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Oklahoma Water Resources Board

Robin L. Simmons  
Regional Land Manager

May 27, 2022

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

Re: Martin Marietta/TXI Mill Creek Limestone Quarry Monitoring Report Q1 2022

Dear Mr. Cogburn:

Attached please find the Q1 2022 Quarterly Monitoring Report for Martin Marietta/TXI's Mill Creek Limestone quarry. The report is summarized on the table labeled Appendix C. Supporting data is also included.

Please call if you have any questions or comments.

Sincerely,

A handwritten signature in blue ink that reads 'Robin L. Simmons'.

Robin L. Simmons  
Regional Land Manager

North Texas/Oklahoma District  
1503 LBJ Parkway Suite 400, Dallas, Texas 75234  
t. (972) 350-8228 m. (214) 213-6024 e. [Robin.Simmons@martinmarietta.com](mailto:Robin.Simmons@martinmarietta.com)  
[www.martinmarietta.com](http://www.martinmarietta.com)

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ATTACHMENT 1 (Appendix C)  
Martin Marietta (TXI) Mill Creek 2022

Appendix C . Consumptive use of Pitwater

Q1 2022

PIT GROUNDWATER VOLUME			
1	Total volume pumped from producing mine pit(s) (AC-FT)		537.1
2	Volume of precipitation that falls onto the surface of producing Mine Pits (AC-FT)		2.6
3	Portion of total precipitation that flows over the land surface that drains into the mine pit water (AC-FT)		26.8
4	<b>(WATER HELD IN PIT FROM PREVIOUS MONTHS) other non pit waters pumped from the producing mining pit (AC-FT)</b>		94.9
5	add lines 2 through 4		124.4
6	<b>Pit Groundwater Volume (AC-FT) (line 1 minus Line 5)</b>		412.7
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
8	Vol. of pit groundwater that is carried away with the the mined material transp. off of the mine site (AC-FT)		3.66
9	Vol. of pit groundwater that evaporates from producing mine pits, process ponds and lined ponds (excluding structures used for augmentation) (AC-FT)		2.83
10	Volume of pit groundwater that is used for other beneficial uses off of the mine site (AC-FT) (includes on-site dust control)		15.52
11	<b>DEFINED ELEMENTS OF CONSUMPTIVE USE of Pit groundwater (AC-FT) (add lines 7 through 10)</b>		<b>22.01</b>
PIT GROUNDWATER BALANCE			
12		Lines 6 minus 11	390.67
13	<b>Groundwater Augmentation</b> Volume of pit water returned to GW Basin or subbasin. (Troy Recharge AC-FT)	<b>Credits</b>	283.40
14	<b>Stream Augmentation</b> 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)		86.82
15	<b>PPT and Runoff</b> Volume of Precipitation and surface runoff into a recharge pit or holding pond (AC-FT)		11.62
16	<b>Recycled Pit Groundwater</b> - Volume of ground water returned to the mine pit or holding basin (AC-FT)		334.90
17	<b>Other Non-Consumptive GW Losses</b> Including pit GW returned to the land surface from which surface runoff flows into a mine pit and other losses (AC-FT)		12.75
18		add lines 13 through 17	729.49
19	<b>OTHER CONSUMPTIVE USE</b>	Line 12 minus Line 18	-338.81
TOTAL REPORTED CONSUMPTIVE USE (AC-FT)			
	<b>TOTAL NET CONSUMPTIVE USE (AC-FT)</b>	Line 11 plus line 19	-316.81

**RESULTS FROM RUNOFF MODELLING**

2022	PPT. Inches	Quarry Monthly Totals				FW Pond Monthly Totals			Re-cycle Recharge (Troy) Monthly Totals			TXI-Mill Creek Totals		
		Sump Direct ppt	In-Quarry Runoff	Runoff from beyond Quarry	Quarry Totals	Direct ppt	Runoff	ac-ft	Direct ppt	Runoff	ac-ft	Direct ppt	Runoff	ac-ft
		ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft
January	0.36	0.005	1.196	0.000	1.20	0.52	0.00	0.00	1.06	0.00	1.59	1.20		
February	0.89	0.012	5.000	0.162	5.17	1.30	0.00	0.00	2.62	0.07	3.93	5.23		
March	2.33	0.031	18.851	2.254	21.14	3.39	0.11	0.11	6.86	1.01	10.29	22.22		
<b>Q1 Subtotal</b>	<b>3.58</b>	<b>0.05</b>	<b>25.05</b>	<b>2.42</b>	<b>27.51</b>	<b>5.21</b>	<b>0.11</b>	<b>0.11</b>	<b>10.55</b>	<b>1.07</b>	<b>15.81</b>	<b>28.65</b>		

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Water Volume Movements	January	February	March
Pumped from Pit	210.2	132.3	194.6
Groundwater Component of Pitwater	130.3	107.9	174.5
Quarry dust suppression	5.9	4.6	6.0
Q- freshwater pond	175.2	115.0	143.5
To Secondary FM7	505.8	310.0	494.1
To sand Plant FM8	159.9	95.4	159.0
to loadout FM6	394.7	227.1	397.4
to dust control FM9	0.000	0.000	0.000
to Plant FM7+FM8+FM6	1060.3	632.5	1050.5
to stream Augmentation	29.16	12.58	45.08
bypass discharge	2.059187	0.5284378	1.5891711
To Troy FM3	1066.8	636.3	1075.6
To Booster FM2	1071.7	641.2	1074.4
From Troy to Freshwater Pond FM4	867.3	531.2	858.1

