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Sewer Commissioners Meeting Minutes of Tuesday, July 14, 2020 Zoom Remote - Public Access **Bourne TV Public Broadcast**

TA Tony Schiavi ATA Glenn Cannon TOWN CLERK BOURNE

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Sewer Commissioners

James Potter, Chairman Jared MacDonald, Vice-Chairman Judy Froman, Clerk Peter Meier George Slade

Others: Mike Schrader and Adam Yanulis - Tighe & Bond and Tim Lydon

Note this Zoom videoconference meeting is being televised, streamed and recorded by Bourne TV. If anyone from the public wishes to provide public comment, they can access the conference line by calling: 1-929-205-6099 Meeting ID: 873 4884 8796 Password: 229979.

https://us02web.zoom.us/i/87348848796?pwd=a1VlNTJZYVNmWFNSallnTTJiQzJwdz09

Please MUTE your phone until the Chair asks if anyone wishes to speak. All items within the meeting agenda are subject to deliberation and vote(s) by the Board of Selectmen/Sewer Commissioners.

Note this meeting is being recorded.

Sewer Commissioners Meeting / Workshop 7:00 P.M. Call Public Session to Order in Open Session

Chm. Potter called the meeting to order at 7:00 pm.

1) Salute the flag

2) Consent Agenda

A. Sewer Commissioners Re-organization of Officers

B. Approval of Open Session meeting minutes: June 30, 2020

Voted: Peter Meier moved and seconded by Jared MacDonald to nominate James Potter as Chair, Jared MacDonald as Vice Chair, and Judy Froman as Clerk.

Voted: Peter Meier moved and seconded by Jared MacDonald to close the nominations. Roll Call Vote: Peter Meier - Yes, Judy Froman - Yes, George Slade - Yes, Jared

MacDonald - Yes James Potter - Yes

Vote: 5-0-0

Voted: Peter Meier moved and seconded by Judy Froman to approve the nominations and the officers to remain for the next year.

Roll Call Vote: Peter Meier - Yes, Judy Froman - Yes, George Slade - Yes, Jared

MacDonald - Yes, James Potter - Yes

Vote: 5-0-0

Voted: Judy Froman moved and seconded by George Slade to approve the minutes from June 30, 2020.

Roll Call Vote: Peter Meier - Yes, Judy Froman - Yes, George Slade- Yes, Jared

MacDonald - Yes, James Potter - Yes

Vote: 5-0-0

3) Sewer Business

A. Savary Avenue Update

- 50 & 52 have been capped inside and outside they are off
- 21 is scheduled to be capped on the outside tomorrow
- Then everyone will be off
- Working with the Army Corps to fully decommission the site.
- Do cleanups last pump outs

