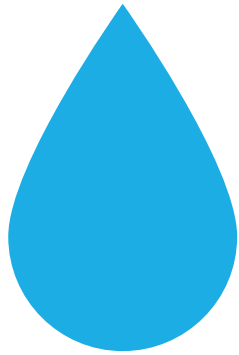




# 2024 Annual Report

---

**INSERT DATE** BOARD OF  
DIRECTORS MEETING



# Goal 1: Providing the Most Efficient Use of Water

---

# Exempt Wells Registered with the District

Use	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Agriculture	1	4	5	13	8	1	1	1	2	3	0	2	1	8	50
Commercial	6	3	1	7	6	6	3	2	2	7	2	6	7	3	61
Domestic	61	75	161	204	133	142	158	207	142	177	223	190	162	169	2204
Golf Course	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Industrial	5	0	0	0	0	0	1	0	0	0	2	1	0	1	10
Irrigation	2	10	41	28	28	19	21	17	5	5	8	14	11	13	222
Livestock	27	16	27	14	15	4	11	9	6	17	9	15	12	5	187
Monitoring	8	0	0	0	0	0	1	0	0	0	1	0	0	0	10
Oil / Gas	4	0	4	1	1	0	0	0	0	0	1	0	0	0	11
Other	5	5	12	9	14	6	7	9	8	4	3	1	0	0	83
Public Water	32	4	1	0	0	0	2	1	0	0	2	0	0	2	44
Surface Impoundments	12	6	15	10	2	5	12	15	6	11	11	10	16	17	148
<b>Total</b>	<b>164</b>	<b>123</b>	<b>268</b>	<b>286</b>	<b>207</b>	<b>183</b>	<b>217</b>	<b>261</b>	<b>171</b>	<b>224</b>	<b>262</b>	<b>239</b>	<b>209</b>	<b>218</b>	<b>3032</b>

# Non-Exempt Wells Registered with the District

Use	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Agriculture	3	10	3	0	1	0	0	7	0	0	3	2	6	3	26
Commercial	3	0	1	1	0	2	2	1	1	0	0	0	5	0	10
Domestic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Golf Course	22	12	2	0	0	0	0	0	0	0	0	0	0	1	37
Industrial	12	1	0	1	1	0	3	1	0	0	2	1	1	1	26
Irrigation	4	13	10	10	12	11	21	23	8	10	6	13	4	6	127
Livestock	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
Monitoring	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Oil / Gas	44	6	9	0	1	0	0	2	0	0	0	0	0	0	66
Other	0	0	1	0	0	0	0	1	0	3	1	2	0	0	9
Public Water	235	20	8	3	4	5	5	8	11	5	7	6	19	21	318
Surface Impoundments	18	7	5	3	9	9	10	16	3	6	5	4	0	7	100
<b>Total</b>	<b>342</b>	<b>69</b>	<b>39</b>	<b>19</b>	<b>28</b>	<b>28</b>	<b>41</b>	<b>59</b>	<b>23</b>	<b>24</b>	<b>24</b>	<b>28</b>	<b>35</b>	<b>39</b>	<b>798</b>

# Wells Registered with the District

Use	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Agriculture	4	14	8	13	9	1	1	8	2	3	3	4	7	11	61
Commercial	9	3	2	8	6	8	5	3	3	7	2	6	12	3	52
Domestic	61	75	161	204	133	142	158	207	142	177	223	190	162	169	1598
Golf Course	23	12	3	0	0	0	0	0	0	0	0	0	0	1	38
Industrial	17	1	0	1	1	0	4	1	0	0	4	2	1	2	30
Irrigation	6	23	51	38	40	30	42	40	13	15	14	27	15	19	296
Livestock	27	16	27	15	15	5	11	9	6	17	9	15	12	5	152
Monitoring	9	0	0	0	0	0	1	0	0	0	1	0	0	0	4
Oil / Gas	48	6	13	1	2	0	0	2	0	0	1	0	0	0	72
Other	5	5	13	9	14	6	7	10	8	7	4	3	0	0	21
Public Water	267	24	9	3	4	5	7	9	11	5	9	6	19	23	332
Surface Impoundments	30	13	20	13	11	14	22	31	9	17	16	14	16	24	193
<b>Total</b>	<b>506</b>	<b>192</b>	<b>307</b>	<b>305</b>	<b>235</b>	<b>211</b>	<b>258</b>	<b>320</b>	<b>194</b>	<b>248</b>	<b>286</b>	<b>267</b>	<b>244</b>	<b>257</b>	<b>3830</b>

# Well Inspections in 2024

Month	Collin County	Cooke County	Denton County	Total
January	1	28	4	33
February	11	6	28	45
March	4	8	23	35
April	5	12	56	73
May	5	4	33	42
June	4	5	13	22
July	9	2	18	29
August	1	7	26	34
September	2	21	14	37
October	3	8	6	17
November	1	9	27	37
December	0	5	5	10
<b>Total</b>	<b>46</b>	<b>115</b>	<b>253</b>	<b>414</b>

# Wells Measured for the District's Monitoring Program

<b>Year</b>	<b>Collin County</b>	<b>Cooke County</b>	<b>Denton County</b>	<b>Total</b>
2010	10	15	20	45
2011	12	24	14	50
2012	10	19	21	50
2013	0	6	0	6
2014	9	21	16	46
2015	16	34	29	79
2016	8	11	14	33
2017	6	22	11	39
2018	0	10	3	13
2019	0	2	3	5
2020	7	25	17	49
2021	9	23	22	54
2022	10	23	18	51
2023	12	23	21	56
2024	12	23	22	57



# Percentage of Registered Non-Exempt Wells Meeting Reporting Requirements

Year	Percentage Meeting Reporting Requirements
2012	85%
2013	89%
2014	95%
2015	96%
2016	92%
2017	82%
2018	93%
2019	93%
2020	92%
2021	89%
2022	91%
2023	92%
2024	93%

# Late Fees and Payments

	Late Fees	Late Payments
Number of Occurrences	201	221
Percentage of Accounts with at Least 1 Occurrence	40%	20%
Percentage of Late Readings/Payments	6%	18%
Amount Paid	\$36,600	\$29,472

# Percentage of Registered Non-Exempt Wells Inspected Annually

Year	Percentage of Wells Inspected
2012	74%
2013	6%
2014	21%
2015	24%
2016	13%
2017	37%
2018	51%
2019	16%
2020	16%
2021	13%
2022	42%
2023	20%
2024	28%

# Non-Exempt Production by County (All Production is in Acre-Feet)

<b>Year</b>	<b>Collin County</b>	<b>Cooke County</b>	<b>Denton County</b>
2012	5,326	6,319	14,885
2013	4,650	5,130	13,422
2014	4,311	4,829	13,712
2015	5,263	4,323	13,308
2016	4,935	4,279	11,275
2017	4,925	4,365	12,958
2018	5,469	4,499	14,505
2019	5,950	4,574	13,602
2020	5,929	5,160	14,367
2021	6,027	5,059	14,900
2022	7,468	4,944	20,004
2023	7,637	5,081	23,671
2024	10,011	5,102	21,096
<b>Average</b>	<b>5,992</b>	<b>4,897</b>	<b>15,516</b>

# Non-Exempt Production by Aquifer (All Production is in Acre-Feet)

Year	River Alluvial	Trinity (Antlers)	Trinity (Paluxy)	Trinity (Twin Mountains)	Washita Group	Woodbine
2012	0	16,534	1,845	4,027	0	4,120
2013	0	14,447	1,738	3,324	24	3,367
2014	0	14,264	1,652	3,125	17	3,795
2015	0	13,440	1,840	3,702	13	3,898
2016	0	12,338	1,433	2,989	16	3,711
2017	30	12,820	1,652	3,262	8	4,477
2018	49	14,336	1,680	4,024	4	4,380
2019	54	13,205	1,995	3,619	0	4,976
2020	64	14,314	2,007	3,438	1	5,361
2021	50	15,603	1,777	3,467	0	4,825
2022	35	18,925	2,210	4,608	11	6,627
2023	48	22,364	2,185	5,043	15	6,735
2024	53	21,032	3,262	4,430	15	7,417
<b>Average</b>	<b>29</b>	<b>15,663</b>	<b>1,944</b>	<b>3,774</b>	<b>10</b>	<b>4,899</b>

