

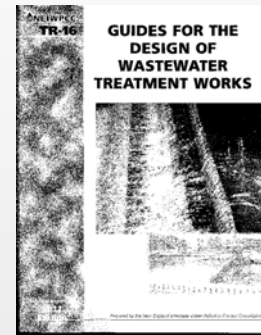
Wastewater Design Issues



Environmental Health Training in Emergency Response (ETHER) Conference

April 2-5, 2012

Norwood, MA



NEIWPCC Design Guidelines – TR16 (2011 Edition)



Sanitary Sewer Design

- **Gravity Sewer**
 - Peak wastewater flows
 - I/I allowance
 - Conservative design



Sanitary Sewer Design

- **Alternative Sewer System**
 - Vacuum Sewer/Pressure Sewer
 - Peak wastewater flows
 - Provisions for standby power



Wastewater Pumping Stations

- Peak Design Flows
- Multiple Units
- Accessible under all weather conditions



Wastewater Pumping Stations

- 100-year flood: Structure and equipment protected
- 25-year flood: Fully operational and accessible
- Withstand earthquake loads
- Protection against buoyancy (flotation)
- Standby power



Wastewater Treatment Plants

- Design Flows – include stormwater flow if in a combined area
- Multiple units
- Accessible under all weather conditions



Wastewater Treatment Plants

- 100-year flood: Structure and equipment protected
- 25-year flood: Fully operational and accessible
- Protection of lab chemicals
- Withstand earthquake loads
- Protection against buoyancy (flotation)
- Standby power



WWTP Outfalls

- Protection during flooding and tidal conditions
- Prevention of backflow



DEP SSO/Bypass Notification Form

- Written report to DEP within 5 days
- Description of event
- Corrected?
- Future actions to reduce, eliminate or prevent reoccurrences
- Located at DEP website



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Stormwater Management Program
Sanitary Sewer Overflow (SSO)/Bypass
Notification Form
Instructions

Who must notify DEP about an overflow or bypass, and when?
Any owner or operator of the following facilities:

- Municipal, state, federal, regional, institutional or other private wastewater collection systems
- Wastewater treatment plants
- Facilities with a wastewater discharge permit
- Facilities with a surface water discharge permit

How often must you notify DEP about an overflow or bypass?
You must notify DEP about an overflow or bypass:

- At the time of the overflow or bypass
- At a minimum, once a month, regardless of whether or not there is an overflow or bypass
- At least 30 days prior to the start of the overflow or bypass

What are the consequences for non-compliance?
Step One:
Provide immediate telephone notification to the appropriate DEP Regional Office.

Northwest Region (Wareham)	617-554-2215
Central Region (Wareham)	508-751-1500
Southwest Region (Wareham)	508-846-2700
Western Region (Wareham)	415-751-1500

If you are not sure which Massachusetts DEP Regional Office oversees your facility, go to: dep.state.ma.us/about/depregional.asp

Complete the notification form and submit it to the appropriate DEP Regional Office within 5 business days of the overflow or bypass. If you cannot submit the form within 5 business days, you must submit it by the 10th day of the month following the overflow or bypass. If you cannot submit the form by the 10th day of the month, you must submit it by the 15th day of the month following the overflow or bypass. If you cannot submit the form by the 15th day of the month, you must submit it by the 1st day of the month following the overflow or bypass.

Step Two:
Submit a written report to DEP within five (5) days of the time you become aware of the overflow or bypass. The report should include the following information:

- Date, time and location of the overflow or bypass
- Description of the overflow or bypass
- Volume of the overflow or bypass
- Duration of the overflow or bypass
- Cause of the overflow or bypass
- Actions taken to correct the overflow or bypass
- Actions taken to prevent future overflows or bypasses

DEP SSO/Bypass Notification Form

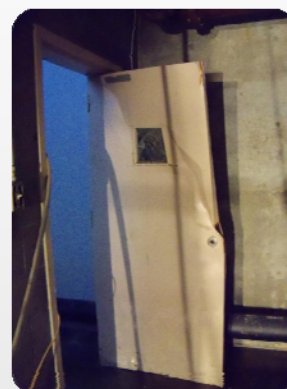




Before



After





Massachusetts Department of
Environmental Protection