



Jesse Martindale  
Sr. Environmental Engineer

March 19, 2024

RECEIVED  
DEC 06 2024  
OKLAHOMA WATER RESOURCES BOARD

Oklahoma Water Resources Board  
3800 N. Classen Boulevard  
Oklahoma City, OK 73118  
Attn: Mr. Matt Cogburn

TXI

Re: Martin Marietta Mill Creek Limestone Quarry Monitoring Report Q4 and Annual 2023

Dear Mr. Cogburn:

Attached please find the Q4 and Annual 2023 Quarterly Monitoring Report for Martin Marietta's Mill Creek Limestone quarry. The report is summarized on the table labeled Appendix C. Supporting data is also included.

MEPS for this facility is 128 acre-feet of groundwater per calendar year per permit 2000-533.

Please call if you have any questions or comments.

Sincerely,

A handwritten signature in blue ink that reads 'Jesse Martindale'.

Jesse Martindale  
Sr. Environmental Engineer

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**ATTACHMENT 1 (Appendix C)**  
**Martin Marietta Mill Creek Limestone 2023**

**Appendix C . Consumptive use of Pitwater**

Q1 2023    Q2 2023    Q3 2023    Q4 2023    2023 Totals

PIT GROUNDWATER VOLUME							
1	Total volume pumped from producing mine pit(s) (AC-FT)		432.7	419.5	502.7	453.9	1808.8
2	Volume of precipitation that falls onto the surface of producing Mine Pits (AC-FT)		0.1	0.1	0.1	0.1	0.3
3	Portion of total precipitation that flows over the land surface that drains into the mine pit water (AC-FT)		121.6	133.8	139.8	154.9	550.1
4	(WATER HELD IN PIT FROM PREVIOUS MONTHS) other non pit waters pumped from the producing mining pit (AC-FT)		0.5	-0.7	1.2	-0.8	0.1
5	add lines 2 through 4		122.2	133.2	141.0	154.2	550.6
6	Pit Groundwater Volume (AC-FT) (line 1 minus Line 5)		310.5	286.3	361.7	299.7	1258.2
DEFINED ELEMENTS OF CONSUMPTIVE USE							
7	Vol. of pit groundwater that is driven off (by drying) the mined material transp. off of the mine site (AC-FT)		0.00	0.00	0.00	0.00	0.0
8	Vol. of pit groundwater that is carried away with the the mined material transp. off of the mine site (AC-FT)		2.10	2.27	2.61	1.90	8.9
9	Vol. of pit groundwater that evaporates from producing mine pits, process ponds and lined ponds (excluding structures used for augmentation) (AC-FT)		0.00	0.00	0.00	0.00	0.0
10	Volume of pit groundwater that is used for other beneficial uses off of the mine site (AC-FT) (includes on-site dust control)		9.25	7.45	21.99	5.94	44.6
11	DEFINED ELEMENTS OF CONSUMPTIVE USE of Pit groundwater (AC-FT) (add lines 7 through 10)		11.34	9.72	24.60	7.84	53.5
PIT GROUNDWATER BALANCE							
12	Lines 6 minus 11		299.19	276.61	337.06	291.88	1204.7
13	Groundwater Augmentation Volume of pit water returned to GW Basin or subbasin. (Troy Recharge AC-FT)	Credits	261.71	301.78	494.29	459.87	1517.6
14	Stream Augmentation volume of pit water discharged to a definite Stream, during flow conditions that are less than or equal to the accepted exceedance level (AC-FT)		0.00	0.00	0.00	0.00	0.0
15	PPT and Runoff Volume of Precipitation and surface runoff into a recharge pit or holding pond (AC-FT)		38.57	39.41	42.67	47.13	167.8
16	Recycled Pit Groundwater - Volume of ground water returned to the mine pit or holding basin (AC-FT)		257.80	237.89	291.25	254.82	1041.8
17	Other Non-Consumptive GW Losses Including pit GW returned to the land surface from which surface runoff flows into a mine pit and other losses (AC-FT)		5.54	0.00	0.00	5.99	11.5
18	add lines 13 through 17		563.62	579.08	828.20	767.81	2738.7
19	OTHER CONSUMPTIVE USE Line 12 minus Line 18		-264.43	-302.47	-491.14	-475.93	-1534.0
TOTAL REPORTED CONSUMPTIVE USE (AC-FT)							
TOTAL NET CONSUMPTIVE USE (AC-FT) Line 11 plus line 19			-253.08	-466.54	-466.54	-468.09	-1654.3



