MIIA Risk Management

Proper Sewer System Management

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A Guide to Reducing Sewer System Overflows & Associated Insurance Claims

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Executive Summary

Statistics report that more than 400,000 sanitary sewer overflows (SSOs) occur annually in the United States. The frequency of SSOs has also increased in many communities during the last few years, particularly due to recent large storm events. SSOs can release sewage directly to the environment, such as onto streets, parking lots, waterways, and the ground, and also into buildings and other areas of private property. Municipalities have a legal responsibility to protect citizens and property owners from illness, injuries, and damages that may result from SSOs from the municipal sewer system. Municipalities also have insurance that provides coverage for claims filed against them associated with these failures.

Because sewer backups to private property account for approximately 40% of General Liability Insurance losses incurred by municipalities each year, the Massachusetts Interlocal Insurance Agency (MIIA) has put together this procedural guide to help develop or strengthen municipalities' plans for prevention of SSOs. The information contained in this document is designed to assist sewer division personnel and municipal officials with those issues important to the safe and efficient operation of a sewer system. Through sound operation of the system, as supported herein, MIIA hopes to help municipalities reduce the frequency and magnitude of SSOs and associated loss claims.

One of the most common excuses for not undertaking proper preventive maintenance of the sewer system is a lack of adequate staff and financial resources. However, the cost of prevention can be far less than SSO response and liability. In 2012, municipal insurance deductibles for sewer backup claims through MIIA ranged between $2500 and $10000 per incident. For communities where backups in the sewer system are a regular occurrence, payment of these deductibles adds up very quickly. As an example, a community with 20 sewer backup claims in a year could be paying out as much as $200,000 annually in insurance deductibles. In addition, municipal insurance carriers perform annual reviews and may increase deductible amounts for communities with more frequent or severe claims. Put in simple terms, any money saved through reducing preventive maintenance in the sewer system is likely expended tenfold on overtime for emergency response staff, payment of high insurance deductibles, and time spent by the municipality responding to SSO insurance claims.

This guide offers discussion and sample guidelines, checklists and report forms to assist municipalities to properly manage their sewer systems. The documents provided should be used as a guide to develop and implement a program customized to meet the needs of each individual municipality. They should not be used as a substitute for proper technical or legal expertise for activities related to each municipality's own sewer system.

Chapter 1: General Program Information

Overview

The frequency of sewer backup problems has increased in many communities during the last few years, particularly due to recent large storm events. Statistics report that more than 400,000 sanitary sewer overflows (SSOs) occur annually in the United States. All local governments have a responsibility to protect citizens and property owners from illness, injuries, or damages that may result from the failure of municipal stormwater and sewer systems. To reduce their exposure to costly claims and litigation, municipalities should ensure that:

- Existing sewer systems are adequately maintained through planned inspections and repairs;
- New sewer systems are designed and constructed according to appropriate industry standards;
- An emergency response plan is adopted in the event of sewer blockages or backups; and
- Property owners affected by sewer blockages or backups are promptly provided with the information and support they need.

The Massachusetts Interlocal Insurance Agency (MIIA) has put together this procedural guide to help develop or strengthen municipalities' plans for prevention of such incidents and for control of general liability losses. Discussion and sample guidelines, checklists and report forms have been provided to assist municipalities to understand and implement better programs. The ordinances, policies and procedural documents provided should be customized to meet the needs of each individual municipality, and the municipal Department(s) tasked with proper operation, maintenance, and management of the sewer system. Please note that this document should not be relied upon as a substitute for appropriate technical expertise or legal advice. Please contact your MIIA Loss Control Manager if you need further information or assistance.

System Design

Prevention of sewer system problems starts with proper design and construction. This document is not intended to discuss the science of sewer system design; however, the importance of proper design in the prevention of sewer system problems is important. New sewer system components, both public and private, must be designed by qualified engineers and installed in accordance with industry standard engineering specifications. Repairs or improvements to existing sewer components must also conform to current industry design and installation standards and be constructed by qualified and locally licensed drain layers.

