BaySaver® Separation System

Maintenance Manual

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BaySeparator System Maintenance Manual

One of the advantages of the BaySaver Separation Systems is the ease of maintenance. Like any system that collects pollutants, the BaySaver Separation Systems must be maintained for continued effectiveness. Maintenance is a simple procedure performed using a vacuum truck or similar equipment. The systems were designed to minimize the volume of water removed during routine maintenance, reducing disposal costs.

Contractors can access the pollutants stored in the manholes through two 30" manhole covers. This allows them to gain unobstructed access to the bottom of the manholes. There is no confined space entry necessary for inspection or maintenance.

Vacuum hoses can reach the entire sump area of both manholes to remove sediments and trash. The entire maintenance procedure typically takes from 2 to 4 hours, depending on the size of the system and the capacity of the vacuum truck.

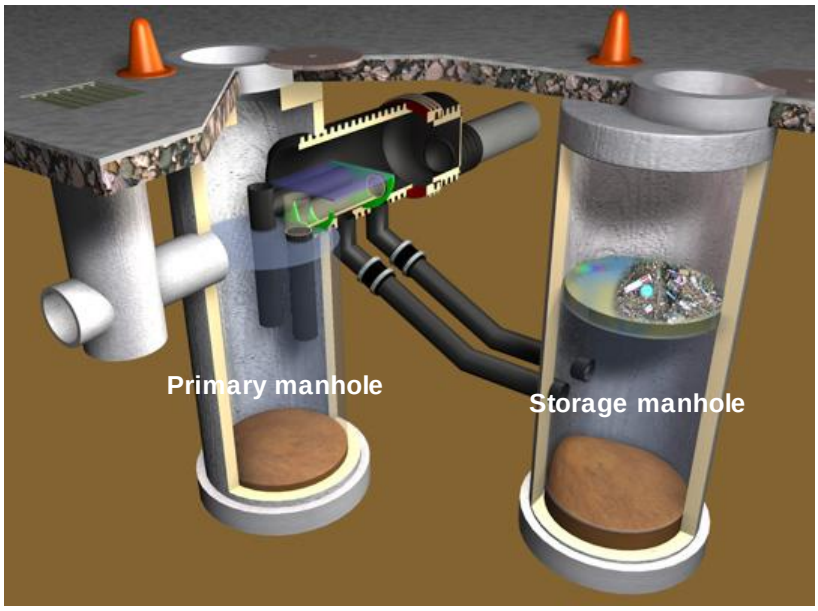
Local regulations may apply to the maintenance procedure. Safe and legal disposal of pollutants is the responsibility of the maintenance contractor. Maintenance should be performed only by a qualified contractor.

Inspection and Cleaning Cycle

Periodic inspection is needed to determine the need for and frequency of maintenance. You should begin inspecting as soon as construction is complete and thereafter on a quarterly basis. Typically, the system needs to be cleaned every 12 months.

The cycle may be less than 12 months if there is a chance that excessive oils, fuels or sediments will accumulate. That is why periodic inspection is important.

Figure 1: BaySaver System with stored pollutants in manholes



Determining When to Clean

The system needs to be cleaned when 2 feet (0.6 meters) of sediment is accumulated at the bottom of either structure or when visual inspection shows a large accumulation of debris or oil.

Measuring Sediment Depth

You can determine the sediment depth by lowering a pole into the manhole until it hits the sediment and measuring the distance from the bottom of the pole to the water line mark on the pole. If this is less than 6 feet (1.8 meters), the system needs to be cleaned.

Summary

- You can access the pollutants through the 2 manhole covers.
- You can see the entire floor/sump area of each manhole from the surface.
- There is no confined space entry for inspection or maintenance.
- During maintenance, you can transfer water from the primary to the storage manhole, minimizing the amount of water for disposal.

Finding Information

- For the **manhole capacities** for the BaySaver models, **American standards**, see page 3.
- For the **manhole capacities** for the BaySaver models, **metric standards**, see page 4.
- For the **maintenance procedure**, see page 6.
- To see an **animated maintenance procedure**, visit our web site at www.baysaver.com.

