



# New MassDEP requirements for the operation of municipal sewer systems

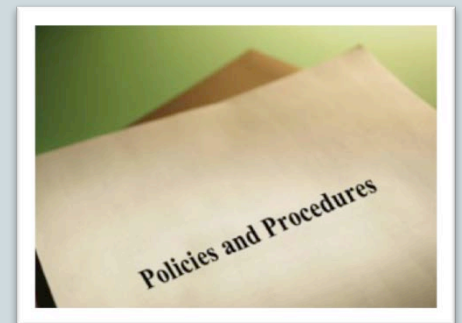


Bureau of Water Resources  
Massachusetts Department of Environmental Protection

# Summary



- Regulation Changes:
  - Sewer Use Rules and Regulations 314 CMR 7.00
  - Operation and Maintenance Regulations 314 CMR 12.00
  
- Guidance Document Update
  - Infiltration/Inflow Program Guidance



# MassDEP Sewer Permits



314 CMR 7.00

No more MassDEP Sewer Permits ! *except.....*

- *Industrial Connections greater than 25,000 gpd to a POTW without an approved IPP for SIC Codes listed in regulations*
- *Where MassDEP determines that the discharge will cause water quality issues or pass through treatment facility*

# Sewer System O&M Requirements



- Changes to 314 CMR 12.00:
  - Reporting of SSO Events
  - Pump Station Inspection Requirements
  - Sewer Use Ordinance/Bylaw Requirements
  - Implementation of I/I abatement programs

# Sewer System O&M Requirements



## ○ Bypass and Overflow Reporting

- Use MassDEP form and instructions at <http://www.mass.gov/eea/agencies/massdep/service/approvals/sanitary-sewer-overflow-bypass-backup-notification.html>
- Anticipated bypass notify MassDEP 10 days prior
- Unanticipated bypass notify MassDEP within 24 hrs
- Within 5 days provide information to MassDEP about activities that led up to the event; steps taken to minimize event; and steps taken to prevent it from occurring again

# Sewer System O&M Requirements



- Pumping Station Inspections
  - Daily inspections of Pumping Stations with peak design flows of 100,000 GPD or greater
  - Weekly inspections of all pump stations with peak design flows of less than 100,000 GPD
  - Maintain a Log book or electronic record detailing the dates of inspection, operational condition and all preventive, predictive or corrective maintenance activities
  - Less frequent inspections may be allowed upon approval of MassDEP

# Sewer Use Regulations



## ○ Must Include.....

- Discharge limits to address prohibitions in 12.08(1) & (2) including provisions to control FOG
- Prohibit stormwater, groundwater, subsurface drainage (inflow!)
- Authority to access property connected to sewer
- Penalties for non-compliance
- Program to permit or approve connections and extensions

# Infiltration and Inflow Programs



- Develop and implement an **ongoing** I/I program:
  - Identify and eliminate Inflow/Infiltration (I/I) sources
  - Focus on inflow sources
  - Demonstrate adequate funding



# Infiltration and Inflow Programs



By December 2017 submit I/I analysis:

- To address excessive I/I based on MassDEP's Guidelines for Performing I/I Analyses and Sewer Systems Evaluation Survey
- Assess the risk for sanitary sewer overflows on the 5-year 24 hour storm
- Municipalities that have completed the above plans and are implementing them they may be submitted to MassDEP for review and approval

# Infiltration and Inflow Program

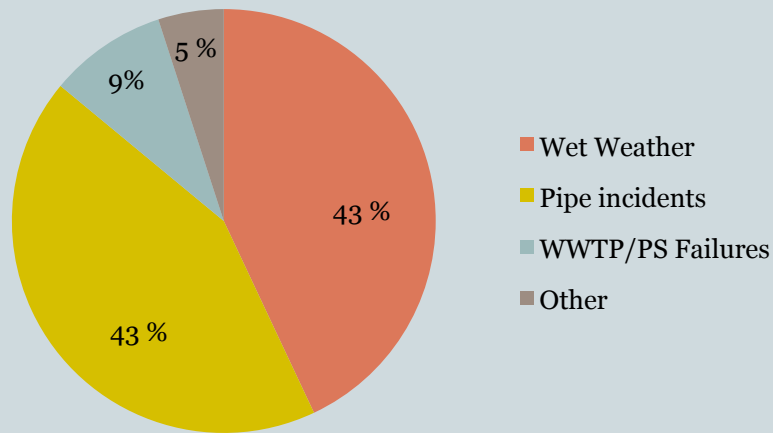


- New Connection Mitigation Programs.....
  - Systems with CSOs, tributary to systems with CSOs or with significant SSO risks, provisions for 4 to 1 mitigation for new connections or extensions with design flows in excess of 15,000 gpd.
  - Prohibit connections and extensions that will exceed system capacity causing SSO backups and bypasses

# SSO Problems



- Since 2006 in NERO.....
  - > 3,000 events in 70 communities



# Wet Weather SSO's



- SSO's widespread in extreme storm events
- SSO's chronic in some systems, mostly due to I/I, but some capacity problems also
- Infiltration/Inflow.....34 – 70 % of ADF
- Enforcement Actions related to SSO and I/I in about 25% of sewerred communities

# SSO Enforcement Actions



- Remedies may include:
  - Complete system characterization and investigation.
  - Permanent sewer system metering
  - Development of detailed sewer system models.
  - A “comprehensive” approach to I/I abatement involving complete sewer system/lateral rehabilitation in some or all subareas, along with elimination of all confirmed inflow sources.
  - Restrictions on new or expanded sewer connections to the system, to effectively manage the risk of SSO events.
  - Penalties and fines.

# Infiltration and Inflow Program Guidance



- Guidance last updated in January 1993
  - Based extensively on cost-effectiveness
  - Better investigation and rehab options
  - Reliance on 1-year “design” storm
  - Streamlining of programs

# I/I Guidance Challenges



- No national standards for “excessive” I/I
  - *4,000 gpdim, 120/275 gpcd, > 5% R values*
- No national standard “design storm” for sewers
  - *2 - 25 year storms, 3-4 x ADF*
- CEA hasn’t yielded effective I/I removal in some cases
  - *Migration of infiltration, limited design life of fixes*
- Flexibility for alternative approaches

# Infiltration and Inflow Program Guidance



- Key Concepts for Revisions:
  - More focus on inflow removal
  - Use of both 1 year and 5 year design storms
  - Continued use of cost-effectiveness for infiltration removal
  - Focus on SSO risk mitigation



# Infiltration and Inflow Program Guidance



- *Process*

- NEWEA Collection System Committee/Advisory Group meetings
- Final Draft for public review in February
- Notice in Environmental Monitor
- 30 day comment period

# Questions?

