Maynard Planning Board – Meeting and Public Hearing
January 14, 2020 - 7 p.m.
195 Main Street, Room 101

Board Members Present: Greg Tuzzolo – Chair, Andrew D'Amour – Vice Chair, Bill Cranshaw, Chris Arsenault, Jim Coleman, Mike Uttley (Alternate)

Others Present: Bill Nemser – Town Planner; Wayne Amico – Town Engineer; Justin DeMarco – DPW Director; Garry McCarthy – Stantec Engineering; Katie Chamberlain – Stantec Engineering

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Called to Order at 7:00 p.m. by Greg Tuzzolo

Approval of Minutes

Greg Tuzzolo made a motion to approve the Minutes dated 11.12.19, 11.26.19, and 12.10.19, with typo corrections. The motion was seconded by Jim Coleman.

The Board voted 5-0 in favor of the motion.

Update from DPW Director Justin DeMarco and Stantec Engineering

Justin DeMarco and Stantec Engineering presented the results of their water analysis, including areas of concern and long-term recommendations. Refer to attached presentation for details.

Justin DeMarco explained that there is currently no funding source available for any of the recommendations and that he believes that the Water Enterprise Fund (WEF) is failing. He will be a recommending a water-rate increase at one of the next Board of Selectmen meetings in February. The rate increase would only fund Well 4A and the permitting and piloting of Rockland Ave. There is no funding source for either Old Marlboro Rd, which would be a complete treatment changeover, or White Pond, which would be a 5-8 year process. The overall estimate for Well 4A, Rockland Ave, and Old Marlboro Rd wells is $10-15 million. During the last cleaning of Well 4, some degradation was identified. Another cleaning will occur in February and it will be checked for any further degradation.

The Board discussed with Justin DeMarco the water capacity as it relates to current, pending, and future development. The current connection fees for new projects are low compared to other towns and are insufficient to accommodate the increased capacity. Justin DeMarco pointed out that all of the timelines in the analysis are based on immediate availability of funding. The timelines would need to be adjusted out based on when funding would actually be available. He also pointed out that the model that was presented was just for water. The same analysis would need to be done for sewer capacity.

Bill Nemser asked about a mitigation calculation that the Board could use for new projects that come up. Justin DeMarco stated that he does not have the funding available to do that analysis as those costs would need to come out of the WEF if the analysis isn't done through a peer review process. Wayne

Amico stated that in his experience, other towns require a much larger mitigation package than what Maynard requires of new developments. Justin DeMarco and Bill Nemser agreed that any new development proposals need to go through DPW first and there needs to be a peer review process to determine the utility impact prior to Planning Board (PB) review of an application. Andrew D'Amour suggested that the PB Rules and Regulations be updated to reflect that requirement.

Public Hearing – 86A Powdermill Road (Continued from 11.12.19)

Leo Bertolami of 86 Powdermill Road and Michael Cochran, one of the owners of Victory Plaza, introduced themselves. Michael Cochran explained that he has some disagreements with Leo Bertolami about the proposed coffee shop.

> *Greg Tuzzolo made a motion to continue the Public Hearing for 86A Powdermill Road to February 11, 2020, which was seconded by Andrew D'Amour.*
>
> ***The Board voted unanimously in favor of the motion.***

Master Plan Input from Planning Board

Mike Uttley explained that Master Plan Steering Committee will need the PB's approval of the Master Plan Implementation Matrix wherever the PB is listed as having ownership. If there are any changes the PB requires or recommends for the Implementation Ownership column or the Supporting Partner column, that feedback should be provided by January 16, 2020.

Design Consultant Solicitation and Responses

Bill Nemser explained that Town Counsel recommended that the PB periodically opens up a Request for Proposals (RFP) for organizations to enter into contract with the Town for peer review. There was a bid solicitation process that took place for design review last month, and In Situ was the only firm to respond with the criteria. Bill Nemser's recommendation is that the RFP process occurs every three years. In Situ's initial contract has ended but can be renewed for an additional two years, which the Board agreed to do.

Bill Nemser discussed with the PB some recommended changes to the process of maintaining sufficient funds from applicants for the costs of engineering and design review. He would like to see the peer review fund accounts being replenished regularly. The PB discussed ways in which they could enforce replenishment, including but not limited to the following: non-issuance of building permits, continuance of hearings, liens on property.