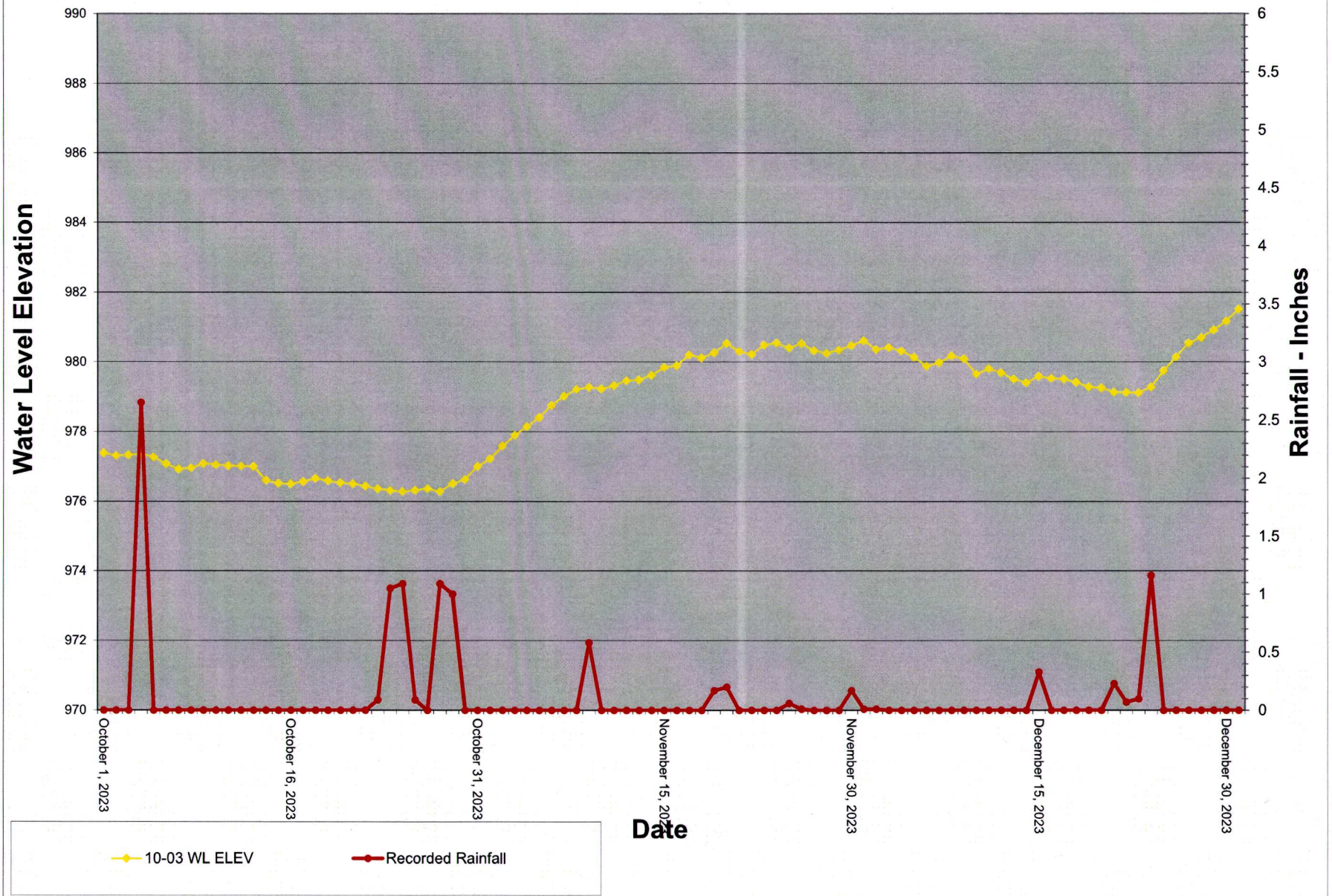
## RESULTS FROM RUNOFF MODELLING

2023		Quarry Monthly Totals				FW Pond Monthly Totals		Re-cycle Recharge (Troy) Monthly Totals		MM-Mill Creek Limestone Totals	
	PPT.	Sump Direct ppt	In-Quarry Runoff	Runoff from beyond Quarry	Quarry Totals	Direct ppt	Runoff	Direct ppt	Runoff	Direct ppt	Runoff
	Inches	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft
January	0.36	0.016	26.076	6.452	32.54	2.77	5.11	5.60	3.50	8.38	41.13
February	0.89	0.029	31.543	5.188	36.76	5.07	2.76	10.25	2.65	15.35	42.14
March	4.39	0.037	45.010	7.370	52.42	6.39	2.63	12.93	3.64	19.36	58.65
<b>Q1 Subtotal</b>	<b>5.64</b>	<b>0.08</b>	<b>102.63</b>	<b>19.01</b>	<b>121.72</b>	<b>14.23</b>	<b>10.50</b>	<b>28.78</b>	<b>9.79</b>	<b>43.09</b>	<b>141.93</b>
April	1.46	0.012	11.261	1.036	12.31	2.13	0.03	4.30	0.45	6.44	12.77
May	2.11	0.018	4.444	0.009	4.47	3.07	0.00	6.22	0.00	9.31	4.46
June	6.48	0.054	92.480	24.537	117.07	9.44	20.22	19.09	9.35	28.58	146.59
<b>Q2 Subtotal</b>	<b>10.05</b>	<b>0.08</b>	<b>108.19</b>	<b>25.58</b>	<b>133.85</b>	<b>14.64</b>	<b>20.25</b>	<b>29.60</b>	<b>9.81</b>	<b>44.33</b>	<b>163.82</b>
July	6.77	0.06	103.81	32.78	136.65	9.86	39.14	19.94	18.97	29.86	194.71
August	0.30	0.00	0.20	0.00	0.20	0.44	0.00	0.88	0.00	1.32	0.20
September	0.96	0.01	3.02	0.10	3.13	1.40	0.00	2.83	0.04	4.23	3.16
<b>Q3 Subtotal</b>	<b>8.03</b>	<b>0.07</b>	<b>107.02</b>	<b>32.89</b>	<b>139.98</b>	<b>11.70</b>	<b>39.14</b>	<b>23.65</b>	<b>19.01</b>	<b>35.42</b>	<b>198.06</b>
October	7.06	0.06	104.78	29.08	133.93	10.28	26.15	20.80	16.12	31.14	176.14
November	1.19	0.01	4.17	0.21	4.39	1.73	0.00	3.51	0.08	5.25	4.46
December	1.91	0.02	14.60	2.09	16.71	2.78	0.37	5.63	1.00	8.42	18.06
<b>Q4 Subtotal</b>	<b>10.16</b>	<b>0.08</b>	<b>123.55</b>	<b>31.39</b>	<b>155.02</b>	<b>14.80</b>	<b>26.52</b>	<b>29.93</b>	<b>17.20</b>	<b>44.81</b>	<b>198.65</b>
<b>ANNUAL TOTALS</b>	<b>33.88</b>	<b>0.32</b>	<b>441.39</b>	<b>108.86</b>	<b>550.57</b>	<b>55.37</b>	<b>96.41</b>	<b>111.97</b>	<b>55.81</b>	<b>167.65</b>	<b>702.47</b>

Water Volume Movements												
	January	February	March	April	May	June	July	August	September	October	November	December
Pumped from Pit	110.8	132.0	190.0	140.9	132.6	146.1	144.2	176.8	181.7	166.3	136.9	150.7
Groundwater Component of Pitwater	78.2	95.3	137.0	128.3	128.4	29.6	8.8	177.8	179.9	33.7	133.7	135.2
Quarry dust suppression	7.4	1.9	3.6	3.4	3.2	6.2	7.4	11.8	6.9	2.9	1.6	1.5
Q- freshwater pond	103.4	130.0	186.4	137.5	129.4	139.9	136.9	165.0	174.7	163.4	135.3	149.2
	508.2	422.6	608.3	487.6	505.1	564.4	565.3	524.2	516.8	500.5	482.7	564.7
	151.9	132.6	168.2	133.8	143.3	155.9	151.0	146.4	149.5	148.2	140.2	171.2
	317.9	272.5	374.4	313.3	299.8	337.9	329.3	330.8	367.0	340.3	313.9	402.9
	0.000	0.000	0.000	0.000	0.000	0.000	5.242	10.075	8.482	9.520	5.273	12.564
to Plant FM7+FM8+FM6	978.1	827.7	1150.8	934.8	948.3	1058.2	1045.6	1001.4	1033.3	989.1	936.9	1138.9
to stream Augmentation												
bypass discharge	1.1097219	0.52843784	2.34219935	2.549825	0.2109328	0.4876097	0	0	0.0061	1.0061	2.0061	3.0061
To Troy FM3	994.1	864.3	1175.8	951.9	978.5	1079.1	1084.5	1047.7	1058.8	1043.0	980.0	1158.0
To Booster FM2	988.3	887.3	1206.8	1032.3	1010.7	1115.4	1107.3	1046.8	1095.6	1047.0	999.7	1174.2
From Troy to Freshwater Pond FM4	969.8	837.5	1158.2	818.2	857.8	984.8	939.7	900.4	910.5	872.2	827.1	1043.4



