

ARTICLE 5: BORROW AUTHORIZATION FOR ADDITIONAL FUNDING FOR THE SPECTACLE POND WATER TREATMENT PLANT IMPROVEMENTS FOR REMOVAL OF PERFLUORINATED ALKYL SUBSTANCES (PFAS)

To see if the Town will vote to authorize the Treasurer, with the approval of the Select Board, to borrow the sum of \$ 610,000 for the purposes of funding the construction of the Spectacle Pond Water Treatment Plant improvements for the removal of perfluorinated alkyl substances (PFAS), including demolition and site preparation costs and costs incidental or related thereto. Any premium received by the Town upon the sale of any bonds or notes approved by this vote, less any such premium applied to the payment of the costs of issuance of such bonds or notes, may be applied to the payment of costs approved by this vote in accordance with Chapter 44, Section 20 of the General Laws, thereby reducing the amount authorized to be borrowed to pay such costs by a like amount, or take any action thereon or in relation thereto.



Massachusetts Sets PFAS Limits

- MassDEP approved maximum contaminant level (MCL) for 6 PFAS chemicals at 20 ppt
- Ayer knew this was coming and has been proactive in sampling, designing and constructing PFAS treatment
- All systems must sample for PFAS by Dec. 2021
- Currently over 30 water systems have tested above the 20 ppt



September PFAS Sample Results

(September 2020)

Supply	PFOA & PFOS ppt	MassDEP PFAS-6 ppt
Grove Pond Well 1	15.8	28.5
Grove Pond Well 6	13.9	24.6
Grove Pond Well 7	15.4	28.8
Grove Pond Well 8 (untreated)	119	262
Grove Pond Well 8 (treated)	Non Detect	Non Detect
Grove Pond finished	8.76	15.2
Grove Pond PFAS Treatment	Non Detect	Non Detect
Spectacle Pond Well 1	13.4	20.9
Spectacle Pond Well 2	15.4	28.6
Spectacle Pond finished	14.8	25.6
Washington St Water Tank	12.9	23.7
Pingry Hill Water Tank	14.0	22.3

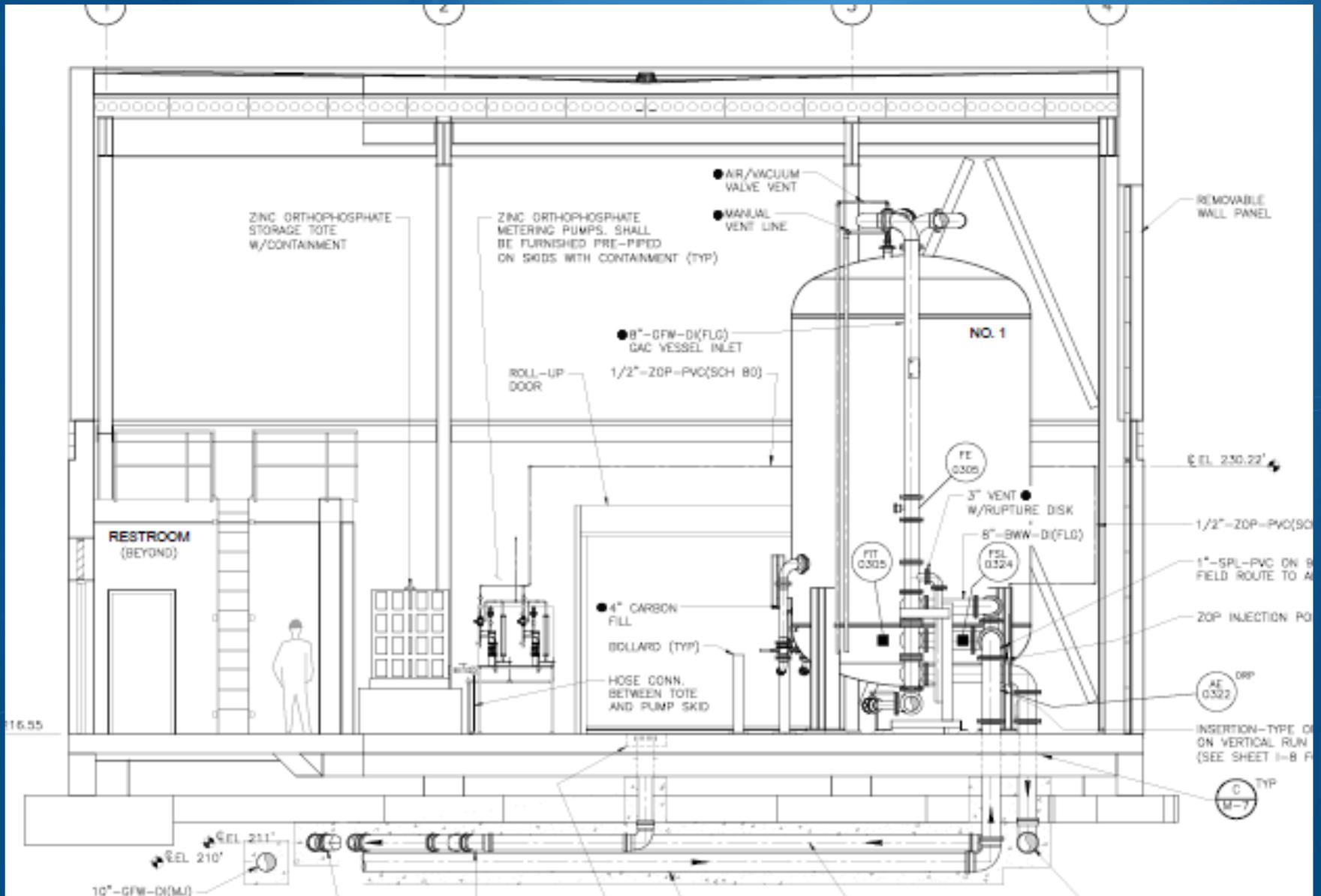
Spectacle Pond PFAS Treatment Facilities