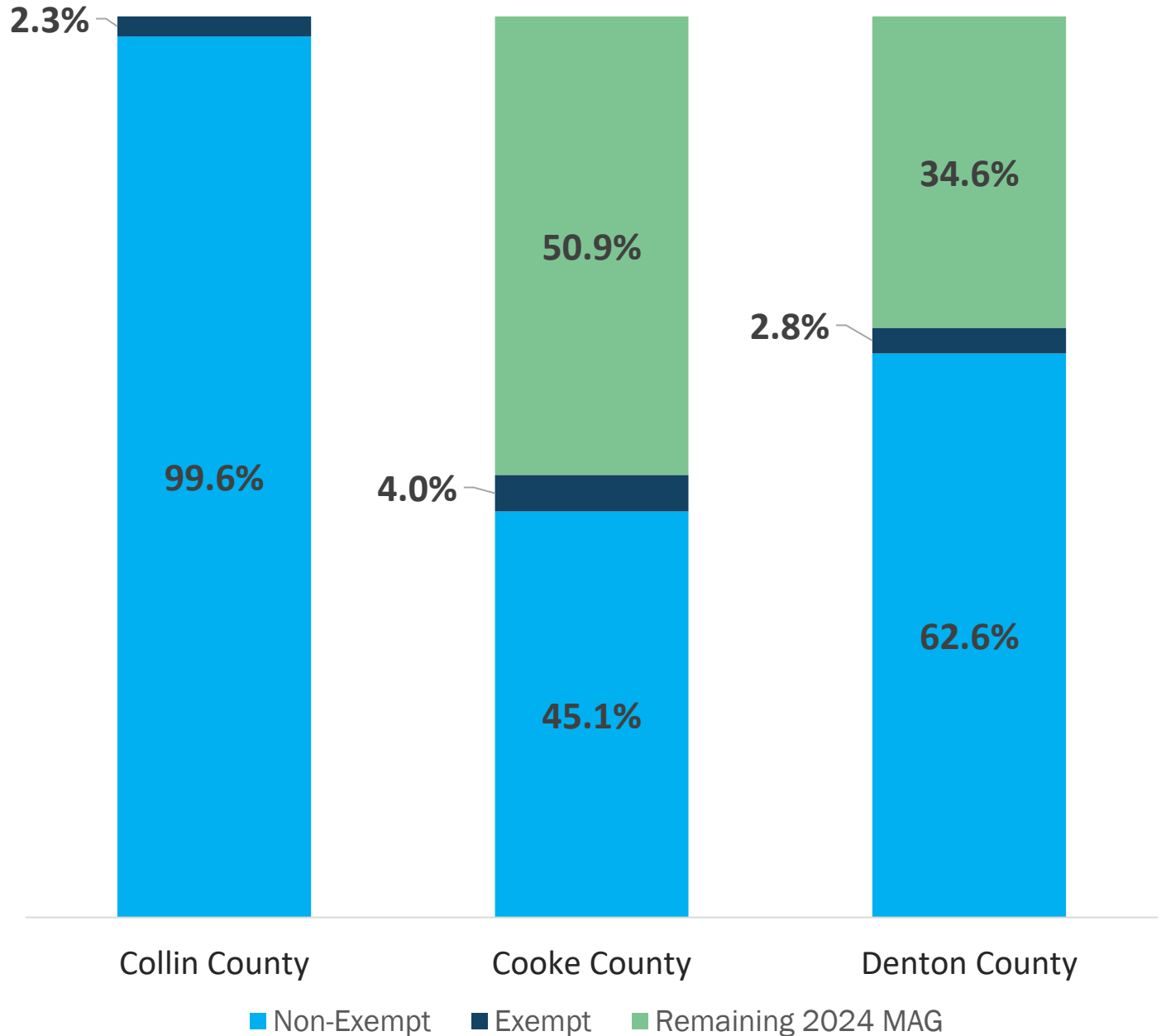
# Non-Exempt Production by Use (All Production is in Acre-Feet)

Year	Public Water	Golf Course	Agriculture	Irrigation	Surface Impoundments	Oil / Gas	Industrial	Livestock	Commercial	Other
<b>2012</b>	16,889	3,043	1,471	637	1,128	2,200	288	749	122	0
<b>2013</b>	15,105	2,672	1,241	607	1,165	1,289	212	608	2	0
<b>2014</b>	15,206	2,468	1,614	684	781	1,619	198	189	92	1
<b>2015</b>	15,908	2,318	1,302	1,188	618	1,084	226	50	198	1
<b>2016</b>	15,845	1,661	945	995	607	204	191	0	37	2
<b>2017</b>	16,240	1,794	1,328	1,150	947	399	294	7	88	3
<b>2018</b>	17,388	2,195	1,033	1,457	942	1,057	263	12	124	3
<b>2019</b>	16,538	2,252	1,390	1,841	1,165	283	246	2	132	1
<b>2020</b>	18,202	1,608	1,749	1,995	1,007	248	221	6	147	1
<b>2021</b>	18,814	1,673	1,053	1,855	1,104	797	273	5	129	20
<b>2022</b>	20,904	2,416	2,140	3,020	1,715	1,667	289	4	90	83
<b>2023</b>	23,046	2,748	1,616	3,173	4,478	678	345	6	122	149
<b>2024</b>	24,918	3,311	1,456	3,747	1,661	536	343	2	139	69
<b>Average</b>	<b>18,077</b>	<b>2,320</b>	<b>1,411</b>	<b>1,719</b>	<b>1,332</b>	<b>928</b>	<b>261</b>	<b>126</b>	<b>109</b>	<b>26</b>

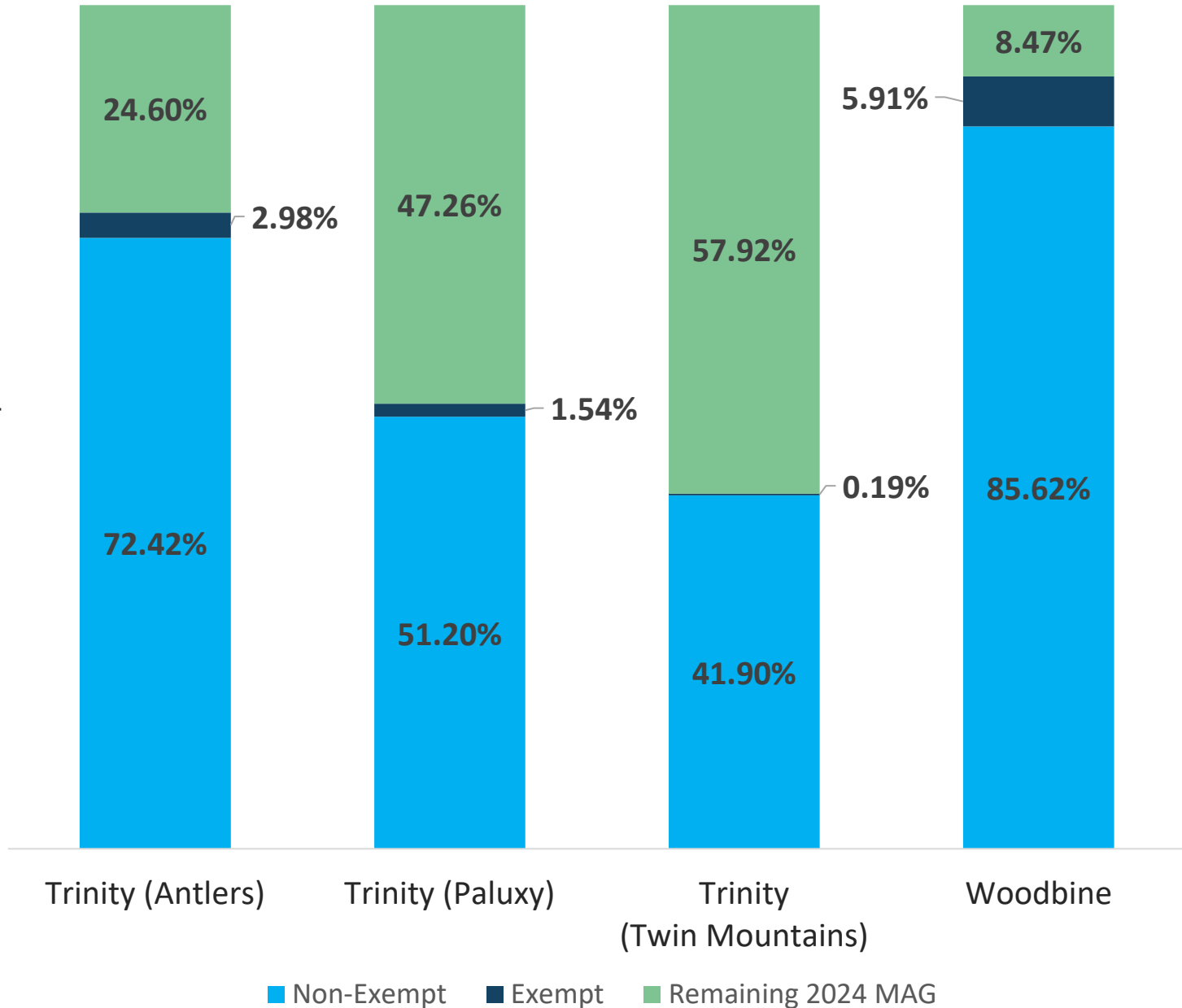
# Estimated Exempt Production (All Production is in Acre-Feet)

Use	Active Wells	Estimated Production (Ac-ft)	3x Estimated Production (Ac-ft)	Methodology
Agriculture	50	114	343	Average time pumping per day of 2 hours
Commercial	61	10	31	Assumed average consumption is 150 gallons per day
Domestic Use	2204	370	1,111	Assumed average consumption is 150 gallons per day
Industrial/Manufacturing	10	23	69	Average time pumping per day of 2 hours
Irrigation	222	507	1,522	Average time pumping per day of 2 hours
Livestock	187	427	1,282	Average time pumping per day of 2 hours
Oil/Gas	11	25	75	Average time pumping per day of 2 hours
Other	83	190	569	Average time pumping per day of 2 hours
Pond/Surface Impoundments	148	338	1,015	Average time pumping per day of 2 hours
Public Water System	44	302	905	Average time pumping per day of 6 hours
<b>Total</b>	<b>3,020</b>	<b>2,306</b>	<b>6,922</b>	

