

**Montague Sewer Commission Retreat**

Information and Strategy Session  
 Sanitary Sewer Collection System  
**Meeting Minutes**  
 August 2, 2023

1

---

---

---

---

---

---

---

---

Meeting Minutes, August 2, 2023

- Meeting called to order at 1pm in the Town Hall Annex
- Members Present: Richard Kuklewicz, Chris Boutwell, Matt Lord
- Staff Present: Tim Peura, Kyle Bessette, Chelsey Little, Tom Bergeron, Walter Ramsey, Steve Ellis (Facilitator)
- Meeting Discussion Followed the Slides as Follow. Key outcomes and decisions are noted through the course of this slide deck, which will serve as the meeting minutes. Denoted in **red text**.

2

---

---

---

---

---

---

---

---

**Meeting Goals** (Steve Ellis)

- Enhance Sewer Commission’s knowledge of the system
- Sharpen collective understanding of challenges & opportunities
- Develop preliminary strategies to...
  - Meet regulatory requirements for management, operation & reporting
  - Determine how best to acquire expertise to move system forward
  - Assess staffing level adequacy
  - Prioritize capital and design/planning requests
  - Ensure long-term financial capacity to support improvement
- Develop short and medium term action plan

3

---

---

---

---

---

---

---

---

### Clean Water Facility and Collection System Overview

- Description of Assets
  - Clean Water Facility and Pump Stations
  - Collection System (Sanitary and Stormwater)
  - Combined Sewer and Related Structures
- Evolving Departmental Roles and Responsibilities
  - Focus on transition of CSO management and operation from CWF to DPW, and escalation of collection system O&M requirements resulting from increased regulatory pressure.
- Current Staffing and Cooperation

---

---

---

---

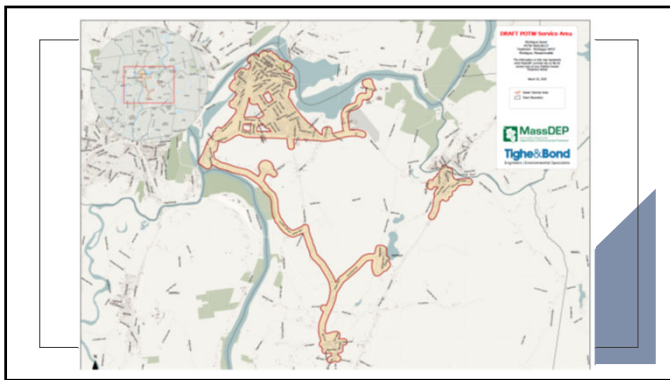
---

---

---

---

4



---

---

---

---

---

---

---

---

5

### Regulatory Requirements – the NPDES Permit

- Key Requirements of the Existing NPDES Permit
  - Clean Water Facility
  - Collection System and the Nine Minimum Controls (9-MC)
  - Recent Compliance History Relative to the 9-MC
- New NPDES Draft Permit Requirements
  - Expected Timeline *Expect final permit in September, Effective 60 days later*
  - New Requirements and Related Concerns *Increased reports and plans, see below*
- Key Concerns, Action Plan

---

---

---

---

---

---

---

---

6

### The NPDES Permit: Nine Minimum Controls

- (1) Proper operation and regular maintenance programs for the sewer system and the combined sewer overflows.
- (2) Maximum use of the collection system for storage.
- (3) Review and modification of the pretreatment program to assure CSO impacts are minimized.
- (4) Maximization of flow to the POTW for treatment.
- (5) Prohibition of dry weather overflows from CSOs.

7

---

---

---

---

---

---

---

---

---

---

### The NPDES Permit: Nine Minimum Controls

- (6) Control of solid and floatable materials in CSOs.
- (7) Pollution prevention programs that focus on contaminant reduction activities.
- (8) Public notification to ensure that the public receives adequate notification of CSO occurrences and impacts.
- (9) Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

