



Robin Simmons
Regional Land Manager

June 30, 2016

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

Re: Martin Marietta/TXI Mill Creek Limestone Quarry Monitoring Report Q1 2016

Dear Mr. Wilkins:

Attached please find the Q1 2016 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.

During the 1st quarter of 2016 the last of the water that has been stored in the pit due to the record precipitation of 2015 was pumped out of the pit. This water was already accounted for as rain and runoff into the pit in previous quarterly reporting. This pumping is reflected on line 4 of Attachment 1 (Appendix C).

Please call if you have any questions or comments.

Sincerely,

A handwritten signature in cursive script that reads 'Robin L. Simmons'.

Robin L. Simmons, EIT
Regional Land Manager

North Texas/Oklahoma District
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**ATTACHMENT 1 (Appendix C)
Martin Marietta (TXI) Mill Creek 2016**

Appendix C . Consumptive use of Pitwater

Q1 2016

PIT GROUNDWATER VOLUME			
1	Total volume pumped from producing mine pit(s) (AC-FT)		1413.17
2	Volume of precipitation that falls onto the surface of producing Mine Pits (AC-FT)		48.48
3	Portion of total precipitation that flows over the land surface that drains into the mine pit water (AC-FT)		16.70
4	(WATER HELD IN PIT FROM PREVIOUS MONTHS) other non pit waters pumped from the producing mining pit (AC-FT)		750.00
5	add lines 2 through 4		815.19
6	Pit Groundwater Volume (AC-FT) (line 1 minus Line 5)		597.99
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)		7.18
9	Vol. of pit groundwater that evaporates from producing mine pits, process ponds and lined ponds (excluding structures used for augmentation) (AC-FT)		6.17
10	Volume of pit groundwater that is used for other beneficial uses off of the mine site (AC-FT) (includes on-site dust control)		7.82
11	DEFINED ELEMENTS OF CONSUMPTIVE USE of Pit groundwater (AC-FT) (add lines 7 through 10)		21.17
PIT GROUNDWATER BALANCE			
12	Lines 6 minus 11		576.82
13	Groundwater Augmentation Volume of pit groundwater returned to GW Basin or subbasin. (Troy Recharge AC-FT)	Credits	166.52
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
15	PPT and Runoff Volume of Precipitation and surface runoff into a recharge pit or holding pond (AC-FT)		39.50
16	Recycled Pit Groundwater - Volume of ground water returned to the mine pit or holding basin (AC-FT)		527.59
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)		-0.49
18	add lines 13 through 17		733.12
19	OTHER CONSUMPTIVE USE Line 12 minus Line 18		-156.30
TOTAL REPORTED CONSUMPTIVE USE (AC-FT)			
TOTAL NET CONSUMPTIVE USE (AC-FT) Line 11 plus line 19			-135.13

RESULTS FROM RUNOFF MODELLING

2016	PPT. Inches	Quarry Monthly Totals				FW Pond Monthly Totals			Re-cycle Recharge (Trov) 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	0.62	1.671	0.244	0.000	1.91	1.13	0.00	2.10	0.00	0.00	4.90	0.24		
February	1.11	2.991	7.027	1.678	11.70	2.02	0.48	3.76	2.00	8.77	11.18			
March	3.88	10.457	26.093	13.348	49.90	7.06	10.87	13.15	18.49	30.66	68.80			
Q1 Subtotal	5.61	15.12	33.36	15.03	63.51	10.20	11.35	19.01	20.49	44.33	80.23			

Water Volume Movements

	January	February	March
Pumped from Pit	259.3	495.8	658.1
Groundwater Component of Pitwater	207.4	334.1	456.5
Quarry dust suppression	1.5	4.4	3.3
Q- freshwater pond			
To Secondary FM7	257.8	491.4	654.8
To sand Plant FM8	474.7	507.8	535.1
to loadout FM6	73.3	214.2	138.7
to dust control FM9	363.8	338.1	385.4
to Plant FM7+FM8+FM6	0.7	3.4	1.6
to stream Augmentation	911.8	1060.1	1059.2
	0.00	0.00	0.00
To Troy FM3	971.8	985.3	1085.3
From Troy to Freshwater Pond FM4	+	709.1	749.6
			817.7

Quarter Summary	1st QTR
Total Tons Shipped	1,360,000
Total Acre Feet	30.57
Average Moisture %	3.06%

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# ----- WARNING -----
# The data you have obtained from this automated U.S. Geological Survey database
# have not received Director's approval and as such are provisional and subject to
# revision. The 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: http://help.waterdata.usgs.gov/policies/provisional-data-statement
#
# File-format description: http://help.waterdata.usgs.gov/faq/about-tab-delimited-output
# Automated-retrieval info: http://help.waterdata.usgs.gov/faq/automated-retrievals
#
# Contact: gs-w_support_nwisweb@usgs.gov
# retrieved: 2016-03-31 15:23:50 EDT (sdww02)
#
# 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
# DD parameter statistic Description
# 02 00060 00003 Discharge, cubic feet per second (Mean)
#
# Data-value qualification codes included in this output:
# A Approved for publication -- Processing and review completed.
# e Value has been estimated.
#
agency_cd site_no datetime 02_00060_00003 02_00060_00003_cd
5s 15s 20d 14n 10s
USGS 07331200 2016-01-01 207 A
USGS 07331200 2016-01-02 196 A
USGS 07331200 2016-01-03 189 A
USGS 07331200 2016-01-04 179 A
USGS 07331200 2016-01-05 143 A
USGS 07331200 2016-01-06 129 A
USGS 07331200 2016-01-07 127 A
USGS 07331200 2016-01-08 112 A
USGS 07331200 2016-01-09 101 A
USGS 07331200 2016-01-10 92 A
USGS 07331200 2016-01-11 86 A
USGS 07331200 2016-01-12 77 A
USGS 07331200 2016-01-13 73 A
USGS 07331200 2016-01-14 72 A
USGS 07331200 2016-01-15 70 A
USGS 07331200 2016-01-16 69 A:e
USGS 07331200 2016-01-17 69 A:e
USGS 07331200 2016-01-18 59 A:e
USGS 07331200 2016-01-19 52 A:e
USGS 07331200 2016-01-20 47 A:e
USGS 07331200 2016-01-21 38 A:e
USGS 07331200 2016-01-22 33 A
USGS 07331200 2016-01-23 29 A
USGS 07331200 2016-01-24 28 A
USGS 07331200 2016-01-25 27 A
USGS 07331200 2016-01-26 25 A
USGS 07331200 2016-01-27 25 A
USGS 07331200 2016-01-28 27 A
USGS 07331200 2016-01-29 29 A
USGS 07331200 2016-01-30 28 A
USGS 07331200 2016-01-31 28 A