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Quarter Summary	1st Qtr
Total Tons Shipped	1,230,000
Total Acre Feet	24.24
Average Moisture %	2.68%

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 # 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://help.waterdata.usgs.gov/policies/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\\_support\\_nwisweb@usgs.gov](mailto:gs-w_support_nwisweb@usgs.gov)  
 # retrieved: 2022-05-03 16:58:19 EDT (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  
 # 111780 00060 00003 Discharge, cubic feet per second (Mean)  
 #

# Data-value qualification codes included in this output:  
 #

# P Provisional data subject to revision.  
 # 4 Statistic computed from less than expected number of instantaneous values for the period  
 #

agency_cd	site_no	datetime	111780_00060_00003	111780_00060_00003_cd
5s	15s	20d	14n	10s
USGS	07331200	2022-01-01	2.94	P
USGS	07331200	2022-01-02	1.73	P
USGS	07331200	2022-01-03	1.31	P
USGS	07331200	2022-01-04	1.02	P
USGS	07331200	2022-01-05	0.91	P
USGS	07331200	2022-01-06	0.71	P
USGS	07331200	2022-01-07	0.83	P
USGS	07331200	2022-01-08	0.97	P
USGS	07331200	2022-01-09	0.82	P
USGS	07331200	2022-01-10	0.61	P
USGS	07331200	2022-01-11	0.64	P
USGS	07331200	2022-01-12	0.57	P
USGS	07331200	2022-01-13	0.72	P
USGS	07331200	2022-01-14	0.78	P
USGS	07331200	2022-01-15	0.76	P
USGS	07331200	2022-01-16	0.70	P
USGS	07331200	2022-01-17	0.50	P
USGS	07331200	2022-01-18		
USGS	07331200	2022-01-19		
USGS	07331200	2022-01-20	0.72	P:[4]
USGS	07331200	2022-01-21	0.80	P
USGS	07331200	2022-01-22	0.92	P
USGS	07331200	2022-01-23	0.99	P
USGS	07331200	2022-01-24	2.06	P
USGS	07331200	2022-01-25	2.55	P
USGS	07331200	2022-01-26	2.11	P
USGS	07331200	2022-01-27	1.33	P
USGS	07331200	2022-01-28	1.37	P
USGS	07331200	2022-01-29	0.99	P
USGS	07331200	2022-01-30	0.62	P
USGS	07331200	2022-01-31	0.48	P