pdated 07.10.2020				Si	wary Avenue Re	sidents				
<u>Ассониі #</u> 03-00003	Property Owner Robert W. Lubold Patricia A. Lubold	Address 21 Savary Avenue		Map/Parcel 12.1 / 86 00	Phone # 774-313-9535	Perc Test Completed YES	Septic Permit Application Submitted? YES	Installed/ Inspected? YES	Sewer Line canned? NO	Notes Perc test done 10 25 2019 Inspected on 05 06 2020 / capped imade of house. Honcowner informed on 05 08 2020 to contact contractor to cut & cap outside with Sewer Technican present. 06 20 2020 Contacted owner and informed he if not capped and witnessed shaw will continue to receive a sewer hell.
23-00004	Thomas M. Cloonan Maureen Cloonan	23 Savary Avenue	6 Wood Lawn Street East Taunton, MA 02718-2802	12.1/87.00	508-833-8213	YES	YES	YES	YES	Septic permit #155-19 not installed Sewer line cut and capped 01,24,2020 "see file for pics
03-00005	Carrie A Holmes Amanda Lindvall	25 Savary Avenue	25 Savary Avenue Sagamore Beach, MA 02562	12.1 / 88.00	774-413-5484	YES	YES	YES	YES	Sower line out and capped 12.26.2019 *see file for pice
03-00006	Burton E Bouldry St Mary Ann Bouldry	27 Savary Avenue	PO Box 126 Sagamore Beach, MA 02562-61		508-888-2750	YES	YES	YES	YES	Capped off inside house but not outside 12.17.2019 Cut and capped exterior sewer pipes 12.23.2019 *see file for pies
3-00007	Jean A Cole	31 Savary Avenue	31 Savary Avenue I Sagamore Beach, MA 02562-286		508-888-4248	YES	YES	YES	YES	Final inspection done 10.29.2019 permit #137-19 Sewer line cut and capped 11.04.2019 *see file for pics
3-00008	Charles Neff	33 Savary Avenue	33 Savary Avenue, RFD 1 Sagamore Beach, MA 02562		508-685-1447	YES	YES	YES	YES	Sewer line capped 10.23.2019 "see file for pica
3-00009	Nazia Hameed Ali Rahber	35 Savary Avnue	PO Box 722 Sagamore, MA 0256)	2.1/92.00	508-364-9538	Yes	YES	YES		Perc test done 11.05 2019 Inspected 1/21/2020 COC issued 1/22/2020 Sewer line cut and capped 01.27,2020 "see file for pics
3-00010	Stephanie A. Comick Trustee of the Stephanie A. Comic	39 Savary Avenue k Trust	39 Savary Avenue I RFD 01 Sagamore Beach, MA 02562	2.1 / 93.00	508-888-0055	YES	YES	YES		Septic permit #147-19 has been issued Sewer line cut and capped 12 17 2019 *see file for pics
3-00013	Edward J McGuire Paula B. McGuire	52 Savary Avenue	52 Savary Avenue I Sagamore Beach, MA 02562	21/9600	508-338-0383	Yes	Yes	NO		Perc test done 10.25.2019- BOH discussed site limitations with engineer Septic permit #25-20 has been listued Variances granted by BOH on 2.12.2020, not installed
3-00014	Prince Street Real Estate LLC clo Phillip C Kozar II	50 Savary Avenue	50 Savary Avenue 1 Sagamore Beach, MA 02562	2.1 / 97.00	508-566-6035	Yes	Yes	NO		Perc text done 10.25.2019- BOH discussed one limitations with engineer 1 to 6.2020 conducted 2nd and evaluation Septie permit 3rd-10 has been saused Variances granted by BOH on 2 12.2020, not installed Sewer line has been cut and exposed of 700.2020 *See file for pics
3-00015	Richard A Johnson Janet Johnson	46 Savary Avenue	46 Savary Avenue I Sagamore Beach, MA 02562-280		508-888-0229 [not in service]	YES	YES	YES	YES	Sewer line cut and capped 08 13 2019 *see file for pres
3-00016	James R. Fair Wendy L. Fair	42 Savary Avenue	42 Savary Avenue 1: Sagamore Beach, MA 02562-280		508-833-0840	YES	YES	YES'	YES	Sewer line cut and capped 05.16.2019 *see file for pics
3-00017	Greta G. Sylvia Trust of the Sylvia Family Realty T	10 Savary Avenue rust	PO Box 1458 1: Sayamore Beach, MA 02562	2 1 / 100.00	508-888-2071	Yes	YES	YES		Septie permit #175-19 not installed Hired Peter Valeri and paid deposit. Work to begin Thursday 01.30 2020 Sewer lina cut and capped 01.30.2020 "ree file for pics

4) New Business

- A. Correspondence
 - Buzzards Bay Water District
- B. Any new sewer business (not foreseen 48 hours ahead of this meeting)
- C. Public Comment

4.A.

Received a letter/email from the Buzzards Bay Water District cautioning on commercial development.

The process with the routing to keep them up to date.

They had a meeting today, some Sewer Commissioners attended.

Built the well in 2015 - they were permitted for a higher capacity

They are asking for the data so they can get permitting for the higher capacity

Will need to meet with the North Sagamore Water District and the Bourne Water District, to make sure they are part of the infrastructure discussion moving forward.

4.C. Public Comment

Updated RFP for the Wastewater Management Master Plan Will put it on the next agenda

5) Workshop

A. Sewer Rate Study presentation by Michael Schrader of Tighe and Bond

B. Sewer Rates and Fees Discussion

Mike Schrader - Tighe & Bond, spoke regarding:

The rate everyone pays for the year vs fee for new tie-ins,

History and Overview

- Existing Sewer System
- New Wastewater Treatment Plant
- Development Fees
- Rate Evaluation Process
- Projecting Expenses
- Projecting Revenue
 - Existing customers
 - o Projected Development
 - o New Customers
 - User charges
 - Development charges
 - Development Fee summary

Project Goals

- Rate Evaluation
- Connection Fee and Allocation Evaluation

Usage Analysis
Rate Alternative B – New Rates and Fees
Rae Alternative A1 – Status Quo
Capacity Management and Flows
Findings, Conclusions & Recommendations

Regarding Title V – Re-Evaluate how we allocate
I&I we intend to do that study and submit to State
Set rates sooner than later to capture new developments
Fees should be separated out and put them in a Capital Fund, so we know we are paying the debt service.