8

---

---

---

---

---

---

---

---

---

---

### Regulatory: Draft NPDES Permit

Report	Due	Substance	Reg.	Notes
<b>Period Report and Annual Reporting</b>				
<b>Period Report</b>				
WWT Major Storm and Flood Events Plan	12 months of effective control date	Part 5.2.4	25	
CSO Sewer System Operation and Maintenance Plan	12 months of effective control date	Part 5.2.2	25	Outlines related to Part 5.2.2.3
Pretreatment Maintenance Program	Part 5.2.2.1	25		Part of the CSO System O&M Plan
Elements of Sewer System O&M Plan	12 months of effective control date	Part 5.2.2.1	25	Part of the CSO System O&M Plan
Sewer System Major Storm and Overflow Control Plan	Part 5.2.2.2	25		Part of the CSO System O&M Plan
Overflow Emergency Response Plan	12 months of effective control date	Part 5.2.2.3	25	Part of the CSO System O&M Plan
Public Notification Plan	180 days of effective control date	Part 5.3.18	25	Annual notification required by March 31 <sup>st</sup>
<b>Annual Reporting</b>				
Annual O&M Report (WWT Major Storm and Flood Events Plan)	March 31 <sup>st</sup>	Part 5.2.4	25	Reporting by the March 31 <sup>st</sup> filing for compliance
Annual O&M Report on Sewer System O&M Plan	March 31 <sup>st</sup>	Part 5.2.1	25	Reporting by the March 31 <sup>st</sup> filing for compliance
Annual Report of POTW Program Activities (Performance Program)	March 31 <sup>st</sup>	Part 5.3	26	1 year after approval of CSO Management Program
Annual Report for Sludge Handling	February 27 <sup>th</sup> (or latest of O&M Plan)	Part 5.2.8	26	
Annual Report for Nitrogen Removal (available if applicable)	March 31 <sup>st</sup>	Part 5.3.1	26	
Annual Non-Stormwater (NWS) Reporting	March 31 <sup>st</sup>	Part 5.3.5	26	
<b>Other</b>				
Public Sewer System Map	12 months of effective control date	Part 5.2.4	25	

9

---

---

---

---

---

---

---

---

---

---

**NPDES Permit Key Concerns & Action Plan**

- We have weaknesses relative to the Nine Minimum Controls that must be addressed. Addition of the Collect System Lead Operator position and new GIS of sanitary sewer system provide important new capacity, but we will discuss proposals for other needed improvements.
- Consideration of whether we possess sufficient collections system management expertise. Higher requirements due to combined sewer/storm system, which represents an estimated 10% of our system.
- The Town filed comments on our new NPDES permit, working to account for new storm resilience planning requirements, more explicit collections system operations and maintenance planning requirements. Addition of lab manager position improves positioning of CWF in the face of increased testing requirements.
- With regard to storm resilience planning, concern raised about planning based on current flood maps, as EPA is redrawing them for our area and they are expected out in the next couple of years.
- Real-time CSO event notifications from Montague are currently three-year average figures, which we understand from our vendor allows their analysis time to properly review and calculate true release quantities. Monthly reports provide us with final post-review numbers and we update Sewer Notification System. All in accordance with regulations, but in this recent spate of storms, it didn't provide a realistic view of event quantities. Tom/Steve will follow up with ADS to see if this can be improved.

10

---

---

---

---

---

---

---

---

---

---

**Regulatory Requirements – Long-Term Control Plan (LTCP)**

- Past Progress and Accomplishments (CSO Reduction Results)
- June 2023 LTCP and I/I Study Overview – CSO and I/I Reduction
  - Short-Term Measures and Costs
  - Long-Term Measures and Costs
- Key Concerns, Action Plan

11

---

---

---

---

---

---

---

---

---

---

**Long-Term Control Plan - CSO Reduction Results**

2005 - 2021

Year	Greenfield Road		Avenue A		7th & L Streets		Combined Total	
	Number of Overflows	Volume (MG)	Number of Overflows	Volume (MG)	Number of Overflows	Volume (MG)	Number of Overflows	Volume (MG)
2021 <sup>1</sup>	15	0.11	8	0.29	18	0.11	0.52	
<b>Total<sup>2</sup></b>	<b>357</b>	<b>7.57</b>	<b>54</b>	<b>3.51</b>	<b>75</b>	<b>0.63</b>	<b>14.08</b>	
Annual Average	24	0.76	5	0.35	6	0.06	1.28	
Reduction in Annual Average from 2005 data	23%	78%	79%	85%	38%	95%	-	
Reduction in 2020 from 2005 data	68%	95%	90%	98%	50%	95%	-	

12

---

---

---

---

---

---

---

---

---

---

### Long-Term Control Plan: Operating Costs (not discussed)

Modified Implementation Schedule – Operations and Maintenance Ongoing Best Practices