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#
# Additional info: https://help.waterdata.usgs.gov/policies/provisional-data-statement
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# Automated-retrieval info: https://help.waterdata.usgs.gov/faq/automated-retrievals
#
# Contact: gs-w_support_nwisweb@usgs.gov
# retrieved: 2022-05-03 17:01:22 EDT (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
#      111780      00060      00003      Discharge, cubic feet per second (Mean)
#
# Data-value qualification codes included in this output:
# P Provisional data subject to revision.
#

```

agency_cd	site_no	datetime	111780_00060_00003	111780_00060_00003_cd
5s	15s	20d	14n	10s
USGS	07331200	2022-02-01	0.65	P
USGS	07331200	2022-02-02	0.88	P
USGS	07331200	2022-02-03	1.14	P
USGS	07331200	2022-02-04	0.70	P
USGS	07331200	2022-02-05	0.68	P
USGS	07331200	2022-02-06	0.74	P
USGS	07331200	2022-02-07	0.75	P
USGS	07331200	2022-02-08	0.43	P
USGS	07331200	2022-02-09	0.39	P
USGS	07331200	2022-02-10	0.47	P
USGS	07331200	2022-02-11	3.21	P
USGS	07331200	2022-02-12	3.99	P
USGS	07331200	2022-02-13	2.46	P
USGS	07331200	2022-02-14	1.47	P
USGS	07331200	2022-02-15	0.89	P
USGS	07331200	2022-02-16	0.51	P
USGS	07331200	2022-02-17	0.72	P
USGS	07331200	2022-02-18	0.54	P
USGS	07331200	2022-02-19	0.73	P
USGS	07331200	2022-02-20	0.39	P
USGS	07331200	2022-02-21	0.41	P
USGS	07331200	2022-02-22	0.77	P
USGS	07331200	2022-02-23	0.71	P
USGS	07331200	2022-02-24	0.64	P
USGS	07331200	2022-02-25	1.38	P
USGS	07331200	2022-02-26	1.65	P
USGS	07331200	2022-02-27	1.96	P
USGS	07331200	2022-02-28	1.90	P

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 #  
 # Contact: [gs-w\\_support\\_nwisweb@usgs.gov](mailto:gs-w_support_nwisweb@usgs.gov)  
 # retrieved: 2022-05-03 17:02:38 EDT (caww01)  
 #

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 # USGS 07331200 Mill Creek near Mill Creek, OK  
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 # TS parameter statistic Description  
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agency_cd	site_no	datetime	111780_00060_00003	111780_00060_00003_cd
5s	15s	20d	14n	10s
USGS	07331200	2022-03-01	1.64	P
USGS	07331200	2022-03-02	2.14	P
USGS	07331200	2022-03-03	2.36	P
USGS	07331200	2022-03-04	2.02	P
USGS	07331200	2022-03-05	1.80	P
USGS	07331200	2022-03-06	1.94	P
USGS	07331200	2022-03-07	3.18	P
USGS	07331200	2022-03-08	2.17	P
USGS	07331200	2022-03-09	2.44	P
USGS	07331200	2022-03-10	2.75	P
USGS	07331200	2022-03-11	2.26	P
USGS	07331200	2022-03-12	2.69	P
USGS	07331200	2022-03-13	2.18	P
USGS	07331200	2022-03-14	2.66	P
USGS	07331200	2022-03-15	2.99	P
USGS	07331200	2022-03-16	3.41	P
USGS	07331200	2022-03-17	2.73	P
USGS	07331200	2022-03-18	2.21	P
USGS	07331200	2022-03-19	1.74	P
USGS	07331200	2022-03-20	1.49	P
USGS	07331200	2022-03-21	1.80	P
USGS	07331200	2022-03-22	1.87	P
USGS	07331200	2022-03-23	1.23	P
USGS	07331200	2022-03-24	1.13	P
USGS	07331200	2022-03-25	1.14	P
USGS	07331200	2022-03-26	0.93	P
USGS	07331200	2022-03-27	1.28	P
USGS	07331200	2022-03-28	1.12	P
USGS	07331200	2022-03-29	0.59	P
USGS	07331200	2022-03-30	1.12	P
USGS	07331200	2022-03-31	0.74	P

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Date	Daily Rainfall Total
1/1/2022	0.35
1/2/2022	0
1/3/2022	0
1/4/2022	0
1/5/2022	0
1/6/2022	0
1/7/2022	0
1/8/2022	
1/9/2022	0.01
1/10/2022	0
1/11/2022	0
1/12/2022	0
1/13/2022	0
1/14/2022	0
1/15/2022	0
1/16/2022	0
1/17/2022	0
1/18/2022	0