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Automated-retrieval info: <http://help.waterdata.usgs.gov/faq/automated-retrievals>

Contact: gs-w_support_nwisweb@usgs.gov
retrieved: 2016-03-31 15:24:30 EDT (sdww01)

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
DD parameter statistic Description
02 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.

agency_cd	site_no	datetime	02_00060_00003	02_00060_00003_cd
5s	15s	20d	14n	10s
USGS	07331200	2016-02-01	25	A
USGS	07331200	2016-02-02	22	A
USGS	07331200	2016-02-03	20	P
USGS	07331200	2016-02-04	19	P
USGS	07331200	2016-02-05	24	P
USGS	07331200	2016-02-06	22	P
USGS	07331200	2016-02-07	19	P
USGS	07331200	2016-02-08	18	P
USGS	07331200	2016-02-09	18	P
USGS	07331200	2016-02-10	18	P
USGS	07331200	2016-02-11	19	P
USGS	07331200	2016-02-12	21	P
USGS	07331200	2016-02-13	15	P
USGS	07331200	2016-02-14	15	P
USGS	07331200	2016-02-15	14	P
USGS	07331200	2016-02-16	14	P
USGS	07331200	2016-02-17	13	P
USGS	07331200	2016-02-18	14	P
USGS	07331200	2016-02-19	17	P
USGS	07331200	2016-02-20	17	P
USGS	07331200	2016-02-21	15	P
USGS	07331200	2016-02-22	9.4	P
USGS	07331200	2016-02-23	70	P
USGS	07331200	2016-02-24	85	P
USGS	07331200	2016-02-25	50	P
USGS	07331200	2016-02-26	32	P
USGS	07331200	2016-02-27	22	P
USGS	07331200	2016-02-28	19	P
USGS	07331200	2016-02-29	17	P

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# Automated-retrieval info: http://help.waterdata.usgs.gov/faq/automated-retrievals
#
# Contact: gs-w\_support\_nwisweb@usgs.gov
# retrieved: 2016-07-01 13:02:30 EDT (nadww02)
#
# Data for the following 1 site(s) are contained in this file
# USGS 07331200 Mill Creek near Mill Creek, OK
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agency_cd site_no datetime 02_00060_00003 02_00060_00003_cd
5s 15s 20d 14n 10s
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USGS 07331200 2016-03-03 24 A
USGS 07331200 2016-03-04 19 A
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USGS 07331200 2016-03-06 7.9 A
USGS 07331200 2016-03-07 30 A
USGS 07331200 2016-03-08 625 A
USGS 07331200 2016-03-09 209 A
USGS 07331200 2016-03-10 128 A
USGS 07331200 2016-03-11 109 A
USGS 07331200 2016-03-12 109 A
USGS 07331200 2016-03-13 93 A
USGS 07331200 2016-03-14 81 A
USGS 07331200 2016-03-15 69 A
USGS 07331200 2016-03-16 59 A
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USGS 07331200 2016-03-18 111 A
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USGS 07331200 2016-03-21 43 A
USGS 07331200 2016-03-22 39 A
USGS 07331200 2016-03-23 31 A
USGS 07331200 2016-03-24 25 A
USGS 07331200 2016-03-25 23 A
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USGS 07331200 2016-03-27 21 A
USGS 07331200 2016-03-28 23 A
USGS 07331200 2016-03-29 23 A
USGS 07331200 2016-03-30 20 A
USGS 07331200 2016-03-31 22 A

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Date	Daily Rainfall Total	Total Daily Evaporation
1/1/2016	0	0
1/2/2016	0	0
1/3/2016	0	0
1/4/2016	0	0
1/5/2016	0	0
1/6/2016	0.16	0.16
1/7/2016	0.21	0.21
1/8/2016	0	0
1/9/2016	0.04	0.04
1/10/2016	0	0.001
1/11/2016	0	0.004
1/12/2016	0	0
1/13/2016	0	0.002
1/14/2016	0	0.003
1/15/2016	0	0.002
1/16/2016	0.21	0.214
1/17/2016	0	0.001
1/18/2016	0	0.002
1/19/2016	0	0.003
1/20/2016	0	0.002
1/21/2016	0	0.002
1/22/2016	0	0.003
1/23/2016	0	0.002
1/24/2016	0	0.001
1/25/2016	0	0.001
1/26/2016	0	0.005
1/27/2016	0	0.001
1/28/2016	0	0.004
1/29/2016	0	0.001
1/30/2016	0	0.001
1/31/2016	0	0
2/1/2016	0	0.003
2/2/2016	0	0.001
2/3/2016	0	0.004
2/4/2016	0	0
2/5/2016	0	0.005
2/6/2016	0	0.002
2/7/2016	0	0.002
2/8/2016	0	0.002
2/9/2016	0	0.004
2/10/2016	0	0.003
2/11/2016	0	0
2/12/2016	0	0.001
2/12/2016	0	0
2/13/2016	0	0.004
2/14/2016	0	0

