



# Board of Sewer Commissioners Meeting Agenda



Date  
August 9, 2022

Time  
6:30 PM

Location  
Bourne Community Center  
239 Main St., Buzzards Bay

Note this meeting is being televised, streamed or recorded by Bourne TV. All items within the meeting agenda are subject to deliberation and vote(s) by the Board of Sewer Commissioners.

## 6:30 P.M. Call Public Session to Order in Open Session

1. Moment of Silence to recognize our Troops and our public safety personnel
2. Salute to the Flag
3. Vision: Bourne is a proud community that embraces change while respecting the rich heritage of the town and its villages. It is a municipality based on strong fiscal government with a durable economy that recognizes the rights of all citizens, respects the environment, especially the coastal areas of the community and the amenities that it affords. Bourne embraces excellent education, and offers to citizens a healthy, active lifestyle.
4. Mission: Bourne will maximize opportunities for social and economic development while retaining an attractive, sustainable and secure coastline and environment for the enjoyment of residents and visitors. Through responsible and professional leadership and in partnership with others, Bourne will strive to improve the quality of life for all residents living and working in the larger community.
5. Public Comment on Non-Agenda Items: Public comments are allowed for up to a total of 12 minutes at the beginning of each meeting. Each speaker is limited to 3 minutes for comment. Based on past practice, members of the Board are not allowed to comment or respond.
6. Board of Sewer Commissioners Business
  - a. Discuss and vote on FY23 sewer user rates
  - b. CWMP – Public Meeting for Phase II – Alternatives Analysis
7. Adjourn

RECEIVED  
2022 AUG -4 AM 10:20  
TOWN CLERK BOURNE

**Board of Sewer Commissioners  
Minutes of Tuesday, August 9, 2022  
Bourne Community Center  
239 Main Street, Buzzards Bay**

RECEIVED  
2022 OCT 13 PM 1:01  
TOWN CLERK BOURNE

**TA Marlene McCollem**

**Board of Sewer Commissioners**

Mary Jane Mastrangelo, Chair  
Jared MacDonald, Vice Chair  
Judith Froman, Clerk  
Melissa Ferretti

Others: Michael Rausch, Helen Gordon, Kate Roosa, Stanley Andrews, Neil Langille, Kathy Fox Alfano, Sue Barlow, Bradshaw Lupton, Bob Dwyer, Keith Barber, and Tom Barlow.

Note this meeting is being televised, streamed or recorded by Bourne TV. All items within the meeting agenda are subject to deliberation and vote(s) by the Board of Sewer Commissioners. Michael Rausch acknowledged that he is recording the meeting. Chair Mastrangelo said that Commissioner Peter Meier will be at the meeting after the vote on the rates.

**6:30 PM Call Public Session to Order in Open Session**

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- 6. Board of Sewer Commissioners Business**
  - a. Discuss and vote on FY23 sewer user rates.**
  - b. CWMP – Public Meeting for Phase II – Alternative Analysis**

**6.a. Discuss and vote on FY23 sewer user rates.**

Town Administrator Marlene McCollem asked that the Board of Sewer Commissioners only vote the first half of the fiscal year rates for the September bill commitment and then that number will be based on the budget voted at the May Town Meeting. There will be adjustments at the October Town Meeting that may or may not affect the rates.

Chair Mastrangelo asked if there will be an opportunity after October to get some feedback from Environmental Partners on rates and what they have been looking at. Ms. McCollem said the second half of the year will be committed in March, so she does not think they will be ready in October or November but before March it is possible, and then there can be a larger discussion on adjusting overage and other areas.

Neil Langille of Taylor's Point said that he is on the old sewerage system, and he objects to paying on two sewerage systems for the users that will never get on the new system. He said that he would like to see some sort of report done on gallonage.

**Voted:** Jared MacDonald moved, and Judith Froman seconded to approve the per unit sewer user fee at \$583.50 for the first half of the fiscal year.