- Spec Pond wells provide 40% of Town water supply
- Existing wells are treated for removal of iron and manganese. Treatment plant built in 1984
- PFAS-6 level in wells is 20 to 30 ppt; MassDEP MCL is 20 ppt
- Testing of treatment systems determined that granular activated carbon was the best treatment process

PFAS Treatment Design

- Due to site constraints, treatment will be a separate building
- GAC treatment vessels are twice as tall as the Grove Pond PFAS ion exchange vessels
- Site issues related to existing well location, wetlands, endangered species habitat, topography
- Design includes required upgrades to existing treatment system
 - Generator
 - Electrical and control
 - New roof





Funding Issues

- Town Meeting authorized \$6.2M
- Project bid was \$5.15M
- Additional costs for design, well replacement, construction administration and contingencies
- We have obtained MassDEP Drinking Water 0% Interest loan with some principle forgiveness
- We were recently awarded a \$200,000 grant from MassDEP for engineering to date
- I am working with Contractor to develop a “credit” change order

Total Project Costs

Engineering and Design	\$ 675,000
Spec 1A Replacement Well (Dankris Builders)	\$ 262,000
Misc. (to date)	\$ 12,687
Winston Builders Bid	\$ 5,145,889
Construction Contingency (5%)	\$ 257,294
CDM-Smith Construction Services	<u>\$ 650,000</u>
Total	\$ 7,002,870
Appropriation	\$ 6,200,000
MassDEP PFAS Grant	<u>\$ 200,000</u>
Additional funds needed	\$ 602,870

ARTICLE 9: EXTENSION OF WATER AND SEWER LINE ON HARVARD ROAD INTO THE TOWN OF HARVARD

To see if the Town will vote to authorize the extension of the Town's water and sewer lines on Harvard Road from approximately the Town line on Harvard Road (for water) and from approximately the end of Markham Circle (for sewer) down Harvard Road into the Town of Harvard at approximately 320 Ayer Road in Harvard to provide water and sewer for a private residential development in Harvard, to include an assisted living component; or take any action thereon or in relation thereto.



Overview

- Developer is proposing a senior residential housing at 320 Ayer Road in Harvard (45 units with up to 80 in future)
- Developer requested potential water and sewer service from Town of Ayer
- Extension of water and sewer service outside of town requires Town Meeting approval -Bylaw XVII
- Final approval requires additional analysis and



**ZONING REQUIREMENTS- SRD-1 DISTRICT
(SINGLE-FAMILY SENIOR DETACHED RESIDENTIAL)**

BULK REQUIREMENTS	REQUIRED	PROPOSED
BASE DENSITY:	2 DUL/AC	1.8 DUL/AC
MIN. OPEN SPACE:	30% (± 6.9 AC)	44% (± 10.2 AC)
MIN. PROJECT SITE SETBACK:	30 FT	30 FT
MIN. FRONT SETBACK:	20 FT	25 FT
MIN. SIDE SETBACK:	10 FT	7.5 FT ±
MIN. REAR SETBACK:	20 FT	20 FT
MAX. BUILDING HEIGHT:	35 FT	35 FT

1. SEE OPEN SPACE CALCULATIONS BELOW
2. RELIEF REQUIRED

PROPERTY DATA:

