



**CITY OF CAMBRIDGE**

**PHOSPHORUS CONTROL PLAN YEAR 6  
PERFORMANCE EVALUATION**

**Last Revised: September 30, 2024**



## PHOSPHORUS CONTROL PLAN: YEAR 6 PERFORMANCE EVALUATION

As required by the 2016 National Pollutant Discharge Elimination System General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) in Massachusetts (MS4 Permit), the City of Cambridge (the City) developed a Phase 1 Phosphorus Control Plan (PCP) to meet Charles River Watershed Phosphorus TMDL Requirements. The MS4 permit requires that permittees annually evaluate the effectiveness of the PCP by tracking the phosphorus reductions achieved through implementation of structural and non-structural best management practices (BMPs) and tracking increases in phosphorus loading resulting from development. This document serves as the City's PCP Year 6 Performance Evaluation.

### 1.1 CHANGES TO PHOSPHORUS LOAD DUE TO DEVELOPMENT

In Permit Year 6, the City used land use land cover data provided by EPA and the Charles River Watershed Association to calculate changes in phosphorus load due to development and incorporated these load calculations into the Phase 1 PCP. The City submitted a memo requesting recalculation of Cambridge's baseline phosphorus load to EPA on October 3, 2023 and is awaiting a response.

No additional calculations to determine increase in phosphorus loading due to development were completed in Permit Year 6. The City will calculate changes in phosphorus loading using updated land use land cover data when available, which is anticipated every 3-5 years.

### 1.2 NON-STRUCTURAL BMPs

Cambridge has implemented an enhanced street sweeping program eligible for a phosphorus reduction credit of 8.5 lbs/yr. During Permit Year 6, the City continued implementation of this program.

Through discussions with regulators, the City anticipates street cleaning credits may potentially change during Phase 1 implementation to incorporate recommendations by the Clean Sweep expert panel to develop a new measured credit for organic matter collection (Clean Sweep, 2022<sup>1</sup>). During Permit Year 6, the City collected 1,442 tons of debris from street cleaning. Using the Clean Sweep measured organic matter collection credit, this equates to over 300 lbs in phosphorus reduction (conservative estimate using the lower phosphorus concentration for the "non-fall" months). Starting in Year 7, the City plans to track mass of material collected during the fall (Sept-Dec) versus non-fall months.

### 1.3 STRUCTURAL BMPs

#### 1.3.1 City Owned BMPs

During Permit Year 6, the following BMPs were added to the City's BMP inventory (Appendix A):

- Four (4) infiltration trenches and an area of porous pavement from a completed Chapter 90 project that was not previously included.

---

<sup>1</sup> UNH Stormwater Center, *Clean Sweep Recommendations for New and Updated Credits for Street Cleaning in New Hampshire*. September 1, 2022.  
<https://scholars.unh.edu/cgi/viewcontent.cgi?article=1459&context=prep>

- Two (2) infiltration trenches and an underground detention BMP from the Triangle Park project completed in Permit Year 6.
- Four (4) areas identified as Impervious Cover (IC) Disconnection. The City completed a desktop analysis of municipally owned pervious areas to identify potential areas of IC Disconnection. Site visits were conducted to confirm eligibility of the four (4) areas added to the inventory.
- 38 dry wells and one (1) area of IC Disconnection at the Cambridge Cemetery. The City delineated drainage patterns in the Cambridge Cemetery, including catchment areas for dry wells and areas of IC disconnection.
- Sewer deflection credits for Talbot St and Endicott St. During Permit Year 6, the City coordinated with EPA to develop performance curves for sewer deflection devices, which were used to calculate phosphorus reduction credits.

Table 1 summarizes the phosphorus reduction credits from City-owned BMPs to date:

Table 1. Summary of City-owned BMPs

	<b>Phosphorus Reduction (lb/yr)</b>
BMPs Included in Phase 1 PCP	16.5
<b>Year 6 Additions</b>	
Chapter 90 and Triangle Park	2.2
IC Disconnection Areas	0.7
Cambridge Cemetery	41.9
Sewer Deflection	235.3
<b>Total</b>	<b>296.6</b>

The BMPs added to the PCP Inventory in Permit Year 6 will be included in the City’s annual inspection program starting in Permit Year 7. The City continues to review projects for green infrastructure opportunities (Appendix B) and track completion of new BMPs as they are constructed.

### 1.3.2 Privately Owned BMPs

During Permit Year 6, the following privately owned BMPs were added to the City’s BMP inventory (Appendix A):

- 39 existing BMPs from various projects. In Permit Year 6, the City began a Self-Certification Program for private BMP inspections. Through data review for this process, additional BMPs were identified that were not previously included in the inventory.