## Mill Creek Water Levels 4th Quarter 2023



Quarter Summary	4th Qtr
Total Tons Shipped	1,170,000
Total Acre Feet	21.25
Average Moisture %	2.47%



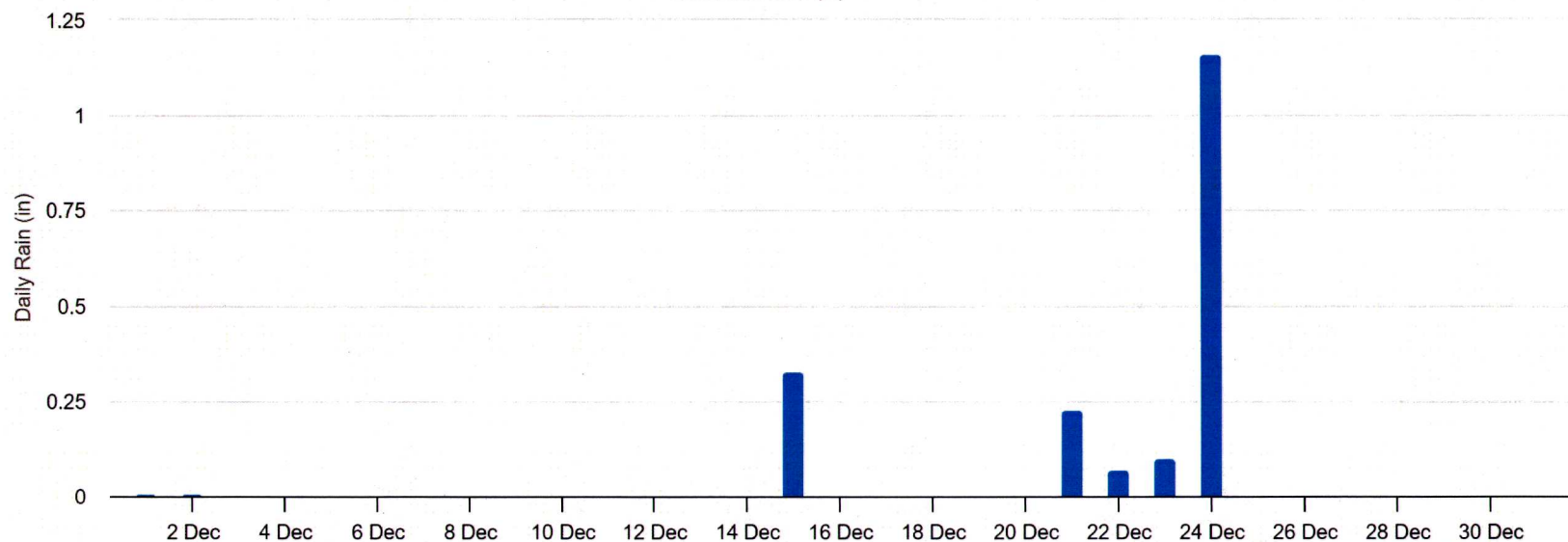
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# ----- WARNING -----
# Some of the data that you have obtained from this U.S. Geological Survey database
# may not have received Director's approval. Any such data values are qualified
# as provisional and are subject to revision. Provisional data are released on the
# condition that neither the USGS nor the United States Government may be held liable
# for any damages resulting from its use.
#
# Additional info: https://waterdata.usgs.gov/provisional-data-statement/
#
# File-format description: https://help.waterdata.usgs.gov/faq/about-tab-delimited-output
# Automated-retrieval info: https://help.waterdata.usgs.gov/faq/automated-retrievals
#
# Contact: gs-w_waterdata_support@usgs.gov
# retrieved: 2024-03-07 09:59:24 EST (caww01)
#
# Data for the following 1 site(s) are contained in this file
# USGS 07331200 Mill Creek near Mill Creek, OK
# -----
#
# Data provided for site 07331200
#      TS      parameter      statistic      Description
#      325587      00060      00003      Discharge, cubic feet per second (Mean)
#
# Data-value qualification codes included in this output:
#   A Approved for publication -- Processing and review completed.
#   P Provisional data subject to revision.
#
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USGS      07331200      2023-11-01      6.39      A
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USGS	07331200	2023-11-03	3.54	A
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USGS	07331200	2023-11-08	7.12	A
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USGS	07331200	2023-11-21	6.07	A
USGS	07331200	2023-11-22	4.73	A
USGS	07331200	2023-11-23	7.10	A
USGS	07331200	2023-11-24	7.18	A
USGS	07331200	2023-11-25	7.21	A
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USGS	07331200	2023-12-15	6.47	P
USGS	07331200	2023-12-16	6.13	P
USGS	07331200	2023-12-17	5.95	P
USGS	07331200	2023-12-18	5.75	P
USGS	07331200	2023-12-19	5.74	P
USGS	07331200	2023-12-20	5.50	P
USGS	07331200	2023-12-21	4.57	P
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USGS	07331200	2023-12-26	8.54	P
USGS	07331200	2023-12-27	7.55	P
USGS	07331200	2023-12-28	6.60	P
USGS	07331200	2023-12-29	7.06	P
USGS	07331200	2023-12-30	5.57	P
USGS	07331200	2023-12-31	6.82	P



## Martin Marietta Mill Creek Limestone Weather - Daily Total Rain

Total Rain: 1.91 (in)