1/19/2022	0
1/20/2022	0
1/21/2022	0
1/22/2022	0
1/23/2022	0
1/24/2022	0
1/25/2022	0
1/26/2022	0
1/27/2022	0
1/28/2022	0
1/29/2022	0
1/30/2022	0
1/31/2022	0
2/1/2022	0
2/2/2022	0
2/3/2022	0
2/4/2022	0.02
2/5/2022	0
2/6/2022	0
2/7/2022	0
2/8/2022	0
2/9/2022	0
2/10/2022	0
2/11/2022	0
2/12/2022	0
2/13/2022	0
2/14/2022	0
2/16/2022	0

2/17/2022	0.51
2/18/2022	0
2/19/2022	0
2/20/2022	0
2/21/2022	0.13
2/22/2022	0.2
2/23/2022	0.01
2/24/2022	0
2/25/2022	0.01
2/26/2022	0.01
2/27/2022	0
2/28/2022	0
3/1/2022	0
3/2/2022	0
3/3/2022	0
3/4/2022	0
3/5/2022	0
3/6/2022	0.27
3/7/2022	0
3/8/2022	0
3/9/2022	0
3/10/2022	0
3/11/2022	0.03
3/12/2022	0
3/13/2022	0
3/14/2022	0.16
3/15/2022	0
3/16/2022	0
3/17/2022	0.02
3/18/2022	0
3/19/2022	0
3/20/2022	0
3/21/2022	0.9
3/22/2022	0.01
3/23/2022	0
3/24/2022	0
3/25/2022	0
3/26/2022	0
3/27/2022	0
3/28/2022	0
3/29/2022	0
3/30/2022	0.94
3/31/2022	0

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MESONET CLIMATOLOGICAL DATA SUMMARY (TISH) Tishomingo Latitude: 34-19-57					January 2022		Oklahoma Water Resources Board Time Zone: Midnight-Midnight CST					County: Johnston Elevation: 879 feet									
DAY	TEMPERATURE ( F )				DEG DAYS		HUMIDITY (%)			RAIN	PRESSURE (in)		WIND SPEED (mph)			SOLAR	4" SOIL TEMPERATURES				
	MAX	MIN	AVG	DEWPT	HDD	CDD	MAX	MIN	AVG	(in)	STN	MSL	DIR	AVG	MAX	(MJ/m2)	SOD	BARE	MAX	MIN	
1	59	16	39.7	36.8	28	0	98	73	89	0.28	28.85	29.78	NNW	11.0	30.8	2.66	54.6	51.2	56	40	
2	35	14	22.3	12.0	40	0	85	43	66	0.00	29.38	30.33	NNW	10.4	27.7	11.80	47.3	37.1	40	35	
3	52	15	32.8	19.6	32	0	92	31	63	0.00	29.41	30.36	SE	5.4	16.3	13.04	45.0	38.2	45	34	
4	58	27	41.2	23.5	23	0	81	25	53	0.00	29.06	30.00	S	9.5	30.2	11.31	45.6	40.2	46	36	
5	51	29	40.1	22.7	25	0	86	27	53	0.00	29.02	29.96	NNE	12.0	31.6	12.44	46.0	41.8	49	38	
6	33	20	26.9	13.4	39	0	72	48	57	0.00	29.21	30.15	N	14.6	31.1	11.82	44.5	38.5	43	36	
7	44	16	30.8	20.0	35	0	80	50	65	0.00	29.22	30.17	SSE	9.8	23.1	10.43	43.0	37.6	43	34	
8	59	42	46.8	44.3	14	0	100	60	92	0.07	29.01	29.95	SSE	10.3	23.6	1.47	45.9	44.2	49	41	
9	60	33	46.7	34.4	19	0	99	34	66	0.00	29.36	30.31	NNE	15.7	37.0	8.84	48.9	48.3	51	41	
10	54	24	36.2	15.8	26	0	77	17	48	0.00	29.66	30.62	N	5.7	16.9	13.56	46.0	41.9	51	36	
11	59	20	38.6	20.4	25	0	87	23	53	0.00	29.50	30.45	SSW	6.3	24.4	13.20	44.5	41.9	51	36	
12	64	30	44.6	30.1	18	0	87	32	59	0.00	29.27	30.22	SW	5.7	15.5	12.95	45.5	44.7	55	38	
13	73	29	50.2	29.6	14	0	92	20	52	0.00	29.15	30.10	WNW	5.7	20.8	12.99	46.3	46.8	57	39	
14	63	35	50.5	34.3	16	0	86	34	56	0.00	28.94	29.88	SE	7.5	36.8	6.64	47.5	47.9	53	43	
15	43	25	29.9	19.4	31	0	76	55	65	0.00	29.17	30.11	NNW	18.5	42.5	2.50	45.4	41.8	49	37	
16	50	24	34.5	21.7	28	0	89	30	63	0.00	29.13	30.07	NNW	6.0	18.9	13.83	43.5	40.9	50	35	
17	59	25	42.4	26.3	23	0	83	34	55	0.00	29.14	30.08	SSE	5.6	16.7	13.90	44.2	43.5	54	36	
18	67*	28*	50.8*	36.9*	17*	0*	87*	40*	61*	0.00*	28.89*	29.83*	S *	9.8*	30.5*	11.27*	45.3*	45.7*	55*	38*	
19	58	25	40.8	31.3	23	0	98	42	70	0.00	29.06	30.00	N	15.6	40.9	3.65	46.5	45.5	49	40	
20	30	16	22.8	3.9	42	0	57	28	44	0.00	29.54	30.49	N	15.5	34.1	10.22	42.7	38.2	42	35	
21	41	12	24.5	5.6	39	0	74	18	48	0.00	29.46	30.41	N	4.6	12.2	14.60	40.4	37.1	46	33	
22	50	14	30.4	12.6	33	0	84	22	53	0.00	29.45	30.41	SW	3.9	16.6	14.46	40.0	38.5	48	33	
23	62	20	40.5	21.2	24	0	82	22	50	0.00	29.19	30.13	WSW	5.4	15.7	14.59	41.1	41.6	53	34	
24	65	24	42.6	31.0	20	0	94	31	67	0.00	28.93	29.87	NW	5.6	20.3	14.34	43.0	44.7	56	36	