Table 2 summarizes the phosphorus reduction credits from privately-owned BMPs to date.

Table 2. Summary of Privately-owned BMPs

	<b>Phosphorus Reduction (lb/yr)</b>
BMPs Included in Phase 1 PCP	90.3
Year 6 Additions	19.3
<b>Total</b>	<b>109.6</b>



Several redevelopment projects that included BMPs were completed in Permit Year 6. Once the City receives as-builts, these BMPs will be added to the PCP inventory and incorporated into the Self-Certification program. The City continues to track the design and installation of BMPs through Stormwater Control Permits.

## 1.4 SUMMARY

Table 3 summarizes the total phosphorus reduction credit compared to the City's required reduction target to date, assuming EPA approves the City's revised baseline load calculations.

Table 3. Summary of Current Phosphorus Credits

	<b>Phosphorus Reduction (lbs/year)</b>
Street Sweeping (non-structural)	8.5
City Owned BMPs (Structural)	296.6
Privately Owned BMPs (Structural)	109.6
<b>Current Total</b>	<b>414.7</b>
Year 8 Milestone: 20% of Reduction	423.8
<b>Amount Remaining to Reach Year 8 (2026)</b>	<b>9.1</b>
Year 10 Milestone: 25% of Reduction	529.8
<b>Amount Remaining to Reach Year 10 (2028)</b>	<b>115.1</b>

During Permit Year 7, the City plans to:

- Continue implementation of the enhanced street cleaning program.
- Begin tracking the mass of organic material collected from street cleaning during the fall versus non-fall months.
- Inspect City-owned BMPs included in the PCP inventory (Appendix A).
- Continue to evaluate City projects for stormwater treatment opportunities (Appendix B).
- Continue to track construction of BMPs as part of City projects and update the PCP inventory as necessary.
- Evaluate phosphorus reduction credits from potential sewer deflection devices at Western Ave and Binney Street.
- Discuss with EPA how to address phosphorus reduction credits for BMPs within sewer deflection catchment areas.
- Continue to implement Self-Certification program for annual inspection of privately-owned BMPs.
- Continue to track construction of privately-owned BMPs as part of redevelopment projects and update the PCP inventory as necessary.

Through discussions with regulators, the City anticipates the issuance of the next MS4 Permit as well as the Residual Designation permit in Permit Year 7. The City will evaluate and update the Phase I PCP as necessary to incorporate changes to baseline loads, required load reductions, privately owned BMP inventory and phosphorus credits for existing BMPs (street cleaning, flow through media devices, rainwater harvesting etc.).