Created: Tue, 02 Jan 2024 14:00:54 -06:00, GSVT Data services

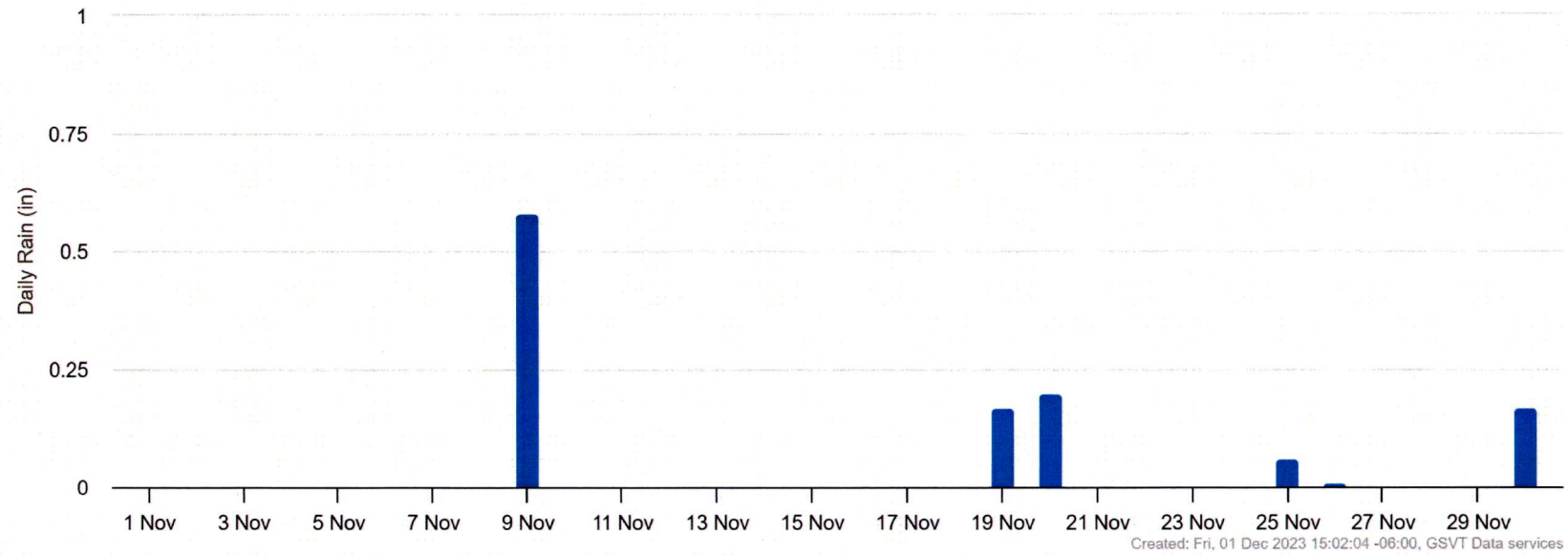
Date	Daily Rain (in)
12/1/2023	0.01
12/2/2023	0.01
12/3/2023	0
12/4/2023	0
12/5/2023	0
12/6/2023	0
12/7/2023	0
12/8/2023	0
12/9/2023	0
12/10/2023	0
12/11/2023	0
12/12/2023	0

12/13/2023	0
12/14/2023	0
12/15/2023	0.33
12/16/2023	0
12/17/2023	0
12/18/2023	0
12/19/2023	0
12/20/2023	0
12/21/2023	0.23
12/22/2023	0.07
12/23/2023	0.1
12/24/2023	1.16
12/25/2023	0

12/26/2023	0
12/27/2023	0
12/28/2023	0
12/29/2023	0
12/30/2023	0
12/31/2023	0

## Martin Marietta Mill Creek Limestone Weather - Daily Total Rain

Total Rain: 1.19 (in)



Date	Daily Rain (in)
11/1/2023	0
11/2/2023	0
11/3/2023	0
11/4/2023	0
11/5/2023	0
11/6/2023	0
11/7/2023	0
11/8/2023	0
11/9/2023	0.58
11/10/2023	0
11/11/2023	0

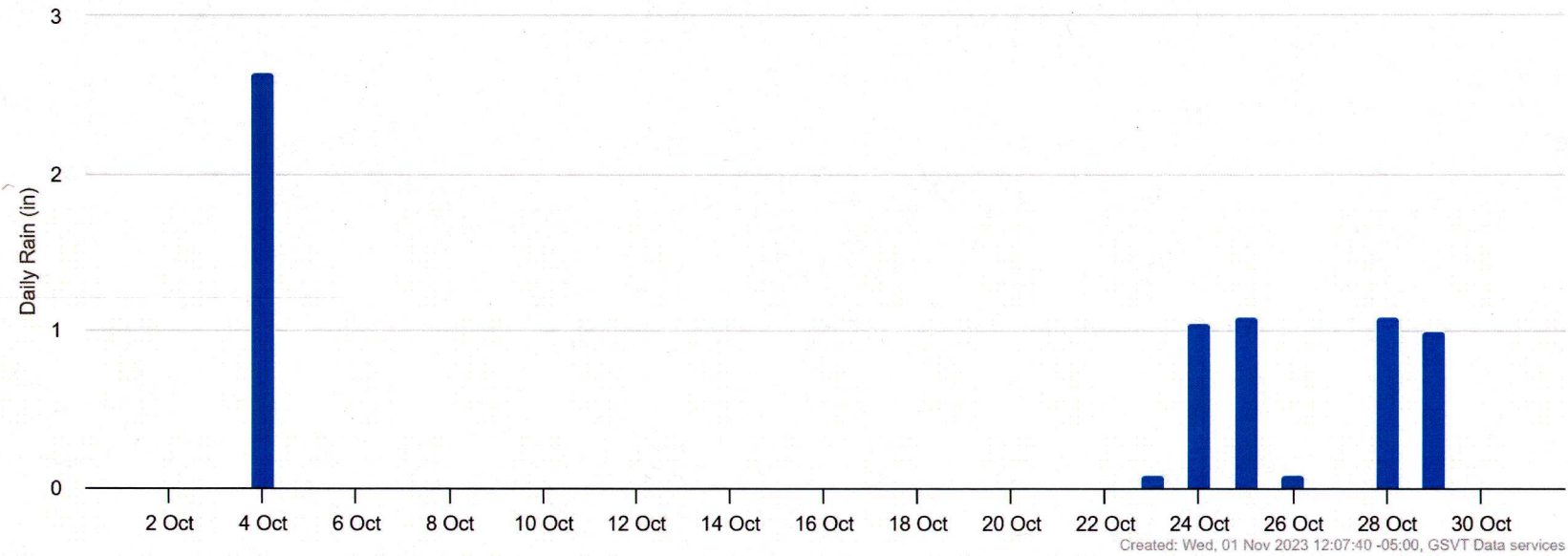
11/12/2023	0
11/13/2023	0
11/14/2023	0
11/15/2023	0
11/16/2023	0
11/17/2023	0
11/18/2023	0
11/19/2023	0.17
11/20/2023	0.2
11/21/2023	0
11/22/2023	0
11/23/2023	0
11/24/2023	0

11/25/2023	0.06
11/26/2023	0.01
11/27/2023	0
11/28/2023	0
11/29/2023	0
11/30/2023	0.17