> *Greg Tuzzolo made a motion to adjourn, which was seconded by Andrew D'Amour.*
>
> ***The Board voted 5-0 in favor of the motion.***

Adjourned at 8:51 p.m.

Water Supply and Demand in the Town of Maynard

Planning Board
January 14, 2020

Stantec

Evaluation Process: Town's Ability to Meet Future Water Demands

- Evaluate current demands (average and maximum day)

- Estimate future water demands
  - Review population growth data
  - Consider water conservation efforts
    - By residents
    - By the Town ("unaccounted for water"; i.e. unmetered water - leaks)
  - Review ongoing and planned development

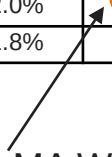
- Evaluate Current Water Supplies

- Compare Water Demands against Supply

Current Water Demands

- 2018 Water Use – based on metered data
  Average Day 0.685 MGD
  Max Day 1.04 MGD

Year	Residential	Commercial/ Business	Industrial	Municipal/ Institutional/ Non-profits	Total CEMU	UAW	Total
2010	58.5%	3.8%	0.6%	0.6%	0.0%	36.5%	100.0%
2011	68.6%	4.5%	0.6%	5.2%	1.1%	20.0%	100.0%
2012	58.7%	10.1%	1.5%	5.4%	0.8%	23.5%	100.0%
2013	62.3%	11.3%	0.4%	2.1%	1.3%	22.6%	100.0%
2014	70.2%	5.2%	3.4%	2.2%	3.3%	15.6%	100.0%
2015	74.6%	4.9%	3.8%	2.3%	0.4%	13.9%	100.0%
2016	71.8%	4.5%	2.7%	2.3%	0.9%	17.7%	100.0%
2017	73.0%	2.3%	0.3%	2.4%	6.2%	15.8%	100.0%
2018	77.1%	4.1%	0.6%	2.8%	2.0%	13.5%	100.0%
AVG	68.3%	5.6%	1.6%	2.8%	1.8%	19.9%	100.0%