Questions asked regarding:

- ERU Base Rate \$575 per ERU per year
- Different rates for seasonal residents everyone pays per amount of water they use, not different rates.
- Coastal community Sewer Cost
- Staff Roles
- Putting aside money for Capital Infiltration
- Seeing Final Report August

Can set the rates at the next meeting - not using this rate structure yet



BOURNE SEWER RATE EVALUATIONBourne Sewer Commission

July 14, 2020 Workshop

Tighe&Bond

INTRODUCTION

This handout is designed specifically for use in a virtual meeting environment where some participants may be connected by telephone only. The goal is to provide a comprehensive overview of the evaluation in an intentionally condensed fashion to minimize the total number of pages.



Bourne Sewer System History and Overview

Existing sewer system

- Constructed in the 1990's
- Services the Downtown, Taylor Point and Hideaway Village Areas
- Paid by owners through betterments
- Sewage goes to Wareham for treatment through Intermunicipal Agreement (IMA)
- Sewer users are billed based upon a base fee which includes 45,000 gallons of use, anything over that billed at \$0.01 per gallon.

New Wastewater Treatment Plant

- Need first identified in early 2000's
- Designed to support projected development in existing sewer service area
- Intended to be fully funded by new growth with no impact on existing rate payers.

Development Fees

- 2006 Existing fee structure established
- 2017 Capacity management policy developed

Project Goals

Rate Evaluation: Determine if new plant costs will be supported entirely by growth.

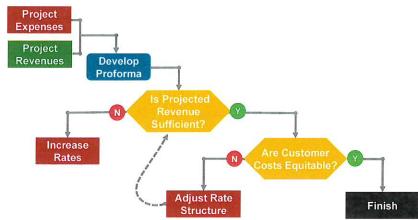
- Add costs of new plant to existing costs
- Estimate future revenue under existing connection fees and from future users
- Determine user cost impacts

Connection Fee and Allocation Evaluation

- Review existing development fees
- Review capacity allocation policy

RATE EVALUATION PROCESS

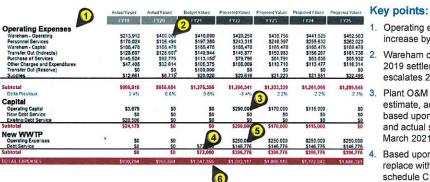




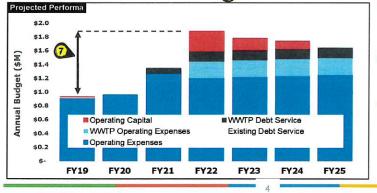
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PROJECTING EXPENSES

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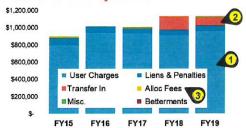


- Operating expenses projected to increase by about 3.5% annually
- Wareham costs based on June 2019 settlement agreement. Cost escalates 2.5% annually
- 51,295.45
 2.35
 3. Plant O&M cost based upon estimate, actual cost will vary based upon future contracts costs and actual startup based upon March 2021 completion
 - Based upon FY21 budget, should replace with information from schedule C.
 - Operating Capital reflects deferred projects including \$100k Infiltration & Inflow investigation (MADEP required).
 - Based upon Budget, actual costs likely to be lower. For FY19 the actual expenditure was 77% of budget.
 - Budget levels nearly double by
 FY22 which tends to bring out any
 inequities in a water or sewer rate
 structure



PROJECTING REVENUE

Historic Revenue by Source



Key points:

- 1. The majority of revenue has come from user charges
- 2. In the past, transfers were used to minimize rate increases
- Once debt and CIP costs hit. development revenue becomes more important.



Projecting Revenue From New and Existing Customers

Existing Customers

User Charges: Based upon analysis of previous years usage data

New Customers (Development) Broken down into two categories:

Known: Projects that the Town is aware of and are in the development process

Projected: Estimated from undeveloped non-residential parcels

User Charges

Known:

Based upon flow data provided in application materials or estimated

combined with estimated connection year.

Projected: Based upon planning level flow estimates **Development Charges**

Based upon data provided in application materials or estimated combined

with estimated connection year

Projected: Based upon planning level data

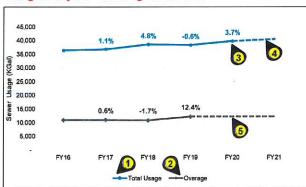
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7-10-2020

PROJECTING REVENUE FROM USER CHARGES

Usage Analysis - Existing Customers



Key points:

- 1. Total amount of water use as measured by Buzzards Bay Water District
- 2. Amount of usage over the 45K gallons allotted per billable unit under the current rate structure
- 3. 2020 based upon first 6 months of meter data extrapolated to full year using data from previous years water use.
- 4. Estimated to increase at 2% annually
- Overage trends differently than total usage because of masking effect of existing fee structure. Projected to remain at 2019 levels.
- 6. First year of flow, based upon best estimate. Green indicates project usage appears in 2019 flow data
- 7. Allocated flow is based upon Title 5 (Septic System planning level flow estimates based upon type of use). Generally considered to be a maximum day flow or about twice the average daily
- 50% of Title 5 flow, considered to be an average daily flow

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Usage Analysis - Known Development



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7-10-2020

PROJECTING REVENUE FROM DEVELOPMENT FEES

FEE STRUCTURES

Existing Fee Structure

Fee	Amount and Basis			
Existing Fee Structure (as of 2006)				
Design Review and Construction Inspection Fee	\$1,500 (commercial only)			
Commercial Sewer Permit Fee	\$150 + \$0.010 per square foot of building floor space			
Sewer Connection Fee	Annual sewer fee times the number of business units.			
Residential Sewer Permit Fee	\$100 + \$100 for each additional unit.			
Sewer System Development Charge	\$5,769.678 per acre plus \$36.703 per foot of frontage.			
2017 Commercial Allocation Policy Fees				
Application Fee	\$1,500			
Preliminary Allocation Fee	\$5,000 plus \$1 per projected flow			
Operational Allocation Fee	Number of units x curren annual base rate sewer f			

Key points:

- 1. 2006 Sewer Development Charge was based upon betterment structure used to pay for system in the 1990's. This method is designed to distribute the costs of sewer (horizontal) construction.
- 2. The proposed system development charge distributes the \$2.4M of new WWTP debt assigned to the sewer enterprise fund using the widely accepted ERU methodology.

Proposed ERU Based Development Fee

Service Development Charge

1. Determine number of Equivalent Residential units Divide total plant capacity by

average residential usage

Total Capacity 100.000 gpd Residential usage 150 gpd Equals 667 ERU's

2. Determine ERU cost

Cost to be recovered \$2,400,000 Total ERU's 667

Equals \$3,600 Per ERU

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PROJECTED DEVELOPMENT REVENUE

Existing Fee Structure

Known Development Allocation Policy \$62,474 \$19,013 \$18,694 \$21,743 \$8,756 \$6,681 \$6,940 \$9,965 \$19,500 \$23,300 \$6,830 \$13,570 \$6,684 \$6,541 \$2,580 \$32,580 \$24,200 2020 2020 2020 2020 2020 2020 2021 2021 2021 2021 2022 5.500 8,400 40 3.535 5,993 21 8.876 13,040 8.860 2023 2023 2023

Projected Development

	Title 5 Estimated Flow (gpd)	Expected Flow (gpd)	Est No Units	A	pplication Fee		reliminary ocation Fee		System evelopment Charge	6	
Vacant, Selectmen or City Council (Municipal)	1,468	734	12	\$	1,500	5	7,968	5	18,570	5	28,038
Developable Commercial Land	1,411	706	12	5	1,500	5	7,911	5	18,273	5	27,684
Undevelopable Commercial Land	501	250	5	5	1,500	5	7.001	5	5.805	5	14,30
Undevelopable Commercial Land	736	368	6	8	1,500	5	7.236	5	7,089	5	15,825
Vacant, Selectmen or City Council (Municipal)	645	322	6	5	1,500	5	7,145	5	19,619	5	28,26
Vacant, Selectmen or City Council (Municipal)	954	477	8	5	1,500	5	7,454	5	15,593	5	24,54
Developable Commercial Land	1,015	507	9	5	1,500	5	7,515	5	9,809	5	18,82
Developable Commercial Land	1,346	673	11	5	1,500	5	7,846	5	15,678	5	25,02
Developable Commercial Land	1.699	849	14	5	1,500	5	8,199	5	9,639	5	19,33
Developable Commercial Land	1,668	834	14	5	1,500	5	8,168	5	10,732	5	20,40
Vacant, Selectmen or City Council (Municipal)	4,252	2,126	35	5	1,500	5	10,752	5	23,962	5	36,21
Vacant, Selectmen or City Council (Municipal)	23.392	11,696	190	5	1,500	5	29.892	5	90,595	5	121,98
· con an internal property of the party of	9.061	4,530	74	5	1,500	5	15.561	5	38,683	5	55,74
Undevelopable Commercial Land	684	342	6	5	1,500	5	7,184	5	14,071	5	22,75
Name of the last o	48.831	24,415	402		\$21,000		\$139,831		\$298.116		\$458 94