**Vote:** 3-0-1. Melissa Ferretti abstained.

Chair Mastrangelo said that there are Sewer Commissioners that do not vote on the rates because if less than 10% of the population is on the sewer system then the members of the Board who are sewer users should not be voting on the rates. Both Peter Meier and Melissa Ferretti are on the sewer system, so they do not vote on the rates.

Ms. McCollem asked for permission to use the stamp on the certificate of the vote for the vote tonight and Chair Mastrangelo gave permission.

**Voted:** Jared MacDonald moved, and Judith Froman seconded to recess the meeting until 7:00 PM.

**Vote:** 4-0-0.

**7:00 PM Call Public Session Back to Order**

Chair Mastrangelo called the meeting back to order.

**6.b. CWMP – Public Meeting for Phase II – Alternative Analysis**

Chair Mastrangelo said that Environmental Partners will be giving a slide presentation on the Alternatives Analysis of the Comprehensive Wastewater Management Plan. She said that the internet was knocked out earlier in the day, so the presentation will not be live streamed, although it will be recorded by Bourne Community TV.

Chair Mastrangelo also announced that Peter Meier is not able to attend the meeting, so he is excused and she said that Town Administrator Marlene McCollem is also excused.

Helen Gordon of Environmental Partners said she is the Project Manager of the Comprehensive Wastewater Management Plan (CWMP) with Bourne. She introduced Kate Roosa, who is the Senior Project Engineer on this project. She said that Ms. Roosa is responsible for putting together the text and the technology pieces. She also introduced Mark White, who is one of their Senior Scientists and Engineer at Environmental Partners.

Ms. Gordon said that the workshop goals are to provide a technology review for nitrogen reduction in the watersheds, review education criteria and discuss recommended technologies for each watershed. Ms. Gordon said that for the past few months they have been working with the Sewer Commissioners and the Wastewater Advisory Committee to discuss all the alternatives available to reduce nitrogen.

Ms. Gordon gave an overview of what a Comprehensive Wastewater Management Plan is and said it is a 20-year living plan in four phases. She said that the Town is currently in phase 2, alternatives. She talked about the TMDLs (Total Maximum Load of Nitrogen) for Bourne. She explained the process that the group used to come up with alternatives. She said that what they are presenting tonight are concept strategies.

Judith Froman asked if the outfall will be part of the bigger-picture comparison at some point. Ms. Gordon said that it is part of the bigger-picture comparison. She said that they will be looking at regional options as part of their study.

Kathy Fox Alfano, Chair of the Wastewater Advisory Committee wanted clarification of when Ms. Gordon talks about the Buzzards Bay outfall, does she mean the Cape Cod Canal outfall? Ms. Gordon replied that yes, that is what they are talking about. Jared MacDonald said that they must be careful when they mention outfall because it can be several outfall pipes in and around Bourne.

Sue Barlow asked for clarification on the Joint Base Cape Cod relationship here. Ms. Gordon said that recently the federal government turned over, through an agreement, the operations of their wastewater system at the base to a company called Converge, which has hired a contract operations company to run the Wastewater Treatment Plant that is there now. The goal of Converge is to provide a Wastewater Treatment Facility that the abutting communities could discharge to and be customers of. Mr. MacDonald clarified that this is not an option at this time, but it is out there as a possibility in the future.

Bradshaw Lupton said that he wants to know more about the outfall pipes at Mass Maritime. Ms. Gordon said that they are not studying Mass Maritime and their discharges. She said that they do have a Wastewater Treatment Facility and they do have a permitted outfall associated with it.

Bob Dwyer of Pocasset talked about the possibility of the plant at the base and that Sandwich and Barnstable have also talked about getting their own plant. He also talked about the loadings that Ms. Gordon presented earlier, and he said that the State needs to get moving on this.

