

Memorandum

July 18, 2022

To: Dave Carriere, Chairman Board of Public Works

Fr: Rod Procaccino, Town Engineer

Thru: Tom Reynolds, Supt. Dept. Public Works

Re: Updated Water System Capacity- relative to proposed water system demand from new Modera – Mill Creek Development 300 unit Apartment Complex

The developers of proposed Modera- Mill Creek Development located in Enterprise Park are seeking authorization to connect to the Towns Water System in the High Zone.

Amory Engineers have updated the portions of the Towns Water System Master Plan with current Available Firm Capacity in The High Pressure Zone Area which currently serves the Enterprise Park Area.

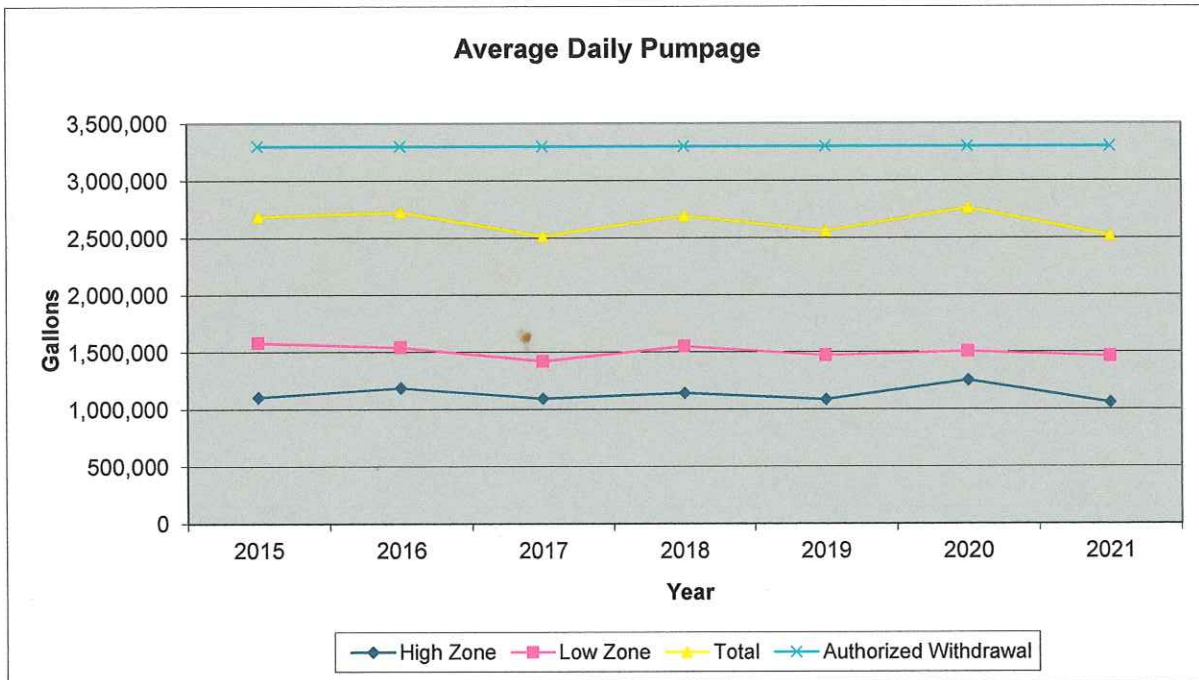
The Firm capacity is the available capacity with your largest source off line. The firm capacity in the high zone is 3.060MGD. The average daily pumpage from the high zone over the last 7 years is 1.12MGD. This leaves a remaining 1.94MGD available capacity. The proposed development will place a .04MGD demand on the system. Typically, a safe operating mode for well and pumping equipment is to target about 12 hours of pumping per day. This would then limit your available capacity in the high zone to about 1MGD which is still sufficient to supply the requested .04 MGD daily water consumption proposed by the 300 unit development.

With regard to authorized withdrawal permitted and registered amount. The Town authorized is authorized by the state to withdraw 3.3MGD. The Town has approximately 662,000 gallons per day remaining capacity within its Water Management Withdrawal Permit. See the attached breakdown provided by Amory Engineers.