25	51	30	40.6	20.0	25	0	90	25	46	0.00	29.20	30.15	NNE	15.2	27.9	14.86	44.0	45.4	53	40	
26	46	23	34.7	11.3	30	0	85	19	40	0.00	29.39	30.34	NNE	6.4	21.8	12.68	43.2	43.6	51	37	
27	48	32	39.6	28.8	25	0	87	45	66	0.00	29.33	30.28	NNW	4.7	13.5	8.92	44.8	45.5	51	42	
28	53	24	37.3	21.8	26	0	87	24	59	0.00	29.48	30.43	NW	8.1	27.1	15.33	43.9	43.5	52	37	
29	66	18	42.3	16.6	23	0	89	12	46	0.00	29.26	30.20	WSW	6.5	27.2	15.76	43.0	43.9	55	35	
30	68	22	46.0	17.2	20	0	76	10	37	0.00	29.11	30.05	WSW	3.8	13.1	15.80	44.1	46.2	57	37	
31	70	29	50.6	38.8	15	0	89	40	66	0.01	29.00	29.93	SSE	7.6	23.5	14.66	45.8	49.2	59	40	
55* 24* 38.6* 23.3*					<- Monthly Averages ->					29.22* 30.16*		N * 8.8* 42.5*			11.44* 44.9* 43.1* 51* 37*						
Temperature - Highest: 73*							Degree Days - Total HDD: 798*					Number of Days With:									
Lowest: 12*							Total CDD: 0*					Tmax >= 90: 0* Rainfall >= 0.01 inch: 3*									
Rainfall: Monthly Total: 0.36* in.							Humidity - Highest: 100*					Tmax <= 32: 1* Rainfall >= 0.10 inch: 1*									
Greatest 24 Hr: 0.28* in.							Lowest: 10*					Tmin <= 32: 28* Avg Wind Speed >= 10 mph: 10*									
												Tmin <= 0: 0* Max Wind Speed >= 30 mph: 10*									

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Oklahoma Water Resources Board Time: Midnight-Midnight CST

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

February 2022  
Nearest City: 6.0 N Tishomingo  
Longitude: 96-40-44

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	68	54	58.3	51.2	4	0	93	54	78	0.00	28.90	29.83	SSE	10.0	26.8	7.57	50.1	54.4	60	51
2	55	22	34.0	31.7	27	0	97	83	91	0.00	29.04	29.98	N	15.1	33.9	2.20	48.4	47.2	54	41
3	22	17	19.2	14.6	45	0	89	75	82	0.00	29.27	30.22	N	15.6	31.6	3.86	43.0	37.7	41	37
4	35	18	23.8	11.9	39	0	86	33	63	0.08	29.57	30.53	NNW	8.9	22.6	16.52	41.3	36.4	37	36
5	46	12	28.9	17.2	36	0	91	32	65	0.19	29.45	30.41	SSE	6.2	20.9	16.97	39.3	35.3	38	34
6	53	20	36.7	23.1	28	0	92	32	61	0.27	29.26	30.20	SSE	4.9	16.3	16.72	39.5	38.6	49	33
7	56	27	41.8	24.6	23	0	84	28	54	0.07	29.39	30.34	NNW	7.2	21.2	16.79	41.7	41.0	51	35
8	67	22	43.1	23.9	21	0	93	18	55	0.00	29.19	30.13	SSW	6.6	26.1	17.16	42.5	42.2	52	35
9	68	28	47.2	21.8	17	0	87	13	45	0.00	29.13	30.07	NW	5.2	17.7	17.16	43.9	44.3	55	36
10	67	32	50.9	28.4	16	0	85	25	45	0.00	29.10	30.04	NW	5.2	20.8	13.73	45.8	47.1	57	41
11	74	28	50.7	30.0	14	0	91	17	53	0.00	28.96	29.90	NNE	9.1	28.1	16.22	46.3	48.2	60	39
12	52	21	36.8	11.4	29	0	70	17	37	0.00	29.44	30.39	N	13.8	34.1	13.64	46.6	46.3	52	40
13	60	18	38.4	17.2	26	0	80	19	48	0.00	29.40	30.35	WSW	6.2	21.4	17.89	43.7	43.4	56	35
14	72	25	47.7	23.5	17	0	87	13	47	0.00	29.26	30.20	SSE	7.7	25.4	18.02	44.8	46.9	60	37
15	68	38	54.5	38.6	12	0	82	39	56	0.00	29.12	30.06	SSE	14.5	37.0	17.62	46.8	50.1	60	41
16	70	56	63.4	55.1	2	0	92	58	75	0.00	28.90	29.83	S	17.9	39.7	5.87	50.8	56.0	60	52
17	63	27	39.0	33.7	20	0	96	67	81	0.65	29.09	30.03	NNW	15.0	35.8	4.40	50.7	48.4	58	39
18	51	17	32.6	14.2	31	0	86	17	53	0.00	29.38	30.33	N	4.2	15.1	19.25	46.1	42.1	53	36
19	65	24	43.8	24.3	20	0	91	22	53	0.00	29.37	30.32	W	5.8	19.2	19.07	46.0	44.9	57	36
20	68	34	50.8	30.1	14	0	83	21	50	0.00	29.10	30.05	S	11.0	35.5	16.85	47.1	45.9	54	39
21	72	42	60.0	54.9	8	0	99	63	84	0.37	28.86	29.80	S	9.4	27.1	8.34	49.8	51.9	59	44
22	62	25	38.1	28.4	22	0	98	47	69	0.14	29.11	30.05	N	15.1	32.6	15.17	51.2	49.4	56	40
23	24	16	18.6	12.9	45	0	91	61	79	0.00	29.39	30.34	N	14.1	34.1	3.10	44.1	36.2	40	34
