water use reports, estimated exempt use, and other relevant information and compare production estimates to the Managed Available Groundwater (MAG).

**PERFORMANCE STANDARD:** An annual comparison of total recorded and estimated annual production to the District's MAG will be evaluated and included in the District's Annual Report.

**ACTIVITY AND ACCOMPLISHMENTS:**

See Appendix A for total estimated annual production compared to the MAG.

**APPENDIX A**  
**DISTRICT MAG & DFC COMPARISON & PRODUCTION REPORTING ANALYSIS 2023**



## **PRODUCTION REPORTING ANALYSIS WITH MAG COMPARISON AND WATER LOSS ANALYSIS 2023**

**BY DAVID MILEY, GENERAL MANAGER  
ASSISTED BY DIANA MARTINEZ, OFFICE MANAGER  
July 19, 2023**

The Rusk County Groundwater Conservation District (District) requires reporting of groundwater production for all permit holders of non-exempt wells, mining, and oil and gas rig supply and exploration. Meters are required for groundwater production of oil and gas, mining, and permitted wells outside of agricultural and domestic usage.

The District's 2023 Management Plan requires the District to monitor estimated annual production (12.7.B.) and conduct an annual comparison of the District's water level changes to its adopted DFC (12.7.A.). This report reviews the production by type of use with comparisons to past years' statistics. *Note: The Management Plan is to be updated in 2028.*

### Acronyms & Definitions

- An acre-foot is defined as the volume of one acre of surface area to a depth of one foot.
- 1 acre-foot = 325,852 liquid gallons
- a/f: acre-feet
- PWS: Public Water Supply
- GAM: Groundwater Availability Model
- MAG: Managed Available Groundwater
- GMA 11: Groundwater Management Area 11
- TCEQ: Texas Commission on Environmental Quality
- TWDB: Texas Water Development Board



## PRODUCTION REPORTING STATISTICS

*Overall total reports* submitted for 2023 were up by five from 2022. Steam Electric and mining did not have any reports for 2023. Oil and gas seen a decrease. Some of the difference in overall total reports is due to how PWS reports are submitted. Sometimes multiple wells are listed on one form/report.

<b>Reports Received</b>				
<b>Type</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
PWS Total:	88	72	78	<b>88</b>
Mining Total:	3	1	0	<b>0</b>
Oil & Gas Total:	6	22	8	<b>4</b>
Steam Electric Total:	1	1	0	<b>0</b>
Non-Ex Outside of PWS Total:	23	24	32	<b>31</b>
Overall Total:	121	120	118	<b>123</b>

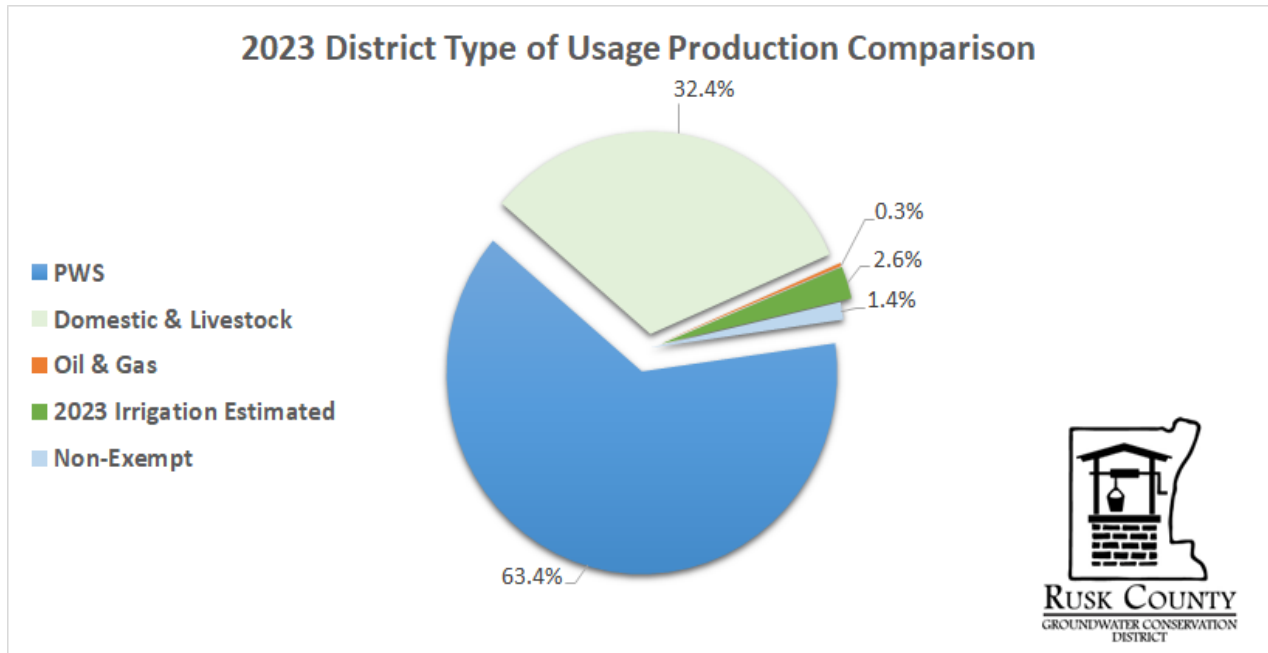
**Overall Total Production** decreased by 291.4 a/f from 2022. The year 2022 ranks second in groundwater production for the years of 2020-2023 at 8,534.3 a/f. The largest increase in production came from Domestic/Livestock with 90 a/f. Oil and gas decreased 40.6 a/f. \*Irrigation decreased at 53.6 a/f. The largest decrease in production came from PWS at 291.4 a/f.