# Average Production Compared to 2024 MAG by County



# Average Production Compared to 2024 MAG by Aquifer



# Permits Approved by the Board

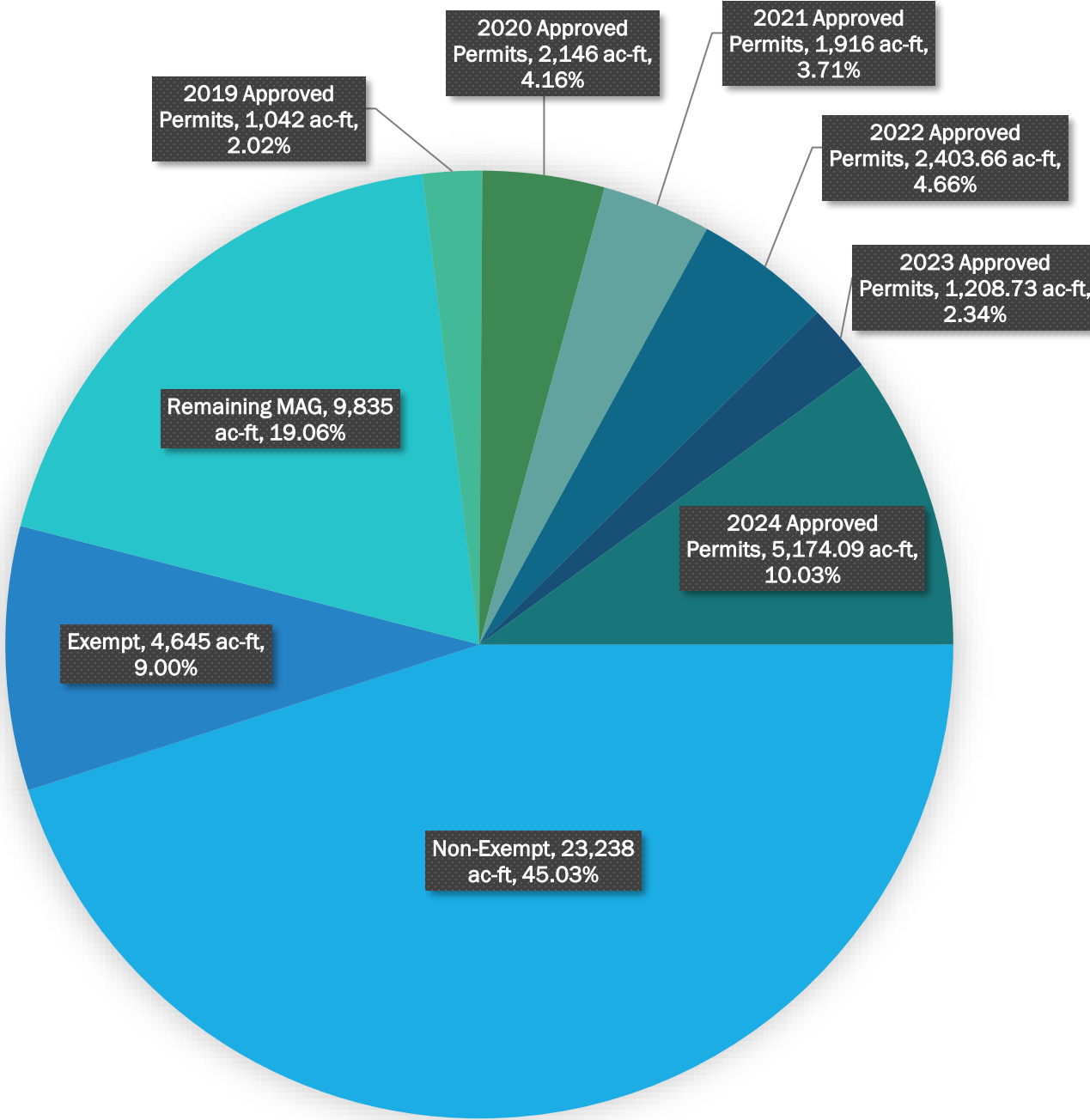
	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Total</b>
New Permits	13	20	22	31	18	29	<b>133</b>
Permit Amendments	0	2	5	1	0	0	<b>8</b>
Total Permits	13	22	27	32	18	29	<b>141</b>
# of Wells	21	41	79	38	29	61	<b>269</b>
Requested Vol (gal)	339,621,618	696,214,100	2,061,546,231	783,233,692	393,866,795	1,685,981,953	<b>5,960,464,389</b>

<b>Aquifer</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Total</b>
Trinity (Antlers)	4	10	8	11	12	17	<b>62</b>
Trinity (Paluxy)	4	2	6	6	2	3	<b>23</b>
Trinity (Twin Mountains)	2	0	1	3	–	–	<b>6</b>
Woodbine	3	8	7	12	4	9	<b>43</b>
<b>Total</b>	<b>13</b>	<b>20</b>	<b>22</b>	<b>32</b>	<b>18</b>	<b>29</b>	<b>134</b>

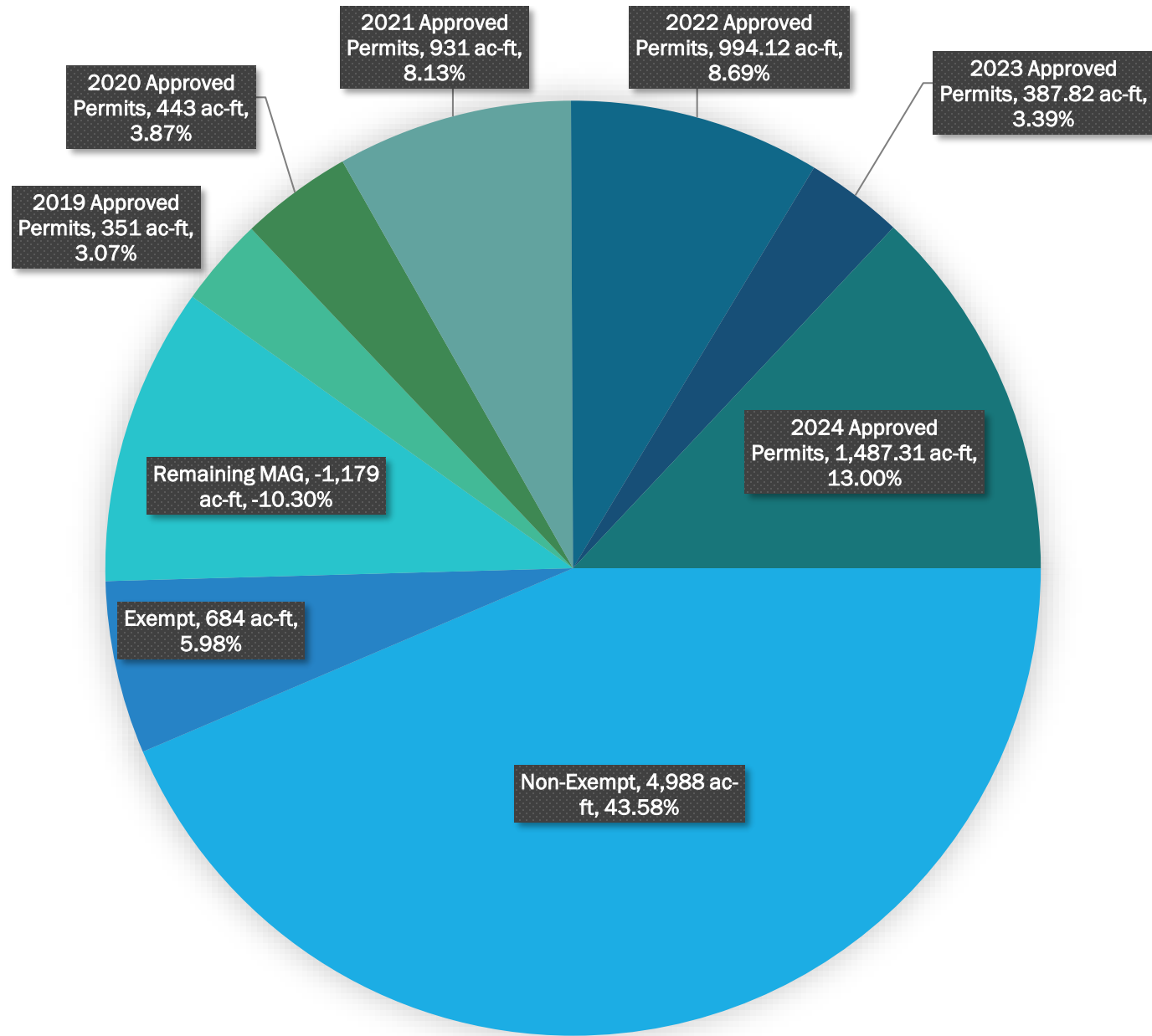
# Permits Approved by the Board

Use	2019	2020	2021	2022	2023	2024	Total
Agriculture Irrigation	0	0	2	1	1	0	4
Agriculture Irrigation and Surface Impoundment(s)	0	1	1	1	0	1	4
Concrete Production	1	0	1	3	1	3	9
Construction	0	2	1	3	0	2	8
Fire Suppression System	0	1	1	0	0	0	2
Landscape Irrigation	4	5	1	5	3	2	20
Landscape Irrigation and Surface Impoundment(s)	3	6	7	13	10	4	43
Oil/Gas Production, Surface Impoundment(s), and Livestock	0	0	1	0	0	0	1
Public Water System	5	4	6	5	1	13	34
Surface Impoundment(s)	0	1	1	0	0	2	4
<b>Total</b>	<b>13</b>	<b>20</b>	<b>22</b>	<b>31</b>	<b>16</b>	<b>27</b>	<b>129</b>