Figure 2: Storage manhole with floating debris and oils

Table 1: BaySaver Separation System Manhole Storage Capacities (American Standards)

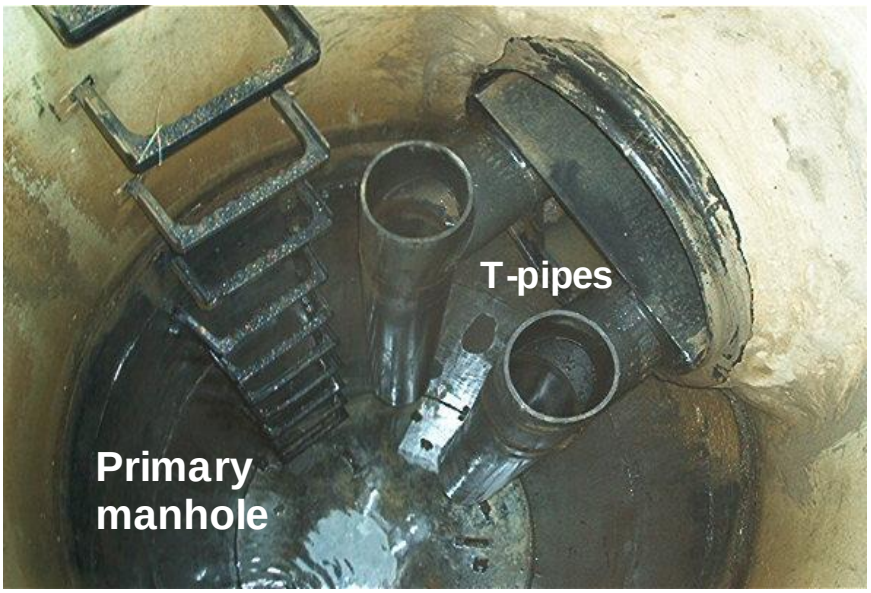
BaySeparator Manhole Size	Total System Capacity	Sediment Capacity	Floatable Capacity
Inches	**Gallons / (ft^3)**	**Yards^3/ (ft^3)**	**Gallons / (ft^3)**
1/2 K			
48 x 48	1128 / (151)	1.40 / (38)	226 / (30)
48 x 60	1445 / (193)	1.79 / (48)	353 / (47)
48 x 72	1833 / (245)	2.27 / (61)	509 / (68)
1K			
48 x 48	1504 / (201)	1.86 / (50)	320 / (43)
48 x 60	1927 / (258)	2.39 / (64)	500 / (67)
48 x 72	2444 / (327)	3.03 / (82)	720 / (96)
3K			
60 x 60	2350 / (314)	2.90 / (79)	456 / (61)
60 x 72	2867 / (383)	3.55 / (96)	657 / (88)
60 x 84	3478 / (465)	4.30 / (116)	894 / (119)
5K			
72 x 72	3384 / (452)	4.19 / (113)	621 / (83)
72 x 84	3995 / (534)	4.93 / (134)	846 / (113)
72 x 96	4700 / (628)	5.82 / (157)	1105 / (148)
84 x 96	5311 / (710)	6.57 / (177)	1105 / (148)
10K			
120 x 120	9400 / (1257)	11.64 / (314)	1567 / (209)

Table 2: BaySaver Separation System Manhole Storage Capacities (Metric Standards)

BaySaver Separation System Size	Total System Capacity	Sediment Capacity	Floatable Capacity
Millimeters	**(m^3)**	**(m^3)**	**(m^3)**
1/2 K			
1219.2 x 1219.2	4.27	1.07	0.86
1219.2 x 1524.0	5.47	1.37	1.34
1219.2 x 1828.8	6.94	1.73	1.93
1K			
1219.2 x 1219.2	5.69	1.42	1.21
1219.2 x 1524.0	7.29	1.82	1.89
1219.2 x 1828.8	9.23	2.31	2.73
3K			
1524.0 x 1524.0	8.90	2.22	1.73
1524.0 x 1828.8	10.85	2.71	2.49
1524.0 x 2133.6	13.17	3.29	3.38
5K			
1828.8 x 1828.8	12.81	3.20	2.35
1828.8 x 2133.6	15.12	3.78	3.20
1828.8 x 2438.4	17.78	4.45	4.18
2133.6 x 2438.4	20.10	5.03	4.18
10K			
3048.0 x 3048.0	35.57	8.89	5.93