## Appendix A: City Owned BMPs

BMP ID	BMP Type	Storage Volume (ft <sup>3</sup> )/ Filter Depth (in.)	Impervious Area Treated (ac)	Runoff Depth (in)	Phosphorus BMP Efficiency (%)	Phosphorus Load Reduction (lb/yr)	Year Added To Inventory	Date of Last Inspection	Date of Last Maintenance
D01UGS0061	INFILTRATION TRENCH	6463	1.08	1.65	98	1.89	Year 5	5/14/2024	
D07UGS0020	INFILTRATION TRENCH	11076	1.08	2.50	98	1.89	Year 5	5/14/2024	
D01UGS0037	INFILTRATION TRENCH	172	0.11	0.43	70	0.14	Year 5	4/23/2024	
D01UGS0036	INFILTRATION TRENCH	172	0.1	0.47	73	0.13	Year 5	6/18/2024	
D01UGS0038	INFILTRATION TRENCH	172	0.06	0.79	89	0.09	Year 5	4/23/2024	
D01UGS0039	INFILTRATION TRENCH	172	0.09	0.53	77	0.12	Year 5	4/23/2024	
D01UGS0040	INFILTRATION TRENCH	172	0.06	0.79	89	0.09	Year 5	4/23/2024	
D01UGS0041	INFILTRATION TRENCH	172	0.06	0.79	89	0.09	Year 5	4/23/2024	
D01UGS0042	INFILTRATION TRENCH	172	0.15	0.32	57	0.15	Year 5	6/18/2024	
D01UGS0043	INFILTRATION TRENCH	172	0.11	0.43	70	0.14	Year 5	4/23/2024	
D01UGS0044	INFILTRATION TRENCH	172	0.11	0.43	70	0.14	Year 5	4/23/2024	
D10PP0001	POROUS PAVEMENT	18	0.373	0.01	62	0.46	Year 5	3/5/2024	
D07BB0003	BIOFILTRATION	9632	0.29	6.98	63	0.33	Year 5	5/14/2024	6/26/2024
D01BB0003	BIOFILTRATION	4036	0.06	8.55	63	0.07	Year 5	5/14/2024	
D17BB0001	BIOFILTRATION	200	0.05	1.10	53	0.06	Year 5	3/5/2024	6/13/2024
D01UGS0062	Rainwater Harvesting Tank	4010	1.56	0.71	40	1.11	Year 5	6/27/2024	
D19UGS0009/10	Rainwater Harvesting Tank	2673	0.87	0.85	72	1.12	Year 5	6/25/2024	
D19UGS0003	INFILTRATION TRENCH	1573	0.22	1.97	100	0.39	Year 5	2/29/2024	
D19UGS0006	INFILTRATION TRENCH	6748	0.93	2.00	100	1.66	Year 5	2/29/2024	
D19UGS0008	INFILTRATION TRENCH	7305	1.01	1.99	100	1.80	Year 5	2/29/2024	
D10UGS0002	INFILTRATION TRENCH	54	0.08	0.19	39	0.06	Year 5	4/24/2024	
D10UGS0003	INFILTRATION TRENCH	54	0.08	0.19	39	0.06	Year 5	4/24/2024	
D13UGS0001	INFILTRATION TRENCH	2205	0.9	0.67	77	1.60	Year 5	6/21/2024	
D13UGS0002	INFILTRATION TRENCH	788	0.3	0.72	79	0.55	Year 5	6/25/2024	
D13UGS0003	INFILTRATION TRENCH	3938	1.68	0.65	75	2.25	Year 5	6/25/2024	
D10TB0001	BIOFILTRATION	28	0.01	0.96	52	0.01	Year 5	3/21/2024	6/13/2024
D10TB0002	BIOFILTRATION	28	0.01	0.96	52	0.01	Year 5	3/21/2024	6/13/2024
D21UGS0018	INFILTRATION TRENCH	146	0.08	0.50	75	0.11	Year 5	5/29/2024	
D01UGS0092	EXTENDED DRY DETENTION POND	330	0.17	0.20	9	0.03	Year 6	6/24/2024	
135691	INFILTRATION TRENCH	604	0.34	0.49	85	0.67	Year 6	6/24/2024	
135692	INFILTRATION TRENCH	217	0.02	2.99	99	0.04	Year 6	6/24/2024	
135693	POROUS PAVEMENT	12	0.10	0.03	62	0.14	Year 6	6/24/2024	
135694	INFILTRATION TRENCH	976	0.44	0.61	91	0.79	Year 6	6/24/2024	
135695	INFILTRATION TRENCH	1092	0.28	1.07	98	0.54	Year 6	6/24/2024	
D01UGS0999*	INFILTRATION TRENCH	22	0.00	0.00	0	0.00	Year 6	6/24/2024	
D01UGS0998*	INFILTRATION TRENCH	19	0.00	0.00	0	0.00	Year 6	6/24/2024	
SD1 - Talbot (S24CMH1200)	SEWER DEFLECTION		66.87	0.30	96	132.4	Year 6	6/28/2024	
SD2 - Endicott (S23SMH0020)	SEWER DEFLECTION		61.52	0.34	84	102.9	Year 6	6/27/2024	4/18/2023
D15IC0001	IMPERVIOUS AREA DISCONNECTION		0.07		99	0.11	Year 6	6/13/2024	

## Appendix A: City Owned BMPs

D10IC0001	IMPERVIOUS AREA DISCONNECTION		0.19		95	0.32	Year 6	6/13/2024	
D30IC0001	IMPERVIOUS AREA DISCONNECTION		0.06		98	0.09	Year 6	6/13/2024	
D01IC0001	IMPERVIOUS AREA DISCONNECTION		0.14		94	0.20	Year 6	6/13/2024	
137334 (Cemetery)	IMPERVIOUS AREA DISCONNECTION		30.6		50	37.6	Year 6	4/30/2024	
Cemetery dry wells (38 total)	INFILTRATION TRENCH	4990	3.5	0.39	73	4.33	Year 6		

\*BMP only treats pervious area so runoff depth is 0 following Appendix F methodology.