7-10-2020 Key points: Assumed

- Consists of the three charges shown which represent Bourne's intended application of existing fees
- 3. Total received to date
- Remaining charges anticipated to be billed
- 5. Parcels selected based upon land use descriptions. Developable residential parcels not included based upon previous discussion relative to zoning restrictions
- Development fees distributed based upon the assumed timeline

PROJECTING REVENUE FROM DEVELOPMENT F

Proposed Fee Structure

Known Development

I SILO AALL DCA		DITIOIT							
Development	Flow Year	Expected Flow (gpd)			RU System evelopment Charge				
Hameton Inn	2020			5					
Oak Bay Browery	2020			5					
Veterinary Clinic	2020			S					
Blended Berries	2020			5					
Mahoney's on Main	2020			S					
Vincent Michienzi (85-93 Main)	2020	6,500	44	S	158,400				
Calamar/ 25 Perry	2021	8,400	56	S	201,600				
James McLaughlin	2021	40	1	5	3,600				
MMA Cadet Housing	2021	3,535	24	5	86,400				
Bay Motor Inn	2022	5,993	40	5	144,000				
Choubah Engineering	2022	21	1	5	3,600				
GENCON/Robert Gendron	2023	8,875	60	5	216,000				
100 Main	2023	13,040	87	S	313,200				
Bourne Scenic Park	2023	8,850	59	5	212,400				
CMP Development LLC	2023	23,238	155	S	558,000				
otal		78,490	527		\$1,897,200				

Known Development

Title 5 Estimated Flow (gpd)	Expected Flow (gpd)		ERU System Development Charge		
1,468	734	5	S	35,232.00	
1,411	706	5	5	33,871.20	
501	250	2	S	12,021.60	
736	368	3	5	17,668.80	
645	322	3	S	15,472.80	
954	477	4	S	22,896.00	
1,015	507	4	S	24,357 60	
1,346	673	5	5	32,304.00	
1,699	849	6	5	40,771.20	
1,668	834	6	S	40,039.20	
4,252	2.126	15	5	102,036.00	
23,392	11,696	78	5	561,400.80	
9,061	4,530	31	5	217,452.00	
684	342	3	S	16,413.60	
48,831	24,415	170		\$1,171,937	
	Estimated Flow (gpd) 1,468 1,411 501 736 645 954 1,015 1,346 1,699 1,668 4,262 23,392 9,061 684	Time ted Flow (epd) Flow	Time Time	Columbia	

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7-10-2020

DEVELOPMENT FEE SUMMARY

Existing Fee Structure

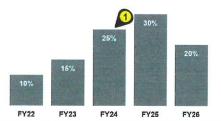
		Known	P	rojected	1	Total	Del	bt Service	1	Balance
2020	\$	144,488			\$	144,488	\$	-	S	144,488
2021	\$	211,408	\$	15	5	211,408	\$	72,000	5	283,896
2022	S	133,767	\$	45,895	S	179,662	\$	148,981	S	314,577
2023	\$	235,827	\$	68,842	\$	304,669	\$	148,981	\$	470,265
2024	\$	-	\$	114,737	\$	114,737	\$	148,981	5	436,021
2025	S	-	\$	137,684	\$	137,684	\$	148,981	S	424,724
2026			\$	91,789	S	91,789	\$	148,981	\$	367,533
2027			\$	-	\$	-	\$	148,981	5	218,552
2028			\$	2	S	25	\$	148,981	\$	69,571
2029			\$	-	\$	-	\$	148,981	\$	(79,409
Total	S	725,490	\$	458,947	\$	1,184,437				



	Known		Known Projected			Total	Del	bt Service	Stabilization Balance		
2020	\$	144,488.00	\$	-	\$	144,488	\$	-	\$	144,488	
2021	\$	450,000	\$	- 4	\$	450,000	\$	72,000	\$	522,488	
2022	\$	147,600	\$	61,200	\$	208,800	\$	148,981	\$	582,307	
2023	\$	1,299,600	\$	91,800	\$	1,391,400	\$	148,981	\$	1,824,727	
2024	\$		\$	153,000	\$	153,000	\$	148,981	\$	1,828,746	
2025	\$	-	\$	183,600	\$	183,600	\$	148,981	\$	1,863,365	
2026	\$	-	\$	122,400	5	122,400	\$	148,981	\$	1,836,784	
2027	\$	-			\$	-	\$	148,981	\$	1,687,804	
2028	\$	-			\$	-	\$	148,981	\$	1,538,823	
2029	\$	-			\$	-	\$	148,981	\$	1,389,842	
	\$	2,041,688	\$	612,000	\$	2,653,688		- 7			

Key points:

- Projected development is assumed to follow the timeline shown below (i.e. 25% of all projected development fees are assumed to be collected in FY24).
- While the goal of System Development charges is to recover the \$2.4M in new WWTP Debt assigned to the Sewer Enterprise, the debt service represents the actual cost that must be paid each year
- Assumes that all development fee revenue is deposited into the Capital Stabilization Fund and used only to pay debt service
- 4. Existing fee structure does not recover full cost of capital as it was not designed for that purpose



Assumed Projected Development Timeline

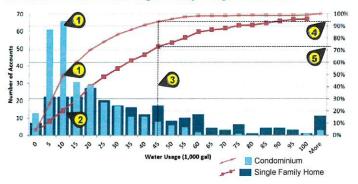
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PROJECTING REVENUES – USER FEES

Evaluation of Existing Fee Structure

Residential Condo and Single Family Usage Evaluation



Key points:

- REVISED 7-10-2020 1. Example data point. This shows that out of all the condominium customer accounts, 65 of them (or
- 10,000 gallons of water in 2018. 2. Similarly, 21 of the single family customers (~20% of them) also used 10,000 gallons of water in 2018. This means condo's use less water than houses.

50% of them) used a total of

- 3. Bourne's current sewer user rate includes 45,000 gallons of usage before customers are charged for overage.
- 4. Usage data appears to be heavily skewed by seasonal aspect. This is exacerbated by the fact that usage is only billed once per year.

Pros and Cons of existing rate structure

The generous usage allowance means Users are effectively paying for more usage than than they actually need

Residential Usage

- MADEP target max usage = 65 gallons per person per day for residential. This equals 94,000 gallons per year.
- 50,000 gallons per year equals 2 people at 65 gallons per person per day or average family at 50 and
- 20,000 gpd example is seasonal cottage

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REVISED

7-10-2020

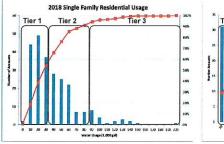
PROJECTING REVENUES – USER FEES

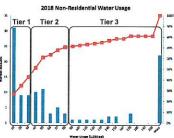
Alternative Rate Structure Development

The existing rates charge by the number of billing units, however this is not defined for non-residential customers which results in inconsistent user costs. As an alternative, a rate structure that maintains the base rate and a usage charge was developed. Many systems use base charges that increase according to the size of the water meter, this reflects the fact that larger users have a proportionally larger impact on system operations and costs. Since Bourne does not own the water system, this information was not available, thus the same Equivalent Residential Unit (ERU) method was used to establish the number of ERU's per customer. The customer's base charge would equal the number of ERU's times the Base Fee (\$600 per ERU in FY21).

With Tiered (or stepped) rates, the usage portion of the customers bill increases with the amount of usage. This is commonly used to encourage water conservation. The proposed tiers are based upon evaluation of the existing water use for both single family residential and non-residential users. The steps in a tier are defined by the volumetric increase and rate increase. Tiers volumes were developed based upon analysis of existing water use for both single family and non-residential customers.

Usage Analysis





RATE ALTERNATIVE A - STATUS QUO

Existing Rate and Fee Structure (usage and development fees)





Key points:

- Most recent data
- Base fee goes up by \$40 per year which is considered to be the status quo in terms of estimating burden on existing rate payers
- User rate revenue for developments subject to change due to assumptions of billable units
- Assumes ALL known development and 50% of projected development move forward as previously shown.
- Average household (2.66 people) using 65 gpd each (State target) or 62.2K gal per year.



Alternative A supports enterprise without undue burden on existing rate payers*.

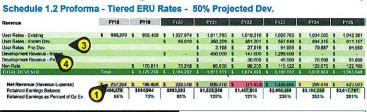
* Based upon FY18 financial data, projected usage and development assumptions shown herein.

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RATE ALTERNATIVE B - NEW RATES & FEES

ERU and Tiered Usage Rates with ERU Based Development Fees

REVISED 7-10-2020







Alternative B

Key points:

- 1. Most recent data
 - Base fee is based upon the number of ERU's (same as current number of units for all residential users, average daily flow / 150 gallons per day for non-residential). No usage is included in base fee. Annual billing frequency assumed for usage.
- User rate revenue for developments subject to change due to assumptions of billable units.
- Assumes ALL known development and 50% of projected development move forward as previously shown.
- Average household (2.66 people) using 65 gpd each (State target) or 62.2K gal per year.



Alternative B supports enterprise without undue burden on existing rate payers* see page 15 for more.

* Based upon FY18 financial data, projected usage and development assumptions shown herein.