There is sufficient capacity to allow this development to connect to the high zone. The prior multi unit development was restricted by not allowing irrigation to be supplied by the Towns water system.

Yearly Pumpage	High Zone	Low Zone	Total	Authorized	High Zone	Low Zone
2015	403,285,390	576,881,630	980,167,020	1,204,500,000	41.1%	58.9%
2016	432,854,940	562,246,453	995,101,393	1,204,500,000	43.5%	56.5%
2017	399,432,420	518,721,421	918,153,841	1,204,500,000	43.5%	56.5%
2018	417,221,070	566,157,750	983,378,820	1,204,500,000	42.4%	57.6%
2019	396,715,460	536,889,110	933,604,570	1,204,500,000	42.5%	57.5%
2020	457,854,620	550,065,980	1,007,920,600	1,204,500,000	45.4%	54.6%
2021	386,317,600	534,243,340	920,560,940	1,204,500,000	42.0%	58.0%
2015 to 2021 Average:					42.9%	57.1%

Average Daily Pumpage	High Zone	Low Zone	Total	Authorized	Percent of Authorized	Remaining Capacity
2015	1,104,891	1,580,498	2,685,389	3,300,000	81.4%	614,611
2016	1,185,904	1,540,401	2,726,305	3,300,000	82.6%	573,695
2017	1,094,335	1,421,155	2,515,490	3,300,000	76.2%	784,510
2018	1,143,071	1,551,117	2,694,189	3,300,000	81.6%	605,811
2019	1,086,892	1,470,929	2,557,821	3,300,000	77.5%	742,179
2020	1,254,396	1,507,030	2,761,426	3,300,000	83.7%	538,574
2021	1,058,404	1,463,680	2,522,085	3,300,000	76.4%	777,915
2015 to 2021 Average:					79.9%	662,471



Current Firm Capacity:	
High Zone	Low Zone
3,060,000	4,017,600

Average Daily Pumpage Percent of Current Firm Capacity:

	High Zone	Low Zone
2015	36.1%	39.3%
2016	38.8%	38.3%
2017	35.8%	35.4%
2018	37.4%	38.6%
2019	35.5%	36.6%
2020	41.0%	37.5%
2021	34.6%	36.4%
2015 to 2021 Average:		
	High Zone	Low Zone
	37.0%	37.5%

Source	Design Capacity (GPM)	2022 Present Capacity (GPM)	WMA Volume (MGD)	WMA Volume (GPD)	Calculated WMA Volume (GPM)	Rounded WMA Volume (GPM)
School Street	350	240	0.50	500,000	347	350
Spring Street	275	210	0.40	400,000	278	275
Union No. 1	1000	1000	1.17	1,170,000	813	800
Union No. 2	350	350	0.50	500,000	347	350
Furnace Brook No. 2	700	450	0.58	580,000	403	400
Church Street	575	575	0.83	830,000	576	575
Fairgrounds	300	300	0.43	432,000	300	300
Furnace Brook No. 1	700	430	1.01	1,010,000	701	700
Furnace Brook No. 3	300	300	0.43	430,000	299	300
Furnace Brook No. 4	1000	800	1.44	1,440,000	1,000	1,000
Webster No. 1	400	390	0.58	580,000	403	400
Webster No. 2	250	200	0.32	320,000	222	220
Ferry Street No. 1	400	400	0.58	580,000	403	400
Ferry Street No. 2	500	500	0.72	720,000	500	500
South River	350	350	0.50	500,000	347	350
Mount Skirgo	220	220	0.43	430,000	299	300
Total	7,670	6,715	10.42	10,422,000	7,238	7,220
High Zone Total	3,550	3,125	4.41	4,412,000	3,064	3,050
Low Zone Total	4,120	3,590	6.01	6,010,000	4,174	4,170
High Zone Firm Capacity	2,550	2,125 w/o Union 1				
Low Zone Firm Capacity	3,120	2,790 w/o FB No. 4				