24	26	16	22.0	19.7	44	0	94	83	91	0.00	29.29	30.24	N	7.7	20.2	4.99	41.2	33.6	34	33
25	32	18	25.3	14.7	40	0	88	47	65	0.00	29.53	30.48	NNE	10.2	21.3	15.34	40.3	32.8	34	32
26	40	28	33.9	23.4	31	0	73	56	65	0.17	29.44	30.39	NNE	5.8	13.2	8.77	41.9	35.2	39	33
27	55	24	37.9	19.5	25	0	89	21	53	0.10	29.43	30.38	NW	6.4	20.9	20.52	43.2	40.3	51	34
28	65	21	44.5	21.6	22	0	88	16	49	0.00	29.32	30.26	SW	5.3	19.2	18.59	43.9	43.0	53	35
56 26 40.1 25.8				<- Monthly Averages ->						29.24 30.18		N 9.4 39.7			13.30		45.0 43.5 51 38			
Temperature - Highest: 74 Lowest: 12						Degree Days - Total HDD: 676 Total CDD: 0						Number of Days With: Tmax ≥ 90: 0      Rainfall ≥ 0.01 inch: 9 Tmax ≤ 32: 4      Rainfall ≥ 0.10 inch: 7 Tmin ≤ 32: 23      Avg Wind Speed ≥ 10 mph: 11 Tmin ≤ 0: 0      Max Wind Speed ≥ 30 mph: 9								
Rainfall: Monthly Total: 2.04 in. Greatest 24 Hr: 0.65 in.						Humidity - Highest: 99 Lowest: 13														

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## Oklahoma Water Resources Board

MESONET CLIMATOLOGICAL DATA SUMMARY	March 2022	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		PRESSURE (in)		WIND SPEED (mph)			SOLAR (MJ/m2)	4" SOIL TEMPERATURES			
	MAX	MIN	AVG	DEWPT	HDD	CDD	MAX	MIN	AVG	(in)	STN	MSL	DIR	AVG	MAX	SOD		BARE	MAX	MIN	
1	74	27	49.8	24.6	15	0	86	13	47	0.00	29.22	30.16	SW	5.1	17.2	20.96	46.1	47.0	59	37	
2	77	29	52.3	27.3	12	0	85	14	48	0.00	29.19	30.14	SSE	4.0	15.4	20.90	47.7	49.2	62	39	
3	78	33	55.6	32.5	10	0	87	16	49	0.00	29.18	30.13	SE	4.3	16.9	20.62	49.4	51.5	63	42	
4	74	39	58.4	49.5	9	0	89	54	73	0.00	29.10	30.04	SSE	9.8	26.6	15.50	51.3	54.0	63	46	
5	78	58	67.3	57.6	0	3	90	51	72	0.00	28.94	29.87	S	14.9	31.6	11.94	54.9	59.4	66	56	
6	60	36	46.9	42.0	17	0	97	67	83	0.28	29.01	29.95	NNE	10.4	27.0	4.05	53.6	52.7	57	46	
7	46	30	36.9	26.6	27	0	90	44	68	0.00	29.30	30.25	N	11.0	26.5	18.40	50.2	46.4	55	41	
8	43	24	33.3	24.6	31	0	89	48	71	0.00	29.18	30.12	NE	6.2	24.1	5.54	47.6	41.1	45	38	
9	56	21	39.4	24.2	27	0	91	30	59	0.00	29.09	30.03	ENE	5.2	14.8	22.26	46.9	44.6	58	36	
10	63	31	45.3	32.1	18	0	92	35	63	0.00	29.03	29.97	SSE	8.9	29.8	21.56	48.5	47.9	60	39	
11	35	26	30.2	20.1	35	0	85	45	67	0.00	29.25	30.20	N	16.4	36.0	6.05	46.4	39.5	45	37	
12	55	21	37.8	16.4	27	0	79	18	46	0.01	29.40	30.35	NW	7.0	17.2	22.81	45.1	42.0	54	35	
13	66	33	49.7	21.4	15	0	59	16	36	0.00	29.21	30.15	S	13.1	30.6	22.90	47.1	45.0	55	37	
14	67	46	54.9	47.4	9	0	96	55	76	0.11	29.04	29.98	SSE	11.6	28.6	6.60	49.1	49.0	55	43	
15	70	42	55.2	44.6	9	0	96	43	70	0.00	29.16	30.10	NNW	7.5	21.7	17.67	51.9	54.2	64	47	
16	76	38	57.9	43.8	8	0	99	29	65	0.00	28.99	29.93	SSE	8.3	23.9	22.71	52.9	54.8	65	46	
17	77	49	63.5	49.2	2	0	86	33	62	0.10	28.76	29.70	SSE	14.1	40.3	19.25	54.7	57.2	65	49	
18	59	33	48.4	34.8	19	0	86	31	62	0.00	29.00	29.93	NW	13.3	36.0	11.27	53.6	51.8	57	47	
19	73	31	53.2	27.9	13	0	87	14	45	0.00	29.19	30.13	WSW	6.5	22.3	24.08	52.2	52.0	65	41	
20	78	37	59.7	32.8	7	0	87	16	44	0.00	29.14	30.09	SSE	10.3	30.8	23.89	53.5	56.1	69	45	
21	62	51	58.0	48.5	8	0	98	33	76	1.84	28.81	29.75	ESE	10.0	27.6	1.86	54.3	55.4	57	54	
22	54	44	46.8	40.7	16	0	99	61	80	0.01	28.78	29.71	WNW	12.0	33.5	6.56	53.4	51.6	55	47	
23	57	34	46.9	26.6	19	0	70	27	47	0.00	28.96	29.90	WNW	12.2	38.0	23.18	51.5	48.4	56	42	
24	63	29	46.2	27.0	19	0	86	22	53	0.00	29.01	29.95	NW	7.1	22.4	24.65	51.2	48.9	60	40	
25	77	33	55.4	32.4	10	0	86	16	48	0.00	29.13	30.08	NE	5.7	17.8	24.57	52.7	53.2	66	42	