<b>Total Production by Type of Use (acre-feet per year)</b>									<b>Production Difference from 2022 to 2023</b>
	<b>2020</b>		<b>2021</b>		<b>2022</b>		<b>2023</b>		
PWS:	4,970.3	60.9%	5,376	65.2%	5,703.6	65.2%	<b>5,412.2</b>	<b>63.4%</b>	<b>-291.4</b>
Mining:	323.2	4.0%	0.0	0.0%	0.0	0.0%	<b>0.0</b>	<b>0.0%</b>	<b>0.0</b>
Oil & Gas:	15.9	0.2%	5.6	0.1%	62.2	0.7%	<b>21.6</b>	<b>0.3%</b>	<b>-40.6</b>
Steam Electric:	0.0	0.0%	0.0	0.0%	0.0	0.0%	<b>0.0</b>	<b>0.0%</b>	<b>0.0</b>
Non-Exempt outside of PWS:	156.6	1.9%	158.9	1.9%	149.3	1.0%	<b>118.7</b>	<b>1.4%</b>	<b>33.2</b>
*Irrigation-TWDB:	206.0	2.5%	276.0	2.5%	222.4	2.5%	<b>220.4</b>	<b>2.6%</b>	<b>-53.6</b>
Domestic & livestock-TWDB:	2,496.0	30.6%	2,588.0	31.0%	2,672.0	30.6%	<b>2,762.0</b>	<b>32.4%</b>	<b>90.0</b>
Overall Total:	8,168.0	100%	8,404.5	100%	8,745.7	100%	<b>8,534.3</b>	<b>100%</b>	<b>211.4</b>

\*TWDB irrigation estimates '20-'23 \*TWDB Domestic & Livestock data provided in 5-10 year intervals