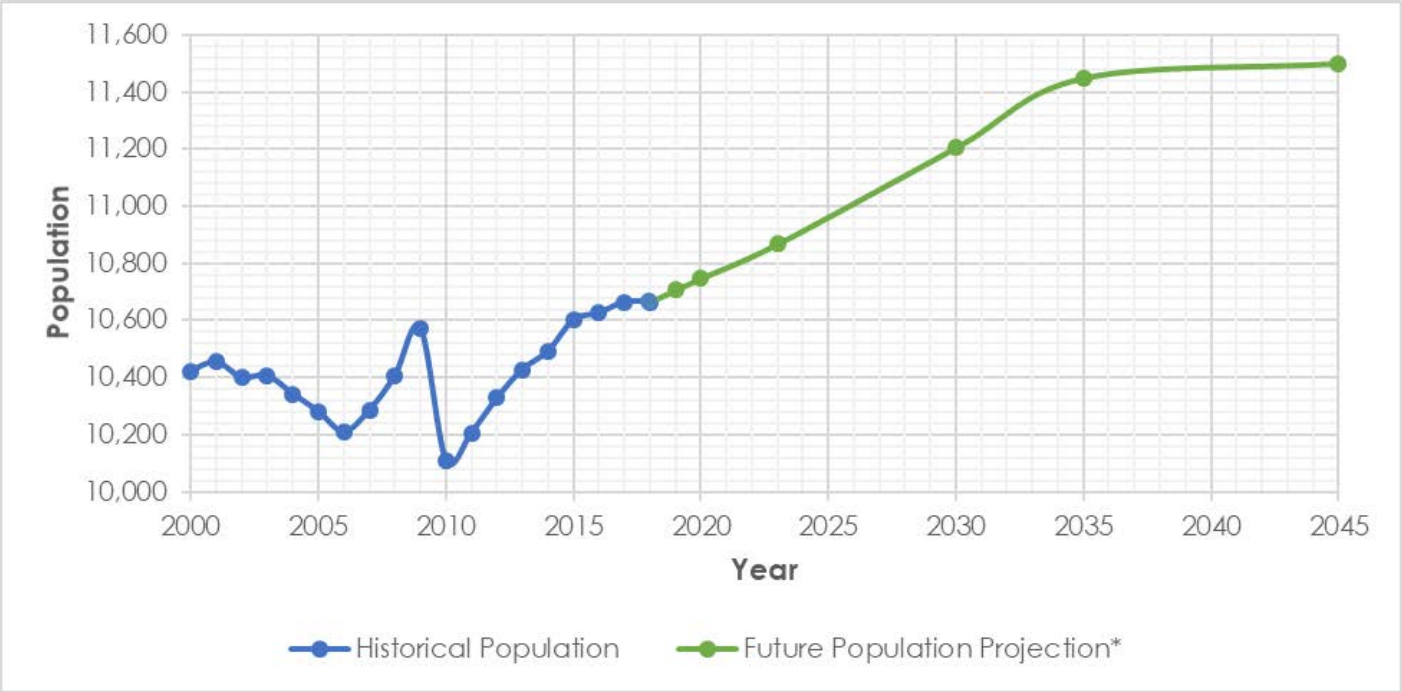


MA WMA Performance Standard 10%

Note: if a property is currently vacant, no demand is associated with it in current demand estimates

Future Demands – Population Projections

- 25 Year Planning Period (2045)
- Increase in demands based on 2045 population = 0.07 MGD



* Based on Population Projections Data from Metropolitan Area Planning Council MetroFuture 2035 Update, Maynard's Master Plan, and Stantec's estimate

Future Water Demands - Conservation

- Unaccounted for Water (UAW):
  - Assume 10% by 2045 to meet MA performance standards; reduction in water use is negligible

- Residential Use:
  - 2010 – 2018 avg use: 51.8 residential gal/person/day (RGPCD)
  - MA performance standard is 65 RGPCD
  - Conservation efforts have been significant lately due to water bans
  - Unlikely to get much lower

- No change in demands due to conservation efforts

Future Water Demands - Development

Ongoing (Re)Development	Avg Day Demand
Maynard Crossing/129 Parker	32.5 gpm
Maynard Point/42 Summer St	1.5 gpm
Maynard Square/115 Main St	2.2 gpm
Powder Mill Place	9.8 gpm
Total	*46 gpm (0.07 MGD)*

Future (Re)Development	Avg Day Demand	Notes
Mill & Main	0.06 MGD	Assumed 500 1-BR units
Beijing Royal School	0.07 MGD	Assumed 1,000 people
Total	*0.13 MGD*	

- Total Estimated (Re)Development Future Demands = 0.2 MGD
- Contingency for Unknown Development = 0.05 MGD (5% of total estimated future avg day demand)

Recommended Future Water Demands

- **Average Day Demand (ADD) = 0.99 MGD** (increase of 0.3 MGD from 2018)
  - → This is a ~50% increase from current demands
  - → For comparison, largest well source is 0.285 MGD @ OMR