26	75	45	59.2	36.2	5	0	65	27	44	0.00	29.10	30.04	ENE	7.5	18.9	24.21	55.2	56.4	67	47	
27	81	50	63.7	40.9	0	1	59	21	45	0.00	29.00	29.94	ENE	9.8	20.3	23.56	56.7	58.2	68	49	
28	82	47	64.8	47.5	1	0	66	39	54	0.00	28.96	29.90	SSE	12.8	28.3	23.09	58.3	59.2	69	50	
29	79	63	70.5	58.5	0	6	84	53	66	0.00	28.72	29.65	S	19.0	39.3	14.19	60.3	62.6	68	59	
30	72	35	52.2	45.3	11	0	98	53	78	0.29	28.64	29.57	NW	10.6	32.7	9.90	59.4	58.3	63	50	
31	62	34	47.9	31.9	17	0	96	28	58	0.00	28.93	29.87	NW	7.8	24.3	24.75	55.8	53.0	63	46	
	67	37	51.8	36.0	<- Monthly Averages ->						29.05	29.99	SSE	9.8	40.3	17.40	52.0	51.6	60	44	

Temperature - Highest: 82 Lowest: 21	Degree Days - Total HDD: 415 Total CDD: 10	Number of Days With: Tmax ≥ 90: 0      Rainfall ≥ 0.01 inch: 7 Tmax ≤ 32: 0      Rainfall ≥ 0.10 inch: 5 Tmin ≤ 32: 10     Avg Wind Speed ≥ 10 mph: 15 Tmin ≤ 0: 0      Max Wind Speed ≥ 30 mph: 10
Rainfall: Monthly Total: 2.64 in. Greatest 24 Hr: 1.84 in.	Humidity - Highest: 99 Lowest: 13	

Date	Reference ET, Short [in]	Reference ET, Tall [in]	Cool Season Grass ET [in]	Warm Season Grass ET [in]	Pan Evaporation [in]
2022-05-25	0.07	0.08	0.07	0.05	0.09
2022-05-24	0.04	0.05	0.03	0.03	0.05
2022-05-23	0.09	0.11	0.09	0.06	0.12
2022-05-22	0.13	0.18	0.12	0.08	0.18
2022-05-21	0.12	0.18	0.11	0.07	0.16
2022-05-20	0.25	0.34	0.24	0.16	0.36
2022-05-19	0.25	0.32	0.23	0.15	0.34
2022-05-18	0.23	0.28	0.21	0.14	0.30
2022-05-17	0.18	0.23	0.17	0.11	0.24
2022-05-16	0.22	0.25	0.20	0.14	0.27
2022-05-15	0.25	0.31	0.23	0.16	0.32
2022-05-14	0.22	0.25	0.21	0.14	0.27
2022-05-13	0.22	0.27	0.21	0.14	0.28
2022-05-12	0.24	0.29	0.22	0.15	0.31
2022-05-11	0.23	0.28	0.21	0.14	0.29
2022-05-10	0.16	0.21	0.15	0.10	0.21
2022-05-09	0.21	0.28	0.20	0.13	0.30
2022-05-08	0.25	0.33	0.24	0.16	0.35
2022-05-07	0.16	0.20	0.15	0.10	0.21
2022-05-06	0.19	0.22	0.18	0.12	0.23
2022-05-05	0.09	0.10	0.08	0.05	0.11
2022-05-04	0.12	0.16	0.11	0.08	0.16
2022-05-03	0.09	0.11	0.08	0.06	0.12
2022-05-02	0.11	0.15	0.10	0.07	0.14
2022-05-01	0.19	0.23	0.17	0.12	0.24
2022-04-30	0.20	0.25	0.18	0.12	0.27
2022-04-29	0.12	0.17	0.12	0.08	0.17
2022-04-28	0.19	0.25	0.17	0.11	0.25
2022-04-27	0.18	0.22	0.16	0.11	0.23
2022-04-26	0.19	0.25	0.18	0.12	0.25
2022-04-25	0.18	0.24	0.17	0.11	0.25
2022-04-24	0.05	0.08	0.05	0.03	0.07
2022-04-23	0.15	0.22	0.14	0.09	0.22
2022-04-22	0.22	0.31	0.20	0.14	0.33
2022-04-21	0.16	0.21	0.15	0.10	0.21
2022-04-20	0.19	0.27	0.18	0.12	0.26
2022-04-19	0.18	0.26	0.17	0.11	0.26
2022-04-18	0.18	0.25	0.17	0.11	0.25
2022-04-17	0.17	0.22	0.15	0.10	0.21
2022-04-16	0.10	0.14	0.09	0.06	0.12
2022-04-15	0.23	0.31	0.21	0.14	0.32
2022-04-14	0.18	0.24	0.17	0.11	0.25
2022-04-13	0.19	0.27	0.18	0.12	0.28
2022-04-12	0.13	0.17	0.12	0.08	0.17
2022-04-11	0.17	0.23	0.16	0.11	0.22
2022-04-10	0.25	0.37	0.23	0.16	0.39
2022-04-09	0.24	0.34	0.22	0.15	0.34
2022-04-08	0.18	0.26	0.17	0.11	0.28
2022-04-07	0.21	0.31	0.20	0.13	0.34
2022-04-06	0.30	0.45	0.28	0.19	0.50
2022-04-05	0.17	0.22	0.15	0.10	0.21

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2022-04-04	0.10	0.14	0.09	0.06	0.13
2022-04-03	0.23	0.33	0.21	0.14	0.32
2022-04-02	0.17	0.22	0.16	0.11	0.22
2022-04-01	0.15	0.20	0.14	0.09	0.20
2022-03-31	0.14	0.19	0.13	0.09	0.19
2022-03-30	0.12	0.17	0.11	0.07	0.16
2022-03-29	0.20	0.29	0.18	0.12	0.30
2022-03-28	0.23	0.34	0.22	0.15	0.33
2022-03-27	0.24	0.34	0.22	0.15	0.33
2022-03-26	0.19	0.27	0.18	0.12	0.26
2022-03-25	0.17	0.24	0.16	0.11	0.23
2022-03-24	0.14	0.19	0.13	0.09	0.19