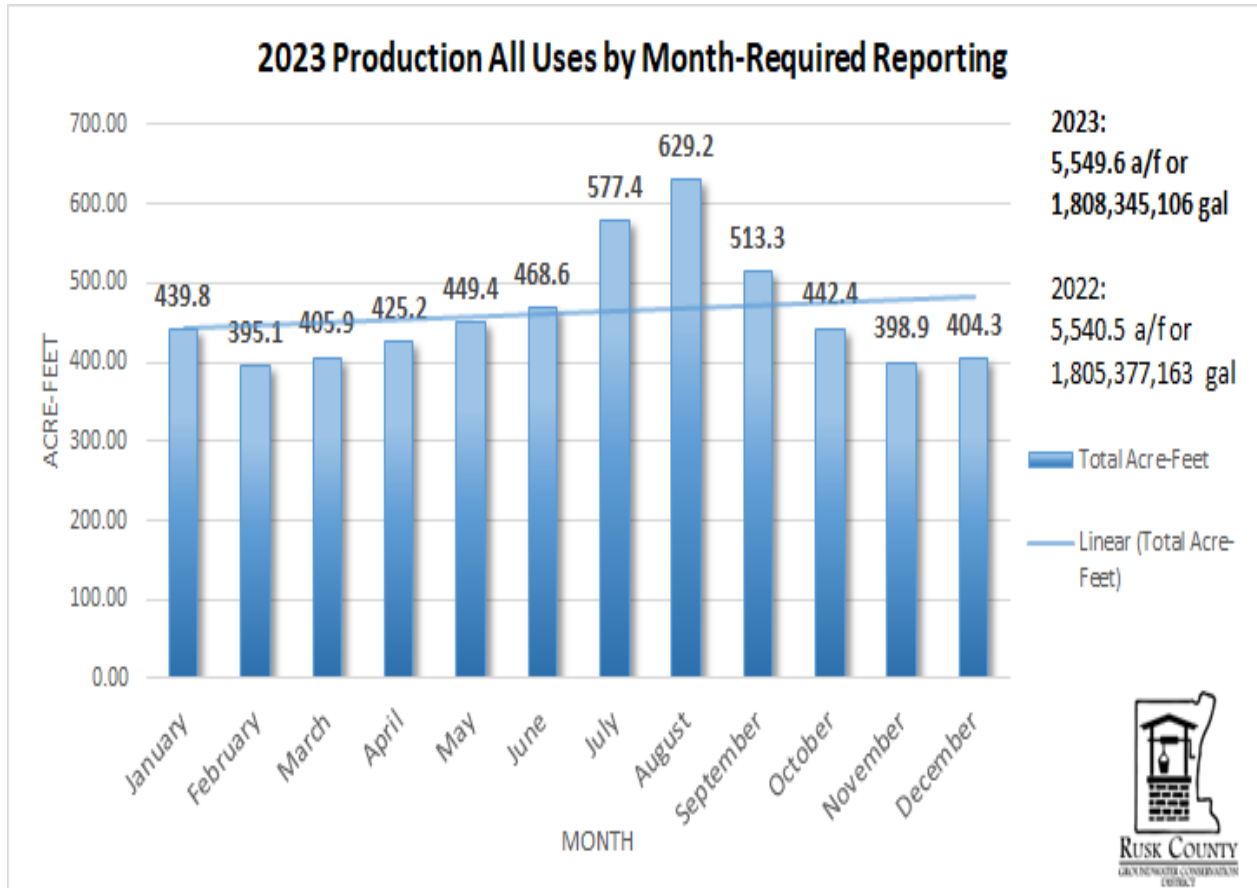
## PRODUCTION BY TYPE OF USE

*Production by Type of Use in Rusk County in 2023* is led by Public Water Suppliers producing 63.4%, Domestic & Livestock at 32.4%. Smaller amounts were seen in Irrigation at 2.6%, Non-Exempt at 1.4%, and Oil & Gas at 0.30%.



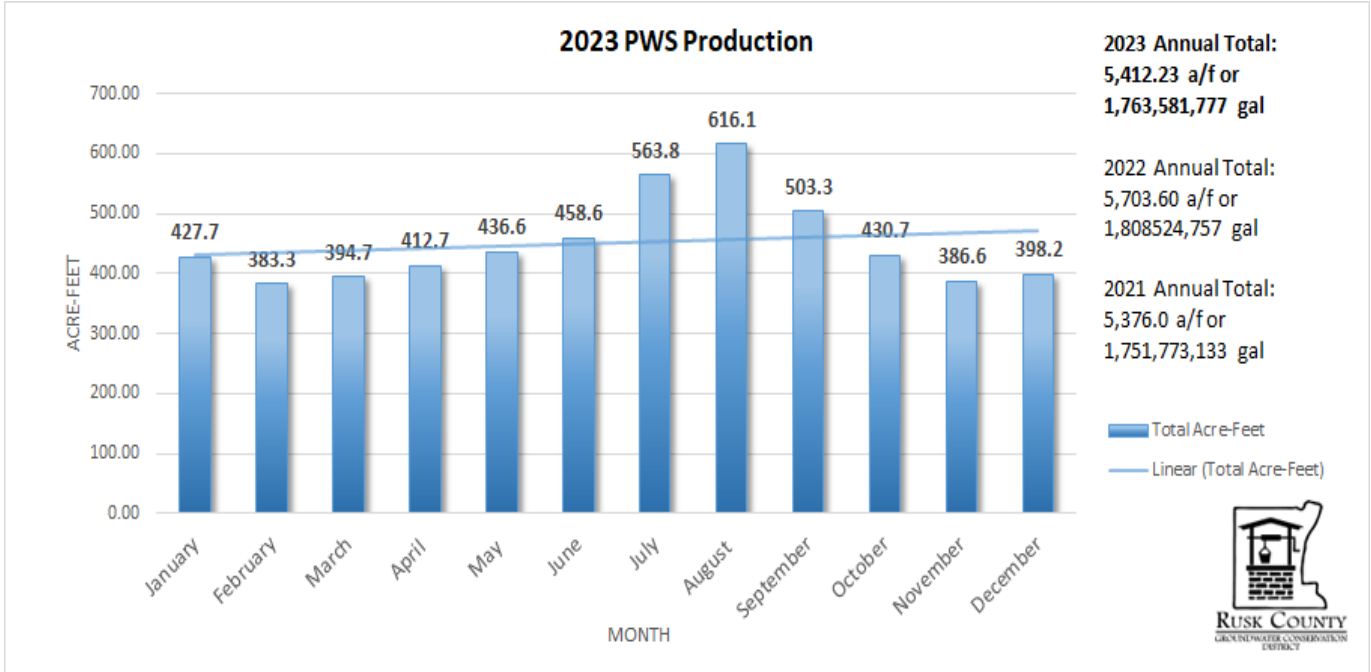
## TOTAL PRODUCTION BY MONTH FOR ALL TYPES OF USE

**Total Production for all Uses (Required Reporting)** shows the largest month of production was July at 591.7 a/f and the lowest month of production being April at 430.3 a/f. There was a decrease in production toward the beginning of the year.