Task	Annual O&M Budget <sup>1</sup>	Monthly O&M Budget
Using CWF WWCT	\$90,000	\$7,500
Using Avenue A Buffer Line	\$12,000	\$1,000
Routine Cleaning of Catch Basins	\$80,000	\$6,667
Monitoring and Sampling CIO Outfalls	\$12,000	\$1,000
Monitoring and enforcement of industrial loading	\$6,000	\$500
CIO / Inflow public notification	\$6,000	\$500
CWF Influent pipe SOPs	\$12,000	\$1,000
Maintenance of CWF Influent pipes, screens, and channels	\$60,000	\$5,000
<b>Grand Total</b>	<b>\$228,000</b>	<b>\$19,000</b>

Note:

- <sup>1</sup> Costs are based on June 2023 (BIM Index 1334E). Annual O&M Budget should be increased each year to account for inflation.
- <sup>2</sup> Actual costs may fluctuate based on internal (staff, equipment, supplies) versus external (vendors, subcontractor) resources used to complete operations and maintenance tasks.

13

---

---

---

---

---

---

---

---

---

---

### Long-Term Control Plan: Short-Term Measures

**Table 7 Short-Term Recommendations – Budgetary Planning Level Costs**

Short-Term Recommendations	Order of Magnitude Cost
Avenue A buffer line improvement project	\$300,000
Evaluate and/or confirm peak capacity of CWF WWCT and primary treatment	\$30,000
Hydraulic modeling	\$100,000
Design and construction of upstream I/I reduction projects (Priority 1 and Priority 2 projects in Turner's Falls)	\$1,200,000
<b>Total</b>	<b>\$1,750,000 (rounded)</b>

14

---

---

---

---

---

---

---

---

---

---

### Long-Term Control Plan: Long-Term Measures

**Table 8 Long-Term Recommendations – Budgetary Planning Level Costs**

Long-Term Recommendations	Order of Magnitude Cost
Sewer Separation Study / 30% Preliminary Design Report <sup>1</sup>	\$1,750,000
Additional I/I and SSES, Field Investigations, Flow Metering	\$300,000
Hydraulic modeling	\$200,000
Design and construction of future upstream I/I reduction projects	\$2,500,000
Sewer Separation Project (Multiple Phases) <sup>2</sup>	\$20M-\$25M
<b>Total</b>	<b>\$25M-\$27M (rounded)</b>

<sup>1</sup> Based on 16,000 LF of sewer separation in Turner's Falls. Includes topographic survey, field investigative work, geotechnical investigations, report development, OPCC development, and 30% drawings.

<sup>2</sup> Based on 16,000 LF of sewer separation in Turner's Falls. OPCC will be developed as part of the Sewer Separation Study / 30% Preliminary Design Report.

15

---

---

---

---

---

---

---

---

---

---

### Long Term Control Plan Concerns and Action Plan

- Updated Long Term Control Plan can be accessed on Town CSO Notification Page files module. Very important document that frames past activity and performance, as well as future short and long term plans for CSO mitigation and eventual elimination.
- Study results show that sampling CSO event data from 2005 to 2021, CSO event volumes have declined by 90%+ at each of our three CSO regulators. Frequency of events has also declined steeply. That project had excellent results, but does not fully mitigate CSOs and we have work to do.
- The short-term project list could be longer, but focuses only on one regulator. More study is needed to advance project requests on the others. CWF hydraulic study needed to confirm that increasing pipe size near the Greenfield Road CSO is feasible – make sure we wouldn't flood the plant. Would also inform capital planning needs as we consider improvement of an aging facility.
- Discussion turned to whether system separation would be more cost effective, but the total cost (in the range of \$25M) seems infeasible. Strong interest in beginning to pick away and separate the combined system as we are able. Suggested that bonding and doing more at once would be more cost effective. Would allow chance to update very old infrastructure that will need to be done some day anyway. Might include road replacement, possibly water infrastructure upgrade as part of separation.
- Discussion of need to continue pipe re-lining program in other areas to reduce inflow & infiltration issues

16

---

---

---

---

---

---

---

---

---

---

### Capital Planning for Collection System & CWF

- Existing Capital Plans/Projects
- Additional Assessment and Planning Needs
- Regulatory Assistance
- GIS Collection System Mapping, Maintenance & Reporting Tool
  - Implementation Status of New System
  - Building It Out – What's Missing
- Key Concerns, Action Plan