## Appendix A: Privately Owned BMPs

BMP ID	BMP Type	Storage Volume (ft <sup>3</sup> )/ Filter Depth (in.)	Impervious Area Treated (ac)	Runoff Depth (in)	Phosphorus BMP Efficiency (%)	Phosphorus Load Reduction (lb/yr)	Year Added To Inventory	Date of Last Inspection	Date of Last Maintenance
D03BB0001	BIOFILTRATION	653	0.01	0.80	63	0.01	Year 5	4/26/2024	4/26/2024
D31UGS0014	INFILTRATION TRENCH	87	0.01	2.40	92	0.01	Year 5	4/24/2024	10/19/2023
D31UGS0022	INFILTRATION TRENCH	87	0.01	2.40	92	0.01	Year 5	4/24/2024	10/19/2023
D31UGS0015	INFILTRATION TRENCH	87	0.01	2.40	92	0.01	Year 5	4/24/2024	10/19/2023
D31UGS0024/D31UGS0025	INFILTRATION TRENCH	133.6	0.03	1.23	92	0.04	Year 5	4/25/2024	4/17/2024
D16UGS0003	INFILTRATION TRENCH	67	0.02	0.92	94	0.04	Year 5	6/19/2024	
D16UGS0004	INFILTRATION TRENCH	67	0.02	0.92	94	0.04	Year 5	5/13/2024	
D08UGS0020	INFILTRATION TRENCH	134	0.03	1.23	93	0.05	Year 5	4/25/2024	4/25/2024
D03TF0008	BIOFILTRATION	547	0.05	1.64	63	0.06	Year 5	4/29/2024	4/1/2024
D21UGS0014	INFILTRATION TRENCH	960	0.03	8.26	95	0.07	Year 5		
D21UGS0011	INFILTRATION TRENCH	944	0.03	8.13	95	0.07	Year 5		
D21UGS0012	INFILTRATION TRENCH	425	0.03	3.66	95	0.07	Year 5		
D21UGS0013	INFILTRATION TRENCH	510	0.03	4.39	95	0.07	Year 5		
D07UGS0008	INFILTRATION TRENCH	348	0.04	2.28	99	0.07	Year 5	3/20/2024	3/20/2024
D08UGS0018	INFILTRATION TRENCH	134	0.06	0.62	74	0.08	Year 5	4/25/2024	12/2/2023
D08UGS0019	INFILTRATION TRENCH	134	0.06	0.62	74	0.08	Year 5	4/25/2024	12/2/2023
D10UGS0021	INFILTRATION TRENCH	229	0.05	1.24	96	0.09	Year 5		
D03TF0005	BIOFILTRATION	496	0.09	1.55	59	0.09	Year 5	4/30/2024	4/1/2024
D31UGS0008	INFILTRATION TRENCH	66	0.05	0.36	84	0.10	Year 5	2/15/2024	9/6/2023
D03TF0009	BIOFILTRATION	314	0.12	0.69	46	0.10	Year 5	4/29/2024	4/1/2024
D07UGS0014	INFILTRATION TRENCH	697	0.06	3.20	99	0.11	Year 5	3/21/2024	4/24/2024
D31UGS0007	INFILTRATION TRENCH	86	0.05	0.46	91	0.11	Year 5	2/15/2024	9/6/2023
D31UGS0010	INFILTRATION TRENCH	457	0.06	2.10	92	0.11	Year 5	4/19/2024	
D16UGS0005	INFILTRATION TRENCH	179	0.05	1.01	96	0.11	Year 5	3/12/2024	10/26/2023
D08UGS0037	INFILTRATION TRENCH	6793	0.07	28.35	94	1.57	Year 5		
D03TF0006	BIOFILTRATION	405	0.12	0.89	51	0.11	Year 5	4/29/2024	4/1/2024
D08UGS0038	INFILTRATION TRENCH	912	0.07	3.59	93	0.12	Year 5		
D03TF0010	BIOFILTRATION	587	0.06	1.04	58	0.12	Year 5	4/29/2024	4/1/2024
D03TF0003	BIOFILTRATION	385	0.15	0.68	46	0.13	Year 5	4/29/2024	4/1/2024