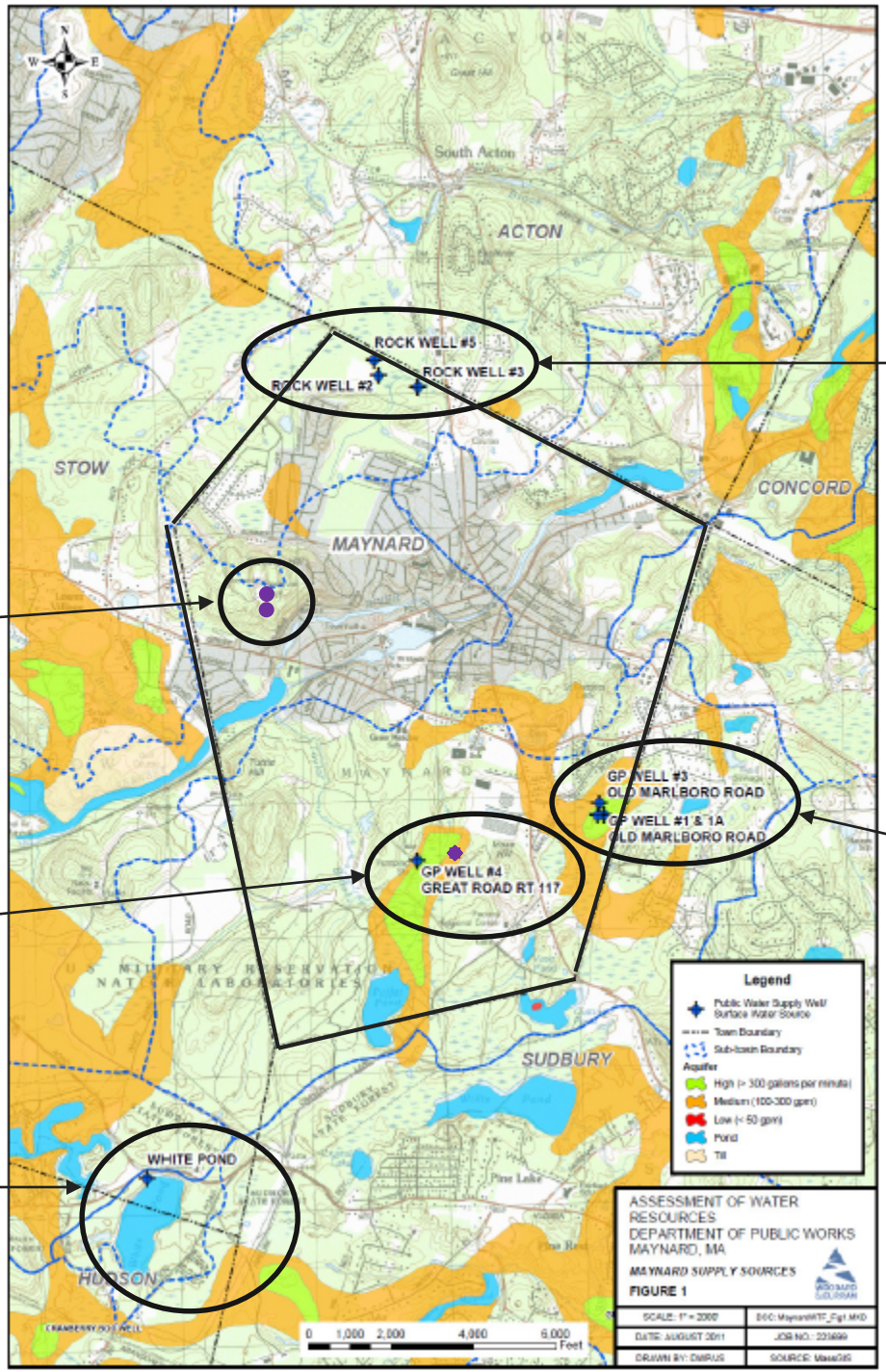
- **Maximum Day Demand = 1.58 MGD** (increase of 0.54 MGD from 2018)

- 35% of planned future development demand (total 0.2 MGD) is accounted for in the future population projections (0.07 MGD)

- Mill & Main and BRS demands (0.13 MGD) are directly built into future demand estimates

- All known planned/potential development demands can be met with a future ADD of 0.99 MGD;
  - → Only leaves an additional 0.1 MGD for future unknown growth
  - → 0.1 MGD = 450 2-BR units