Kate Roosa started her portion of the presentation by letting all know that the presentation will be posted on the CWMP website and that they had paper copies available for all at the meeting. Ms. Roosa explained how they decided on the criteria to arrive at the technologies that are to be recommended. She talked about Innovative/Alternative (IA) Onsite Systems, Responsible Management Entities (RMEs), Stormwater Best Management Practices (BMPs), and Collection Systems. She explained what a Wastewater Treatment is and its functions and showed some

pictures and illustrations. She also explained effluent disposal. Ms. Fox Alfano asked if these sewer systems remove PFAS and other chemicals such as phosphorus, and Ms. Roosa said that for their focus on the wastewater management plan they are looking to mitigate nitrogen first and to have others be considered as a part of an add-on process. She said there are a lot of new technologies being developed currently to mitigate PFAS.

Keith Barber of the Wastewater Advisory Committee said that once this is all in place, there will be many people needed to do the work, and he was asking if the Town should hold a summit to get all the people involved in one place to have a meeting about what is to be expected over the coming months. Mr. MacDonald said that there are contractors and companies that do this, and they have the knowledge of what is needed to install the systems. Ms. Froman agrees with Mr. Barber that a summit would be good to assess the needs and to be proactive about supply and demand. Ms. Roosa said that these summits are happening in other areas to some degree already.

Ms. Roosa concluded the instructional portion of her presentation with a few reminders: they are identifying strategies for achieving the TMDL goal for each watershed, focusing on on-site and limited sewerage approaches and the final plan will be in their next CWMP phase, and they are not considering the Buzzards Bay outfall.

Ms. Roosa continued the presentation by showing and talking about the two TMDL abatement watersheds – Megansett-Squeteague Harbor and Phinney's Harbor, and about how she arrived at the calculations. She said that they look at the general use systems for the calculation basis. She said that with her calculations on these harbors the nitrogen removal goals will be met.

Ms. Roosa then talked about Buttermilk Bay and said it is not a TMDL yet, but it is nitrogen impaired. She split it into two sewer alternatives. She said that with her calculations that the nitrogen removal goal will be met. Pocasset Harbor was the next watershed that Ms. Roosa talked about, and she said that the nitrogen removal goal will also be met with her calculations. Pocasset River also does not have a TMDL but does have a nitrogen removal goal and the goal will be met with her calculations at this watershed also.

Chair Mastrangelo said that Ms. Roosa's presentation has been very helpful, but it would help if gallons per day could be a part of the charts to get a better understanding of quantity. Ms. Roosa said that she does have the gallons per day information and can get it to her. There was some discussion about the sewer options not being too close to the coastline.

Tom Barlow asked Ms. Roosa if the current contracts for Buttermilk Bay sewer alternatives 1a and 1b, will meet the goals or does another 100,000-gallon plant need to be built. Ms. Roosa said that sewer alternatives 1a and 1b would require expansion of the Queen Sewall Wastewater Treatment Plant and it would require expansion of the Queen Sewall Wastewater discharge plant effluent beds.

There was some discussion about effluent concentration values, general use systems, provisional systems, hydraulic mapping, and pilot technologies. Ms. Fox Alfano asked that they redo these using the provisional systems. Ms. Roosa explained that provisional technologies are technologies that Mass DEP has approved for failing septic systems, and they are retrofit-specific items, that can be applied to existing Title 5 systems. She said that provisional technologies do not have

widespread nitrogen removal. IA general use technologies have approved nitrogen removal to 19 mg per liter. There was also some discussion about alternative 4a.

Ms. Gordon talked about the next steps. She said that the intent of tonight was to get public feedback, and she said she appreciates all who came to the meeting, and they will incorporate the feedback into their analysis. In the Fall they will meet with the Sewer Commission and the Wastewater Advisory Committee to pull together the draft recommendations that they will present at another public meeting. From that meeting, they will incorporate that feedback into their recommended plan, which will go for Town action sometime in the Spring or Fall of 2023. Ms. Gordon also reminded everyone about the various web pages that are available.