2/15/2016	0	0
2/15/2016	0	0.001
2/16/2016	0	0
2/17/2016	0	0.001
2/18/2016	0	0
2/19/2016	0	0
2/20/2016	0	0
2/21/2016	0	0
2/22/2016	0	0.001
2/23/2016	1.1	1.101
2/24/2016	0.01	0.01
2/25/2016	0	0.003
2/26/2016	0	0.002
2/27/2016	0	0.003
2/28/2016	0	0
2/29/2016	0	0.001
3/1/2016	0	0
3/2/2016	0	0.001
3/3/2016	0	0
3/4/2016	0	0.001
3/5/2016	0	0
3/6/2016	0	0
3/7/2016	1.44	0.76
3/8/2016	1.02	0.4
3/9/2016	0.15	0.15
3/10/2016	0	0
3/11/2016	0.27	0.27
3/12/2016	0.03	0.03
3/13/2016	0	0
3/14/2016	0	0
3/15/2016	0	0
3/16/2016	0	0
3/17/2016	0.07	0.07
3/18/2016	0.33	0.1
3/19/2016	0	0.003
3/20/2016	0	0.003
3/21/2016	0	0.002
3/22/2016	0	0.001
3/23/2016	0.41	0
3/24/2016	0	0.001
3/25/2016	0	0.001
3/26/2016	0	0
3/27/2016	0	0.001
3/28/2016	0	0.001
3/29/2016	0	0
3/30/2016	0.16	0.16
3/31/2016	0	0

MESONET CLIMATOLOGICAL DATA SUMMARY										January 2016			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	HDD	MAX	MIN	(in)	STN	MSL	DIR	AVG	MAX		SOD	BARE	MAX	MIN
	AVG	DEWPT	CDD	AVG	AVG											
1	47	28	27	97	38	0.00	29.54	30.49	NNW	6.7	16.0	11.31	41.6	40.6	46	37
2	46	31	26	80	40	0.00	29.40	30.35	WSW	4.8	11.3	4.09	40.9	39.7	43	37
3	54	26	25	98	30	0.00	29.31	30.25	N	7.8	20.5	12.84	40.6	39.9	46	36
4	49	28	26	93	28	0.00	29.39	30.34	NE	7.6	16.7	11.98	39.9	39.1	44	36
5	44	25	31	95	53	0.00	29.36	30.31	ESE	6.9	18.7	11.39	38.9	38.0	42	35
6	42	34	27	100	72	0.52	29.15	30.10	SE	7.2	16.0	1.91	40.4	39.4	41	38
7	55	42	16	100	77	0.14	28.85	29.79	S	7.5	20.5	5.12	44.6	44.5	49	41
8	45	34	25	100	92	0.00	28.85	29.79	NNE	8.0	23.2	4.65	43.7	44.2	47	41
9	40	26	32	97	75	0.02	29.04	29.98	NNW	13.4	28.7	2.72	41.6	40.9	44	37
10	35	19	38	90	31	0.00	29.33	30.28	NNW	6.6	19.8	13.43	36.7	36.1	38	35
11	47	25	29	94	44	0.00	29.25	30.19	SSW	5.0	17.5	7.69	37.0	36.6	41	35
12	61	25	22	98	23	0.00	29.25	30.19	W	4.1	12.3	13.32	39.3	39.5	47	35
13	64	27	20	100	33	0.00	29.13	30.08	S	5.1	16.7	12.46	41.4	41.5	49	36
14	65	37	14	99	54	0.00	28.82	29.76	S	11.2	31.3	12.79	44.6	44.9	51	39
15	58	40	16	100	35	0.00	28.81	29.74	NNW	8.8	22.8	13.36	45.9	46.0	51	42
16	43	25	31	100	58	0.19	29.06	30.00	NNE	9.7	30.4	5.86	41.6	39.8	44	37
17	52	20	29	99	41	0.03	29.21	30.15	NNE	7.0	26.0	12.73	40.8	38.6	46	35
18	40	21	35	89	49	0.00	29.37	30.32	NNE	7.2	19.7	13.79	38.5	37.0	41	35
19	49	30	25	96	76	0.00	29.18	30.13	SE	9.2	26.4	2.86	38.7	37.7	41	35
20	38	32	30	97	83	0.00	29.17	30.11	NNW	6.2	17.0	4.03	39.9	38.7	41	37
21	40	33	28	100	74	0.01	29.12	30.06	NNW	12.3	31.0	1.65	40.3	39.2	40	37
22	42	28	30	87	46	0.00	29.32	30.27	NNW	14.1	31.3	14.20	38.5	37.5	42	35
23	45	26	29	90	46	0.00	29.27	30.22	SE	6.7	18.8	12.71	39.2	38.2	45	35
24	58	30	21	94	38	0.00	28.98	29.92	SSE	12.3	35.7	10.43	40.3	39.7	45	35
25	58	36	18	97	40	0.00	28.96	29.90	NW	10.1	26.5	14.20	45.3	45.8	52	42
26	51	29	25	91	35	0.00	29.32	30.27	N	10.2	25.2	11.58	42.3	41.2	46	37
27	56	24	25	91	25	0.00	29.32	30.27	NNW	4.3	13.6	15.07	41.3	40.7	49	36
28	67	27	18	93	23	0.00	29.12	30.06	NNW	5.9	18.9	14.36	42.6	42.2	50	36
29	74	32	12	92	21	0.00	28.92	29.86	S	9.9	34.2	15.03	44.7	44.6	52	38
30	71	37	11	82	28	0.00	28.77	29.70	S	10.1	29.2	15.19	47.4	47.5	54	41
31	66	46	9	83	38	0.00	28.80	29.74	SSW	11.1	28.1	14.79	50.8	51.0	57	47
	52	30	<-	Monthly Averages ->			29.14	30.08	NNW	8.3	35.7	10.24	41.6	41.0	46	37

Temperature - Highest: 74
Lowest: 19

Rainfall: Monthly Total: 0.91 in.
Greatest 24 Hr: 0.52 in.