## Appendix A: Privately Owned BMPs

BMP ID	BMP Type	Storage Volume (ft <sup>3</sup> )/ Filter Depth (in.)	Impervious Area Treated (ac)	Runoff Depth (in)	Phosphorus BMP Efficiency (%)	Phosphorus Load Reduction (lb/yr)	Year Added To Inventory	Date of Last Inspection	Date of Last Maintenance
D21UGS0017	Rainwater Harvesting Tank	668	0.16	1.15	40	0.13	Year 5	4/25/2024	
D07UGS0006	INFILTRATION TRENCH	648	0.08	2.23	92	0.13	Year 5	3/20/2024	3/20/2024
D21UGS0016	INFILTRATION TRENCH	292	0.08	1.01	90	0.14	Year 5	4/25/2024	
D10UGS0065	INFILTRATION TRENCH	392	0.10	1.05	94	0.17	Year 5		
D03TF0001	BIOFILTRATION	840	0.18	0.96	56	0.18	Year 5	4/29/2024	4/1/2024
D08UGS0024	INFILTRATION TRENCH	1175	0.11	2.84	92	0.19	Year 5	4/30/2024	4/30/2024
D31UGS0011	INFILTRATION TRENCH	320	0.09	0.94	88	0.19	Year 5	5/15/2024	5/15/2024
D31UGS0009	INFILTRATION TRENCH	628	0.10	1.73	98	0.19	Year 5	4/19/2024	
D03TF0002	BIOFILTRATION	668	0.24	0.72	48	0.20	Year 5	4/29/2024	4/1/2024
D07UGS0005	INFILTRATION TRENCH	1075	0.14	2.10	92	0.23	Year 5	3/20/2024	3/20/2024
D07UGS0004	INFILTRATION TRENCH	823	0.14	1.65	98	0.24	Year 5	3/21/2024	4/21/2024
D03TF0007	BIOFILTRATION	942	0.26	0.99	53	0.24	Year 5	4/29/2024	4/1/2024
D03TF0011	BIOFILTRATION	608	0.32	0.41	41	0.24	Year 5	4/29/2024	4/1/2024
D03TF0004	BIOFILTRATION	1002	0.29	0.89	52	0.27	Year 5	4/29/2024	4/1/2024
D08UGS0027	INFILTRATION TRENCH	473	0.25	0.52	67	0.30	Year 5	5/3/2024	
D02UGS0002	INFILTRATION TRENCH	590	0.21	0.77	82	0.31	Year 5	5/2/2024	5/2/2024
D10UGS0060	INFILTRATION TRENCH	652	0.19	0.62	97	0.33	Year 5	5/28/2024	
D10UGS0066	INFILTRATION TRENCH	1350	0.19	1.96	99	0.33	Year 5		
D06UGS0001	EXTENDED DRY DETENTION POND	12720	1.74	2.01	14	0.43	Year 5		
D12UGS0007	INFILTRATION TRENCH	704	0.23	0.84	85	0.45	Year 5		
D31UGS0013	INFILTRATION TRENCH	1276	0.26	1.35	95	0.48	Year 5	4/25/2024	4/24/2024
D03UGS0044	Rainwater Harvesting Tank	1320	0.70	0.52	40	0.50	Year 5	4/30/2024	4/30/2024
D24UGS0011	INFILTRATION TRENCH	1637	0.24	1.88	99	0.55	Year 5	4/25/2024	
D31UGS0001	INFILTRATION TRENCH	1320	0.25	1.45	96	0.56	Year 5	4/25/2024	
D02USG0008	INFILTRATION TRENCH	523	0.73	0.20	47	0.60	Year 5	4/18/2024	4/18/2024
D08UGS0032	INFILTRATION TRENCH	2091	0.38	0.00	100	0.68	Year 5	6/12/2024	6/12/2024
D10UGS0067	INFILTRATION TRENCH	1700	0.40	1.17	95	0.68	Year 5		
D10UGS0019	INFILTRATION TRENCH	1727	0.40	1.18	95	0.69	Year 5		
D03UGS0039	Rainwater Harvesting Tank	2807.3	0.93	0.83	40	0.73	Year 5	4/30/2024	4/1/2024
D01UGS0057	INFILTRATION TRENCH	3045	0.33	2.51	95	0.74	Year 5	7/22/2024	