Existing Water Supply



Rockland Ave Filtration Plant:
Wells 5G, 6G, & 7G

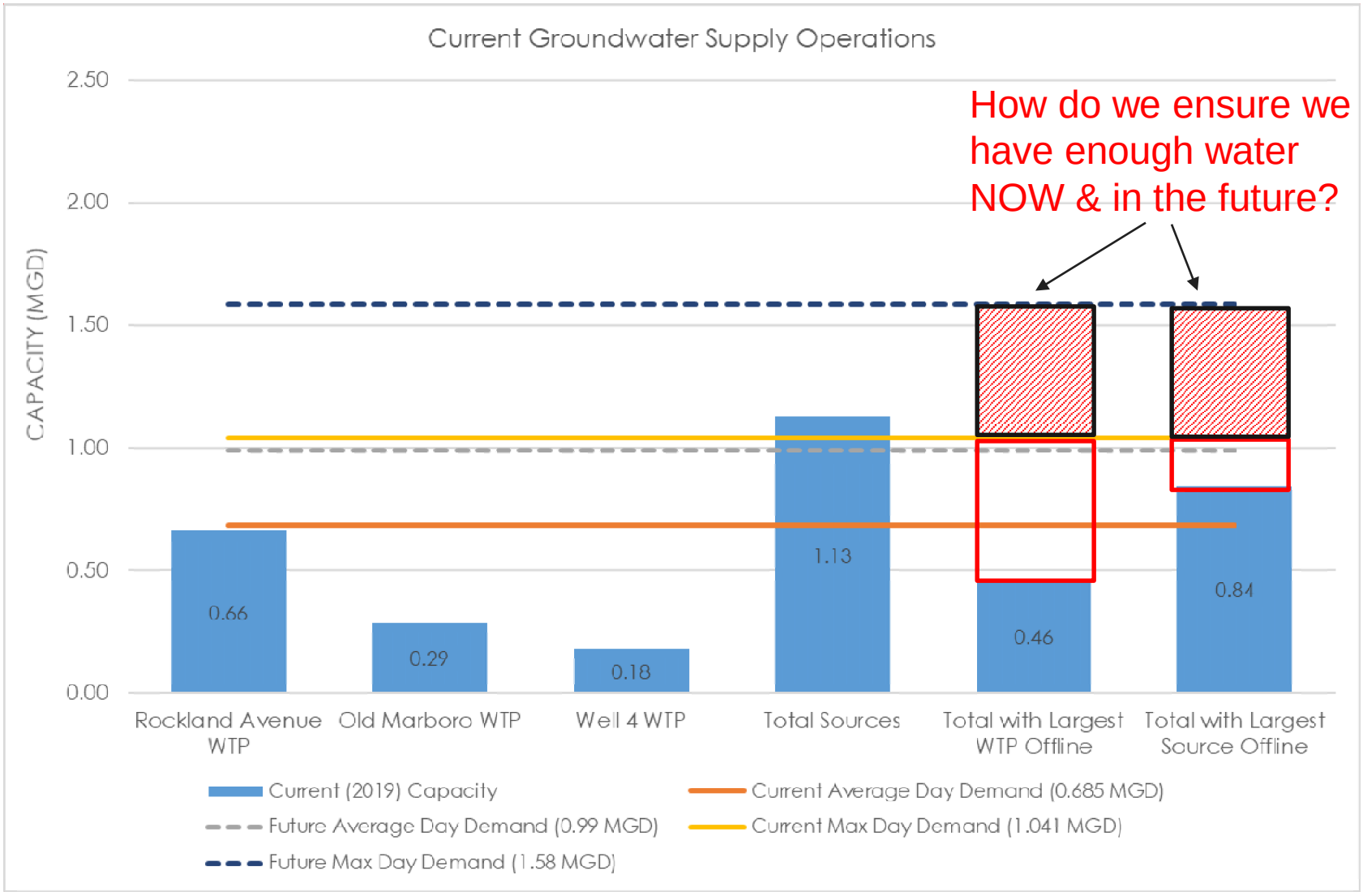
Water Storage Tanks:
#1(concrete) – 1.5MG
#2 (steel)– 3.1 MG

Well #4 Filtration Plant:
Well 4G
New Well #4A (future)

Old Marlboro Road Filtration Plant:
Wells 1G, 2G, & 3G (not in use)

White Pond not currently used as a source water

Supply (existing) vs. Demand



Current Demand Inadequacy

Future Demand Inadequacy

Sources for Additional Capacity

- GROUNDWATER SOURCES:
  - Well 4 new source: 0.35 MGD (est.) → in permitting process now
  - Rockland Ave new well: 0.2 MGD (est.); potential – need to do testing to determine if feasible
  - OMR Well 3G Re-activation: 0.5 MGD (est.) → requires additional treatment due to impaired water quality
  - TOTAL POTENTIAL ADDITIONAL CAPACITY = 1.05 MGD