Degree Days - Total HDD: 752
Total CDD: 0

Humidity - Highest: 100
Lowest: 21

Number of Days With:
Tmax > 90: 0
Tmax < 32: 0
Tmin < 32: 22
Tmin < 0: 0

Rainfall > 0.01 inch: 6
Rainfall > 0.10 inch: 3
Avg Wind Speed > 10 mph: 9
Max Wind Speed > 30 mph: 6

* Denotes incomplete record

© 1993, 2016 Oklahoma Climatological Survey
Monthly data generated on Tuesday, March 01, 2016 at 11:11 AM

MESONET CLIMATOLOGICAL DATA SUMMARY										February 2016				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	67	39	54.0	45.0	12	0	91	47	73	28.79	29.72	SE	10.7	33.3	49.6	49.5	56	43
2	63*	38*	50.3*	33.1*	15*	0*	84*	28*	55*	28.75*	29.68*	WSW*	12.8*	31.3*	50.6*	50.5*	55*	45*
3	47	27	36.7	22.7	28	0	84	32	59	29.22	30.16	NW	9.3	24.1	44.0	42.9	49	39
4	52	23	35.3	20.0	28	0	87	22	59	29.44	30.39	NW	5.2	20.0	41.8	40.9	49	36
5	56	22	40.3	24.4	26	0	98	29	59	29.39	30.34	SSE	6.7	23.0	41.9	41.7	49	36
6	53	36	43.1	34.6	21	0	99	42	74	29.36	30.31	SSW	4.7	11.9	46.3	46.1	54	42
7	62	28	45.0	30.2	20	0	100	28	63	29.23	30.17	SSW	7.4	26.0	45.0	44.2	53	38
8	52	36	43.7	13.5	21	0	44	16	30	29.30	30.25	NW	15.5	40.7	43.1	43.7	50	39
9	55	31	41.5	18.7	22	0	56	27	41	29.30	30.25	NNW	10.1	32.0	41.4	42.6	51	37
10	70*	23*	46.3*	27.9*	18*	0*	94*	23*	53*	29.21*	30.16*	SSW*	7.8*	23.0*	42.9*	44.6*	54*	37*
11	67	43	54.2	31.6	10	0	64	26	44	29.13	30.08	NNE	8.6	20.8	47.0	49.6	59	43
12	66	33	49.5	31.6	15	0	87	30	53	29.33	30.28	NNE	8.1	21.7	47.2	49.6	59	42
13	58	34	46.5	31.3	19	0	77	39	57	29.34	30.29	SE	10.6	21.8	46.5	48.8	57	42
14	63	46	53.4	46.6	10	0	94	62	78	28.97	29.91	SE	7.9	18.9	49.2	51.2	56	48
15	66	37	52.8	35.3	13	0	92	21	57	28.93	29.87	NW	7.8	24.9	50.7	53.0	61	48
16	66	38	52.7	29.1	13	0	72	16	43	29.01	29.95	NNW	10.2	27.0	49.2	52.2	61	47
17	69	31	50.7	32.9	15	0	94	27	55	29.22	30.17	SSE	7.5	21.3	48.5	51.3	61	43
18	72	48	60.7	43.6	5	0	69	39	54	29.10	30.04	S	15.7	35.5	51.4	55.0	63	48
19	74	58	65.3	56.6	0	1	93	54	74	29.07	30.01	S	10.7	35.3	57.1	60.4	67	56
20	78	60	66.7	60.6	0	4	100	61	82	29.00	29.94	S	11.3	27.6	59.9	63.1	70	58
21	67	55	60.6	49.8	4	0	100	35	72	29.08	30.02	NNE	9.9	24.3	58.5	60.6	64	58
22	65	45	55.0	36.1	10	0	76	32	50	29.00	29.94	N	10.4	26.8	55.9	59.0	67	52
23	49	39	42.5	40.2	21	0	97	75	92	28.85	29.79	N	18.1	44.7	50.1	50.3	58	46
24	56	36	45.0	30.1	19	0	86	31	58	29.09	30.04	NW	12.1	31.1	47.5	47.0	53	42
25	52	29	43.3	25.2	24	0	83	31	50	29.36	30.31	NNW	10.8	26.2	46.7	45.4	52	41
26	59	22	41.2	27.2	24	0	96	27	63	29.39	30.34	SSW	6.3	20.0	45.9	44.6	53	38
27	71	30	52.7	38.0	15	0	97	29	62	29.18	30.13	S	8.4	25.5	49.0	48.3	58	40
28	74	51	59.9	45.4	2	0	92	26	63	29.01	29.95	S	10.9	29.0	53.5	53.9	62	49
29	74	43	60.0	45.8	7	0	89	27	62	29.04	29.98	SSE	9.3	25.7	54.4	55.0	64	47
	63*	37*	50.0*	34.7*	<	<	Monthly Averages ->		29.14*	30.09*	S	9.8*	44.7*	15.75*	48.8*	49.8*	57*	44*
Temperature - Highest: 78*										Degree Days - Total HDD: 437*		Number of Days With:		Rainfall ≥ 0.01 inch: 3*				
Lowest: 22*										Total CDD: 5*		Tmax ≥ 90: 0*		Rainfall ≥ 0.10 inch: 2*				
Rainfall: Monthly Total: 1.41* in.										Humidity - Highest: 100*		Tmin ≤ 32: 0*		Avg Wind Speed ≥ 10 mph: 14*				
Greatest 24 Hr: 1.24* in.										Lowest: 16*		Tmin ≤ 32: 10*		Max Wind Speed ≥ 30 mph: 8*				