## Appendix A: Privately Owned BMPs

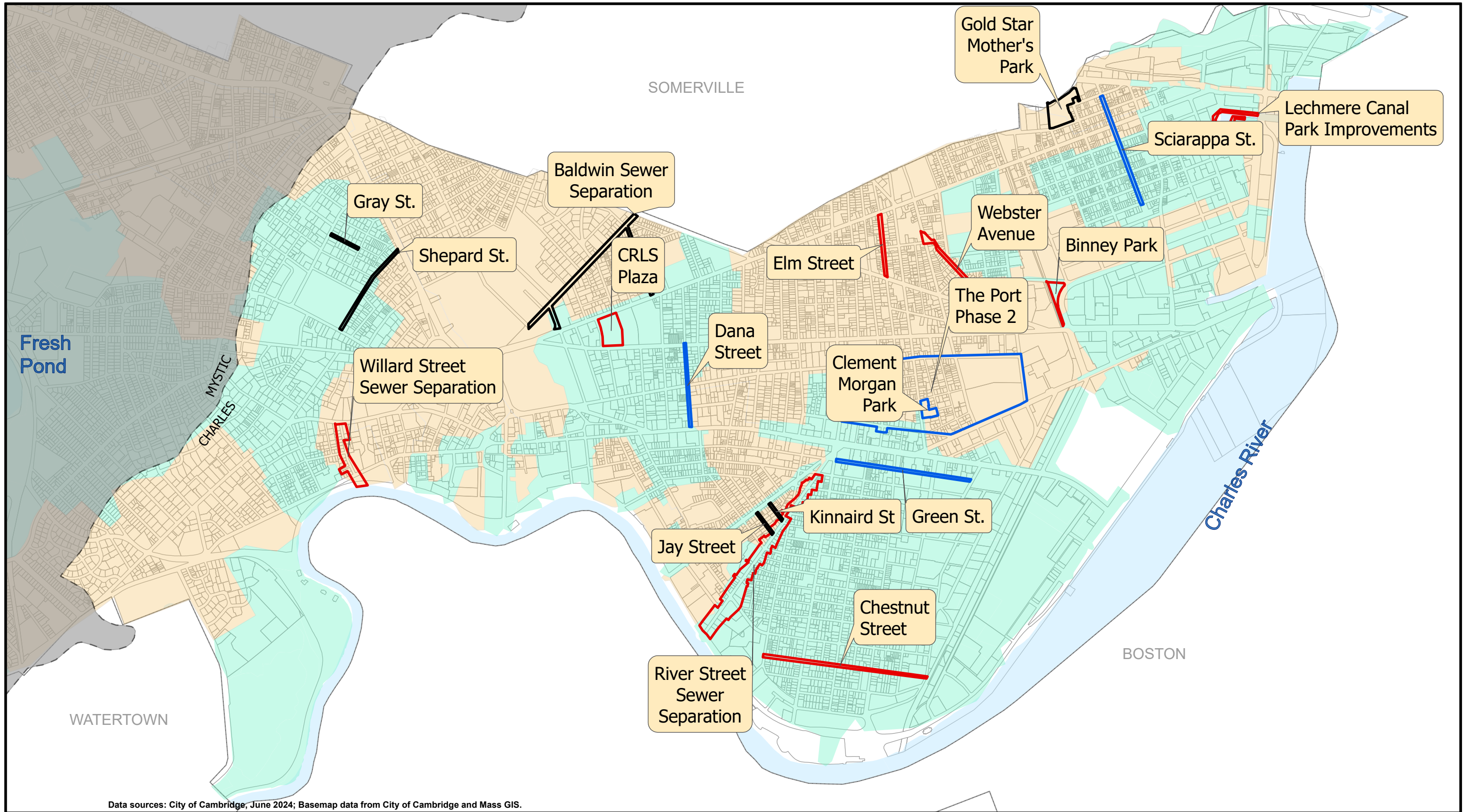
BMP ID	BMP Type	Storage Volume (ft <sup>3</sup> )/ Filter Depth (in.)	Impervious Area Treated (ac)	Runoff Depth (in)	Phosphorus BMP Efficiency (%)	Phosphorus Load Reduction (lb/yr)	Year Added To Inventory	Date of Last Inspection	Date of Last Maintenance
D20UGS0006	INFILTRATION TRENCH	1600	0.34	1.30	94	0.74	Year 5	4/25/2024	
D02USG0005	INFILTRATION TRENCH	1002	0.53	0.52	81	0.76	Year 5	4/18/2024	4/18/2024
D10UGS0068	INFILTRATION TRENCH	4008	0.50	2.21	95	0.85	Year 5		
D03UGS0050	INFILTRATION TRENCH	884	0.90	0.27	96	0.40	Year 5		
D07UGS0013	INFILTRATION TRENCH	2091	0.61	0.94	98	1.06	Year 5	3/21/2024	3/21/2024
D21UGS0015	INFILTRATION BASIN	862	0.96	0.25	65	1.11	Year 5	7/8/2024	6/8/2024
D01UGS0017	INFILTRATION TRENCH	11582	0.54	5.91	92	1.15	Year 5	5/3/2024	5/3/2024
D03UGS0049	INFILTRATION TRENCH	2547	0.70	1.00	96	1.20	Year 5	4/29/2024	4/29/2024
D08UGS0030	INFILTRATION TRENCH	2297	0.86	0.74	80	1.22	Year 5	5/3/2024	
D10UGS0007	INFILTRATION TRENCH	3528	0.53	1.82	100	1.23	Year 5		
D07UGS0007	INFILTRATION TRENCH	4966	0.79	1.74	100	1.40	Year 5	3/21/2024	4/21/2024
D03UGS0040	INFILTRATION TRENCH	3424	0.62	1.53	99	1.42	Year 5	4/29/2024	4/29/2024
D08UGS0017	INFILTRATION TRENCH	1239	1.90	0.18	43	1.45	Year 5	6/5/2024	6/5/2024
D10UGS0010	INFILTRATION TRENCH	1699	0.76	0.62	86	1.52	Year 5		
D01UGS0048	INFILTRATION TRENCH	3870	0.93	1.15	92	1.52	Year 5	4/15/2024	4/15/2024
D01UGS0086	INFILTRATION TRENCH	1811	0.96	0.52	76	1.70	Year 5	3/25/2024	
D10UGS0069	INFILTRATION TRENCH	6950	1.01	1.90	99	1.77	Year 5		
D01UGS0070	INFILTRATION TRENCH	3250	0.90	0.99	96	2.00	Year 5	6/21/2024	6/21/2024
D01UGS0049	INFILTRATION TRENCH	4863	1.46	0.92	87	2.26	Year 5	4/15/2024	4/15/2024
D03UGS0043	INFILTRATION TRENCH	6253	1.11	1.55	99	2.56	Year 5	4/26/2024	4/26/2024
D03UGS0027	INFILTRATION TRENCH	13079	2.42	1.49	78	3.13	Year 5	4/22/2024	4/22/2024
D01UGS0048/0049	INFILTRATION TRENCH	6046	2.28	0.73	94	3.83	Year 5	4/15/2024	4/15/2024
D03WP0001	WET POND/CREATED WETLAND	18018	0.30	1.38	57	3.98	Year 5	4/29/2024	4/1/2024
D08UGS0016	INFILTRATION TRENCH	4177	6.33	0.18	43	4.89	Year 5	6/5/2024	6/5/2024
D01UGS0069	INFILTRATION TRENCH	8500	2.34	1.00	96	5.21	Year 5	6/21/2024	6/21/2024
D03UGS0035	INFILTRATION TRENCH	14478	5.18	0.77	91	8.40	Year 5	4/22/2024	4/22/2024
D03UGS0037,D03UGS0038 & D03UGS0039	INFILTRATION TRENCH	5548	1.09	1.40	98	8.95	Year 5	4/22/2024	4/22/2024