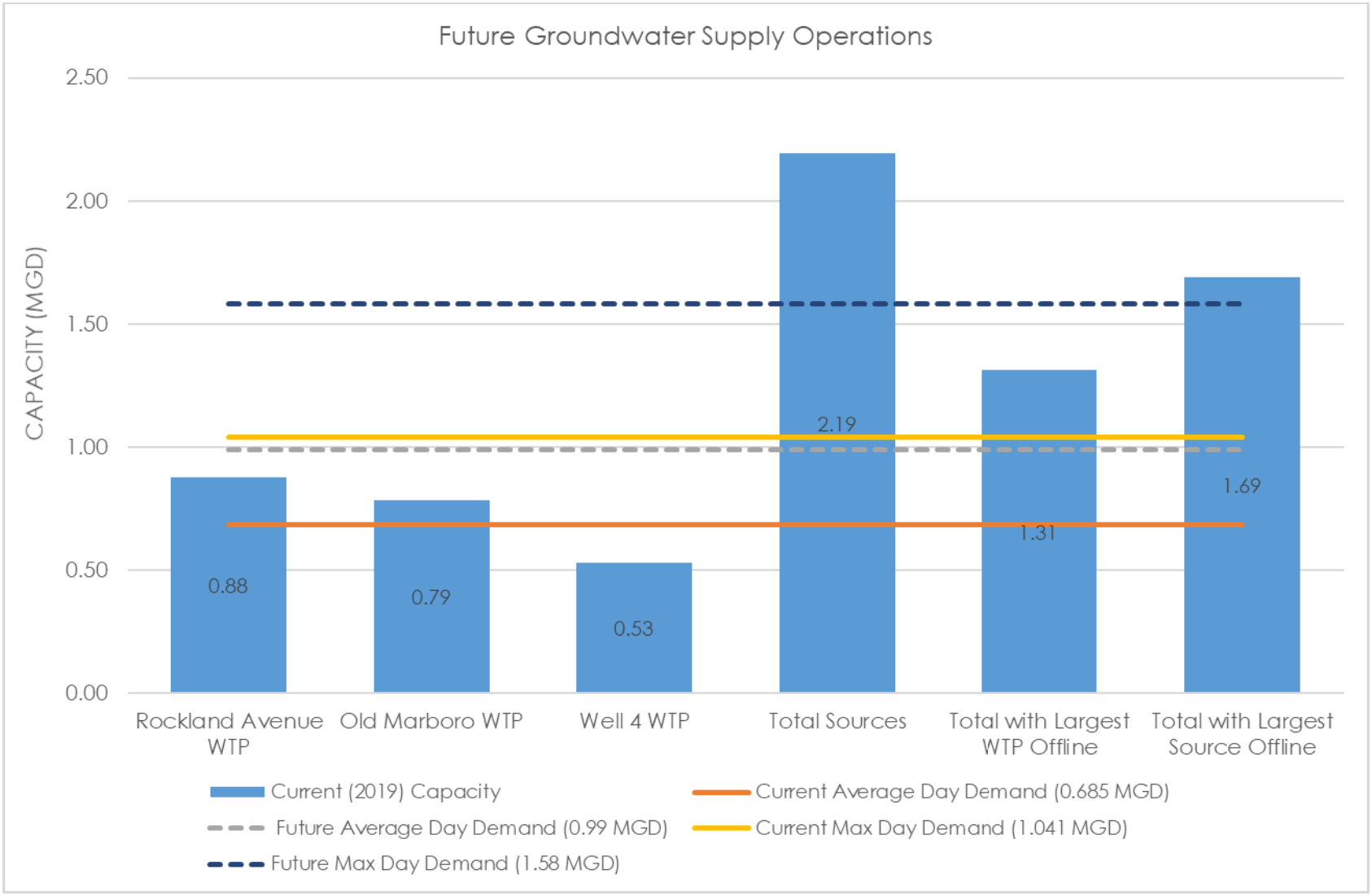
- SURFACE WATER SOURCES
  - White Pond: potentially up to 1 MGD

How to Ensure Adequate Capacity NOW?

- Immediate Concerns:
  - **Unable to meet current max day demands with the largest source offline (OMR Well #1= 0.285 MGD)**
  - Unable to meet current average day demand with the largest WTP offline

- Recommended Short Term Solutions:
  - New Well 4A (0.35 MGD): Permitting is underway now, anticipated that these wells can be online by Fall 2021. Schedule dependent upon permitting & funding
  - New well source at Rockland Ave (0.22 MGD): if this is pursued immediately, permitting, design & construction could be finished by Fall 2022. Schedule dependent upon permitting & funding
  - Bring OMR Well #3 back online and implement major treatment improvements at Old Marlboro Road WTP (0.5 MGD): if begin immediately, permitting, design & construction could be finished by Winter 2023. Schedule dependent upon funding.