CUSTOMER COST IMPACTS

and Use Code	LOCATION 1	2018 USAGE (Gal x 1,000)	2019 USAGE (Gal x 1,000)	Billable Units	No. af ERU's		nual Bill xisting Rates	Annual Bill Tiered Rates	Delta
Business Condo	271 MAIN STREET (NAPA AUTO PARTS)	41	57	2	1	5	1,838	\$1,033	-5805
Business Condo	268 MAIN STREET (BUZZARDS BAY PROF.)	490	540	17	9	5	15,623	\$11,821	-53,802
Gasoline Service Stations	246 MAIN STREET (SUPER PETR.)	29	17	1	1	\$	919	\$686	-\$234
Gasoline Service Stations	160 MAIN STREET (CUMBERLAND FARMS)	485	500	1	9	5	5,469	\$11,301	\$5,832
Hotel	Perry Lane (Hampton Inn)		168	1	1	\$	2,149	\$2,385	\$236
Mixed Use (Primarily Comr	n)7 & 9 ST MARGARETS STREET	148	120	6	3	5	5,514	\$2,911	-\$2,603
Mixed Use (Primarily Comr	n.) 145 MAIN STREET	350	321	3	7	5	3,377	57,824	54,447
Mixed Use (Primarily Comm	n) 267 MAIN STREET (LAUNDRY MAT)	2,350	2450	1	43	5	24,969	\$56,201	\$31,232
Residential Condo	10-C HORSESHOE LANE	5	3	1	1	\$	919	\$695	-\$325
Residential Condo	20-H BAKERS LANE	20	16	1 (1	5	919	\$679	-\$240
Residential Condo	21-S BOG VIEW DRIVE	119	116	1	1	\$	1,629	\$1,709	580
Restaurants/Food Service	67 MAIN STREET (MAHONEY'S ON MAIN ST)	10	321	1	1	5	3,679	54,374	\$695
Restaurants/Food Service	225 MAIN STREET (BETTY ANNE'S)	94	105	1	2	5	1,519	52,141	5622
Restaurants/Food Service	278 MAIN STREET (DUNKIN DONUTS)	560	540	1	11	5	5,869	\$12,971	57,102
Single Family Residential	18 EVERETT ROAD	15	15	1	1	5	919	\$673	-5247
Single Family Residential	225A MAIN STREET	60	50	1	1	\$	969	\$965	-54
Single Family Residential	24 OLD BRIDGE ROAD	95	100	1	1	5	1,469	\$1,501	532
Two-Family Residential	17 BAY DRIVE	15	16	2	2	5	1,838	\$1,254	-\$584
Two-Family Residential	33 OLD BRIDGE ROAD	74	80	2	2	5	1,838	\$1,833	-SE
Two-Family Residential	34 HARRISON AVENUE	144	133	2	2	5	2,053	52,505	5452



Key points:

- Representative sampling of most common user types showing range of usage.
- 2. Example of inconsistent application of billable units for existing rate structure
- Single family typically used as test case for determining rate impacts.

Residential Usage

- Bourne has large seasonal component ~40% of single family homes likely to be seasonal
- MADEP target max usage = 65 gallons per person per day for residential. This equals 94K gallons per year for a 4 person household.
- 50,000 gallons per year equals 2 people at 65 gallons per person per day or average family (2.5 people) at 50 gpd
- 15,000 gpd example is likely seasonal

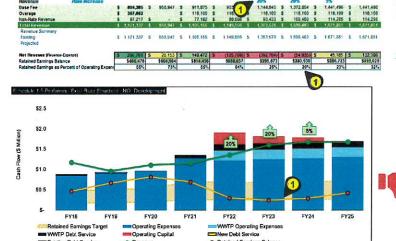
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RATE ALTERNATIVE A1 – STATUS QUO

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NO NEW DEVELOPMENT



REVISED7-10-2020 Key points:

- Rates adjusted to maintain retained earnings balance above 20% of operating costs.
- Base fee increases are much higher to make up for development revenue. FY21 same as in alternative A.

Alternative A without development revenue does not support enterprise without undue burden on existing rate payers*.



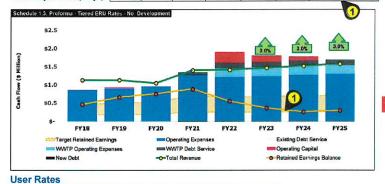
* Based upon FY18 financial data, projected usage and development assumptions shown herein.

REVISED 7-10-2020

RATE ALTERNATIVE B1 – NEW RATES

NO NEW DEVELOPMENT





Key points:

- 1. Rates adjusted to maintain retained earnings balance above 20% of operating costs
- 2. Base fee increases are much higher to make up for development revenue. FY21 same as in alternative A.

Alternative B without development revenue does not support enterprise without undue burden on existing rate payers*.