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

March 2016
 Nearest City: 6.0 N Tishomingo
 Longitude: 96-40-44

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

DAY	TEMPERATURE (F)		DEWPT	DEG DAYS	HUMIDITY (%)		RAIN	STN	MSL	DIR	AVG	MAX	SOLAR	4" SOIL TEMPERATURES			
	MAX	MIN	AVG	HDD	MIN	MAX	(in)						(MJ/m2)	SOD	BARE	MAX	MIN
1	63	38	56.5	40.0	14	0	0.00	29.11	30.05	N	11.4	32.5	19.28	56.4	57.7	64	52
2	67	33	52.4	33.8	15	0	0.00	29.06	30.00	S	10.9	31.1	18.33	51.3	52.5	61	45
3	66	38	55.3	37.2	13	0	0.00	29.05	29.99	NNW	11.3	34.8	20.81	53.6	55.7	63	50
4	69	33	52.4	34.6	14	0	0.00	29.16	30.10	SSE	6.3	19.1	19.90	52.7	54.2	64	45
5	75	38	57.0	39.3	9	0	0.00	29.20	30.14	ESE	4.8	15.8	20.56	54.9	56.8	68	48
6	72	46	61.0	47.7	6	0	0.00	29.05	29.99	S	13.9	36.6	14.73	56.0	58.1	64	52
7	64	57	61.2	58.2	4	0	1.30	28.87	29.81	SSE	13.5	29.3	1.86	57.9	59.2	60	59
8	62	54	58.8	57.8	7	0	0.97	28.83	29.76	ESE	6.5	33.7	3.18	58.4	58.8	61	58
9	60	53	57.0	55.2	8	0	0.16	28.93	29.87	N	6.7	15.9	4.48	57.8	58.1	60	57
10	63	57	59.0	55.2	5	0	0.01	29.04	29.99	NNE	12.5	26.8	4.91	57.9	57.8	60	57
11	59	52	54.9	51.1	10	0	0.28	29.12	30.06	NE	11.9	21.6	4.74	56.4	55.9	57	54
12	66	55	58.8	56.9	4	0	0.00	28.96	29.90	E	6.0	17.0	8.69	58.3	58.7	64	56
13	72	51	60.7	50.2	4	0	0.00	28.75	29.68	ESE	8.5	25.1	19.92	59.5	59.2	65	55
14	80	45	63.7	49.0	2	0	0.00	28.75	29.69	SSE	8.3	26.6	22.05	59.9	59.2	66	52
15	76	50	63.3	42.1	2	0	0.00	28.80	29.73	NNW	9.1	28.2	22.37	60.0	59.0	66	53
16	71	44	58.0	29.4	7	0	0.00	29.06	30.00	NE	6.4	17.5	23.21	58.7	56.6	65	49
17	63	49	55.6	39.0	9	0	0.01	29.01	29.95	E	9.2	24.2	6.15	55.6	53.4	55	50
18	56	39	51.6	44.5	18	0	0.83	29.00	29.94	N	11.6	34.8	4.05	55.1	53.9	56	50
19	56	35	45.4	27.9	19	0	0.00	29.30	30.25	N	13.2	32.7	24.35	51.7	49.4	56	44
20	52	31	41.1	24.9	23	0	0.00	29.43	30.39	NNW	9.0	28.4	25.10	50.2	46.7	54	40
21	63	27	47.7	32.7	20	0	0.00	29.29	30.24	S	11.1	30.9	24.36	50.5	47.4	56	40
22	72	47	59.7	45.2	6	0	0.46	28.74	29.67	S	18.4	37.0	22.67	54.0	52.5	60	45
23	79	57	66.9	56.8	0	3	0.00	28.94	29.88	S	17.4	35.7	16.36	60.2	60.2	66	56
24	59	37	49.0	32.2	17	0	0.00	29.00	29.94	NW	12.7	34.6	24.38	56.4	54.3	60	49
25	65	32	50.4	34.7	16	0	0.00	28.98	29.92	SSE	7.0	22.2	23.83	54.8	51.9	61	43
26	72	48	59.0	46.5	5	0	0.00	28.95	29.88	SE	8.6	25.9	23.68	57.8	55.9	65	48
27	59	37	49.4	40.8	17	0	0.00	29.15	30.10	NNW	10.9	32.9	21.37	57.4	55.1	61	51
28	67	32	51.5	35.0	15	0	0.00	29.16	30.10	SE	6.3	20.5	25.56	56.3	53.9	64	44
29	72	48	60.4	46.9	5	0	0.00	29.01	29.95	SE	11.9	34.3	17.22	58.0	57.4	65	50
30	77	63	68.1	64.6	0	5	0.15	28.73	29.66	S	11.7	32.3	8.81	62.6	63.0	67	60
31	69	49	60.8	43.7	6	0	0.00	28.78	29.72	NW	9.2	22.1	23.84	62.8	62.1	69	57
	67	44	56.3	43.6	<- Monthly Averages ->			29.01	29.95	S	10.2	37.0	16.80	56.5	56.0	62	51

Temperature - Highest: 80 Lowest: 27	Degree Days - Total HDD: 301 Total CDD: 8	Number of Days With: Tmax >= 90: 0 Tmax < 32: 0 Tmin < 32: 4 Tmin <= 0: 0	Rainfall > 0.01 inch: 9 Rainfall >= 0.10 inch: 7 Avg Wind Speed > 10 mph: 16 Max Wind Speed >= 30 mph: 14
Rainfall: Monthly Total: 4.17 in. Greatest 24 Hr: 1.30 in.	Humidity - Highest: 100 Lowest: 15		

