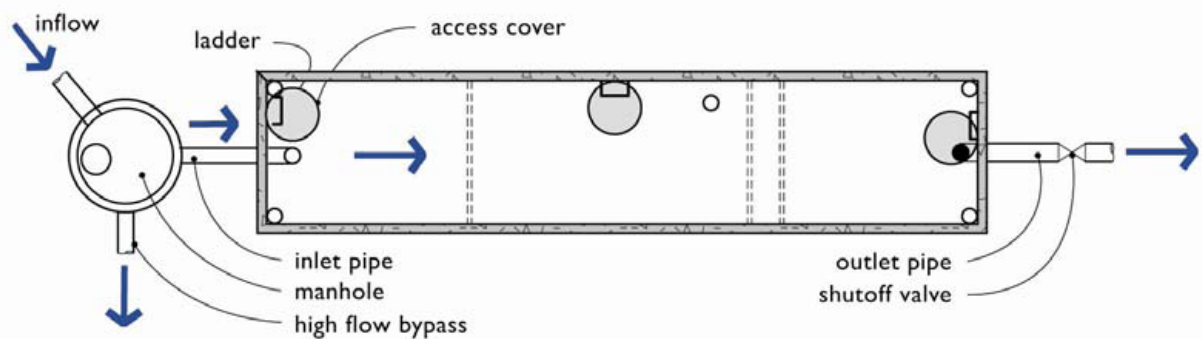


## Oil/Water Separator (API Type)

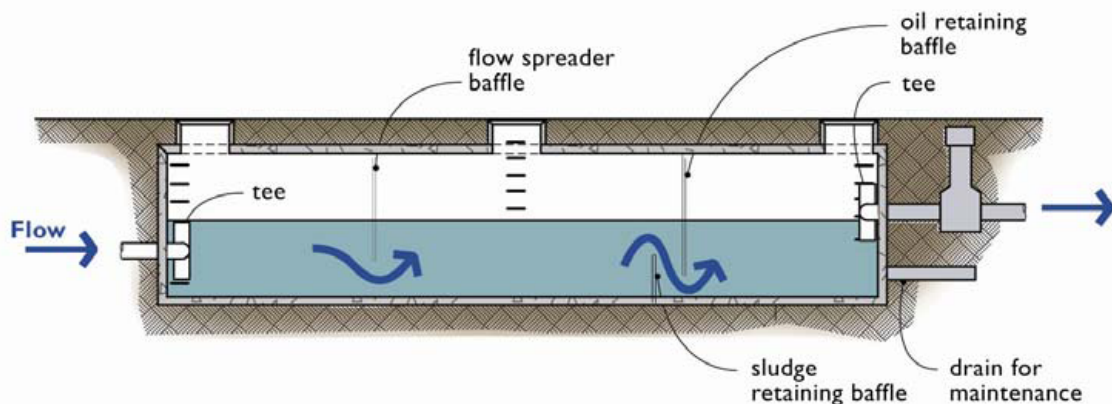
This type of oil/water separator is a design from American Petroleum Institute (API). An oil/water separator is an underground vault that treats stormwater by mechanically separating oil from water. The oil rises to the surface and floats on the water and sediment settles to the bottom. Oil/water separators are typically utilized in locations where high oil concentrations in the stormwater runoff are anticipated (e.g. service and fuel stations). Oil/water separators are most commonly used as the first pretreatment facility in a series of stormwater management facilities.

Facility objects that are typically associated with an oil/water separator include:

- access road or easement
- control structure/flow restrictor



BIRD'S-EYE VIEW



SIDE PROFILE

## Key Operations and Maintenance Considerations

- Common tools for cleaning and maintaining an oil/water separator are a vacuum truck and/or oil absorbing media materials to remove oils and other sediments that have accumulated in the facility.
- Prepare, regularly update, and implement an O&M Manual for the oil/water separators.
- Inspect oil/water separators to ensure proper operation monthly during the wet season of October 1 - April 30 and during and immediately after a large storm event of  $\geq 1$  inch per 24 hours.
- Clean oil/water separators regularly to keep accumulated oil from escaping during storms. They must be cleaned by October 15 to remove material that has accumulated during the dry season, after all spills, and after a significant storm. An eductor truck may be used for oil, sludge, and washwater removal. Replace wash water in the separator with clean water before returning it to service.
- Replace oil absorbent pads before their absorbed oil content reaches capacity.
- Train designated employees on appropriate separator operation, inspection, record keeping, and maintenance procedures.

Oil/Water Separator (API Type)			
Drainage System Feature	Potential Defect	Conditions When Maintenance Is Needed	Minimum Performance Standard
Note: table spans multiple pages.			
General	Poor Water Quality	Inspection of discharge water for obvious signs of poor water quality (i.e. obvious oil or other contaminants present).	Effluent discharge from vault is clear, without thick visible sheen.
	Sediment Accumulation	Sediment depth in bottom of vault exceeds 6-inches in depth.	No sediment deposits on vault bottom that would impede flow through the vault and reduce separation efficiency.
	Trash and Debris Accumulation	Trash and debris accumulation in vault, or pipe inlet/outlet, floatables and non-floatables.	Vault and inlet/outlet piping free of trash and debris.
	Oil Accumulation	Oil accumulations that exceed 1-inch, at the surface of the water.	Oil extracted from vault by vacuuming. Disposal in accordance with state and local rules and regulations.
	Damaged Pipes	Inlet or outlet piping damaged or broken and in need of repair.	Pipe repaired or replaced to design specifications.
	Access Cover Damaged/Not Working	Cover cannot be opened, corrosion/deformation of cover.	Cover repaired or replaced to design specifications.

*Stormwater Treatment, Flow Control, and Conveyance Facility Components*

<b>Oil/Water Separator (API Type)</b>			
<b>Drainage System Feature</b>	<b>Potential Defect</b>	<b>Conditions When Maintenance Is Needed</b>	<b>Minimum Performance Standard</b>
Note: table spans multiple pages.			
	Vault Structure Damage - Includes Cracks in Walls Bottom, Damage to Frame and/or Top Slab	Top slab has holes larger than 2 square inches or cracks wider than 1/4 inch.  (Intent is to make sure no material is running into basin.)	Top slab is free of holes and cracks.
		Frame not sitting flush on top slab, i.e., separation of more than 3/4 inch of the frame from the top slab. Frame not securely attached.	Frame is sitting flush on the riser rings or top slab and firmly attached.
		Maintenance person judges that structure is unsound.	Basin replaced or repaired to design standards.
		Grout fillet has separated or cracked wider than 1/2 inch and longer than 1 foot at the joint of any inlet/outlet pipe or any evidence of soil particles entering catch basin through cracks.	Pipe is regouted and secure at basin wall.
		If failure of basin has created a safety, function, or design problem.	Basin replaced or repaired to design standards.
		Cracks wider than 1/2-inch at the joint of any inlet/outlet pipe or evidence of soil particles entering through the cracks.	Vault repaired so that no cracks exist wider than 1/4-inch at the joint of the inlet/outlet pipe.
	Baffles	Baffles corroding, cracking, warping and/or showing signs of failure as determined by maintenance/inspection person.	Baffles repaired or replaced to design specifications.
Access Ladder Damaged	Ladder is corroded or deteriorated, not functioning properly, not securely attached to structure wall, missing rungs, cracks, and misaligned.	Ladder replaced or repaired, meets design specifications, and is safe to use as determined by inspection personnel.	