17

---

---

---

---

---

---

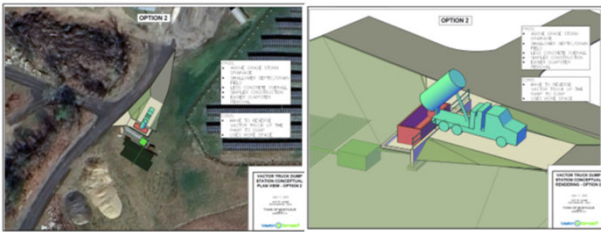
---

---

---

---

### Update on Sludge Drying Pad



18

---

---

---

---

---

---

---

---

---

---

### Current Planning and Regulatory Assistance Proposals

**Notice of Noncompliance Assistance and Miscellaneous Tasks**

**Proposed Fee**  
The proposed fee for the proposed tasks is listed below:

Task	Description	Labor Hours	Labor Fee	Expenses	Total Fee
1	CSO Performance	150-160	\$19,600	\$300	\$19,900
2	CSO Monitoring Report	70-80	\$9,600	\$0	\$9,600
3	Annual Collection System O&M Report / I/I Control Plan Annual Report	110-120	\$14,300	\$300	\$14,600
5	2023 Collective System O&M Corrective Action	70-80	\$9,800	\$0	\$9,800
6	Sewer Use Ordinance	50-60	\$7,100	\$300	\$7,400
7	Nine Minimum Controls Report	60-70	\$8,100	\$300	\$8,400
<b>Total</b>			<b>\$68,500</b>	<b>\$1,300</b>	<b>\$69,800</b>

19

---

---

---

---

---

---

---

---

---

---

### Current Planning and Regulatory Assistance Proposals

Capacity Management Operations and Maintenance (CMOM) report (also referred to as an Operations & Maintenance Plan (O&M Plan))

**Proposed Fee**  
The proposed fee to develop the CMOM Plan is summarized below:

Task	Description	Labor Hours	Labor Fee	Expenses	Total Fee
1	Progress Meetings, Workshops	45-55	\$7,900	\$500	\$8,400
2	Data Collection	25-35	\$3,300	\$250	\$3,550
3	Site visits to Pump Stations, CSO Interceptors and Outfalls, buffer line	35-45	\$5,000	\$500	\$5,500
4	Prepare Draft O&M Plan	110-120	\$14,000	\$100	\$14,100
5	Prepare Final O&M Plan	25-35	\$3,900	\$100	\$4,000
<b>Total</b>		<b>240-290</b>	<b>\$34,100</b>	<b>\$1,450</b>	<b>\$35,550</b>

20

---

---

---

---

---

---

---

---

---

---

### Capital Planning: Concerns & Action Plan

- Began with discussion of CWF plant age and overview of critical assets in each portion of the plant, with primary treatment areas dating to the 1960s and secondary treatment areas to the 1980s. Needs are substantial throughout the complex, with the primary treatment facilities most in need of substantial improvements. Concern that current capital plan is bare bones – doesn't address the bigger issue (age)
- It was all built for flow that included huge papermaking operations, which has major implications for the facility and its process. There are abundant important capital projects to address. Hydraulic study and engineering assessment is needed to plot the best path forward.
- Received update that DEP does not favor the lowest-cost alternative for the drying bed design, requiring more planning and design work. Discussion of how it might be value-engineered through its location, what work DPW can do internally. Affirmed that this project needs to happen and should be done ASAP.
- Discussion of consulting proposals to address critical regulatory requirements, update sewer regulations, create operations and maintenance plan for collection system.
- Need to make progress on short-term LTCP goals, we have submitted several grant requests to try to minimize local cost impacts.
- Need for HVAC/Ventilation improvements a priority for the board due to worker safety concerns. Consider temporary measures if necessary to improve that and provide heat in the wake of higher than expected wood boiler bids. Heat and ventilation seem like a single, larger projects. Should engineer for toxic environment.
- Pump stations are also a concern. Montague Center Pump Station noted as in the worst condition, saw some impacts during recent rain events. Four older stations need attention.

21

---

---

---

---

---

---

---

---

---

---

### Staffing & Administrative Infrastructure Requirements

*Include Pump Stations as we Consider these Questions*

- Collection System/CSO Expertise – Do We Need Help?
- Maintenance and Administrative Staffing Capacity
- Information Systems and Operational Plans
- Key Concerns, Action Plan

---

---

---

---

---

---

---

---

22

### Staffing/Administrative Infrastructure: Concerns & Action Plan

- CWF staff, lab manager position has been very beneficial. Work no longer spread across several people, less distraction for team and more focus and accountability.
- CWF sees need for a full time person focused on pump station maintenance. Current system includes 3x inspections/week, but allows time for only limited assessment and maintenance. Not sufficient.
- DPW collection system work is now being attended to with addition of lead collection system operator, but hard to assign a second staff person – as is frequently required – due to vacancies. Discussion of need for a dedicated second laborer in FY25. In the interim, need solutions to fill open truck/driver laborer and heavy equipment operator positions. Work with union to create an easier path to onboarding staff who lack CDLs
- Need for regulatory support and collection systems management expertise and consideration of how we can best acquire it. May just need consultant support as we get our program built.
- Administrative staff. Both departments otherwise feel they have the staff they need in place.