## Martin Marietta Mill Creek Limestone Weather - Daily Total Rain

Total Rain: 7.06 (in)



Date	Value
10/1/2023	0
10/2/2023	0
10/3/2023	0
10/4/2023	2.65
10/5/2023	0
10/6/2023	0
10/7/2023	0
10/8/2023	0
10/9/2023	0
10/10/2023	0
10/11/2023	0
10/12/2023	0

10/13/2023	0
10/14/2023	0
10/15/2023	0
10/16/2023	0
10/17/2023	0
10/18/2023	0
10/19/2023	0
10/20/2023	0
10/21/2023	0
10/22/2023	0
10/23/2023	0.09
10/24/2023	1.05
10/25/2023	1.09

10/26/2023	0.09
10/27/2023	0
10/28/2023	1.09
10/29/2023	1
10/30/2023	0
10/31/2023	0

Date	Reference ET, Short (in.)	Reference ET, Tall (in.)	Cool Season Grass ET (in.)	Warm Season Grass ET (in.)	Pan Evapotran spiration (in.)
10/1/2023	0.17	0.23	0.15	0.1	0.21
10/2/2023	0.18	0.25	0.17	0.11	0.23
10/3/2023	0.2	0.29	0.19	0.13	0.28
10/4/2023	0.13	0.18	0.12	0.08	0.16
10/5/2023	0.12	0.16	0.12	0.08	0.16
10/6/2023	0.19	0.28	0.18	0.12	0.26
10/7/2023	0.15	0.21	0.14	0.09	0.2
10/8/2023	0.13	0.18	0.12	0.08	0.17
10/9/2023	0.13	0.16	0.12	0.08	0.16
10/10/2023	0.15	0.2	0.14	0.09	0.19
10/11/2023	0.11	0.17	0.11	0.07	0.15
10/12/2023	0.07	0.1	0.06	0.04	0.09
10/13/2023	0.15	0.21	0.14	0.09	0.21
10/14/2023	0.13	0.18	0.12	0.08	0.17
10/15/2023	0.09	0.13	0.08	0.06	0.12
10/16/2023	0.12	0.16	0.11	0.07	0.15
10/17/2023	0.11	0.16	0.11	0.07	0.14
10/18/2023	0.14	0.19	0.13	0.09	0.18
10/19/2023	0.13	0.18	0.12	0.08	0.17
10/20/2023	0.15	0.21	0.14	0.09	0.19
10/21/2023	0.12	0.17	0.11	0.08	0.15
10/22/2023	0.09	0.12	0.08	0.06	0.11
10/23/2023	0.08	0.11	0.07	0.05	0.1
10/24/2023	0.03	0.04	0.03	0.02	0.04
10/25/2023	0.05	0.07	0.05	0.03	0.07
10/26/2023	0.09	0.12	0.09	0.06	0.12
10/27/2023	0.07	0.1	0.07	0.05	0.1
10/28/2023	0.03	0.03	0.02	0.02	0.03
10/29/2023	0.03	0.04	0.03	0.02	0.04
10/30/2023	0.09	0.13	0.08	0.05	0.12
10/31/2023	0.08	0.12	0.08	0.05	0.11
11/1/2023	0.07	0.11	0.07	0.05	0.1
11/2/2023	0.09	0.12	0.08	0.05	0.11
11/3/2023	0.1	0.14	0.09	0.06	0.13
11/4/2023	0.09	0.13	0.09	0.06	0.12
11/5/2023	0.11	0.16	0.1	0.07	0.14
11/6/2023	0.13	0.18	0.12	0.08	0.17
11/7/2023	0.13	0.18	0.12	0.08	0.17
11/8/2023	0.16	0.24	0.15	0.1	0.22
11/9/2023	0.09	0.14	0.08	0.05	0.12
11/10/2023	0.11	0.16	0.1	0.07	0.15
11/11/2023	0.07	0.11	0.07	0.05	0.09



11/12/2023	0.06	0.08	0.06	0.04	0.07
11/13/2023	0.08	0.12	0.08	0.05	0.1
11/14/2023	0.06	0.08	0.06	0.04	0.08
11/15/2023	0.07	0.09	0.06	0.04	0.08
11/16/2023	0.02	0.02	0.02	0.01	0.02
11/17/2023	0.03	0.03	0.02	0.02	0.03
11/18/2023	0.07	0.09	0.06	0.04	0.08
11/19/2023	0.03	0.04	0.03	0.02	0.04
11/20/2023	0.08	0.12	0.07	0.05	0.1
11/21/2023	0.09	0.15	0.09	0.06	0.13
11/22/2023	0.07	0.11	0.07	0.05	0.1
11/23/2023	0.07	0.11	0.07	0.05	0.09
11/24/2023	0.07	0.1	0.06	0.04	0.09
11/25/2023	0.06	0.09	0.06	0.04	0.08
11/26/2023	0.06	0.1	0.06	0.04	0.09
11/27/2023	0.06	0.08	0.05	0.04	0.07
11/28/2023	0.07	0.11	0.07	0.04	0.09
11/29/2023	0.07	0.1	0.07	0.04	0.09
11/30/2023	0.03	0.04	0.03	0.02	0.04
12/1/2023	0.03	0.04	0.03	0.02	0.04
12/2/2023	0.04	0.05	0.04	0.02	0.05
12/3/2023	0.07	0.11	0.07	0.04	0.09
12/4/2023	0.06	0.09	0.05	0.04	0.07
12/5/2023	0.08	0.12	0.07	0.05	0.1
12/6/2023	0.07	0.11	0.06	0.04	0.09
12/7/2023	0.08	0.12	0.08	0.05	0.11
12/8/2023	0.12	0.18	0.11	0.07	0.16
12/9/2023	0.1	0.15	0.09	0.06	0.14
12/10/2023	0.06	0.1	0.06	0.04	0.08
12/11/2023	0.05	0.07	0.04	0.03	0.06
12/12/2023	0.06	0.09	0.05	0.04	0.07
12/13/2023	0.08	0.12	0.07	0.05	0.1
12/14/2023	0.09	0.15	0.09	0.06	0.13
12/15/2023	0.04	0.06	0.04	0.03	0.05
12/16/2023	0.05	0.07	0.05	0.03	0.06
12/17/2023	0.06	0.09	0.05	0.04	0.07
12/18/2023	0.07	0.11	0.07	0.05	0.1
12/19/2023	0.07	0.11	0.06	0.04	0.09
12/20/2023	0.07	0.1	0.06	0.04	0.09
12/21/2023	0.04	0.05	0.04	0.02	0.05
12/22/2023	0.02	0.02	0.02	0.01	0.02
12/23/2023	0.02	0.02	0.02	0.01	0.02
12/24/2023	0	0	0	0	0.01
12/25/2023	0.05	0.08	0.05	0.03	0.07
12/26/2023	0.06	0.1	0.06	0.04	0.08
12/27/2023	0.05	0.08	0.05	0.03	0.07
12/28/2023	0.06	0.09	0.05	0.04	0.08