## Appendix A: Privately Owned BMPs

BMP ID	BMP Type	Storage Volume (ft <sup>3</sup> )/ Filter Depth (in.)	Impervious Area Treated (ac)	Runoff Depth (in)	Phosphorus BMP Efficiency (%)	Phosphorus Load Reduction (lb/yr)	Year Added To Inventory	Date of Last Inspection	Date of Last Maintenance
D03UGS0028	INFILTRATION TRENCH	18832	6.32	0.82	84	9.42	Year 5	4/22/2024	4/22/2024
D21CBN1660	INFILTRATION TRENCH	550	0.09	1.68	100	0.16	Year 6	4/9/2024	
D21CBN1666	INFILTRATION TRENCH	550	0.08	1.89	100	0.14	Year 6	4/9/2024	
D21CBN1655	INFILTRATION TRENCH	550	0.10	1.52	100	0.18	Year 6	4/9/2024	
D21CBN1663	INFILTRATION TRENCH	550	0.02	7.58	99	0.04	Year 6	4/9/2024	
D21UGS0020	INFILTRATION TRENCH	2857	0.18	3.03	99	0.32	Year 6	9/7/2023	
D21CBN1668	INFILTRATION TRENCH	550	0.07	2.16	99	0.12	Year 6	9/7/2023	
D31UGS0028	INFILTRATION TRENCH	3328	0.17	5.39	97	0.29	Year 6	8/23/2023	
D24UGS0005	INFILTRATION TRENCH	15687	0.90	4.80	97	1.55	Year 6	7/20/2023	
D10BB0001	ENHANCED BIOFILTRATION	111	0.13	0.17	27	0.06	Year 6	11/24/2023	12/2/2023
D12BB0001	ENHANCED BIOFILTRATION	102	0.10	0.22	30	0.05	Year 6	11/24/2023	12/2/2023
D10PP0003	POROUS PAVEMENT	12	0.05	0.07	62	0.06	Year 6	4/29/2024	4/1/2024
D05UGS0005	ENHANCED BIOFILTRATION	250	0.05	0.86	57	0.05	Year 6	5/22/2023	
D05UGS0006	ENHANCED BIOFILTRATION	250	0.05	0.86	57	0.05	Year 6	5/22/2023	
D10UGS0072	POROUS PAVEMENT	12	0.64	0.01	62	0.71	Year 6		
D08UGS0041	INFILTRATION TRENCH	640	0.24	0.73	90	0.38	Year 6		
D01UGS0091	INFILTRATION TRENCH	640	0.26	0.68	88	0.41	Year 6		
D06UGS0002	ENHANCED BIOFILTRATION	28000	2.98	2.59	63	3.34	Year 6	5/24/2023	
D12UGS0019	INFILTRATION TRENCH	134	0.05	0.74	90	0.08	Year 6		
D12UGS0020	INFILTRATION TRENCH	5227	0.64	2.25	97	1.10	Year 6		
D07CBN0080	INFILTRATION TRENCH	279	0.02	3.84	99	0.04	Year 6	3/21/2024	3/21/2024
D07CBN0081	INFILTRATION TRENCH	279	0.02	3.84	99	0.04	Year 6	3/21/2024	3/21/2024
D01UGS0078	INFILTRATION TRENCH	2000	0.09	6.12	97	0.15	Year 6	4/16/2024	
D01UGS0079	INFILTRATION TRENCH	2000	0.09	6.12	97	0.15	Year 6	4/16/2024	
D01UGS0080	INFILTRATION TRENCH	2000	0.09	6.12	97	0.15	Year 6	4/16/2024	
D01UGS0081	INFILTRATION TRENCH	2000	0.09	6.12	97	0.15	Year 6	4/16/2024	
D31UGS0026	INFILTRATION TRENCH	93	0.01	2.56	99	0.02	Year 6		
D31UGS0027	INFILTRATION TRENCH	454	0.08	1.56	100	0.14	Year 6		
D01UGS0077	INFILTRATION TRENCH	1536	0.23	1.84	100	0.41	Year 6	4/17/2024	
D03UGS0036	INFILTRATION TRENCH	6167	0.50	3.40	97	0.86	Year 6	4/22/2024	4/22/2024