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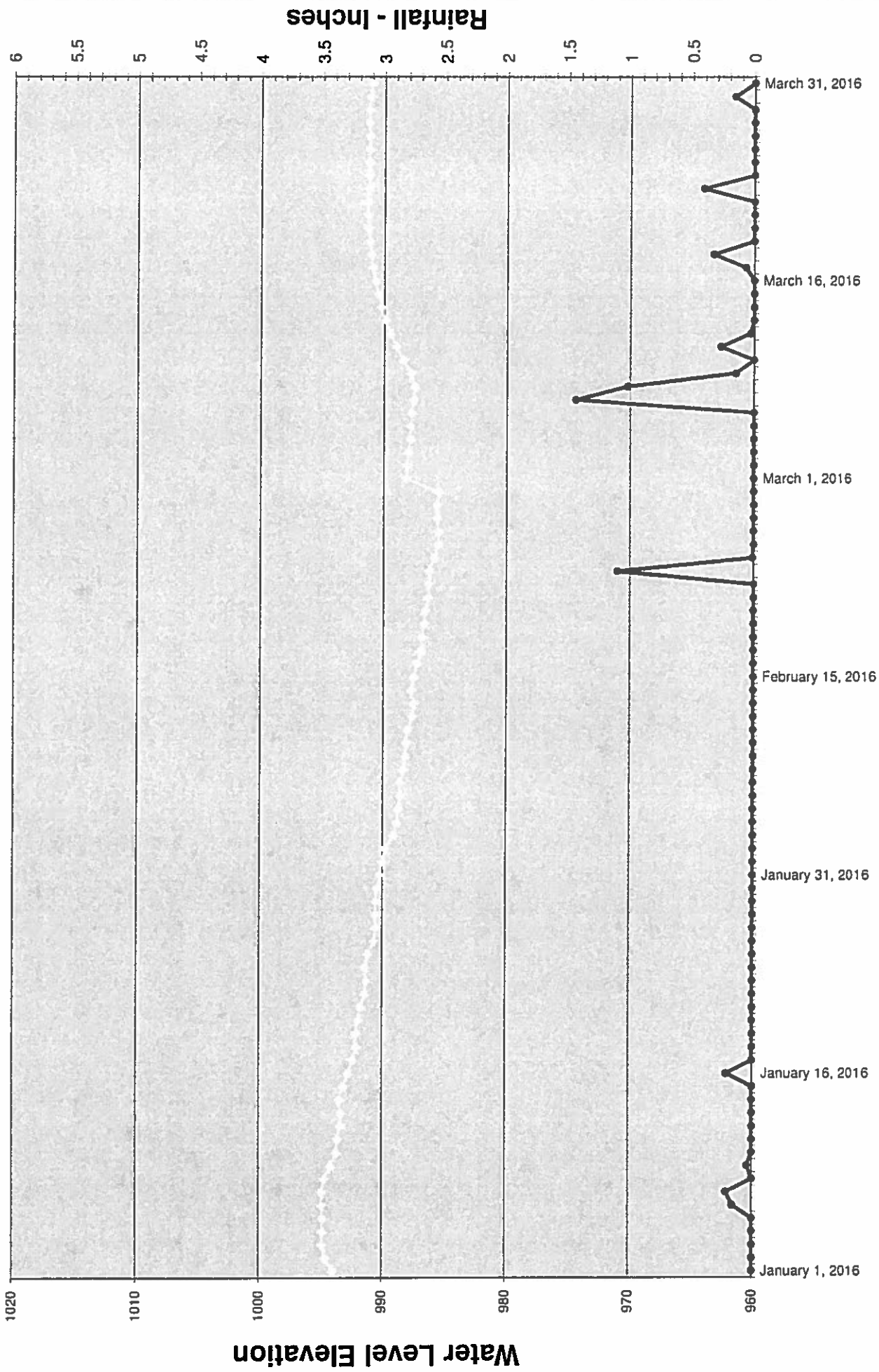
Date	Reference ET (mm)	Reference ET* (mm)	Evaporation Depth (ET) (mm)	Water Content Change (ET) (mm)	Soil Depth (mm)
2016-06-05	0.23	0.28	0.21	0.14	0.29
2016-06-04	0.17	0.19	0.16	0.11	0.21
2016-06-03	0.13	0.15	0.12	0.08	0.16
2016-06-02	0.04	0.04	0.04	0.02	0.05
2016-06-01	0.12	0.13	0.11	0.07	0.14
2016-05-31	0.08	0.09	0.07	0.05	0.09
2016-05-30	0.17	0.20	0.16	0.11	0.21
2016-05-29	0.17	0.20	0.16	0.11	0.21
2016-05-28	0.20	0.23	0.19	0.13	0.25
2016-05-27	0.13	0.16	0.13	0.08	0.17
2016-05-26	0.09	0.11	0.08	0.06	0.12
2016-05-25	0.12	0.15	0.11	0.08	0.16
2016-05-24	0.15	0.17	0.14	0.09	0.19
2016-05-23	0.09	0.11	0.08	0.06	0.11
2016-05-22	0.16	0.20	0.15	0.10	0.20
2016-05-21	0.17	0.19	0.16	0.10	0.20
2016-05-20	0.15	0.16	0.14	0.09	0.17
2016-05-19	0.06	0.07	0.05	0.04	0.07
2016-05-18	0.07	0.09	0.06	0.04	0.09
2016-05-17	0.07	0.08	0.06	0.04	0.09
2016-05-16	0.13	0.16	0.12	0.08	0.16
2016-05-15	0.14	0.18	0.13	0.08	0.18
2016-05-14	0.17	0.22	0.16	0.11	0.23
2016-05-13	0.20	0.24	0.19	0.12	0.25
2016-05-12	0.19	0.24	0.18	0.12	0.25
2016-05-11	0.18	0.21	0.17	0.11	0.23
2016-05-10	0.21	0.24	0.19	0.13	0.26
2016-05-09	0.13	0.16	0.12	0.08	0.16
2016-05-08	0.09	0.11	0.08	0.05	0.11
2016-05-07	0.20	0.25	0.18	0.12	0.25
2016-05-06	0.19	0.22	0.18	0.12	0.23
2016-05-05	0.20	0.24	0.18	0.12	0.25
2016-05-04	0.22	0.28	0.20	0.14	0.28
2016-05-03	0.16	0.19	0.15	0.10	0.20
2016-05-02	0.09	0.11	0.09	0.06	0.12
2016-05-01	0.19	0.24	0.17	0.12	0.25
2016-04-30	0.14	0.16	0.13	0.09	0.17
2016-04-29	0.10	0.13	0.10	0.07	0.13
2016-04-28	0.20	0.25	0.19	0.12	0.26
2016-04-27	0.18	0.21	0.17	0.11	0.22
2016-04-26	0.15	0.19	0.14	0.09	0.21
2016-04-25	0.19	0.25	0.18	0.12	0.26
2016-04-24	0.20	0.25	0.18	0.12	0.27
2016-04-23	0.19	0.23	0.18	0.12	0.24
2016-04-22	0.19	0.23	0.18	0.12	0.24
2016-04-21	0.17	0.20	0.15	0.10	0.20
2016-04-20	0.13	0.14	0.12	0.08	0.15
2016-04-19	0.10	0.12	0.09	0.06	0.12
2016-04-18	0.06	0.06	0.06	0.04	0.07
2016-04-17	0.04	0.04	0.03	0.02	0.05
2016-04-16	0.12	0.15	0.11	0.07	0.15