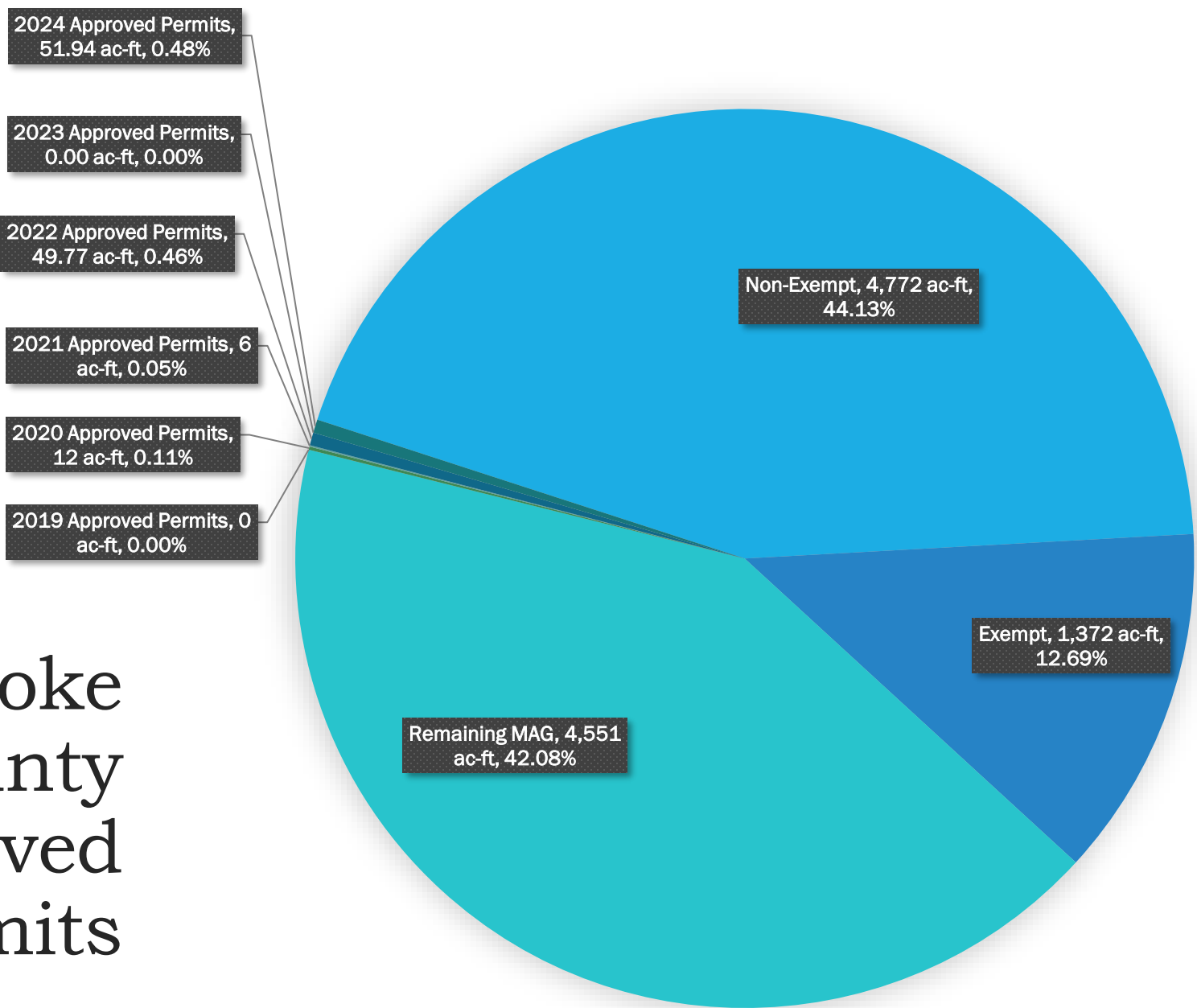
# Districtwide Approved Permits



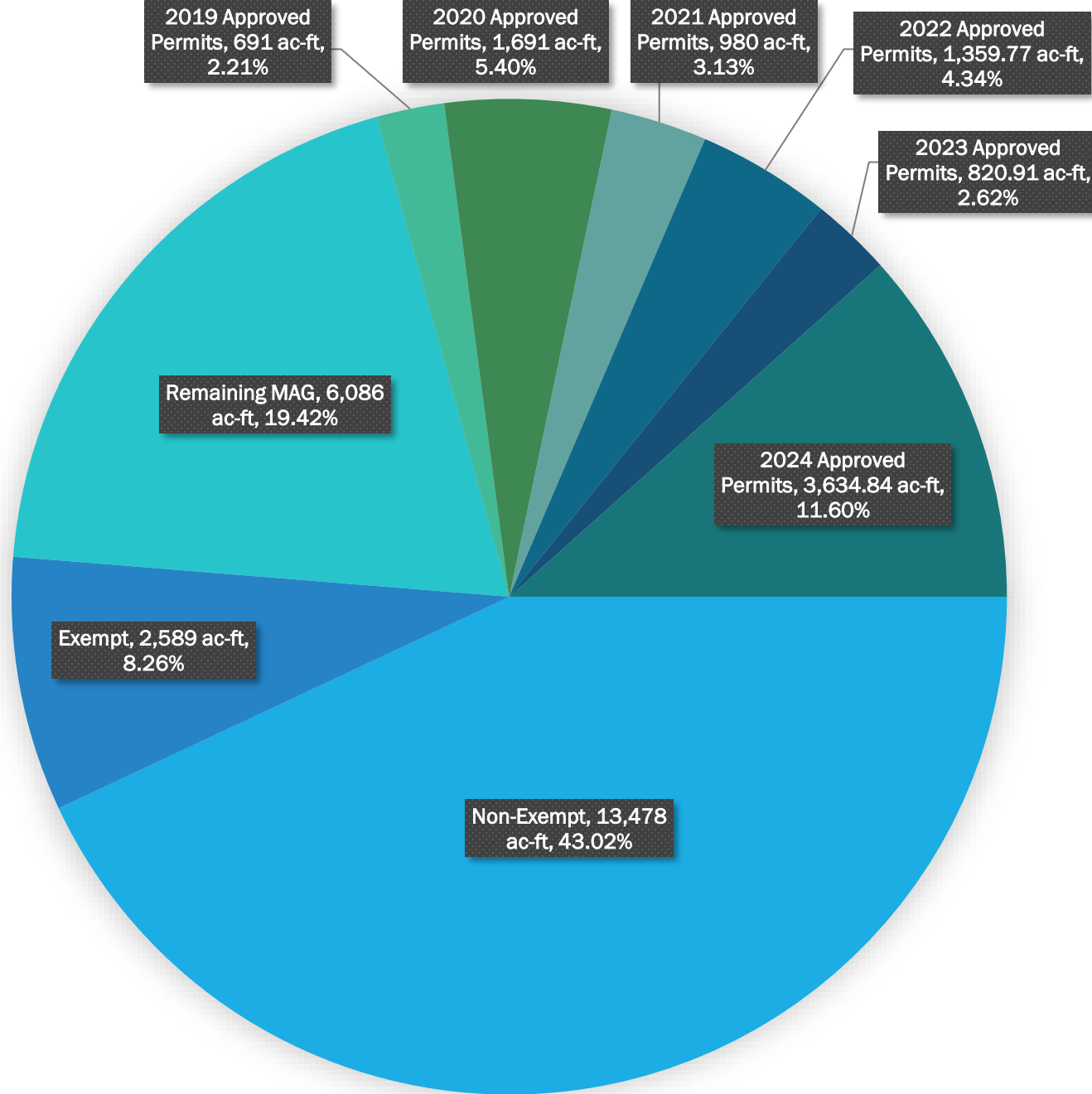
# Collin County Approved Permits



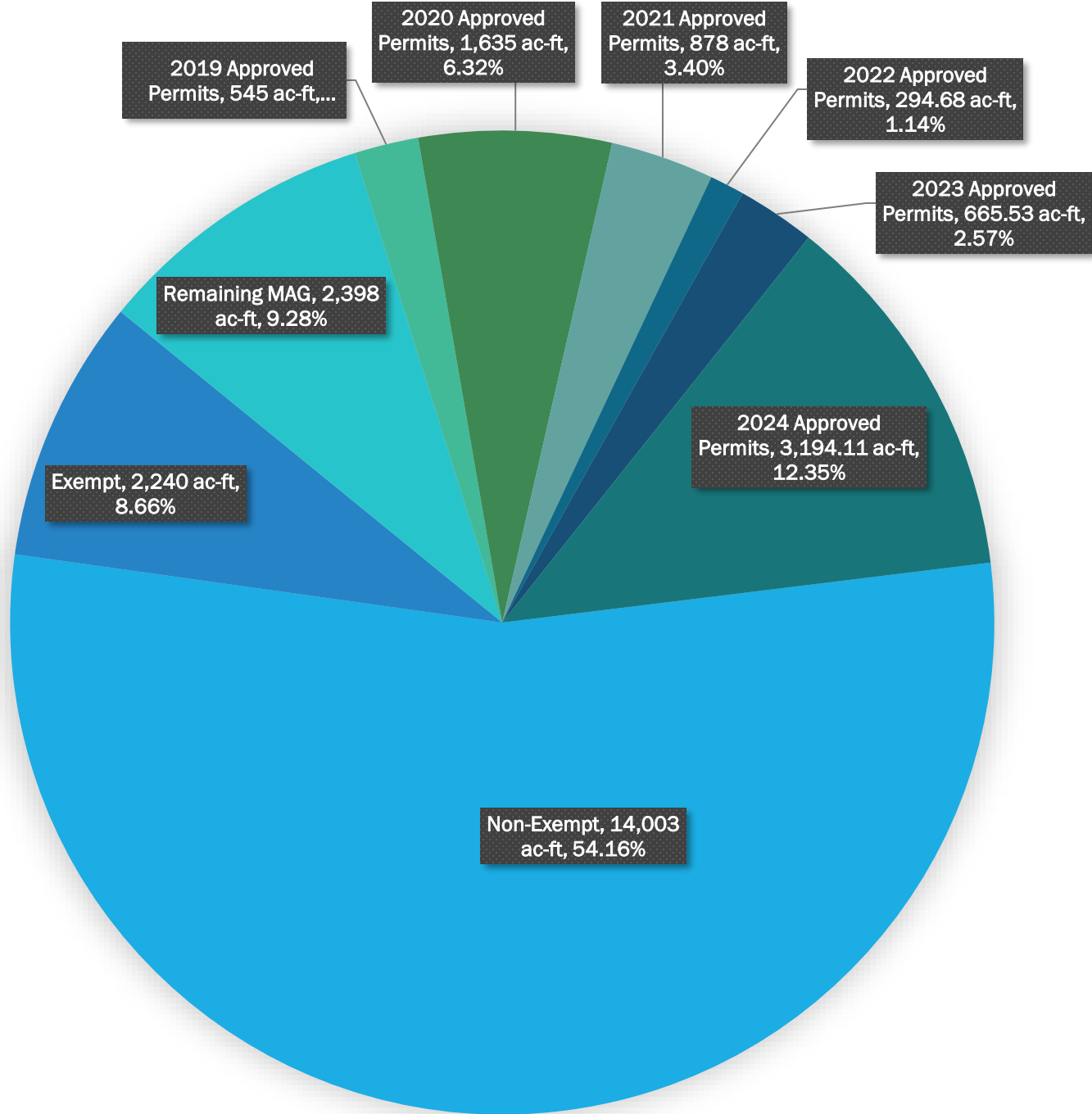
# Cooke County Approved Permits



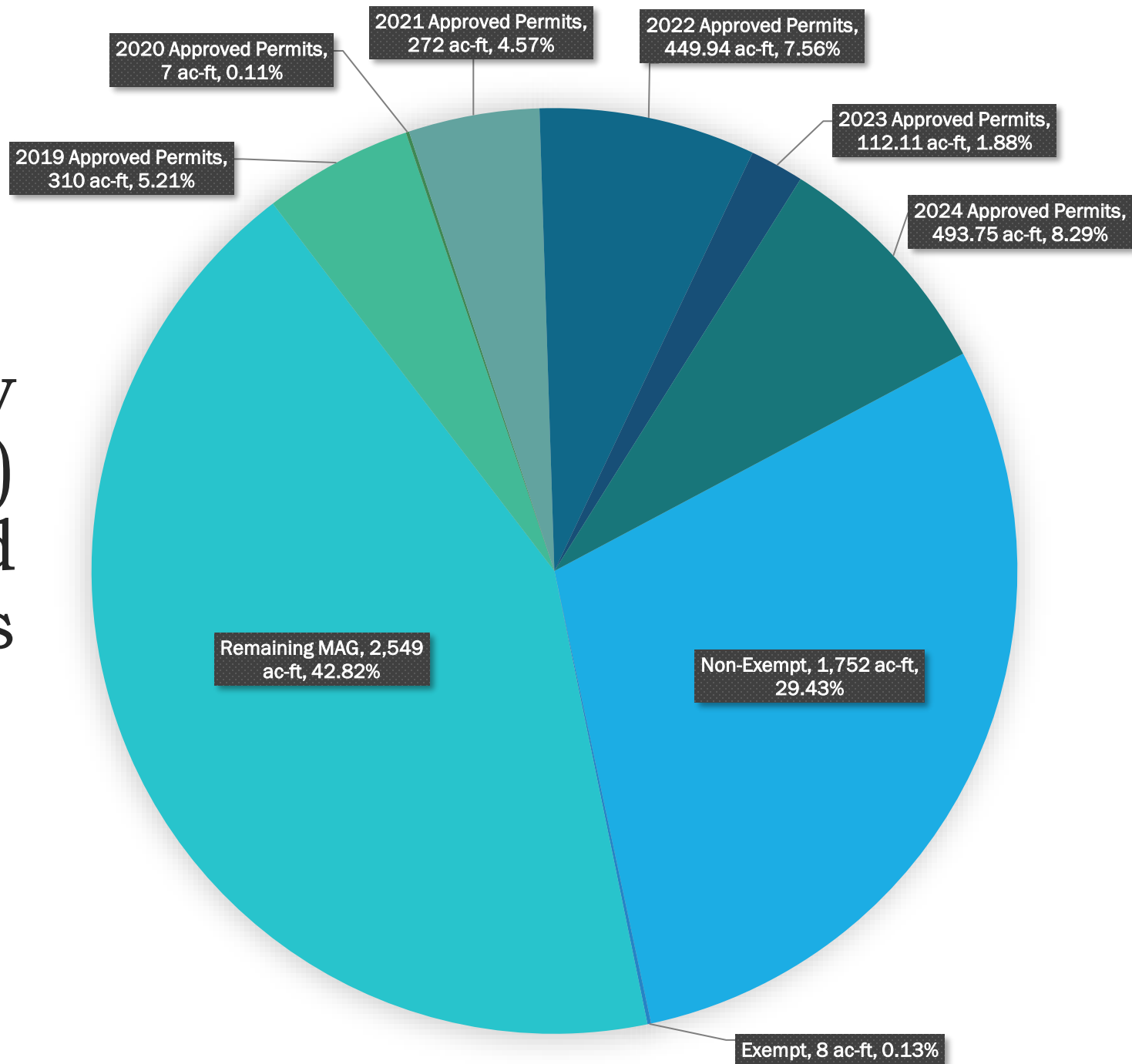
# Denton County Approved Permits



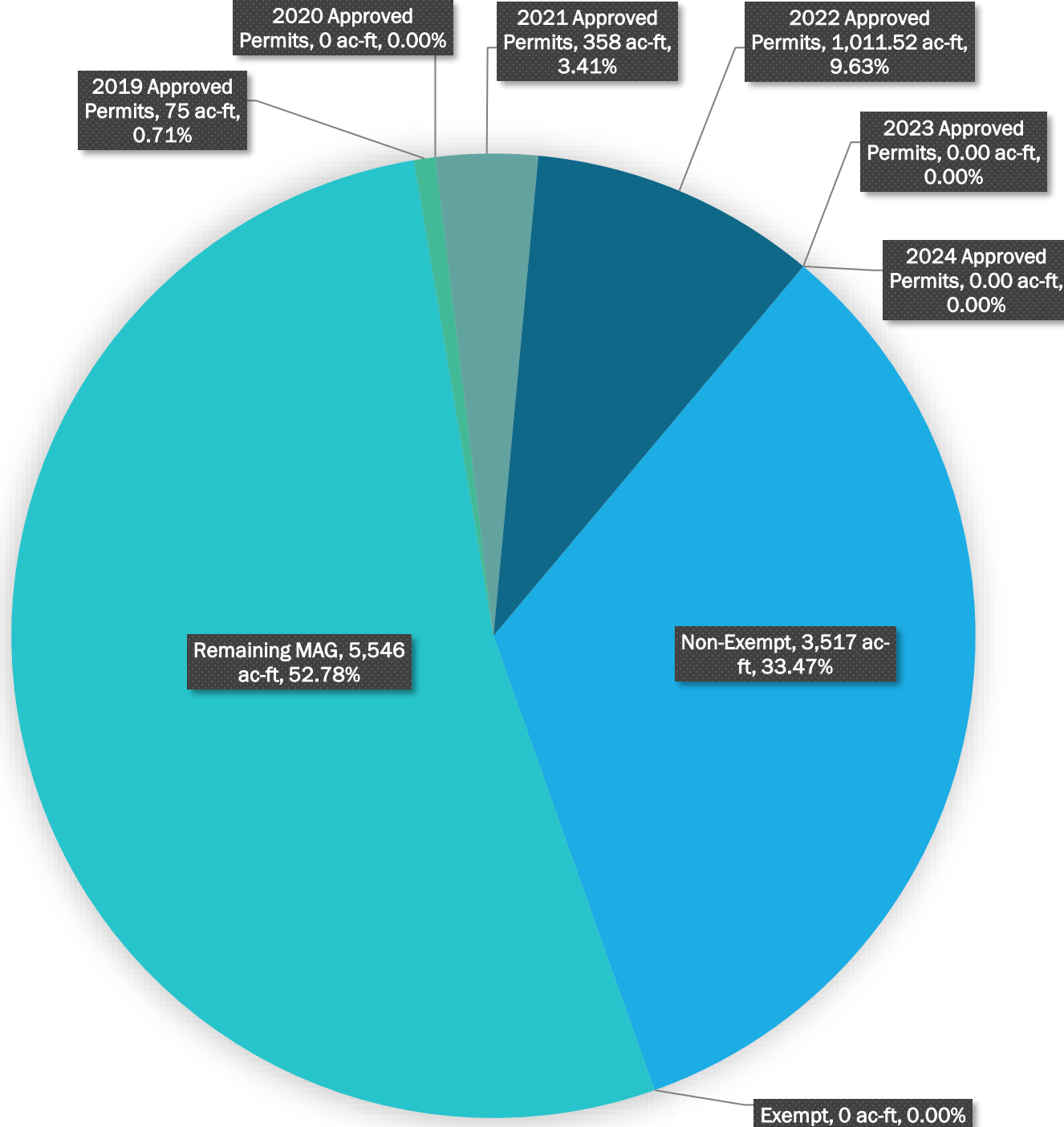