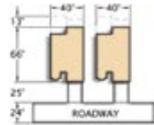
TOTAL SITE AREA:	± 23.0 AC
W-DISTRICT AREA:	± 9.3 ± AC
TOTAL LAND AREA:	± 22.9 AC

3. PER THE TOWN OF HARVARD PROTECTIVE BY-LAWS, LAND AREA DOES NOT INCLUDE ANY AREA IN THE W DISTRICT

OPEN SPACE CALCULATION:

UPLAND OPEN SPACE AREA:	± 8.9 AC
WETLAND AREA:	± 1.3 AC
TOTAL OPEN SPACE AREA:	± 10.2 AC

4. NOT MORE THAN 25% OF THE REQUIRED MINIMUM COMMON OPEN SPACE SHALL CONSIST OF WETLANDS (MAX 1.7 AC)



TYPICAL 40-FT WIDE HOME LAYOUT

NOT TO SCALE

SITE PLAN ASSUMPTIONS:

1. SITE CURRENTLY ZONED COMMERCIAL. CONCEPT ASSUMES REDONE TO AN RESIDENTIAL IN ORDER TO QUALIFY FOR SRD-1 (SINGLE-FAMILY SENIOR DETACHED RESIDENTIAL) OVERLAY.
2. PLAN PROPOSES MERRIM 11' BETWEEN CONDO SINGLE HOMES.
3. ACCESS TO PUBLIC SEWER AND PUBLIC WATER IN THE TOWN OF AYER.
4. EXISTING STRUCTURES TO BE RAISED.
5. WETLAND BUFFER FOOTPRINTS REQUIRED TO ACCESS SITE.
6. SITE CONCEPT IS BASED ON A DRAFT OF THE SENIOR RESIDENTIAL OVERLAY WHICH HAS NOT YET BEEN COORDINATED. OVERLAY DEVELOPMENT STANDARDS MAY CHANGE ONCE FINALIZED AND MAY AFFECT SITE LAYOUT.

LEGEND:

	WETLAND		WATERSHED PROTECTION AND FLOODPLAIN AREA (W DISTRICT)
	WETLAND BUFFER		

SOURCES:

1. THIS PLAN IS THE EXCLUSIVE PROPERTY OF ESE CONSULTANTS, INC. AND TOLL BROTHERS INC. ALL RIGHTS AND REMEDIES ARE HEREBY RESERVED. THIS PLAN MAY NOT BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF ESE CONSULTANTS, INC. AND TOLL BROTHERS INC.
2. AERIAL PHOTOGRAPHY TAKEN FROM DIGITAL GLOBE DATED: 2010
3. TOPOGRAPHIC INFORMATION TAKEN FROM FEMA USGS: NASHUA RIVER WATERSHED OVERLAY DATED: 2011.
4. WETLAND INFORMATION TAKEN FROM MISSISSIPPI WETLANDS DATED: 2012.
5. ALL BASE INFORMATION IS CONSIDERED PRELIMINARY AND SUBJECT TO FIELD VERIFICATION AND SURVEY. SITE PLAN MAY VARY FROMING MORE ACCURATE INFORMATION.



**ESE
PLANNING**

**SENIOR RESIDENTIAL SKETCH:
45 HOMES**

AYER ROAD

HARVARD, WORCESTER COUNTY, MASSACHUSETTS



PLAN SUMMARY:

- (45) TOTAL HOMES
- ± 2,172 LF OF NEW CARTWAY
- ± 120 LF OF BOULEVARD
- ± 10.2 ACRES OPEN SPACE
- ± 1.0 ACRES STORM WATER

SITE DATA:

ADDRESS: 320 AYER ROAD
HARVARD, MA 01453
PARCELS MAP 2 - LOT 24
SITE AREA: ± 23.0 AC
CURRENT ZONING: COMMERCIAL
PROPOSED ZONING: SENIOR RESIDENTIAL DEVELOPMENT

OFFICE DATA:

PROJECT NUMBER: 20202
DATE: 2020.10.07
SCALE: 1" = 100'
DRAWN BY: AT

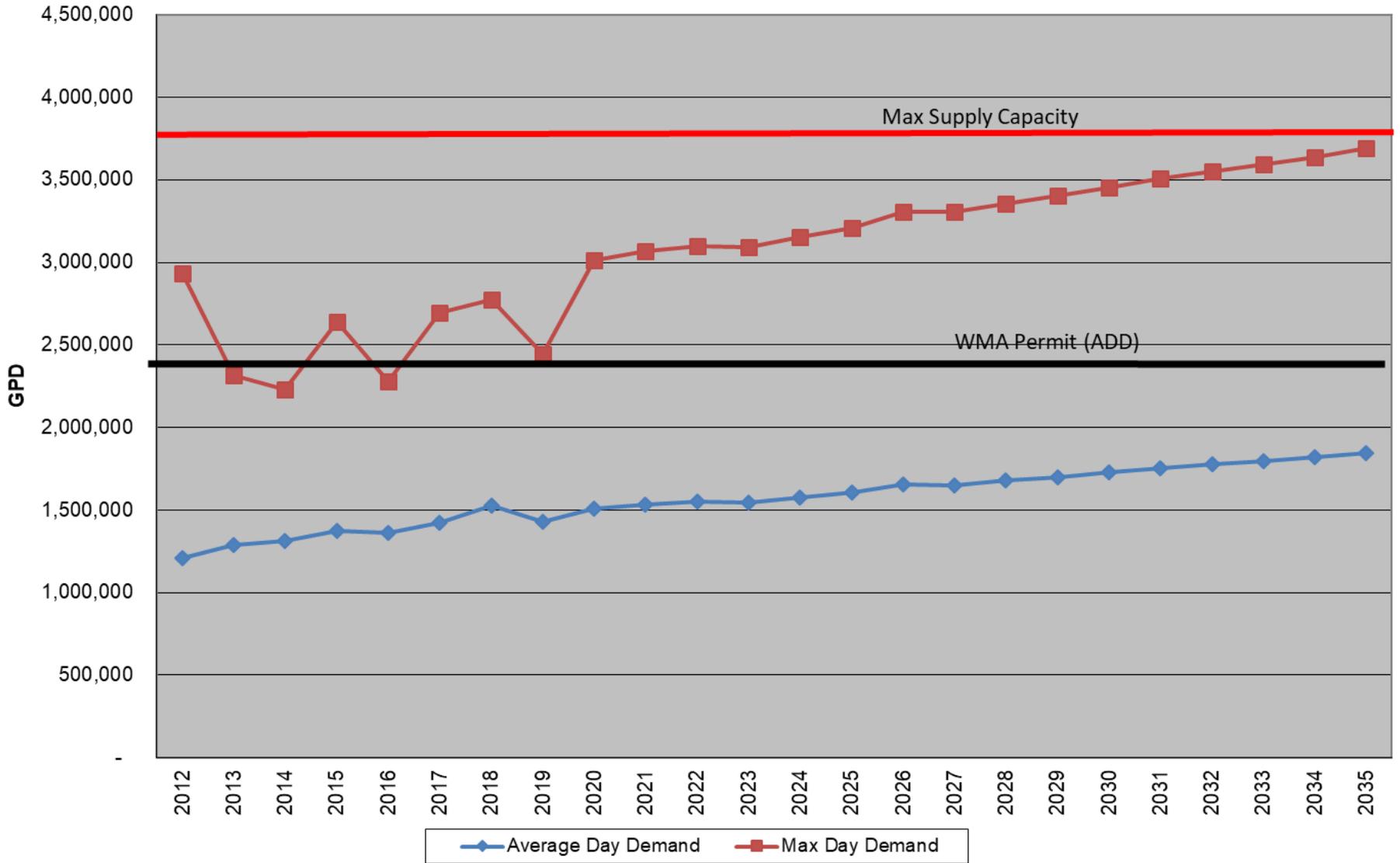
Does Ayer Have Enough Water and Wastewater Capacity?

- DPW Updated the water supply and wastewater demand projects and supply / treatment capacity
- Included known and potential development within Ayer
- Water supply is adequate through 2035
- Wastewater Treatment will need approximately 450,000 gpd treatment capacity in Devens agreement