2016-04-15	0.13	0.16	0.12	0.08	0.16
2016-04-14	0.13	0.15	0.12	0.08	0.15
2016-04-13	0.08	0.09	0.07	0.05	0.10
2016-04-12	0.12	0.16	0.12	0.08	0.16
2016-04-11	0.08	0.10	0.07	0.05	0.10
2016-04-10	0.13	0.18	0.12	0.08	0.18
2016-04-09	0.08	0.10	0.07	0.05	0.09
2016-04-08	0.18	0.23	0.16	0.11	0.24
2016-04-07	0.23	0.32	0.21	0.14	0.32
2016-04-06	0.24	0.36	0.23	0.15	0.38
2016-04-05	0.25	0.36	0.23	0.16	0.36
2016-04-04	0.22	0.29	0.20	0.13	0.29
2016-04-03	0.19	0.26	0.18	0.12	0.25
2016-04-02	0.16	0.22	0.15	0.10	0.22
2016-04-01	0.16	0.23	0.15	0.10	0.22
2016-03-31	0.17	0.23	0.16	0.11	0.23
2016-03-30	0.10	0.14	0.10	0.06	0.14
2016-03-29	0.17	0.24	0.16	0.10	0.23
2016-03-28	0.15	0.19	0.14	0.09	0.19
2016-03-27	0.11	0.15	0.11	0.07	0.15
2016-03-26	0.17	0.23	0.16	0.11	0.23
2016-03-25	0.14	0.19	0.13	0.09	0.19
2016-03-24	0.17	0.25	0.16	0.11	0.26
2016-03-23	0.20	0.29	0.18	0.12	0.29
2016-03-22	0.20	0.30	0.19	0.13	0.31
2016-03-21	0.14	0.20	0.13	0.09	0.19
2016-03-20	0.12	0.16	0.11	0.07	0.16
2016-03-19	0.15	0.21	0.14	0.09	0.21
2016-03-18	0.04	0.06	0.04	0.03	0.06
2016-03-17	0.10	0.15	0.09	0.06	0.14
2016-03-16	0.14	0.18	0.13	0.09	0.19
2016-03-15	0.19	0.26	0.17	0.11	0.25
2016-03-14	0.17	0.23	0.16	0.11	0.22
2016-03-13	0.14	0.17	0.13	0.08	0.17
2016-03-12	0.06	0.07	0.06	0.04	0.07
2016-03-11	0.05	0.07	0.05	0.03	0.07
2016-03-10	0.06	0.08	0.06	0.04	0.08
2016-03-09	0.04	0.04	0.03	0.02	0.04
2016-03-08	0.03	0.03	0.03	0.02	0.04
2016-03-07	0.04	0.05	0.03	0.02	0.05
2016-03-06	0.14	0.21	0.13	0.09	0.20
2016-03-05	0.14	0.18	0.13	0.08	0.17
2016-03-04	0.13	0.18	0.12	0.08	0.17
2016-03-03	0.15	0.21	0.14	0.09	0.21
2016-03-02	0.15	0.22	0.14	0.09	0.21
2016-03-01	0.12	0.17	0.11	0.08	0.17
2016-02-29	0.15	0.21	0.14	0.09	0.20
2016-02-28	0.17	0.25	0.15	0.10	0.23
2016-02-27	0.14	0.19	0.13	0.08	0.18
2016-02-26	0.10	0.13	0.09	0.06	0.12
2016-02-25	0.11	0.16	0.10	0.07	0.15