# Trinity (Antlers) Approved Permits



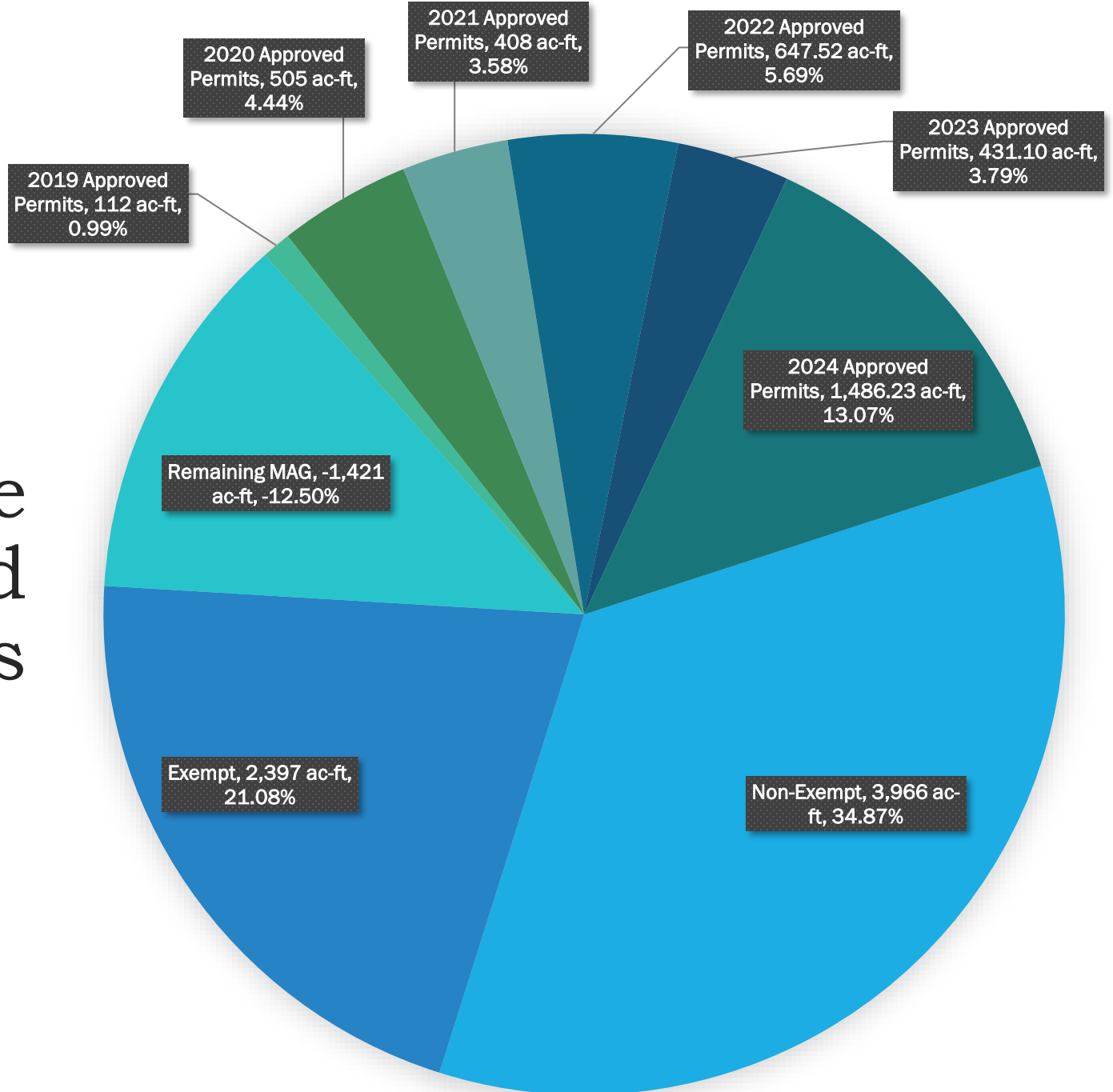
# Trinity (Paluxy) Approved Permits



# Trinity (Twin Mtns) Approved Permits

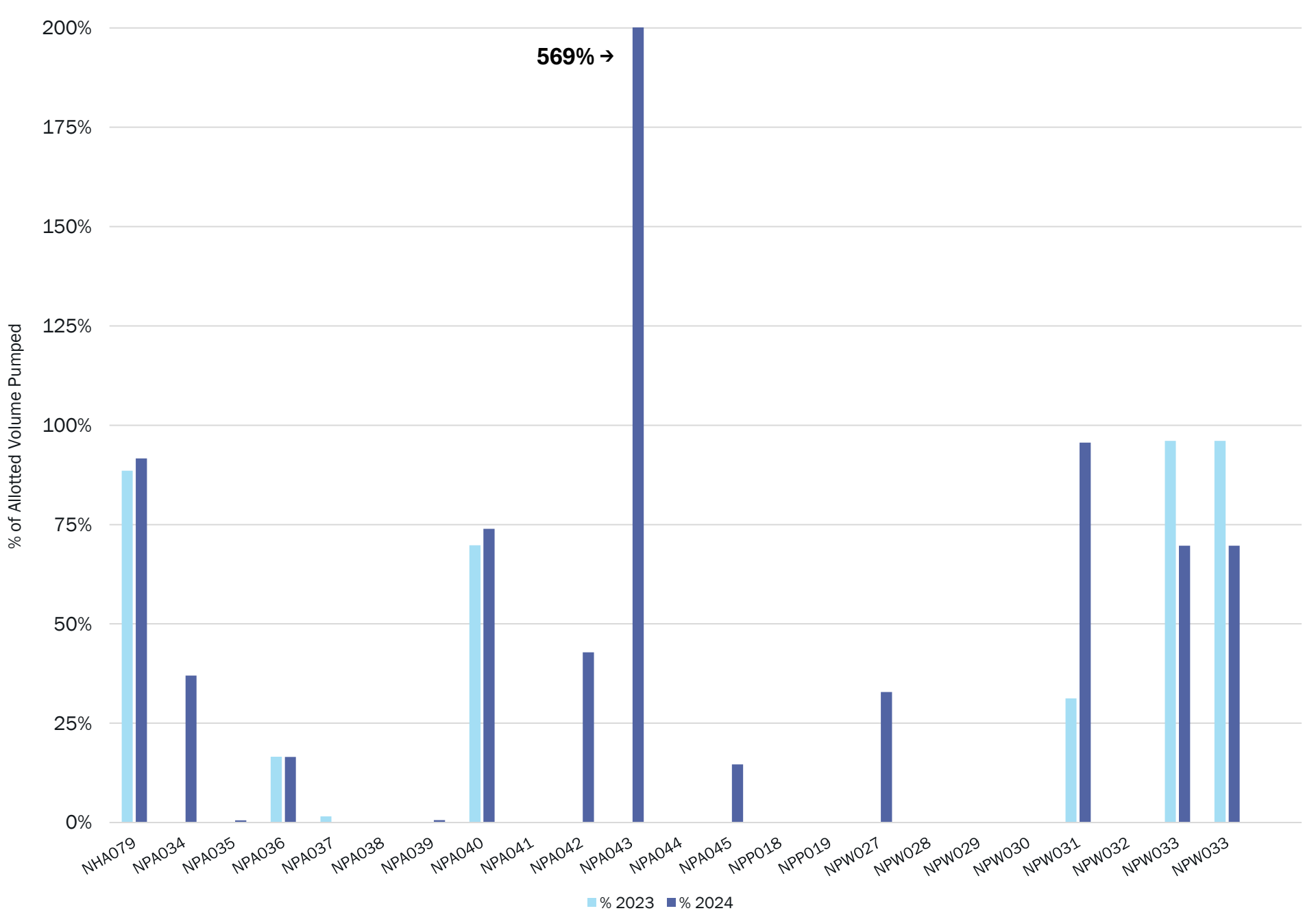


# Woodbine Approved Permits

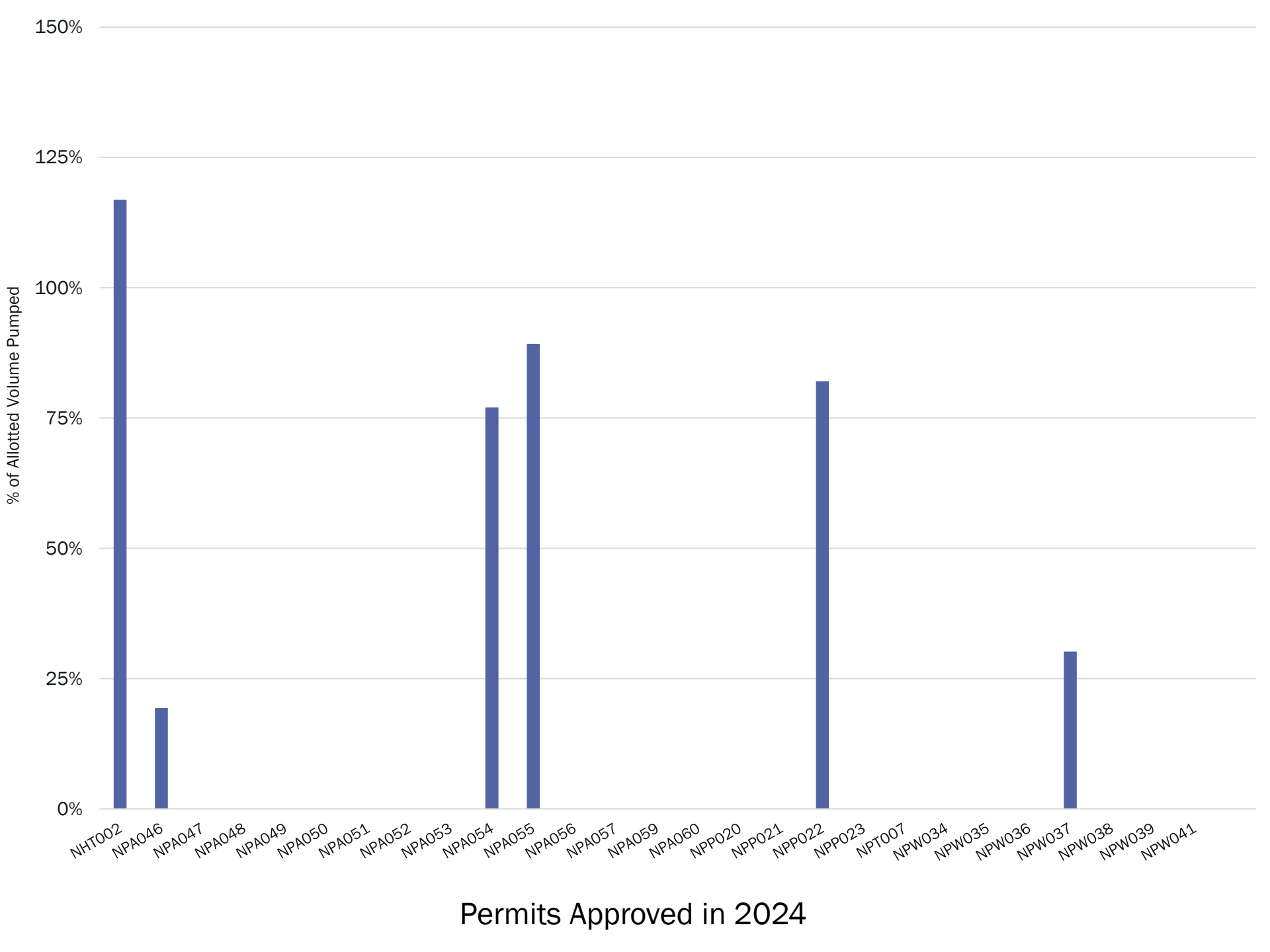


# Permitted Amounts vs Actual Production

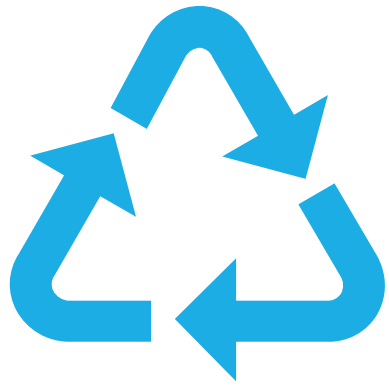
	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Approved Permits as of January 1	13	33	56	82	105
Permitted Amount (gal/yr)	342,247,618	1,321,894,918	2,867,721,869	3,533,534,273	4,985,308,352
Annual Production (gal/yr)	90,804,741	489,524,953	1,374,593,939	1,679,097,433	3,180,807,627
Percentage	26.5%	37.0%	47.9%	47.5%	63.8%
Over Production (gal)	7,882,000	9,268,000	16,386,229	103,082,620	180,861,583