Type FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 Annual \$776 \$812 \$879 \$1,011 \$1,162 \$1,279 \$1,279 \$1,279 \$0.0100 \$0.0100 \$0.0100 \$0.0100 \$0.0100 \$0.0100 \$0.0100 Overage Increase **Residential Costs** FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25

* Based upon FY18 financial data, projected usage and development assumptions shown herein.

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REVISED

7-10-2020

CAPACITY MANAGEMENT AND FLOWS

Capacity Status 300,000 (2) Per 150.000 1 100,000 50,000

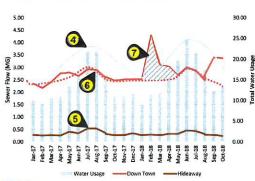
☐Uncomitted Reserve Capacity

Preliminary Allocation

■Operational Allocation Residential Reserve

■Existing Usage (Pumpage)

Why Infiltration & Inflow is Important



Key Points

- 1. Based upon 2019 metered usage as pump station totals not available. Bourne should compare pumpage numbers to estimate volume of infiltration & inflow.
- 2. Allocations based upon Title 5 flow values which are roughly 2X expected daily flows thus understating the amount of available capacity
- 3. Assumes new WWTP on line
- 4. Blue bars represent total water usage (not just sewered area), blue curve shows seasonal increase in water usage
- 5. Amount of sewage pumped from Hideaway Station
- Amount of sewage pumped from Down Town Pump station, curve represents expected increase corresponding to water use increase
- Unexpected spike in Feb 2018 most likely due to infiltration & inflow. Feb 2018 precipitation was 7.15 in vs 2.76 for Feb 2017

FINDINGS, CONCLUSIONS & RECOMMENDATIONS

FINDINGS & CONCLUSIONS

- Existing rate structure does not accurately reflect usage, some pay too much, some pay too little
- The June 2019 settlement with Wareham resulted in a ~40% increase in treatment costs.
- Lack of clarity related to definition of billable units impacts customer equity and cost comparisons, adjustments to new rates will not be even across user types
- Revenue from existing users at status quo rates will not support the enterprise. Revenue from development is required.
- Usage data is heavily skewed from seasonal aspect, water district reads semi-annually which would allow for a much better understanding of seasonal influence.
- The operations and management of the Bourne Sewer System has become considerably more complicated with the addition of the new WWTP

REVISED 7-10-2020

Coastal Community Sewer Costs

Town	Cost
Scituate	\$563
Wareham	\$596
Statewide Average	\$862
Plymouth	\$990
Bourne	\$1,224
Provincetown	\$1,243
Gloucester	\$1,302
Cohasset	\$1,313

Based upon 2017 Tighe & Bond Sewer Rate Survey, annual costs based upon 120 HCF of usage (~90K gallons)

RECOMMENDATIONS

- Meet with Buzzards Bay Water District to discuss options for balancing development needs with water conservation. Continue to negotiate IMA with Wareham, revisit cost sharing methodology
- Retained earnings appears to be sufficient to allow selection of rate Alternative A or B for FY21, confirm projections against FY19 actual and FY20 estimated revenues.
- 3. Based upon resolution of development issue migrate to new fee structure, discuss timing and administration of fees with town counsel. Incorporate fee structure, timing and requirements into Sewer Regulations, separate out fees for easy adjustment. Reduce Title 5 allocations by 50% to better approximate expected flows, refine as uncommitted reserve capacity diminishes (obtain more accurate information, etc.)
- 4. Revisit staff roles relative to Wastewater management, adjust responsibilities to meet new requirements
- 5. Continue to monitor usage, expenses and revenue on annual basis

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6) Future Agenda Items [Tracking] 1 st half of 2020

- A. Sewer Commissioner Regulations & Policies Guidebook and implementation
- B. Sewer Rate setting/vote end of July 2020
- C. Buzzards Bay Water District capacity discussion
- D. Bourne/Wareham Inter-municipal Agreement subcommittee update
- E. New Wastewater Treatment Plant Armory Rd.
- F. Comprehensive Wastewater Management Plan update
- G. Joint Base Cape Cod Sewer Meeting Update
- H. Upper Bay Project (Bourne-Wareham-Marion-S. Plymouth) Regional Sewer Update

7) Adjourn

Voted: Jared MacDonald moved and seconded by Judy Froman to adjourn at 9:07 P.M. **Roll Call Vote**: Judy Froman – Yes, George Slade – Yes, Peter Meier – Yes, Jared MacDonald – Yes, James Potter - Yes

Vote: 5-0-0.

Respectfully submitted - Carole Ellis, secretary.