2016-02-24	0.12	0.18	0.11	0.08	0.17
2016-02-23	0.04	0.06	0.04	0.03	0.06
2016-02-22	0.15	0.22	0.14	0.09	0.21
2016-02-21	0.10	0.15	0.10	0.06	0.14
2016-02-20	0.13	0.18	0.12	0.08	0.16
2016-02-19	0.12	0.17	0.11	0.08	0.16
2016-02-18	0.17	0.26	0.16	0.11	0.25
2016-02-17	0.11	0.15	0.10	0.07	0.14
2016-02-16	0.13	0.20	0.12	0.08	0.19
2016-02-15	0.11	0.16	0.10	0.07	0.14
2016-02-14	0.06	0.09	0.06	0.04	0.08
2016-02-13	0.11	0.16	0.10	0.07	0.15
2016-02-12	0.11	0.16	0.10	0.07	0.15
2016-02-11	0.12	0.18	0.11	0.08	0.17
2016-02-10	0.11	0.17	0.11	0.07	0.15
2016-02-09	0.11	0.16	0.10	0.07	0.15
2016-02-08	0.14	0.22	0.13	0.09	0.23
2016-02-07	0.09	0.12	0.08	0.05	0.11
2016-02-06	0.05	0.06	0.05	0.03	0.06
2016-02-05	0.07	0.11	0.07	0.05	0.10
2016-02-04	0.06	0.07	0.05	0.03	0.07
2016-02-03	0.07	0.10	0.06	0.04	0.09
2016-02-02	0.12	0.19	0.12	0.08	0.17
2016-02-01	0.09	0.13	0.09	0.06	0.12
2016-01-31	0.11	0.16	0.10	0.07	0.14
2016-01-30	0.12	0.18	0.11	0.07	0.16
2016-01-29	0.13	0.20	0.12	0.08	0.17
2016-01-28	0.07	0.10	0.07	0.04	0.09
2016-01-27	0.05	0.06	0.04	0.03	0.06
2016-01-26	0.07	0.10	0.06	0.04	0.09
2016-01-25	0.07	0.09	0.06	0.04	0.09
2016-01-24	0.08	0.11	0.07	0.05	0.10
2016-01-23	0.05	0.06	0.04	0.03	0.06
2016-01-22	0.06	0.09	0.06	0.04	0.09
2016-01-21	0.02	0.03	0.02	0.01	0.03
2016-01-20	0.02	0.03	0.02	0.01	0.03
2016-01-19	0.04	0.05	0.04	0.02	0.05
2016-01-18	0.04	0.06	0.04	0.03	0.05
2016-01-17	0.05	0.07	0.05	0.03	0.06
2016-01-16	0.04	0.05	0.03	0.02	0.04
2016-01-15	0.07	0.11	0.07	0.05	0.10
2016-01-14	0.07	0.10	0.07	0.04	0.09
2016-01-13	0.05	0.07	0.05	0.03	0.06
2016-01-12	0.04	0.06	0.04	0.03	0.05
2016-01-11	0.04	0.05	0.03	0.02	0.04
2016-01-10	0.03	0.05	0.03	0.02	0.04
2016-01-09	0.02	0.03	0.02	0.01	0.03
2016-01-08	0.02	0.02	0.02	0.01	0.02
2016-01-07	0.03	0.04	0.03	0.02	0.04
2016-01-06	0.02	0.03	0.02	0.01	0.03
2016-01-05	0.04	0.05	0.03	0.02	0.04
2016-01-04	0.05	0.08	0.05	0.03	0.06

2016-01-03	0.06	0.08	0.05	0.03	0.07
2016-01-02	0.03	0.04	0.03	0.02	0.04
2016-01-01	0.04	0.06	0.04	0.03	0.05
2015-12-31	0.03	0.05	0.03	0.02	0.04
2015-12-30	0.03	0.04	0.03	0.02	0.04
2015-12-29	0.02	0.03	0.02	0.01	0.03
2015-12-28	0.02	0.03	0.02	0.01	0.03
2015-12-27	0.03	0.04	0.03	0.02	0.04
2015-12-26	0.02	0.03	0.02	0.01	0.03
2015-12-25	0.10	0.16	0.10	0.06	0.14
2015-12-24	0.09	0.14	0.08	0.06	0.12
2015-12-23	0.11	0.17	0.10	0.07	0.15
2015-12-22	0.10	0.15	0.09	0.06	0.13
2015-12-21	0.07	0.10	0.06	0.04	0.09
2015-12-20	0.06	0.10	0.06	0.04	0.09
2015-12-19	0.09	0.14	0.08	0.05	0.12
2015-12-18	0.04	0.06	0.04	0.03	0.05
2015-12-17	0.07	0.10	0.06	0.04	0.09
2015-12-16	0.08	0.12	0.07	0.05	0.11
2015-12-15	0.08	0.12	0.08	0.05	0.10
2015-12-14	0.10	0.15	0.09	0.06	0.13
2015-12-13	0.08	0.12	0.07	0.05	0.10
2015-12-12	0.06	0.08	0.05	0.03	0.08
2015-12-11	0.07	0.11	0.07	0.05	0.09
2015-12-10	0.06	0.08	0.05	0.04	0.07
2015-12-09	0.08	0.11	0.07	0.05	0.09
2015-12-08	0.09	0.14	0.09	0.06	0.12
2015-12-07	0.07	0.10	0.06	0.04	0.08
2015-12-06	0.08	0.11	0.07	0.05	0.09
2015-12-05	0.06	0.09	0.06	0.04	0.08
2015-12-04	0.05	0.07	0.05	0.03	0.06
2015-12-03	0.05	0.07	0.05	0.03	0.06
2015-12-02	0.06	0.08	0.05	0.04	0.07
2015-12-01	0.04	0.05	0.04	0.02	0.05
2015-11-30	0.02	0.02	0.02	0.01	0.03
2015-11-29	0.02	0.02	0.02	0.01	0.02
2015-11-28	0.01	0.02	0.01	0.01	0.02
2015-11-27	0.04	0.05	0.03	0.02	0.05
2015-11-26	-0.01	-0.02	-0.01	-0.00	-0.01
2015-11-25	0.05	0.07	0.05	0.03	0.06
2015-11-24	0.07	0.11	0.07	0.05	0.10
2015-11-23	0.06	0.08	0.05	0.04	0.07
2015-11-22	0.05	0.07	0.05	0.03	0.06
2015-11-21	0.10	0.16	0.09	0.06	0.14
2015-11-20	0.09	0.14	0.09	0.06	0.12
2015-11-19	0.10	0.16	0.10	0.06	0.14
2015-11-18	0.12	0.19	0.11	0.08	0.16
2015-11-17	0.11	0.16	0.10	0.07	0.15
2015-11-16	0.03	0.04	0.03	0.02	0.04
2015-11-15	0.05	0.08	0.05	0.03	0.07
2015-11-14	0.08	0.12	0.08	0.05	0.10

Mill Creek Water Levels First Quarter 2016



Date

Recorded Rainfall

10-03 WL ELEV