## Permits Approved in 2023



Permits Approved in 2024



# Goal 2: Controlling and Preventing Waste of Groundwater

---

# Total Fees Paid and Groundwater Usage Based on the Fees Paid

<b>Year</b>	<b>Total Fees Paid</b>	<b>Total Groundwater Used (gallons)</b>	<b>Total Groundwater Used (ac-ft)</b>
2015	\$739,685	7,396,850,000	<b>22,700</b>
2016	\$625,978	6,259,780,000	<b>19,211</b>
2017	\$625,969	6,259,690,000	<b>19,210</b>
2018	\$792,081	7,290,180,000	<b>22,373</b>
2019	\$713,307	7,133,070,000	<b>21,891</b>
2020	\$714,995	7,149,950,000	<b>21,942</b>
2021	\$826,874	8,268,740,000	<b>25,376</b>
2022	\$1,061,373	10,613,730,000	<b>32,572</b>
2023	\$1,020,753	10,207,530,000	<b>31,326</b>
2024	\$1,112,706	11,127,060,000	<b>34,148</b>
<b>Average</b>	<b>\$823,372</b>	<b>8,233,720,000</b>	<b>25,268</b>

# Violations and Investigations of Potential Waste of Groundwater

- 3 Owners/Drillers accounting for 3 violations
- No reports of potential waste

# Goal 3: Controlling and Preventing Subsidence

---



Due to the geology of the Northern Trinity/Woodbine Aquifers in the District, problems resulting from water level declines causing subsidence are not technically feasible and as such, a goal addressing subsidence is not applicable. The District's Hydrogeologist presented subsidence information to the Board of Directors in 2019.

---



# Goal 4: Addressing Conjunctive Surface Water Management Issues

---

# Region C and GMA 8

---

- Region C Water Planning Group held 4 meetings in 2024, on April 29<sup>th</sup>, September 30<sup>th</sup>, October 16<sup>th</sup>, and October 28<sup>th</sup>. General Manager Paul Sigle attended the meetings.
- Groundwater Management Area 8 (GMA 8) held 3 meetings in 2024, on May 15<sup>th</sup>, September 5<sup>th</sup>, and October 31<sup>st</sup>. General Manager Paul Sigle, Board Members Ronny Young and Greg Peters, and District Staff attended the meetings.

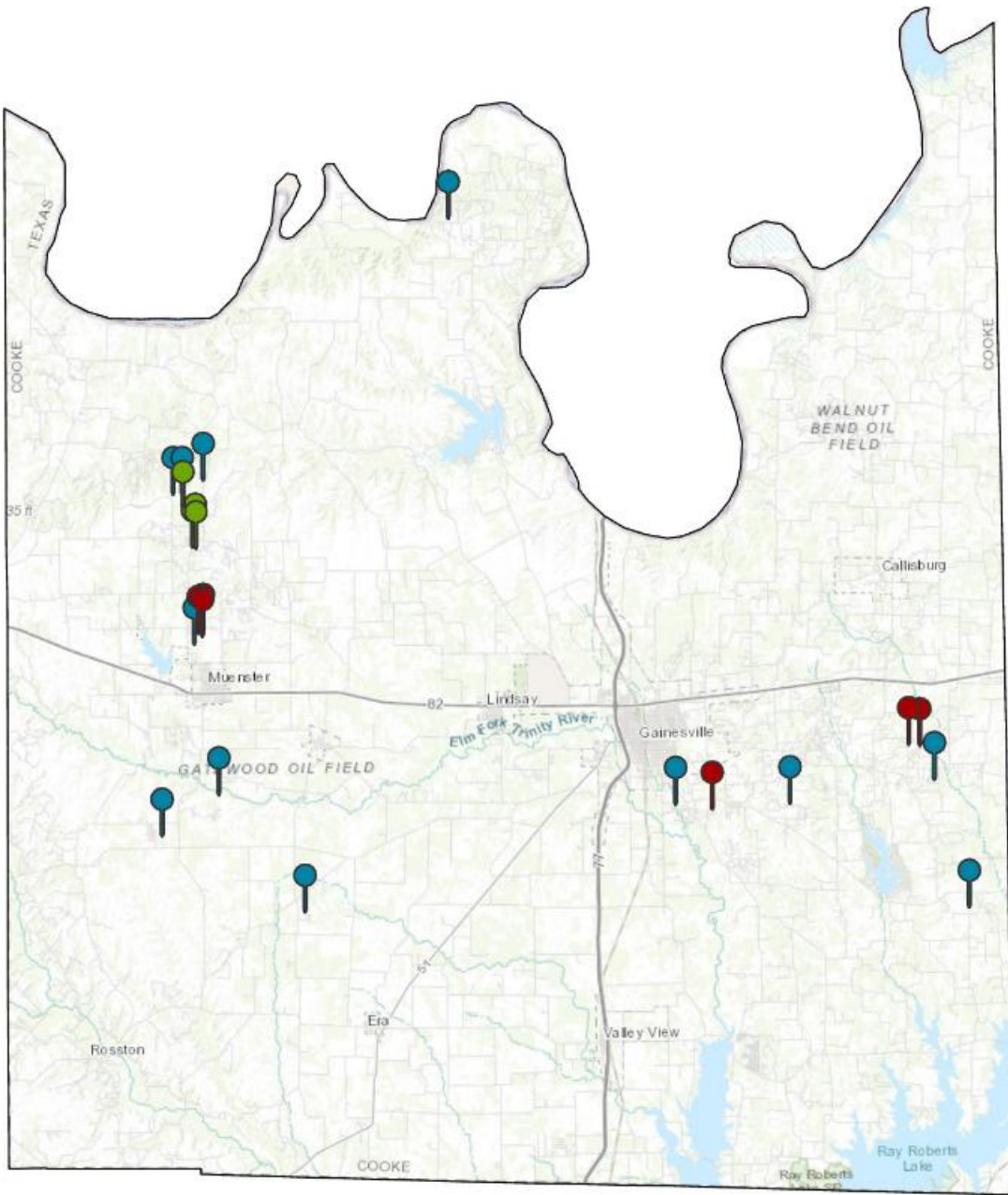
# Goal 5: Addressing Natural Resource Issues

---

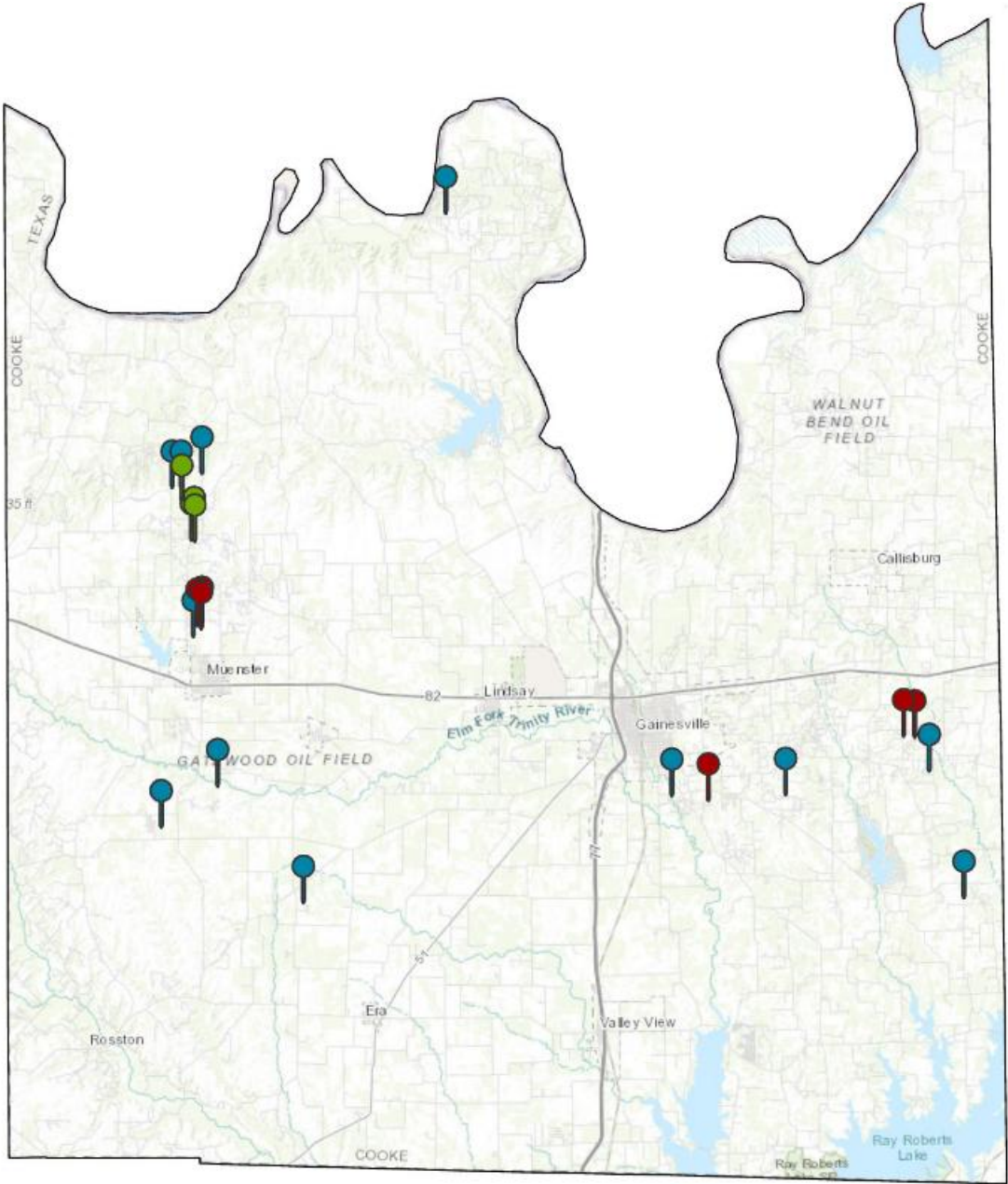


# Reported Injection Wells

- 2022: 12 Applications
- 2023: 4 Applications
- 2024: 7 Applications

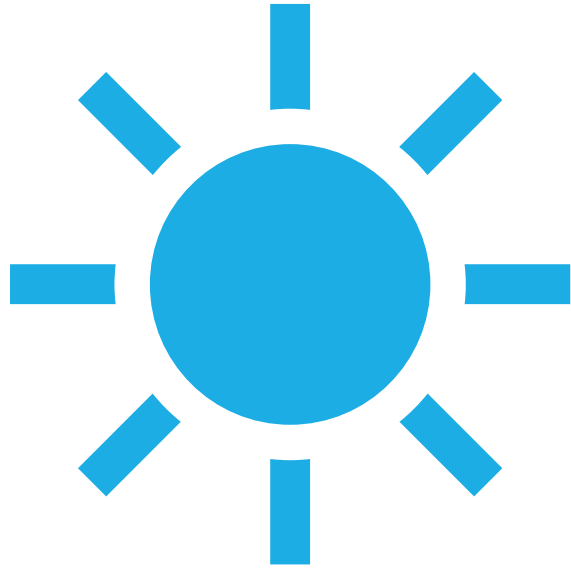


# Reported Injection Wells (2024)



- 1 Application was protested
- 0 Applications were dismissed
- 0 Applications were withdrawn
- 7 Applications were granted