<b>12/29/2023</b>	0.06	0.1	0.06	0.04	0.08
<b>12/30/2023</b>	0.07	0.1	0.06	0.04	0.08
<b>12/31/2023</b>	0.07	0.1	0.06	0.04	0.09

MESONET CLIMATOLOGICAL DATA SUMMARY  
(TISH) Tishomingo  
Latitude: 34-19-57

October 2023  
Nearest City: 6.0 N Tishomingo  
Longitude: 96-40-44

Time Zone: Midnight-Midnight CST  
County: Johnston  
Elevation: 879 feet

DAY	TEMPERATURE ( F )				DEG DAYS		HUMIDITY (%)			RAIN (in)	PRESSURE (in)		WIND SPEED (mph)			SOLAR (MJ/m2)	4" SOIL TEMPERATURES			
	MAX	MIN	AVG	DEWPT	HDD	CDD	MAX	MIN	AVG		STN	MSL	DIR	AVG	MAX		SOD	BARE	MAX	MIN
1	91	62	76.3	57.5	0	12	91	26	57	0.00	29.16	30.11	SE	5.2	21.1	15.69	NA	83.1	91	76
2	91	63	76.2	57.7	0	12	89	31	57	0.00	29.12	30.07	ESE	6.1	21.0	15.22	NA	82.0	90	75
3	89	67	77.5	57.5	0	13	75	35	52	0.00	29.02	29.96	SSE	8.1	25.5	17.13	NA	82.7	91	76
4	88	68	73.7	67.3	0	13	99	57	82	3.42	28.96	29.90	SE	7.3	30.8	8.29	NA	79.8	89	74
5	81	62	70.5	63.9	0	7	98	49	82	0.00	29.08	30.03	NNE	6.8	22.1	14.24	76.5	75.1	81	71
6	81	54	66.4	49.5	0	2	92	25	58	0.00	29.24	30.18	NNE	9.8	27.6	17.04	74.8	70.2	79	63
7	68	47	56.2	36.0	8	0	90	24	51	0.00	29.36	30.30	NNE	6.3	20.3	19.57	70.9	64.3	73	58
8	77	43	59.5	43.3	5	0	95	28	61	0.00	29.13	30.08	SSW	5.1	16.7	18.98	69.4	63.6	73	56
9	85	50	67.0	53.3	0	2	93	35	65	0.00	28.92	29.85	WSW	3.6	13.7	18.17	70.6	67.5	78	59
10	85	55	69.6	58.8	0	5	97	39	72	0.00	28.86	29.80	SSE	6.5	24.6	17.73	72.3	69.7	78	62
11	77	63	68.6	60.9	0	5	93	64	77	0.00	28.75	29.69	SSE	11.7	27.8	8.60	72.5	69.4	74	66
12	69	60	65.1	59.8	0	0	94	72	83	0.00	28.71	29.64	SSE	13.5	26.3	3.36	70.5	66.7	68	65
13	72*	56*	66.3*	50.3*	1*	0*	92*	34*	60*	0.00*	28.92*	29.85*	NW *	10.2*	30.9*	17.20*	71.2*	70.0*	78*	64*
14	65	45	55.3	40.5	10	0	79	43	58	0.00	29.20	30.15	NNW	8.5	27.8	15.41	67.1	63.5	72	57
15	60	42	52.8	42.3	14	0	92	51	68	0.00	29.30	30.25	NNW	9.6	28.3	8.56	64.5	60.4	65	57
16	65	40	50.4	37.6	12	0	92	36	65	0.00	29.32	30.27	NNW	6.9	20.5	18.04	63.2	60.1	72	51
17	71	36	54.0	38.8	12	0	95	30	62	0.00	29.15	30.10	SSE	5.5	17.2	17.70	63.1	61.7	74	52
18	79*	43*	60.5*	46.3*	4*	0*	92*	32*	64*	0.00*	28.99*	29.93*	S *	6.5*	27.3*	NA	64.2*	64.4*	75*	55*
19	81	45	62.4	45.6	2	0	97	23	62	0.00	29.02	29.96	NNW	5.0	18.1	16.99	65.7	66.6	78	57
20	88	52	68.2	46.4	0	5	90	21	51	0.00	28.97	29.90	WNW	4.6	18.1	17.02	66.9	69.4	82	60
21	89	50	67.0	51.4	0	4	92	25	63	0.00	28.94	29.88	SSW	4.3	17.5	12.02	66.9	69.1	78	61
22	78	55	67.2	57.8	0	2	88	54	73	0.00	28.98	29.92	ESE	5.2	13.4	9.40	67.6	69.2	75	63
23	78	65	70.1	66.0	0	7	98	70	87	0.11	29.00	29.94	SE	7.7	23.9	6.42	68.9	70.2	75	67
24	72	66	68.7	67.8	0	4	99	89	97	0.88	29.00	29.93	SE	9.4	28.7	1.59	69.3	69.1	70	68
25	76	65	69.1	67.2	0	5	100	81	94	1.11	29.03	29.97	SSE	9.9	23.2	3.58	69.7	69.2	72	68
26	78	67	71.0	67.6	0	7	99	69	90	0.10	28.98	29.92	SSE	9.8	24.8	11.37	70.6	70.3	75	68
27	78	54	65.6	62.3	0	1	100	77	89	0.11	29.12	30.06	S	10.7	22.6	6.84	71.5	69.6	73	63
28	54	43	50.0	48.9	16	0	99	88	96	0.59	29.14	30.08	NNE	10.0	26.0	2.50	66.2	59.3	63	56
29	43	37	39.9	37.9	25	0	97	87	93	0.80	29.23	30.18	N	15.5	32.2	2.71	60.2	51.5	56	48
30	48	30	38.4	26.6	26	0	87	42	64	0.00	29.42	30.37	N	12.5	29.8	15.88	57.1	47.8	54	43
31	53	27	38.8	26.5	25	0	93	36	65	0.01	29.45	30.40	N	7.8	24.6	16.05	55.6	45.7	54	40
	75*	52*	62.6*	51.4*	<- Monthly Averages ->						29.08*	30.02*	SSE*	8.0*	32.2*	12.44*	67.7*	67.1*	74*	61*
Temperature - Highest: 91*							Degree Days - Total HDD: 160*					Number of Days With: Tmax > 90: 2*      Rainfall > 0.01 inch: 9* Tmax < 32: 0*      Rainfall >= 0.10 inch: 8* Tmin < 32: 2*      Avg Wind Speed > 10 mph: 7* Tmin <= 0: 0*      Max Wind Speed >= 30 mph: 3*								
Lowest: 27*							Total CDD: 106*													
Rainfall: Monthly Total: 7.13* in.							Humidity - Highest: 100*													
Greatest 24 Hr: 3.42* in.							Lowest: 21*													