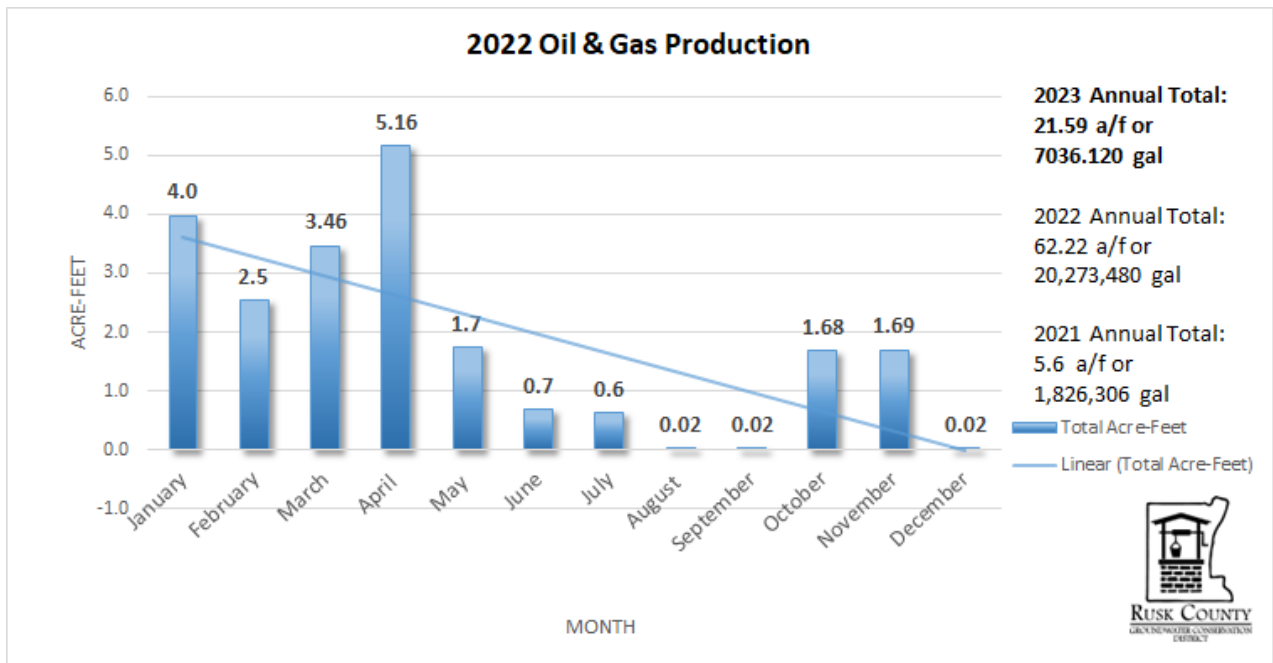


## PRODUCTION BY INDIVIDUAL TYPES OF USE

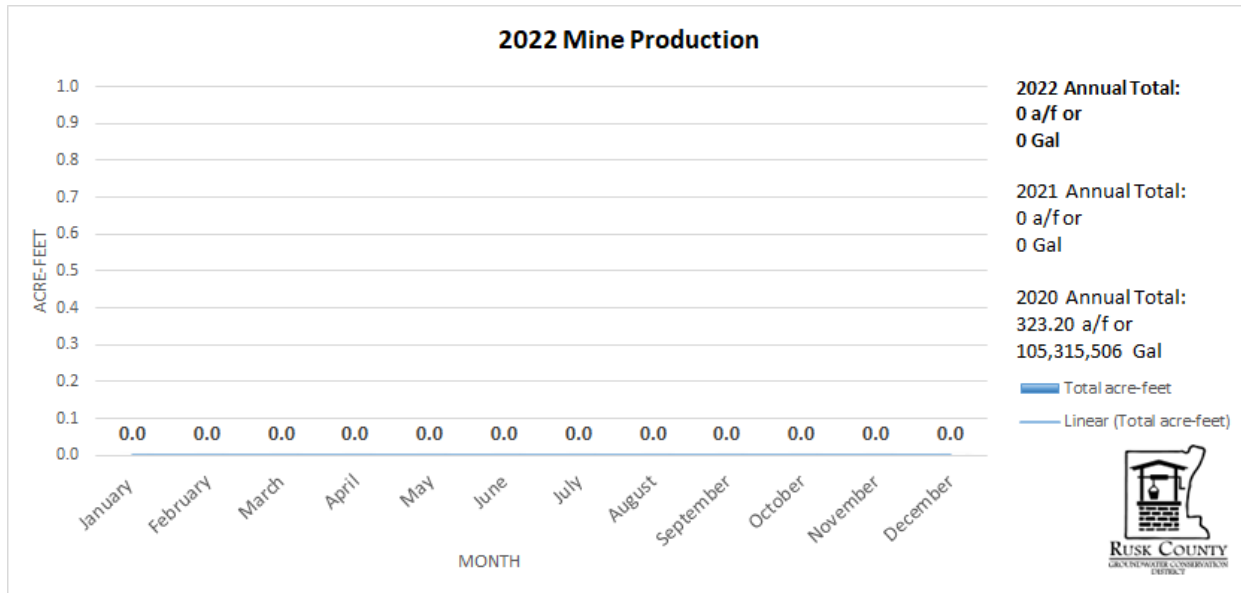
**PWS Production** decreased from 2022 by 291.4 a/f. PWS's largest month of production was August at 616.1 a/f and the lowest month of production was February at 383.3 a/f.