---

---

---

---

---

---

---

---

23

### Financial Capacity

- LTCP Financial Capacity Analysis
- Sewer Revenue Outlook/Rate Analysis
- Sewer Regulations Re Enterprise Funding
- “Competing” CWF/Collection System Funding Needs
- Key Concerns, Action Plan

---

---

---

---

---

---

---

---

24



### Financial Capacity: Rates and Revenue

Absent substantial revenue growth, which is unlikely, the above projects and related cost estimates will have a substantial impact on sewer user costs. They do not, however, include the costs necessary to perform a more comprehensive upgrade of the CWF, which is outside its design life and will need significant investments in the coming decade. This latter need cannot be discounted,



25

---

---

---

---

---

---

---

---

---

---

### Financial Capacity: Sewer Regs on System Funding

**Sec. 3. Annual Sewer Use Charges.** In addition to the one-time charges listed in Sections 1 and 2 of this Article, an annual fee shall be charged to every user of the municipal sewage works. The fee charged shall be established by the Sewer Commission and shall be such as to produce revenues commensurate with the estimated annual cost of operating and maintaining all wastewater collection and treatment works in Montague and, in addition, the estimated annual charge by the Town of Erving to the Town of Montague for treatment of Montague wastes in Millers Falls Village. Each user fee charged shall be calculated so as to reflect that user's fair share of the operating costs based on volume and strength of wastewater flows as determined by the Sewer Commission.

26

---

---

---

---

---

---

---

---

---

---

### Financial Capacity: Concerns & Action Plan

- Viewing the results of the financial capacity analysis, it is clear that the capital needs of the clean water facility, collection system, and pump stations cannot feasibly be paid for by the sewer users.
- Discussion of ongoing grant making, advocacy for federal/state support for improvements, but recognition that our situation is common so programs would have to be huge in scale.
- Discussion of how we can leverage retained earnings, capital stabilization and remaining ARPA authority to assist with these projects. Consideration of whether the General Fund should support capital costs, which is not explicitly prohibited by the existing sewer regulation.
- Suggested that we need a major bond issue for the sewer collection system and facility – the needs are broad and urgent.
- Discussion of sewer rates and concern that industrial rates are lower than residential rates, when costs to treat are generally higher. This reflects a rate strategy of a previous superintendent and should be corrected. Note that Steve and Chelsey are working on a rate study with the New England Environmental Finance Center, which may lead to more innovative rate plan proposal for FY25.
- Acknowledgment that with focus on collection system improvements, there is a feeling that the two elements of our wastewater system (collection and treatment) are competing for the same limited dollars. Will be up to staff to articulate the needs and for SB and CIC to weigh relative merits and urgency of each proposal. We need to think as a team, because it's one system and we share responsibility for it all.

27

---

---

---

---

---

---

---

---

---

---

**Synthesis and Action Planning**

- **Priorities and Action Plan**
  - Immediate / FY24 / FY25-28 (Five Year Schedule)
  - Longer-Term (20 Year Schedule)

28

---

---

---

---

---

---

---

---

**Synthesis and Action Planning**

- **Immediate Priorities**
  - Fund consulting projects focused on collection system O&M and regulatory compliance (Fall STM)
  - Design and construct grit drying pad (Fall STM if Ready)
  - CWF operations building ventilation/HVAC improvements (Fall STM if Ready)
  - Fill vacant DPW positions, work with union to create Truck Driver/Laborer in Training position (or similar) (Fall STM for MOA)
  - Consider plan to bring industrial sewer rates in line with residential. (Fall Sewer Commission Hearing)
  - Regulatory/Collections Consultant (Consider for Winter STM)
- **FY25 priorities**
  - Consider requests for pump station maintenance and collection system support position (may be a regular truck driver laborer position). Department heads are to bring proposal to Selectboard in October for discussion with FinCom in November-December, before personnel request hearings in January.
- **Longer Term Priorities**
  - Largely defined from Long Term Control Plan and Capital Project Discussion. No further consideration due to need to end meeting
- **Adjourned at 5:20**
  - Moved by Mr. Boutwell, Mr. Lord Seconds. Motion passes 3-0.

29

---

---

---

---

---

---

---

---