2022-03-23	0.16	0.23	0.15	0.10	0.24
2022-03-22	0.07	0.11	0.07	0.05	0.10
2022-03-21	0.08	0.11	0.07	0.05	0.10
2022-03-20	0.22	0.33	0.21	0.14	0.32
2022-03-19	0.17	0.24	0.16	0.11	0.23
2022-03-18	0.13	0.20	0.12	0.08	0.19
2022-03-17	0.19	0.28	0.18	0.12	0.27
2022-03-16	0.16	0.22	0.15	0.10	0.21
2022-03-15	0.13	0.18	0.12	0.08	0.17
2022-03-14	0.10	0.15	0.09	0.06	0.14
2022-03-13	0.19	0.29	0.18	0.12	0.30
2022-03-12	0.11	0.16	0.11	0.07	0.16
2022-03-11	0.06	0.09	0.05	0.04	0.08
2022-03-10	0.13	0.19	0.12	0.08	0.18
2022-03-09	0.10	0.13	0.09	0.06	0.12
2022-03-08	0.05	0.07	0.04	0.03	0.06
2022-03-07	0.09	0.12	0.08	0.05	0.12
2022-03-06	0.07	0.10	0.06	0.04	0.08
2022-03-05	0.15	0.22	0.14	0.09	0.21
2022-03-04	0.12	0.17	0.11	0.08	0.16
2022-03-03	0.13	0.18	0.12	0.08	0.17
2022-03-02	0.13	0.18	0.12	0.08	0.17
2022-03-01	0.13	0.19	0.12	0.08	0.18
2022-02-28	0.11	0.15	0.10	0.07	0.14
2022-02-27	0.10	0.15	0.10	0.06	0.14
2022-02-26	0.05	0.07	0.05	0.03	0.07
2022-02-25	0.05	0.07	0.05	0.03	0.07
2022-02-24	0.02	0.02	0.02	0.01	0.02
2022-02-23	0.03	0.05	0.03	0.02	0.04
2022-02-22	0.14	0.22	0.13	0.09	0.21
2022-02-21	0.07	0.09	0.06	0.04	0.09
2022-02-20	0.15	0.23	0.14	0.10	0.22
2022-02-19	0.11	0.15	0.10	0.07	0.14
2022-02-18	0.08	0.11	0.07	0.05	0.10
2022-02-17	0.12	0.19	0.11	0.07	0.17
2022-02-16	0.11	0.16	0.10	0.07	0.15
2022-02-15	0.15	0.23	0.14	0.09	0.21
2022-02-14	0.14	0.22	0.13	0.09	0.19
2022-02-13	0.10	0.14	0.09	0.06	0.13

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MAY 27 2022  
Oklahoma Water Resources Board

2022-02-12	0.13	0.20	0.12	0.08	0.20
2022-02-11	0.16	0.26	0.15	0.10	0.23
2022-02-10	0.10	0.14	0.09	0.06	0.13
2022-02-09	0.11	0.16	0.09	0.07	0.14
2022-02-08	0.11	0.17	0.10	0.07	0.14
2022-02-07	0.09	0.13	0.08	0.06	0.12
2022-02-06	0.07	0.09	0.06	0.04	0.08
2022-02-05	0.06	0.08	0.05	0.03	0.07
2022-02-04	0.06	0.09	0.05	0.04	0.08
2022-02-03	0.02	0.03	0.02	0.01	0.03
2022-02-02	0.07	0.11	0.07	0.04	0.10
2022-02-01	0.09	0.14	0.09	0.06	0.12
2022-01-31	0.11	0.16	0.10	0.07	0.14
2022-01-30	0.08	0.12	0.07	0.05	0.11
2022-01-29	0.11	0.17	0.10	0.07	0.15
2022-01-28	0.09	0.13	0.08	0.05	0.12
2022-01-27	0.05	0.07	0.05	0.03	0.06
2022-01-26	0.08	0.12	0.07	0.05	0.10
2022-01-25	0.12	0.18	0.11	0.07	0.18
2022-01-24	0.08	0.11	0.07	0.05	0.09
2022-01-23	0.08	0.12	0.07	0.05	0.10
2022-01-22	0.05	0.07	0.05	0.03	0.06
2022-01-21	0.05	0.07	0.05	0.03	0.06
2022-01-20	0.07	0.10	0.06	0.04	0.10
2022-01-19	0.10	0.15	0.09	0.06	0.14
2022-01-18	0.10	0.15	0.09	0.06	0.13
2022-01-17	0.07	0.10	0.06	0.04	0.09
2022-01-16	0.06	0.10	0.06	0.04	0.08
2022-01-15	0.08	0.13	0.08	0.05	0.13
2022-01-14	0.09	0.14	0.08	0.05	0.12
2022-01-13	0.10	0.16	0.10	0.06	0.13
2022-01-12	0.08	0.12	0.07	0.05	0.10
2022-01-11	0.08	0.12	0.07	0.05	0.10
2022-01-10	0.07	0.12	0.07	0.05	0.10
2022-01-09	0.10	0.16	0.10	0.06	0.15
2022-01-08	0.06	0.08	0.05	0.03	0.07
2022-01-07	0.05	0.08	0.05	0.03	0.07
2022-01-06	0.05	0.08	0.05	0.03	0.08
2022-01-05	0.09	0.15	0.09	0.06	0.13
2022-01-04	0.09	0.15	0.09	0.06	0.12
2022-01-03	0.06	0.09	0.05	0.03	0.07
2022-01-02	0.05	0.08	0.05	0.03	0.07
2022-01-01	0.05	0.08	0.05	0.03	0.07
2021-12-31	0.04	0.06	0.04	0.03	0.05
2021-12-30	0.07	0.10	0.06	0.04	0.09
2021-12-29	0.06	0.09	0.06	0.04	0.07
2021-12-28	0.10	0.16	0.09	0.06	0.13
2021-12-27	0.09	0.13	0.08	0.05	0.11
2021-12-26	0.06	0.09	0.06	0.04	0.08
2021-12-25	0.08	0.12	0.08	0.05	0.10
2021-12-24	0.13	0.21	0.13	0.08	0.19
2021-12-23	0.09	0.14	0.08	0.05	0.12

# Mill Creek Water Levels 1st Quarter 2022