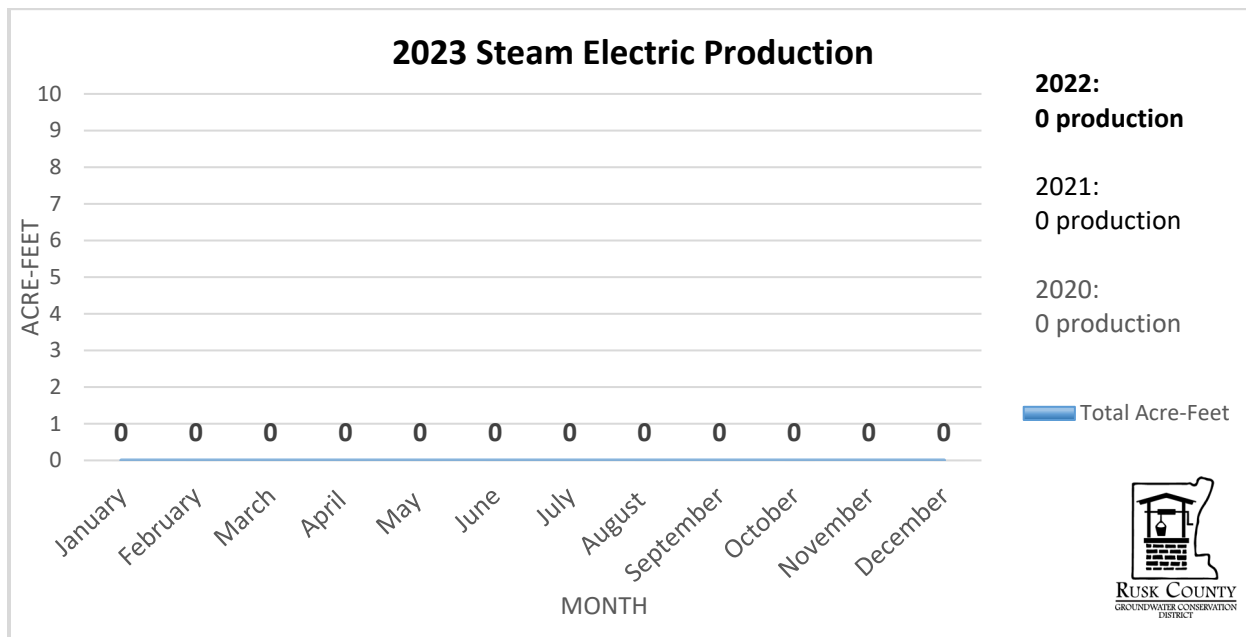
**Oil & Gas production** decreased from 2022 by 40.0 a/f. Oil and Gas' largest months of production were April at 5.16 a/f per month and the lowest months of production were August, September and December at .02 a/f per month.



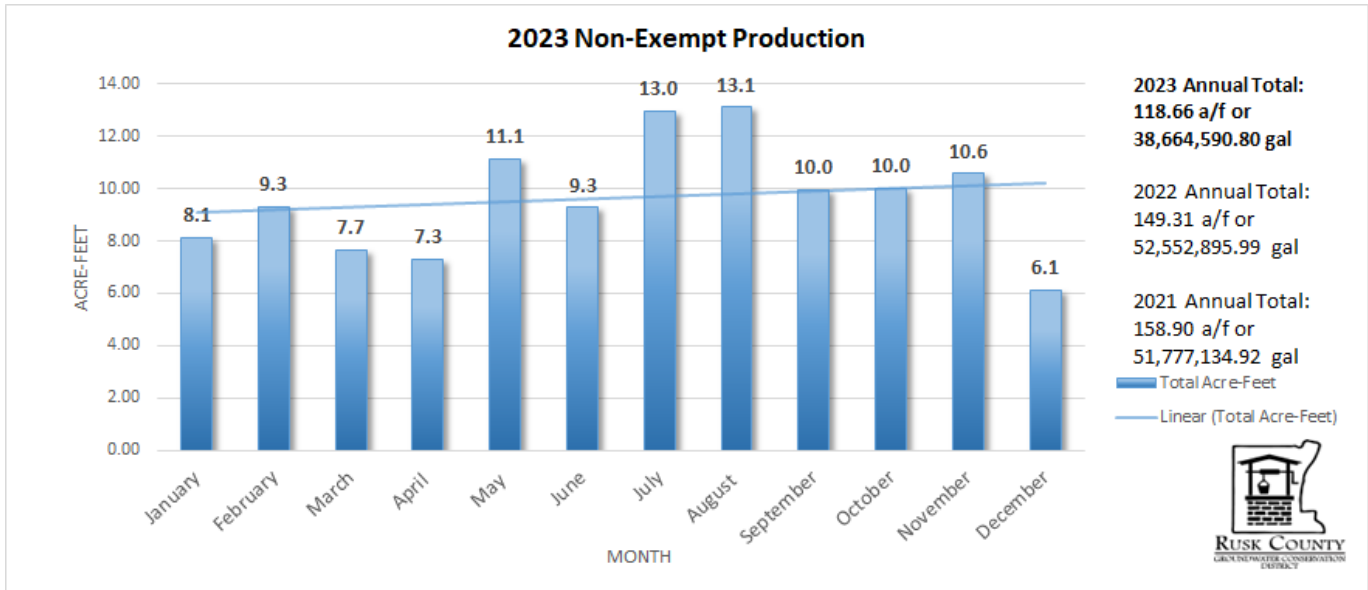
**Mine Production** remained at 0.0 a/f as in 2023. There were no reports of groundwater production from the mines as operations have ceased.



**Steam Electric Production** Steam Electric did not produce groundwater during 2023. The last year of production was 2017 at 41.4 a/f.



**Non-Exempt Outside of PWS Production** increased 33.2 a/f. Non-Exempt’s largest month of production was August at 13.1 a/f with the lowest in December at 6.1 a/f.