Recommended Short Term Solutions to Meet Existing Demands

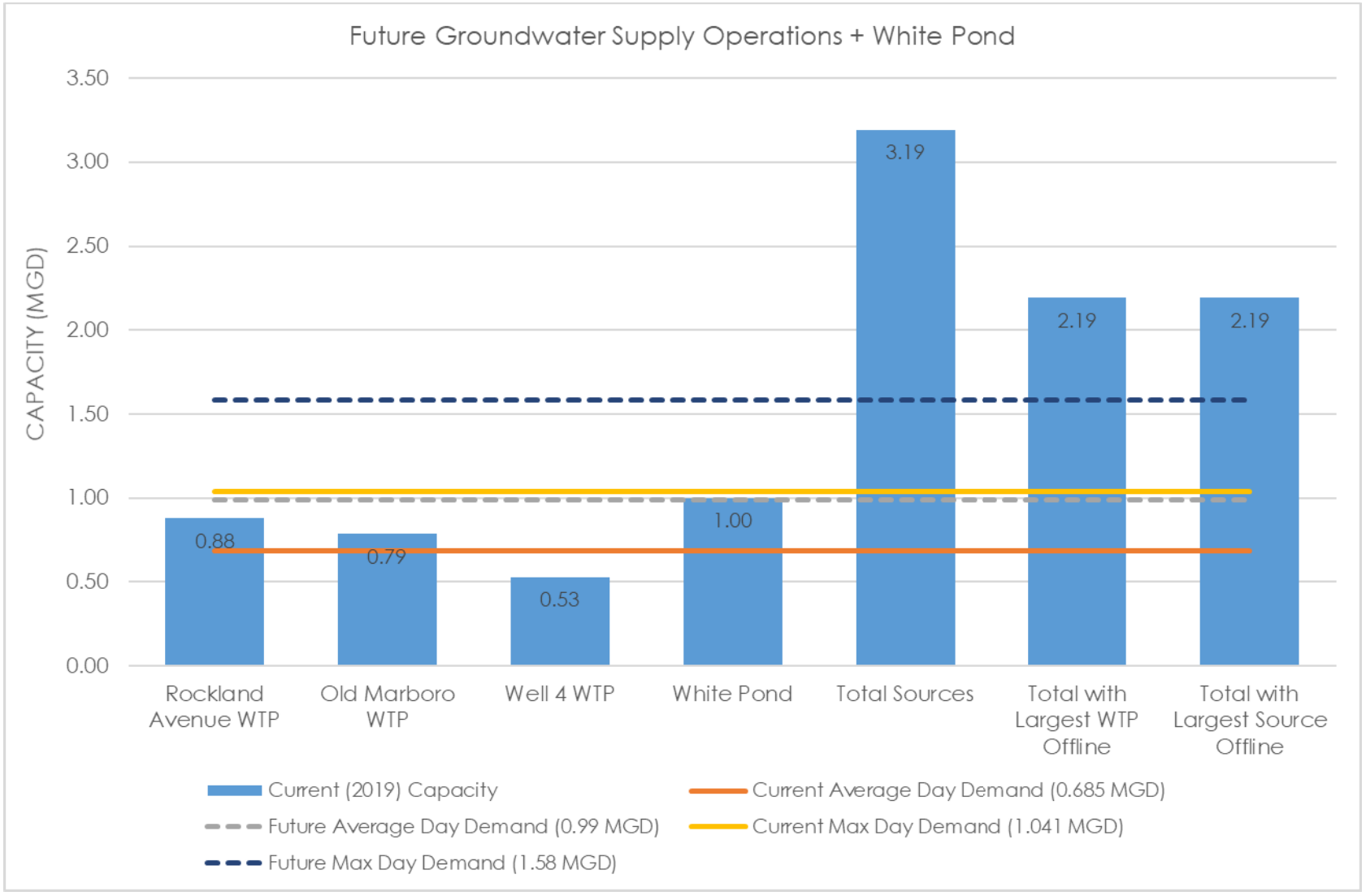


How to Ensure Adequate Capacity in the Future?

- Long Term Concerns
  - Unable to meet future average or max day demands with the largest well source offline
  - Unknown future well performance; degradation of water quality/quantity over 25-year planning period is likely
  - Possible hindrance to Town's growth

- Recommended Long Term Solutions:
  - Use White Pond as additional supply source; estimated from beginning of permitting process through construction to be a 5 to 8 year project
  - Implement all short-term solutions immediately, while concurrently working towards White Pond

Recommended Long Term Solution to Meet Future Demands



White Pond Study – Draft Report Completed

Objectives:

1. Determine how the Town can best meet long term water demands (avg and max day demands) with a fully redundant water treatment system

2. Determine feasibility (engineering, cost, permitting) of using White Pond for source of drinking water

3. Determine feasibility (engineering, cost, permitting) and options for transmission main from White Pond to Town