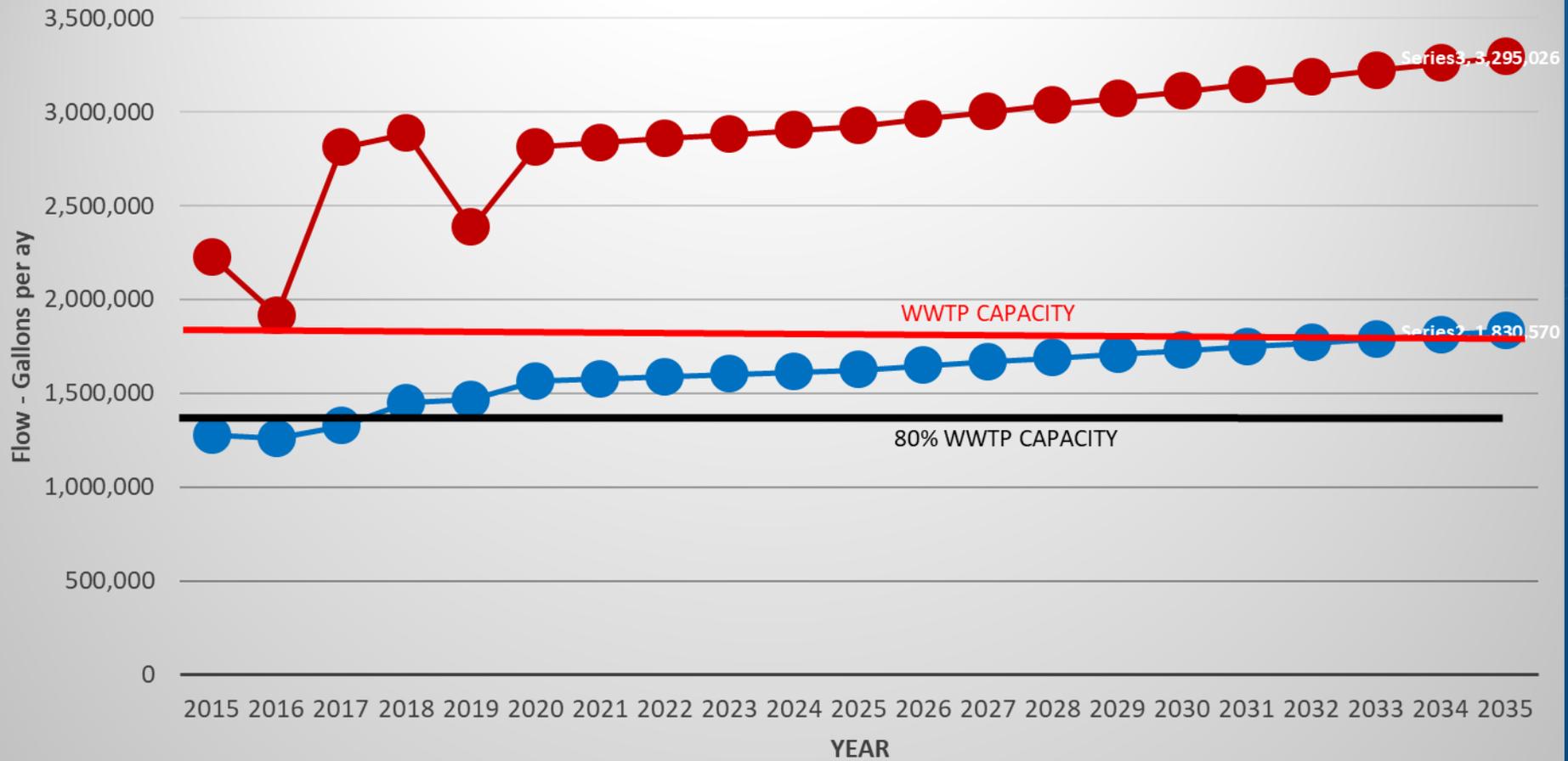
Potential Development

Development	Classification	Units	Water GPD	Wastewater GPD
John Carroll Reserve	Single Family	19	6,840	6,270
Shaker Mill Pond Estates	Single Family	20	7,200	6,600
14 Washington St. (1 BR per unit)	Multi-Unit	6	1,080	990
41 Central Ave	Town House	8	2,880	2,640
Misc ANRs	Single Family	8	2,880	2,640
Stratton Hill	Single Family	50	18,000	16,500
76 Groton School Rd	Single Family	15	5,400	4,950
65 Fitchburg Road - potential 40B	Multi-Unit	100	27,000	24,750
3-5 Park Street	Multi-Unit	17	4,320	3,960
Shop and Save	Multi-Unit	24	8,640	7,920
Madigan Shaker Rd	Multi-Unit	75	27,000	24,750
Barry Main St	Multi-Unit	40	10,800	9,900
W Main St	Multi-Unit	40	10,800	9,900
Groton IMA				40,500
Nasoya	Industrial		107,000	80,000
320 Ayer Road Harvard IMA	Multi-Unit	60	21,600	19,800
	TOTAL	911	261,440	262,070

Projected Water Demands Through 2035 Ayer, Massachusetts



Projected Wastewater Flow



Next Steps if Passed TM

- Develop legal agreement with responsibilities, expansion requirements, fees (\$625K) and rates
- Developer would design and construct water and sewer infrastructure in accordance with Ayer and Harvard requirements
- All agreements and requirements must be approved by Select Board