## SUMMARY OF WATER LOSS OF RUSK COUNTY WATER UTILITIES

The District’s Management Plan requires a summary of water loss from water utilities (12.2.B). The TWDB provided the District with the most current data regarding water loss as recorded through water utility surveys for Rusk County. All utilities are required to submit an audit every five-years. Utilities required to submit an audit every year are those with more than 3,300 connections, or who have a financial obligation with the agency. The chart below shows those that submitted five-year audits for 2023. In addition, The City of Henderson’s yearly audit for 2023 shows the total real water loss at 53,454,373 gal. or 164 a/f. The breakdown of other entities is below:

WSC	Total Real Losses in Gallons - 2023
City of Henderson	53,454,373 gallons or 164.0 a/f
City of New London	***Data Issue***
Goodsprings WSC	3,063,513 or 9.4 a./f
Goodsprings WSC Plant C	593,703 or 1.8 a/f
Pleasant Hill WSC	5,856,509 or 18 a/f
Southern Utilities Laird Hill	3,939,957 or 12 a/f

\*The city of Henderson used 36.9% surface water and 63.1% groundwater in 2023.

### Past Data for City of Henderson

The City of Henderson’s yearly audit for 2023 showed the total real water loss at 53,454,373 gal. or 164 a/f.

Water loss can be accounted for by line failures and repairs, meter accuracy, and other unmetered fields. In addition, it is also hard to accurately know how much water loss occurs with leaks and firefighting, according to the city of Henderson.

### NON-EXEMPT WELLS/PERMITTED WELLS

The total permitted amount of groundwater in the District is to be compared to the Modeled Available Groundwater (MAG) on an annual basis as guided by the District’s Management Plan and Chapter 36 of the Texas Water Code in evaluation of the resource.

The District issues permits up the point that the total volume of exempt and permitted groundwater production will achieve an applicable desired future condition. Meaning, the District can permit over the MAG if there is no adverse effect on the groundwater levels as compared to the DFCs.

The District has permitted **227** non-exempt wells, totaling **9,803** a/f per year permitted production. Due to new operating permits, permit renewals, and identifying historical data for existing wells, there was an increase in permitted production.

The District’s MAG is **14,018 a/f** per year.

Non-Exempt Wells Permitted		
Year	Amount of Permits	Permitted Production A/F
<b>2020</b>	187	9,638
<b>2021</b>	199	9,691
<b>2022</b>	218	9,794
<b>2023</b>	227	9,803

### MODELED AVAILABLE GROUNDWATER (MAG) IN RUSK COUNTY

GMA 11 adopted DFCs August 11, 2021. The District adopted DFCs for Rusk County on February 14, 2022. The TWDB issued a report on GAM Run 21-016 MAG on March 7, 2022, with updated MAGs.

- MAG of the Carrizo-Wilcox Aquifer from years 2020 to 2080 is **14,018 a/f**.

Rusk County MAG Values (acre-feet per year)										
Aquifer	County	Regional Planning Area	River Basin	Year						
				2020	2030	2040	2050	2060	2070	2080
Carrizo-Wilcox	Rusk	I	Neches	7,111	7,111	7,111	7,111	7,111	7,111	7,111
Carrizo-Wilcox	Rusk	I	Sabine	6,907	6,907	6,907	6,907	6,907	6,907	6,907
<b>Totals</b>				<b>14,018</b>	<b>14,018</b>	<b>14,018</b>	<b>14,018</b>	<b>14,018</b>	<b>14,018</b>	<b>14,018</b>



The new Rusk County MAGs for the Carrizo-Wilcox Aquifer are 14,018 AF/yr. While lower than the previous MAGs, the MAG is higher than the estimated highest pumping in recent years (2011) of about 7,313 AF/yr. (in addition, this includes the exempt use).

## DESIRED FUTURE CONDITIONS (DFCs) IN RUSK COUNTY

The District's groundwater elevations are compared to the 2013 baseline. The District makes these comparisons on an annual basis for the DFC and MAG, as guided by the District's Management Plan, Chapter 36 of the Texas Water Code, and best management practices of our groundwater resources. An analysis of the 2022 groundwater elevations to the DFC found that Rusk County's monitoring data are consistent with the desired future conditions.

The new DFC for the Carrizo-Wilcox Aquifer in Rusk County is an average drawdown of **86 feet from 2013 to 2080** GMA 11 adopted new DFCs on August 11, 2021. The new DFCs are based on the updated Groundwater Availability Model (GAM) which corrects many of the limitations and problems associated with the old GAM.

### *District Rule 8.2, Actions Based on Aquifer Response to Pumping*

“The District shall utilize its existing well monitoring program, to access aquifer levels in the District and the effects caused by groundwater production to enforce the District's adopted Desired Future Conditions of the aquifers and to conserve and preserve groundwater availability and protect groundwater users and groundwater ownership and rights.”

The District has adopted three threshold average aquifer drawdown levels to act as triggers to provide for increased levels of District regulatory responses based on the average aquifer drawdown levels in three consecutive years. Each level is based on an average of three consecutive years immediately prior to reaching the trigger.

Based on the 2023 analysis using the updated DFC, no threshold levels have been triggered. Average precipitation for 2013-2023 has been above the long-term average, with only three years falling below average. Current pumping is about half of the assumed pumping that was the basis for the DFC simulation. Given the assumed pumping in the DFC simulation, average drawdown from 2013 in the 34 monitoring wells used by the District is estimated to be about 68 feet in 2021. However, actual monitoring data show about a .75 ft. rise in groundwater levels in 2023 as compared to the groundwater levels in 2021.