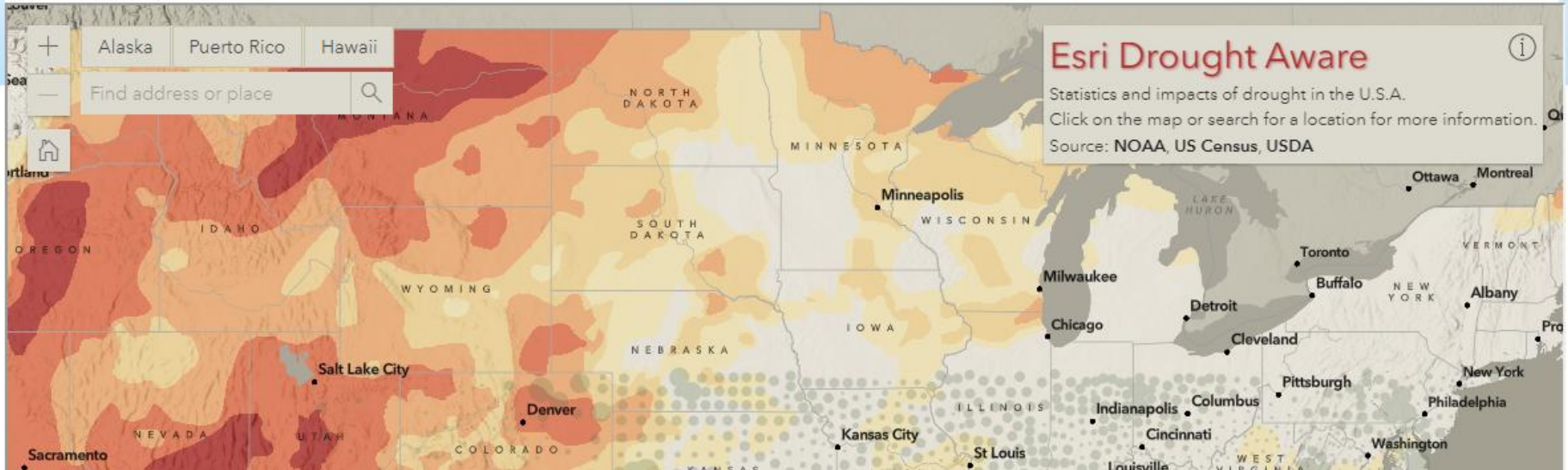




# Goal 6: Addressing Drought Conditions

---

## Drought Information



# Drought Information

Goal 7: Addressing  
Conservation,  
Recharge  
Enhancement,  
Rainwater Harvesting,  
Precipitation  
Enhancement, and  
Brush Control

---



## Conservation

### Conservation Tips:

The NTGCD would like to encourage residents to conserve water. During fall and winter months, lawns in our region require much less irrigation as the grasses go dormant.

How much water do you use at your home? Estimate your daily and annual water use and learn methods to conserve water at the [Home Water Works site](#).

### Water Conservation Links

[Home Water Conservation Guide](#)

[Water IQ by the Texas Water Development Board](#)

[Drought Preparedness Council Situation Report](#)

### Brush Control Links

[State Water Supply Enhancement Plan \(January 2017\)](#)

[Texas State Soil and Water Conservation Board](#)

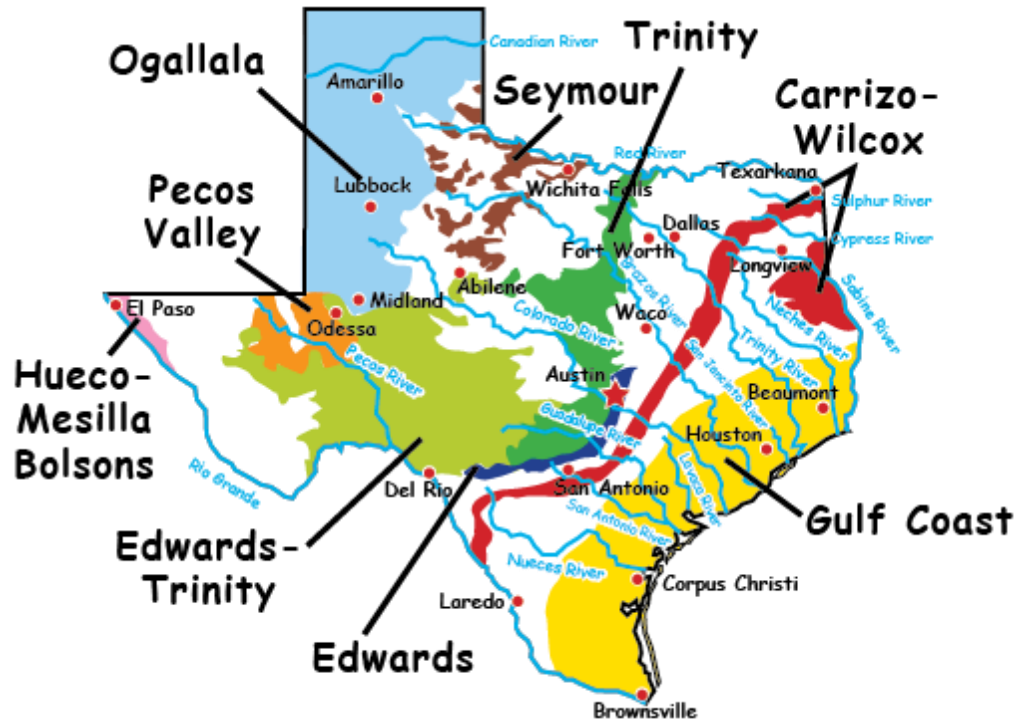
[AgriLife Extension Texas A&M System Brush Control Program](#)

### Rainwater Harvesting Links

[TWDB Rainwater Harvesting Information](#)

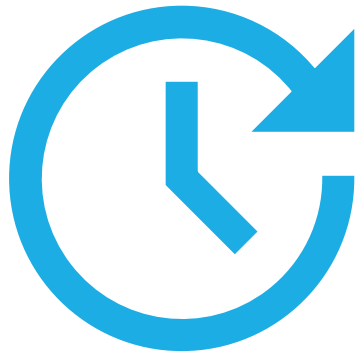
# Conservation Links of the District Website

# MAJOR RIVERS



## Major Rivers Curriculum

---



# Goal 8: Achieving Desired Future Conditions of Groundwater Resources

---

- Summary
- Woodbine Well Analysis
- Woodbine Spatial Analysis
- Paluxy Well Analysis
- Paluxy Spatial Analysis
- Glen Rose Well Analysis
- Glen Rose Spatial Analysis
- Antlers Well Analysis
- Antlers Spatial Analysis
- Twin Mountains Well Analysis
- Twin Mountains Spatial Analysis

Select County or entire GCD

GCD

### DFC Summary for Slope Analysis

Aquifer	County	Adopted DFC (ft of Avg. Drawdown)	DFC Period (Years)	Annual DFC (ft/yr of Avg. Drawdown)	Current Trend (ft/yr of Avg. Drawdown)	Current Status (+ indicates value above DFC/ - indicates value below DFC)
Woodbine	GCD	278	60	-4.63	-0.72	3.91
Paluxy	GCD	671	60	-11.18	-6.38	4.8
Glen Rose	GCD	341	60	-5.68		
Antlers	GCD	290	60	-4.83	-2.78	2.05
Twin Mountains	GCD	569	60	-9.48	-7.11	2.37

### DFC Summary for Spatial Analysis

Aquifer	County	Adopted DFC (ft of Avg. Drawdown)	DFC Period (Years)	Annual DFC (ft/yr of Avg. Drawdown)	Current Trend (ft/yr of Avg. Drawdown)	Current Status (+ indicates value above DFC/ - indicates value below DFC)
Woodbine	GCD	278	60	-4.63	13.11	17.74
Paluxy	GCD	671	60	-11.18	9.98	21.16



# DFC Evaluation Tool

# Slope and Spatial Analysis Comparison

---

<i>Aquifer</i>	<i>County</i>	<i>Slope Analysis Current Status</i>	<i>Spatial Analysis Current Status</i>
<i>Trinity (Antlers)</i>	Collin	—	-30.7
	Cooke	-1.95	-13.39
	Denton	5.14	-17.18
	<b>District</b>	<b>-1.67</b>	<b>-12.98</b>
<i>Trinity (Paluxy)</i>	Collin	-1.28	-1.36
	Denton	-3.94	-13.85
	<b>District</b>	<b>-3.56</b>	<b>-1.38</b>
<i>Trinity (Twin Mountains)</i>	Collin	-10.23	—
	Denton	-4.36	—
	<b>District</b>	<b>-5.53</b>	—
<i>Woodbine</i>	Collin	-2.39	11.88
	Cooke	0.11	5.12
	Denton	-0.38	26.56
	<b>District</b>	<b>-1.51</b>	<b>16.08</b>

# Any Questions?

---

PAUL M. SIGLE, GENERAL MANAGER