## **7. Adjourn**

**Voted:** Jared MacDonald moved, and Judith Froman seconded to adjourn.

**Vote:** 5-0-0.

The Board of Sewer Commissioner's Meeting ended at 8:27 PM

Respectfully Submitted,

Kim Johnson, Recording Secretary

# memo

## Town of Bourne

To: Board of Sewer Commissioners  
From: Marlene McCollem, Town Administrator  
CC: Erica Flemming, Finance Director  
Michael Ellis, Town Accountant  
Date: August 3, 2022  
Re: Sewer Rate Recommendation



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Attached please find the Sewer budget as voted at the May 2022 Town Meeting. Based on this budget an annual rate of \$1,167 per user is necessary to maintain and operate the system. However, I recommend that you only set the rate for the first half of FY23 at \$583.50 per user. This rate will be reflected in the September commitment and subsequent billing.

Although it is not ideal, I recommend that we revisit the rate for the March commitment after the October 2022 Special Town Meeting. At the October Town Meeting we anticipate budget adjustments for the capital cost in connection with the Wareham EQ basins and revenue adjustments for the overage rate increase voted last September. Adjustments may also be necessary for the electricity expenses, but it would be helpful to have more actual data before making that decision.

I recommend that the Board set the rate of \$583.50 now for the September commitment and revisit the rate for the March commitment immediately after the October Special Town Meeting.

Town of Bourne  
Sewer Rate Analysis

	<b>Prelim 3.30.2021 FY2022</b>	<b>FTM 11.15.2021 FY2022</b>	<b>Rate Based off 5.2.22 ATM Presented 7.19.2022 FY2023</b>
<b><u>Expenses:</u></b>			
Salaries	\$ 214,020	\$ 214,020	\$ 189,441
Purchase of Services	75,000	75,000	77,800
Supplies	20,000	20,000	20,700
Other Charges & Exps	375	375	375
Capital Outlay	95,000	95,000	95,000
Capital Outlay reduction			
Transfer to General Fund			
Debt Service	38,100	12,000	36,000
Reserve Fund	50,000	50,000	50,000
Wareham Operating Charge	420,250	420,250	430,757
Wastewater Facility Operating Cost	256,000	256,000	246,000
Wareham Capital Charge	188,478	188,478	188,478
Wareham Capital Charge - <u>EQ Basins</u>			-
Indirect Expenses	148,315	148,315	153,587
<b>Total Expenses</b>	<b>1,505,538</b>	<b>1,479,438</b>	<b>1,488,138</b>
<b><u>Revenues:</u></b>			
Miscellaneous Dept Revenue & Interest	35,000	35,000	35,000
Est. Overage fees	130,000	130,000	130,000
<b>Sub-total</b>	<b>165,000</b>	<b>165,000</b>	<b>165,000</b>
<b>Amount Needed</b>	<b>1,340,538</b>	<b>1,314,438</b>	<b>1,323,138</b>
<b>Users</b>	<b>1,069</b>	<b>1,069</b>	<b>1,070</b>
<b>Per Unit Sewer User Fee - NO Retained Earnings</b>	<b>1,254</b>	<b>1,230</b>	<b>1,237</b>
Retained Earnings Rate Subsidy	50,000	50,000	74,000
Retained Earnings Rate Subsidy Reduction per User	47	47	69
<b>Per Unit Sewer User Fee with Retained Earnings Rate Subsidy</b>	<b>\$ 1,207</b>	<b>\$ 1,183</b>	<b>\$ 1,167</b>