## APPENDIX B

### DOCUMENTED NEW & EXISTING WELLS IN DISTRICT DATABASE

The District recorded 81 wells in its database. Recorded Exempt Wells totaled 67; 55 Domestic, 4 Rig/Supply-Oil & Gas, 1 Test and 7 other or unknown uses. Recorded Non-Exempt Wells totaled 14; 6 Domestic, 1 irrigation/livestock, 7 poultry.

Documented Wells FY 2023-2024				
Well Type	Type of Use	Well Owner (Current) Name	Well ID	Date Entered
Exempt	Domestic	Jeffrey A. Holland	RC2023-0044	9/1/2023
Exempt	Domestic	Lucas Woodard	RC2023-0045	9/1/2023
Exempt	Domestic	Shari Asher	RC2023-0046	9/13/2023
Exempt	Domestic	Ana North	RC2023-0047	9/15/2023
Non exempt	Domestic	Ted Woodruff	RC2023-0053	10/6/2023
Exempt	Domestic	Wesley C. Clark	RC2023-0055	10/25/2023
Non exempt	Domestic	AJ Cook	RC2023-0056	11/3/2023
Exempt	Domestic	Francisco Bazaldua	RC2023-0057	11/8/2023
Exempt	Domestic	Sergio Martin Lopez	RC2023-0059	11/10/2023
Exempt	Domestic	1880 Land Co LTD LLC	RC2023-0060	11/17/2023
Exempt	Domestic	Jacoba Gardner	RC2023-0061	12/11/2023
Exempt	Domestic	Sammy & Carrie Nelson	RC2024-0001	1/4/2024
Non exempt	Domestic	Derek Eggert	RC2024-0003	1/9/2024
Non exempt	Domestic	Glyn Mark Stone	RC2024-0004	1/19/2024
Exempt	Domestic	Carl Allen	RC2024-0005	1/25/2024
Exempt	Domestic	Justin & Kali Roberts	RC2024-0007	2/2/2024
Exempt	Domestic	Daniel & Renee Harding	RC2024-0008	2/6/2024
Exempt	Domestic	Brent Grounds	RC2024-0009	2/14/2024
Exempt	Domestic	Ethan Craig	RC2024-0010	2/16/2024
Exempt	Domestic	Mark A. Pepper	RC2024-0011	2/20/2024
Exempt	Domestic	Full Throttle Transport & Rental LLC	RC2024-0012	2/20/2024
Exempt	Domestic	Ignacio & Claudia Flores	RC2024-0014	2/26/2024
Exempt	Domestic	Brad & Terry Burns	RC2024-0015	2/29/2024
Exempt	Domestic	Beech Creek Land & Timber LLC	RC2024-0016	3/8/2024
Exempt	Domestic	Marc & Monica Tompkins	RC2024-0019	3/25/2024
Exempt	Domestic	Robert Phillips	RC2024-0020	4/3/2024
Exempt	Domestic	David Zimmerman	RC2024-0021	4/3/2024
Exempt	Domestic	Corey Bonner	RC2024-0022	4/4/2024

