

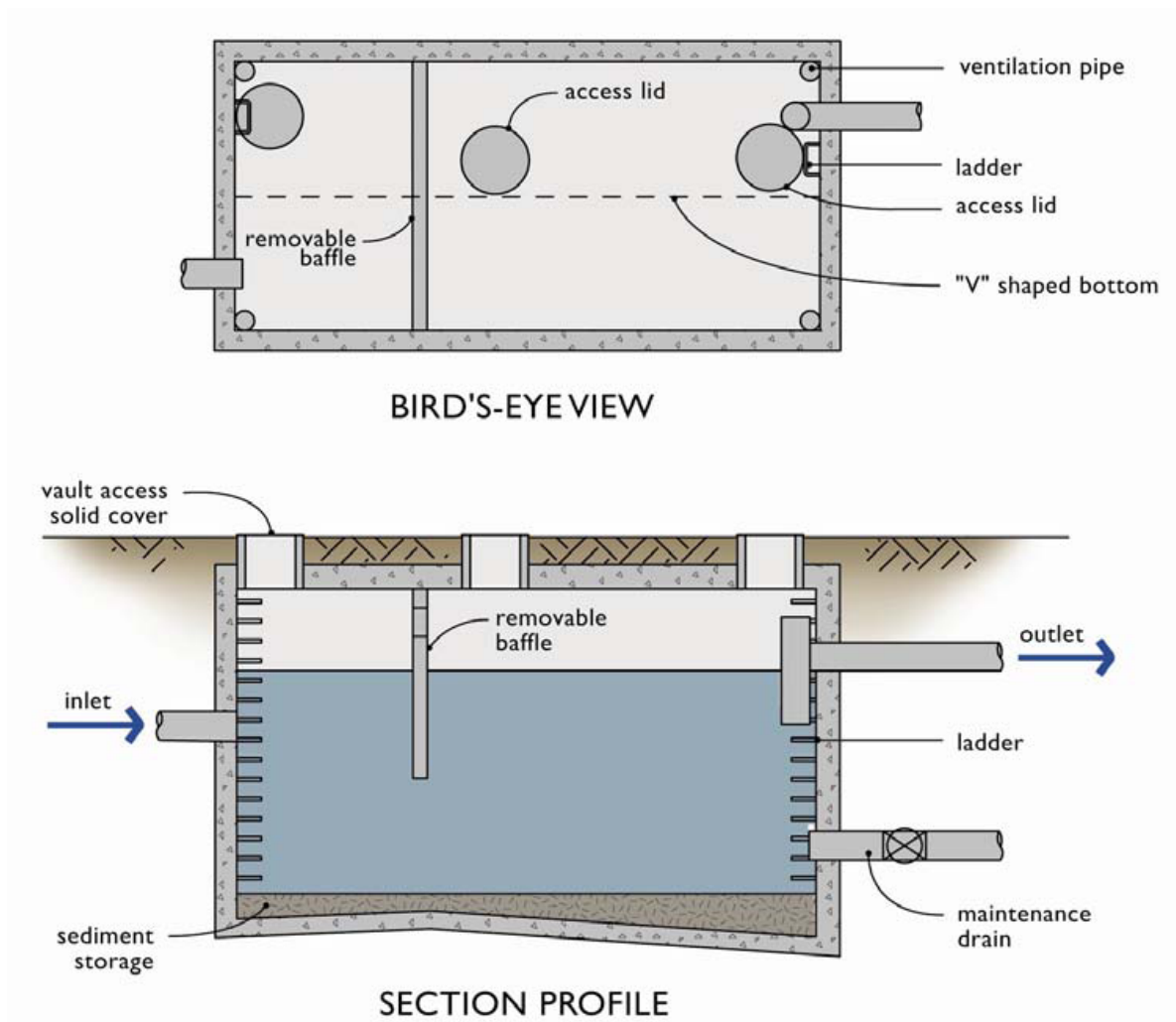
Wet Vault

A wet vault is an underground structure similar in appearance to a detention vault, except that a wet vault has a permanent pool of water (wetpool) which dissipates energy and improves the settling of sediment and other pollutants.

Wet vaults are a closed space where harmful chemicals and gasses can accumulate. Therefore, the inspection and maintenance of these facilities should be conducted by an individual trained and certified to work in hazardous confined spaces.

Facility objects that are typically associated with a wet vault include:

- access road or easement
- conveyance stormwater pipe



Key Operations and Maintenance Considerations

- The most common tool for cleaning wet vaults is a truck with a tank and vacuum hose (Vactor® truck) to remove sediment and debris from the vault.
- Accumulated sediment and stagnant conditions may cause noxious gases to form and accumulate in the vault. Vault maintenance procedures must meet OSHA confined space entry requirements, which include clearly marking entrances to confined space areas. This may be accomplished by hanging a removable sign in the access riser(s), just under the access lid.
- Sediment should be removed when the sediment zone is full plus 6 inches. Sediments should be tested for toxicants in compliance with current disposal requirements. Sediments must be disposed in accordance with current local health department requirements and the Minimum Functional Standards for Solid Waste Handling. For additional guidance see [Book 3, Appendix 3-E](#), Recommendations for Management of Street Waste.
- Any standing water removed during the maintenance operation must be properly disposed of. The preferred disposal option is discharge to a sanitary sewer at an approved location. Other disposal options include discharge back into the wetpool facility or the storm sewer system if certain conditions are met. For additional guidance see [Book 3, Appendix 3-E](#), Recommendations for Management of Street Waste.

Wet Vault				
Drainage System Feature	Potential Defect	Conditions When Maintenance Is Needed	Minimum Performance Standard	
General	Trash/Debris Accumulation	Trash and debris accumulated in vault, pipe or inlet/outlet (includes floatables and non-floatables).	Vault is free of trash and debris.	
	Sediment Accumulation in Vault	Sediment accumulation in vault bottom exceeds the depth of the sediment zone plus 6-inches.	Vault is free of sediment.	
	Damaged Pipes	Inlet/outlet piping damaged or broken and in need of repair.	Pipe has been repaired and/or replaced to design specifications.	
	Access Cover Damaged/Not Working	Cover cannot be opened or removed, especially by one person.	Cover repaired or replaced to design specifications.	
	Blocked Ventilation	Ventilation area blocked or plugged.	Blocking material has been cleared from ventilation area and removed. A specified % of the vault surface area must provide ventilation to the vault interior (see design specifications).	
	Damage - Includes Cracks in Walls Bottom, Damage to Frame and/or Top Slab		Maintenance/inspection personnel determine that the vault is not structurally sound.	Vault replaced or repairs made such that vault meets design specifications and is structurally sound.
			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 staff.	Baffles repaired or replaced to design specifications.		
Ladder	Access Ladder Damage	Ladder is corroded or deteriorated, not functioning properly, not attached to structure wall, missing rungs, has cracks and/or misaligned. Confined space warning sign missing.	Ladder replaced or repaired to design specifications, and is safe to use as determined by inspection personnel. Confined space entry warning and requirements sign is present, clean and legible. Ladder and entry notification complies with OSHA standards.	

*Add the following line for "Storage Area" defect on page 73:

Vegetation Encroachment	Root encroachment of tree or shrub have impacted function or integrity of wetvault.	Roots are found in vault to be removed and repair vault.
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