Criteria, Rev 2	Score Criteria				
	1	2	3	4	5
Design flexibility for adding capacity	Not Scalable	Portions of Treatment only can be scaled up	Can only be scaled up for loads or flows	Portions of both can be scaled up	Can be scaled up for both flows and loads
Environmental Impacts	Negative Impacts	Some Negative impacts	No Impacts	Some positive impacts	Positive Impacts
Implementation Constraints	Constraints with no mitigation possible	Some constraints with equal mitigation	Some constraints	Few constraints	No Constraints
Nitrogen Removal	No Removal	0-49% removal	50% Removal	50-75% Removal	Greater than 75% removal
Monitoring Requirements	Requires daily oversight	Requires monthly oversight	Requires Quarterly oversight	Requires semi annual oversight	Requires annual oversight
Odor Emissions	High Odorous impact near waterfront	Odorous impact	Inland treatment with neighborhood impacts	Some odor, mild	No odor impact, removed from villages completely
Land Area Requirements	>10 Acres	5-10 Acres	3-5 Acres	1-3 Acres	<1 Acre
Implementation Risk	High Risk, Technology Unapproved	Moderate Risk, Technology in Pilot	Mild Risk with mitigation for implementation	Some risk, low to mild impacts to implement	No Risk, No impact to implement
Maintenance/operation requirements	Daily Inspection, Daily Maintenance	Daily Inspection, Frequent maintenance	Monthly Inspection and Maintenance	Quarterly Inspection and Annual Maintenance	Annual or Bi Annual inspection and maintenance only as needed
Greenhouse Gas (GHG) Emissions	Permanent impacts and contribution	Construction with some permanent impacts	Temporary Construction Only (2-5 years)	Temporary Construction Only (1-2 years)	No permanent increase in GHG emissions
Public Acceptance & Political Feasibility	No	Maybe-No	Maybe	Maybe-Yes	Yes
Alignment with Local Comprehensive Plan and Town Mission	No	Maybe-No	Maybe	Maybe-Yes	Yes
Resiliency to Climate Change	No adaptation possible	Technology adaptation difficult	Technology not resilient, but some adaptation possible	Technology requires easy adaptation for resiliency	Technology is adaptable to climate changes

Category Weight -->																	
#	Technology	Type	Raw Total	Weighted Total	4%	3%	8%	12%	7%	1%	2%	5%	5%	1%	2%	30%	20%
					Design flexibility for adding capacity	Environmental Impacts	Implementation Constraints	Nitrogen Removal	Monitoring Requirements	Odor Emissions	Land Area Requirements	Implementation Risk	Maintenance/ Operation requirements	Greenhouse Gas (GHG) Emissions	Resiliency to Climate Change	Public Acceptance/ Political Feasibility	Alignment with Local Comprehensive Plan/Town Goals
1	Cluster Treatment System	Source Reduction	✗ 40	⚠ 3.48	4	4	3	3	2	3	4	2	4	1	2	4	4
2	Aquaculture	Source Reduction	✗ 40	✗ 3.07	2	5	2	2	2	5	1	3	5	4	2	3.5	3.5
3	Fertilizer Management	Source Reduction	✓ 53	⚠ 4.06	5	4	5	3	4	3	1	5	5	5	5	4	4
4	Remediation of Existing Development	Source Reduction	✓ 52	⚠ 4.34	5	5	3	3	4	5	4	5	3	2	3	5	5
5	Compact and Open Space Development	Source Reduction	✓ 58	✓ 4.64	5	5	2	5	4	5	4	5	5	4	4	5	5
6	Transfer of Development Rights	Source Reduction	⚠ 48	✗ 3.42	5	5	1	5	4	5	1	5	4	5	2	3	3
7	Innovative/Alternative (I/A)*	Source Reduction	⚠ 50	✓ 4.35	4	4	3	3	4	3	4	5	5	2	3	5	5
8	I/A Hybrid or Enhanced Systems (2+)	Source Reduction	⚠ 50	✓ 4.42	4	4	3	4	4	3	4	4	5	2	3	5	5
9	Coastal and Wetland Habitat Restoration	Restoration	⚠ 46	⚠ 3.85	3	5	2	2	1	5	1	3	5	4	5	5	5
10	Dredging and Maintenance	Restoration	✗ 44	⚠ 3.95	4	4	3	5	2	4	1	2	5	2	3	4	5
11	Phytoremediation	Groundwater Remediation	⚠ 47	⚠ 4.12	2	5	3	4	2	5	1	3	4	5	3	5	5
12	Permeable Reactive Barriers (PRBs)	Groundwater Remediation	✗ 39	⚠ 3.90	2	4	2	4	2	3	2	2	4	3	1	5	5
13	Stormwater BMPs - Policy	Groundwater Remediation	✓ 55	✓ 4.49	5	5	5	4	1	4	5	5	4	4	3	5	5