Exempt	Domestic	Carolyn Tiller Wilson	RC2024-0023	4/4/2024
Exempt	Domestic	Shelly Martin	RC2024-0024	4/23/2024
Exempt	Domestic	Trevlynn Russell	RC2024-0025	4/24/2024
Exempt	Domestic	Jennifer Shelton	RC2024-0026	4/24/2024
Exempt	Domestic	Jay Haison	RC2024-0027	5/2/2024
Exempt	Domestic	James Bridges	RC2024-0028	5/2/2024
Exempt	Domestic	Don Andrade	RC2024-0029	5/10/2024
Exempt	Domestic	Greg Porter	RC2024-0030	5/14/2024
Exempt	Domestic	Robert E. Grindle	RC2024-0031	5/17/2024
Exempt	Domestic	Bobbi Thompson	RC2024-0032	5/23/2024
Exempt	Domestic	Krystal Hambright	RC2024-0033	5/29/2024
Exempt	Domestic	Sonia Hernandez	RC2024-0034	6/3/2024
Non exempt	Domestic	James Chambless	RC2024-0035	6/6/2024
Exempt	Domestic	David Rice	RC2024-0036	6/10/2024
Exempt	Domestic	Maria Granados	RC2024-0037	6/11/2024
Exempt	Domestic	Art Dudley	RC2024-0038	6/12/2024
Exempt	Domestic	Jose Chaidez	RC2024-0040	6/24/2024
Exempt	Domestic	Chase Crockett	RC2024-0042	6/26/2024
Exempt	Domestic	Johnny Terry	RC2024-0043	7/2/2024
Exempt	Domestic	Ryan Murphy	RC2024-0044	7/8/2024
Non exempt	Domestic	William Summers	RC2024-0046	7/29/2024
Exempt	Domestic	Karl Sanders	RC2024-0047	7/29/2024
Exempt	Domestic	Janey Wright & Edward Sanchez	RC2024-0048	7/30/2024
Exempt	Domestic	TB Fertilizer LLC	RC2024-0049	7/31/2024
Exempt	Domestic	Moore, Michael	RC2024-0050	8/2/2024
Exempt	Domestic	Cecil Parks	RC2024-0051	8/2/2024
Exempt	Domestic	Michael Fleshman	RC2024-0052	8/13/2024
Exempt	Domestic	Justin Wright	RC2024-0055	8/16/2024
Exempt	Domestic	Lee Lewis	RC2024-0056	8/16/2024
Exempt	Domestic	Wesley C. Clark	RC2024-0057	8/20/2024
Exempt	Domestic	Michael A. Urich	RC2024-0058	8/21/2024
Exempt	Domestic	Hunter & Alaina Herrington	RC2024-0059	8/22/2024
Exempt	Domestic	Richard & Melissa Kirkpatrick	RC2024-0062	8/30/2024
Non exempt	Livestock	John Spivey	RC2024-0017	3/18/2024
Exempt	Oil & Gas	Sabine Oil & Gas Corporation	RC2024-0060	8/27/2024
Exempt	Other	Diane and James Carrera	RC2024-0045	7/25/2024
Exempt	Other	Efrain Gonzalez	RC2024-0053	8/16/2024
Exempt	Other	Efrain Gonzalez	RC2024-0054	8/16/2024
Non exempt	Poultry	Bebay Van Lam	RC2023-0048	10/3/2023
Non exempt	Poultry	Bebay Van Lam	RC2023-0049	10/3/2023
Non exempt	Poultry	Bebay Van Lam	RC2023-0050	10/3/2023
Non exempt	Poultry	P & L Farm LLC	RC2023-0051	10/3/2023
Non exempt	Poultry	P & L Farm LLC	RC2023-0052	10/3/2023
Non exempt	Poultry	P & L Farm LLC	RC2023-0054	10/12/2023
Non exempt	Poultry	Bebay Van Lam	RC2024-0018	3/22/2024
Exempt	Rig Supply	TGNER East Texas LLC	RC2023-0058	11/8/2023
Exempt	Rig Supply	RFE Operating	RC2024-0039	6/13/2024
Exempt	Rig Supply	Sabine Oil & Gas Corporation	RC2024-0041	6/24/2024
Exempt	Test Well	SV South LLC	RC2024-0006	1/26/2024
Exempt	Unknown	Sanders, Mickey L.	RC2023-0062	12/15/2023
Exempt	Unknown	Billy Cain	RC2024-0002	1/8/2024
Exempt	Unknown	Rowe, Jon David	RC2024-0013	2/23/2024
Exempt	Unknown	Joe & Mary Clark	RC2024-0061	8/28/2024

**APPENDIX C**  
**DISTRICT SELF ACCOUNTABILITY & PERFORMANCE SHEET**

**Rusk County Groundwater Conservation District**  
**Self Accountability & Performance Sheet 2023-2024**

	Regulation	Description	Occurrence	Last Completed	Compliance	
					Satisfied	Not-Satisfied
State Agencies	TWC 36.1071	District shall develop a management plan that addresses 8 management goals, approved by TWDB	5 years	9/11/2023	X	
	TWC 36.061	TCEQ has the authority to enforce District's compliance with statutory requirements. May implement an enforcement action for failure to comply with TWC, Ch. 36.	n/a	n/a	n/a	
Legislature & Judiciary	TWC 36.302	Legislative Audit Review, Districts are subject to state auditor review. Determines if management plan goals are being achieved and if District is operational.	6 years+	11/22/2021	X	
Local Accountability	TWC 36.064, 36.101	Notice of Meetings & Hearings (rules for details)	as appropriate	8/12/2024	X	
	TWC 36.051	Board of Director four year terms. Elections and appointments. Avoidance of Dual-Service.	2 years	8/29/2024	X	
	TWC 36.056	Board review of GM	annually	11/11/2024	X	
	TWC 36.065	Records Retention adoption	as needed	7/11/2016	X	
	TWC 36.153	Annual financial audit (available on web)	annually	3/11/2024	X	
	Gov. Code 2256 & 2257	Requires each District to adopt a written Investment Policy with annual review.	annually	3/11/2024		
	Comptroller	Tax Rate to be adopted annually	annually	8/26/2024	X	
	Rule 31 TAC, 293(J)(3)	Budget to be adopted annually	annually	8/26/2024	X	
	TWC 36	Accounting Records prepared Monthly	monthly	8/1/2024	X	
	TWC 36	GMA Joint Planning, at least annually	annually	5/11/2024	X	
TWC 36.064	At least one board meeting per Quarter	Quarterly	8/26/2024	X		
District Policies & Rules	Inv. Policy	The District shall maintain at least one investment officer and every 2 years complete at least 4hours of continuing education.	2 years	6/6/2023	X	
	Inv. Policy	Investment reporting quarterly	quarterly	8/12/2024	X	
	Inv. Policy	Investment Policy to be reviewed annually	annually	8/12/2024		
	Rules	Election of officers in November	annually	11/11/2024	X	
	District DCP	Drought Conintgency Plan to be evaluated annually.	annually	2/13/2024		
	MP	Management Plan Objectives & Goals to be attained annually, documented in annual rpt	annually	11/11/2024	X	
	MP	Annual Report of District Operations presented within first quarter of next fiscal year	annually	11/11/2024	X	
	Code of Ethics	Budget/Audit Committee to be appointed, meet & review financials, budget, tax rate, etc. at least annually	annually	5/13/2024	X	
	Emp. Handbook	Employee Evaluations	annually	10/16/2024	X	