Figure 3: *Storage manhole* containing diesel fuel before pollutant removal:

Figure 4: *Primary manhole* with BaySaver unit after pollutant removal



Maintenance Instructions

Note: For each BaySaver System, there are 2 manholes to clean: the **primary manhole** and **storage manhole**.

1. Remove the manhole covers to provide access to the pollutant storage.
2. **Storage manhole**: Use a vacuum truck or other similar equipment to remove all water, debris, oils and sediment.
3. **Storage manhole**: Use a high pressure hose to clean the manhole of all the remaining sediment and debris. Then, use the vacuum truck to remove the water.
4. **Primary manhole**: Use a submersible pump to pump the bulk of the water from the primary manhole into the clean storage manhole:
   a. Keep the pump intake below the water surface.
   b. Stop pumping when the water surface is one (1) foot above the accumulated sediments.
5. **Primary manhole**: Use a vacuum truck or other similar equipment to remove all water, debris, oils and sediment.
6. **Primary manhole**: Use a high pressure hose to clean the manhole of all the remaining sediment and debris. Then, use the vacuum truck to remove the water.
7. **Primary manhole**: Fill the cleaned primary manhole with water until you have a depth of 8 feet (or 2.44 meters).
8. **Storage manhole**: Top off the storage manhole with water until you have a depth of 8 feet (or 2.44 meters).
9. Replace the two manhole covers.
10. Dispose of the polluted water, oils, sediment and trash at an approved facility.
    - Local regulations prohibit the discharge of solid material into the sanitary system. Check with the local sewer authority for authority to discharge the liquid.
    - Many places treat the pollutants as leachate. Check with local regulators about disposal requirements.

Important: Additional local regulations may apply to the maintenance procedure.

Figure 5: Vacuum truck and high pressure hose

How can you tell the primary from the storage manhole?

The **primary manhole** has the BaySaver unit with the T-pipes (see Figure 4).

The other manhole is the **storage manhole** (see Figure 3).

If you need further assistance or have any questions, please call **1-800-229-7283** or visit Baysaver.com

Frequency	Drainage System Feature	Problem	Conditions to Check For	Recommended Action	Date Inspected*											
					J	F	M	A	M	J	J	A	S	O	N	D
A	T-pipes	Damaged pipe	Any part of the pipe that is cracked or damaged.	Maintenace personel to contact BaySaver Technologies, Inc.												
A	Primary manhole	Cracks in concrete, debris build up.	Cracks wider than ½ inch or evidence of soil particles entering the structure through the cracks, or maintenance/inspection personnel determine that the structure is not structurally sound.	Repair cracks or replace manhole.												
A	Secondary manhole	Cracks in concrete, debris build up.	Cracks wider than ½ inch or evidence of soil particles entering the structure through the cracks, or maintenance/inspection personnel determine that the structure is not structurally sound.	Repair cracks or replace manhole.												
A	Bypass plate	Blockage/Damage	Excessive debris degrading bypass flow, cracks in bypass plate and damaged welding.	Clear bypass plate of debris and check for damage. If damage is accessive maintenance personel to contact BaySaver Technologies, Inc.												
A	Separator shell	Damage/Blockage	Any part of the shell that is cracked or damaged.	Maintenace personel to contact BaySaver Technologies, Inc.												
A	Access Cover (MH, Grate, cleanout)	Damage/Blockage	Any damage to manhole cover or debris clogging grate/cleanout.	Replace manhole cover												
A	Inlet pipe	Damage/Blockage	Any part of the pipe that is cracked or damaged.	Replace inlet pipe.												