MESONET CLIMATOLOGICAL DATA SUMMARY										November 2023				Time Zone: Midnight-Midnight CST						
(TISH) Tishomingo										Nearest City: 6.0 N Tishomingo				County: Johnston						
Latitude: 34-19-57										Longitude: 96-40-44				Elevation: 879 feet						
DAY	TEMPERATURE ( F )				DEG DAYS		HUMIDITY (%)			RAIN (in)	PRESSURE (in)		WIND SPEED (mph)			SOLAR (MJ/m2)	4" SOIL TEMPERATURES			
	MAX	MIN	AVG	DEWPT	HDD	CDD	MAX	MIN	AVG		STN	MSL	DIR	AVG	MAX		SOD	BARE	MAX	MIN
1	54	25	38.9	24.4	26	0	92	29	59	0.00	29.46	30.41	SSE	5.3	16.2	15.87	54.3	45.4	55	39
2	61	29	44.9	32.0	20	0	94	32	64	0.00	29.33	30.28	SSE	6.4	21.8	15.35	54.2	47.1	56	40
3	70	35	53.2	43.9	13	0	95	48	73	0.00	29.22	30.16	S	7.8	28.5	14.91	55.5	50.9	60	43
4	74	45	59.8	52.6	5	0	96	56	79	0.00	29.19	30.13	S	6.9	23.6	14.36	58.4	56.4	64	49
5	78	57	65.8	57.6	0	3	94	51	77	0.00	29.10	30.05	S	8.7	27.7	13.23	61.4	61.0	67	56
6	80	58	68.4	60.6	0	4	98	53	78	0.00	28.94	29.87	S	12.0	27.8	14.33	63.0	62.9	69	58
7	81	59	69.6	60.7	0	5	96	47	76	0.00	28.88	29.82	S	9.9	23.6	14.21	64.4	64.2	70	59
8	85	62	71.6	60.6	0	9	95	43	70	0.00	28.88	29.82	S	10.9	23.0	13.84	65.9	66.1	72	61
9	64	48	53.6	47.3	9	0	94	56	80	0.52	29.12	30.06	NNE	14.7	31.6	1.50	63.3	58.1	64	53
10	62	41	51.8	35.5	13	0	77	27	56	0.00	29.27	30.21	NE	8.9	23.4	13.77	60.1	53.6	59	49
11	62	43	53.4	37.6	12	0	91	30	58	0.00	29.31	30.26	ENE	4.7	19.7	9.72	59.4	54.3	59	50
12	67	39	51.6	40.7	12	0	94	37	71	0.00	29.36	30.31	SE	2.8	9.6	13.14	59.1	55.0	64	48
13	69	40	52.7	39.4	11	0	96	24	67	0.00	29.40	30.35	NW	4.8	17.2	13.98	58.9	54.9	62	49
14	67	38	51.8	42.2	12	0	96	42	74	0.00	29.30	30.24	S	3.3	14.2	13.61	58.4	54.6	63	47
15	71	41	53.4	43.8	9	0	98	37	74	0.00	29.23	30.18	ESE	3.3	13.6	13.60	58.5	55.5	65	48
16	59	47	54.9	53.5	12	0	100	89	95	0.01	29.09	30.03	SSE	8.2	17.3	2.80	58.4	55.6	58	53
17	61	49	57.3	54.4	10	0	98	81	90	0.00	29.04	29.98	NNE	6.6	17.5	2.74	59.7	57.7	60	55
18	69	42	53.7	43.0	9	0	98	33	72	0.00	29.13	30.07	NNW	3.6	11.3	13.16	59.0	56.2	65	49
19	62	44	54.5	52.4	12	0	99	74	93	0.25	28.89	29.83	SE	7.8	26.8	3.29	58.3	55.4	58	52
20	69	49	58.1	52.5	6	0	100	62	83	0.62	28.81	29.75	NNW	10.8	29.4	9.98	60.2	59.1	66	55
21	55	41	48.6	35.2	17	0	74	38	61	0.00	29.25	30.20	NNW	12.8	28.9	6.95	58.1	51.5	55	45
22	59	31	42.6	25.4	20	0	90	25	54	0.00	29.25	30.19	NW	4.5	15.9	13.17	54.7	46.7	55	40
23	64	30	46.3	32.2	18	0	95	27	63	0.00	29.10	30.04	ESE	5.0	17.6	13.05	53.6	47.5	56	41
24	58	37	46.0	35.2	18	0	89	41	68	0.00	29.24	30.19	NNE	6.2	15.6	12.48	53.8	48.6	57	43
25	58	37	46.3	38.9	18	0	97	53	77	0.10	29.17	30.12	SE	6.7	19.3	10.84	53.4	48.2	55	42
26	48	29	37.2	27.2	27	0	97	38	69	0.01	29.26	30.20	NW	9.2	25.2	12.86	52.7	45.8	50	40
27	54	25	37.6	26.3	26	0	94	33	68	0.00	29.39	30.34	NW	5.0	15.1	12.63	50.1	42.9	51	37
28	60	27	43.4	28.1	22	0	93	29	59	0.00	29.37	30.31	SSW	5.7	17.4	12.64	50.0	44.0	52	37
29	63	29	47.0	35.0	19	0	92	37	66	0.00	29.15	30.10	S	6.0	16.8	10.48	50.1	45.3	53	38
30	56	47	51.4	48.6	14	0	100	57	91	0.33	28.84	29.78	ESE	6.9	21.1	1.72	52.5	50.4	52	48
	65	41	52.2	42.2	<- Monthly Averages ->						29.17	30.11	S	7.2	31.6	11.14	57.3	53.2	60	48
Temperature - Highest: 85 Lowest: 25							Degree Days - Total HDD: 389 Total CDD: 20					Number of Days With:								
Rainfall: Monthly Total: 1.84 in. Greatest 24 Hr: 0.62 in.							Humidity - Highest: 100 Lowest: 24					Tmax > 90: 0 Rainfall > 0.01 inch: 7								
												Tmax < 32: 0 Rainfall > 0.10 inch: 5								
												Tmin < 32: 8 Avg Wind Speed > 10 mph: 5								
								Tmin < 0: 0 Max Wind Speed > 30 mph: 1												