## Appendix A: Privately Owned BMPs

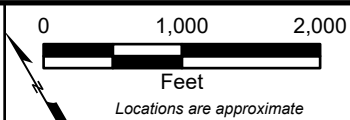
BMP ID	BMP Type	Storage Volume (ft <sup>3</sup> )/ Filter Depth (in.)	Impervious Area Treated (ac)	Runoff Depth (in)	Phosphorus BMP Efficiency (%)	Phosphorus Load Reduction (lb/yr)	Year Added To Inventory	Date of Last Inspection	Date of Last Maintenance
D03UGS0037	INFILTRATION TRENCH	4294	0.70	1.69	99	1.24	Year 6	4/22/2024	4/22/2024
D03UGS0038	INFILTRATION TRENCH	2447	0.40	1.69	99	0.71	Year 6	4/22/2024	4/22/2024
D12UGS0005	INFILTRATION TRENCH	699	1.00	0.19	46	0.81	Year 6		
D21UGS0010	Rainwater Harvesting Tank	2000	0.35	1.56	40	0.25	Year 6	8/29/2023	
D25UGS0003/D25 UGS0004	Rainwater Harvesting Tank	6684	0.65	2.81	40	0.47	Year 6		
D05UGS0011	Rainwater Harvesting Tank	26736	4.13	1.78	40	2.94	Year 6	4/19/2024	3/20/2024
D03UGS0051	Cistern	2673	0.51	1.46	40	0.47	Year 6		
D03UGS0052	Cistern	2673	0.51	1.46	40	0.47	Year 6		
D03UGS0053	Cistern	935	0.31	0.83	40	0.29	Year 6		
D07UGS0021	Rainwater Harvesting Tank	4144	0.62	1.83	40	0.44	Year 5	3/21/2024	3/21/2024
D03UGS0042	Rainwater Harvesting Tank	1336	0.71	0.52	40	0.43	Year 6	4/29/2024	4/29/2024



Data sources: City of Cambridge, June 2024; Basemap data from City of Cambridge and Mass GIS.

**Legend**

- In Construction
- In Design
- Planned
- CHARLES
- MYSTIC
- Town Boundary
- Waterbody



This information was developed specifically and for the exclusive use for the City of Cambridge's Climate Change Vulnerability Assessment. The materials are not intended to be suitable for re-use on extensions of the project or any other project. Any reuse, without the prior written verification or adaptation by Kleinfelder for the specific purpose intended will be at the user's sole risk without liability or legal exposure to Kleinfelder, ATMOS or the City of Cambridge.



PROJECT NO.:	20240208
DRAWN:	JUNE 2024
DRAWN BY:	SK
CHECKED BY:	AF

**BMP RETROFIT SITE SELECTION  
PROJECTS STATUS OVERVIEW**

Cambridge, Massachusetts