MESONET CLIMATOLOGICAL DATA SUMMARY										December 2023				Time Zone: Midnight-Midnight CST						
(TISH) Tishomingo										Nearest City: 6.0 N Tishomingo				County: Johnston						
Latitude: 34-19-57										Longitude: 96-40-44				Elevation: 879 feet						
DAY	TEMPERATURE ( F )				DEG DAYS		HUMIDITY (%)			RAIN (in)	PRESSURE (in)		WIND SPEED (mph)			SOLAR (MJ/m2)	4" SOIL TEMPERATURES			
	MAX	MIN	AVG	DEWPT	HDD	CDD	MAX	MIN	AVG		STN	MSL	DIR	AVG	MAX		SOD	BARE	MAX	MIN
1	51	37	42.7	40.3	21	0	100	77	91	0.00	28.95	29.89	WNW	6.5	22.7	3.63	52.0	48.0	50	45
2	55	37	43.2	41.3	19	0	100	75	93	0.01	28.98	29.92	NE	5.3	16.6	6.34	50.8	46.3	52	43
3	63	27	44.7	32.8	20	0	99	26	70	0.01	28.98	29.92	NNW	5.9	21.7	11.89	50.1	45.8	53	39
4	59	32	45.2	28.6	19	0	90	27	55	0.00	29.19	30.13	NW	4.1	13.5	10.82	50.3	46.1	54	40
5	63	31	45.7	31.2	18	0	92	31	61	0.00	29.32	30.27	N	5.9	18.4	11.89	50.1	45.7	54	39
6	61	29	45.4	31.2	20	0	92	32	61	0.00	29.37	30.32	SSE	5.7	15.6	11.70	49.8	45.5	53	39
7	67	37	54.2	45.5	13	0	91	59	73	0.00	29.01	29.95	S	11.6	31.0	10.35	50.7	48.6	56	42
8	75	47	63.0	51.0	4	0	92	36	68	0.00	28.79	29.72	S	13.1	29.8	9.84	54.9	56.0	62	51
9	57	40	49.3	33.7	16	0	79	40	56	0.00	29.12	30.06	N	11.4	24.6	11.73	53.6	49.6	55	43
10	50	28	37.7	18.8	26	0	85	20	49	0.00	29.32	30.27	NW	5.3	18.3	11.94	49.9	42.8	50	38
11	61	25	40.5	26.0	22	0	92	24	62	0.00	29.23	30.17	S	2.8	8.6	11.68	48.4	43.4	53	37
12	60	32	46.1	34.0	19	0	88	50	63	0.00	29.39	30.34	E	5.3	15.2	9.19	48.9	44.9	52	39
13	60	40	47.8	31.9	15	0	78	31	56	0.00	29.52	30.48	E	6.6	20.4	9.13	49.6	46.2	52	43
14	60	40	50.8	32.3	15	0	70	33	51	0.00	29.46	30.41	ESE	8.2	23.7	8.76	49.4	46.1	51	41
15	56	43	48.2	42.9	16	0	99	43	85	0.62	29.25	30.20	SE	6.5	24.7	1.50	50.5	48.0	49	47
16	55	30	42.6	35.8	22	0	98	45	79	0.00	29.22	30.16	WNW	6.5	20.5	11.75	49.8	46.0	52	41
17	65	28	45.0	34.9	18	0	96	39	72	0.01	29.11	30.05	NW	4.2	14.8	11.45	48.7	45.0	54	37
18	56	29	45.5	31.6	22	0	86	30	61	0.00	29.30	30.25	N	8.8	21.5	11.64	49.3	45.7	52	41
19	53	26	39.9	25.5	25	0	90	37	58	0.00	29.27	30.21	SE	7.7	23.1	8.92	47.0	41.1	46	37
20	61	37	49.5	40.0	16	0	78	62	70	0.00	29.25	30.20	SE	7.9	21.1	6.42	48.0	45.2	51	39
21	57	51	53.4	49.0	11	0	100	64	86	0.34	29.28	30.23	SE	6.3	14.2	2.03	51.0	50.6	53	48
22	59	51	55.1	55.1	10	0	100	99	100	0.09	29.20	30.15	SE	4.2	11.8	2.03	52.8	53.4	56	51
23	61	58	58.9	58.7	6	0	100	95	99	0.15	29.09	30.04	SSE	8.8	23.2	1.90	54.9	56.6	58	55
24	61	43	56.0	54.7	13	0	100	79	96	1.88	28.87	29.81	SE	9.8	31.6	1.85	56.3	57.1	59	53
25	46	28	39.4	28.6	28	0	91	43	66	0.00	29.07	30.01	NW	10.0	33.2	11.46	52.2	47.6	52	42
26	54	22	37.7	26.8	27	0	96	40	68	0.00	29.01	29.95	W	7.2	28.0	10.31	47.8	41.6	47	37
27	44	30	38.0	26.1	28	0	84	46	63	0.00	29.08	30.02	NW	8.0	29.1	10.25	47.0	41.0	46	37
28	44	30	35.5	23.8	28	0	83	48	63	0.00	29.20	30.15	NW	8.0	20.5	9.23	45.9	39.3	45	36
29	53	25	38.7	27.8	26	0	94	42	67	0.00	29.19	30.13	WNW	7.1	21.0	11.43	45.0	39.4	47	35
30	60	25	42.3	27.4	22	0	91	28	60	0.00	29.15	30.10	NW	4.8	17.7	11.88	45.3	41.2	50	35
31	54	29	39.4	31.2	23	0	94	47	75	0.00	29.15	30.09	NNE	8.3	22.3	8.72	45.7	41.2	47	36
	57	34	45.8	35.4	<- Monthly Averages ->						29.17	30.12	NW	7.1	33.2	8.76	49.9	46.3	52	42
Temperature - Highest: 75 Lowest: 22							Degree Days - Total HDD: 590 Total CDD: 0					Number of Days With:								
Rainfall: Monthly Total: 3.11 in. Greatest 24 Hr: 1.88 in.							Humidity - Highest: 100 Lowest: 20					Tmax > 90: 0 Rainfall > 0.01 inch: 8								
												Tmax < 32: 0 Rainfall > 0.10 inch: 4								
												Tmin < 32: 18 Avg Wind Speed > 10 mph: 4								
									Tmin < 0: 0 Max Wind Speed > 30 mph: 3											