Sewer Use Ordinance

The municipality must also have proper regulatory control for the sewer system. A comprehensive Sewer Use Ordinance (SUO) or Bylaw that thoroughly and clearly sets forth specific requirements/restrictions for use of the public sewer system is critical. At a minimum, the SUO should provide the municipality with appropriate

legal authority to regulate connections and use of sewers, enter upon the private property of users for the purpose of inspection, maintenance, and enforce the provisions of the SUO. The SUO should clearly define allowable and prohibited discharges to the sewer system, as well as detail specific provisions for industrial and commercial users. As examples, the SUO should:

- Require industrial users to comply with all federal, state, and local laws applicable to the wastes at their facility as set forth in the National Pre-treatment Standards.
- Require that commercial users (e.g., restaurants, laundromats, etc.) that discharge waste products that could contain excess grease or similar non-soluble products install and maintain grease traps.
- Prohibit all property owners from discharging storm and groundwater from sump pumps, downspouts, foundation drains, and other sources of "clean" water into the sanitary sewer system.

A properly written and enforced SUO helps eliminate discharges of inappropriate materials to the sewer system, and prevent associated problems with conveyance and treatment of the wastewater. The requirements of the SUO, particularly those related to prohibited discharges, should be clearly communicated to property owners/residents and prospective builders/developers on a regular basis.

Sample SUOs and Bylaws can be found on MIIA's website (www.emiia.org).

Legal Considerations

Municipal Liability

A release of raw sewage into a home or business, onto public ways, or into nearby rivers or streams, can not only cause real and personal property damage, but can also pose significant health problems, safety risks and environmental hazards. Sewage contains pathogens and allergens potentially harmful to humans, pets and wildlife. Such material can also contaminate physical structures, furniture, appliances, clothing, and other items of personal property. Because of the serious potential consequences, many government agencies, such as the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (DEP), and the Massachusetts Department of Public Health Division of Community Sanitation (DPH), strictly regulate the reporting, remediation and cleanup of SSOs and spills.

A municipality can be held legally liable for injuries or damages resulting from SSOs, including cleanup costs, if the SSO was in the municipal sewer system and was reasonably preventable. The law provides that a city or town owes its residents a duty to exercise "reasonable care" in the operation and maintenance (O&M) of a sewer system in order to keep the system free of obstructions. Further, a municipality is obligated to operate and maintain its sewer system so that it does not substantially and unreasonably interfere with a resident's use and enjoyment of his property. If a municipality breaches the duty of reasonable care, it may be held liable for negligence to an injured party for all damages caused by such breach. Alternatively (or additionally), if the municipality's sewer system O&M substantially and unreasonably interferes with a resident's use and enjoyment of his property, the municipality may likewise be held liable for creating a private nuisance. Yet, under both theories, some showing of culpability is required to support recovery; in short, a municipality cannot be held strictly liable (i.e., liable without fault) for SSOs and resultant harm.

Sewer backups often occur without municipal fault. For example, in the event of extraordinary rains, a sewer system may suddenly surcharge, resulting in a backup or overflow into neighboring homes and businesses. Alternatively, a private contractor or property owner may rupture or otherwise damage a municipal sewer line during excavation, construction or repair activities. And, occasionally, despite the diligent efforts of sewer division employees who routinely inspect and maintain municipal sewer lines, an unanticipated blockage may nonetheless result in a harmful backup.

Under certain circumstances, municipalities remain immune from liability to the victims of sewer backups. Thus, a city or town cannot be faulted for decisions concerning the layout or design of a public sewer system, or for making certain choices about the scope of its sewer maintenance program. Nor can a municipality be held liable if the backup resulted from a harmful condition not caused by municipal employees, or because the municipality mistakenly issued (or neglected to issue) certain permits or other approvals.

But where municipal officials are at fault and where no immunities are available, litigation may ensue and, when it does, it can be both costly and time-consuming. Limited municipal resources may quickly become strained by the demands of locating, assembling, and producing pertinent documents and records (some many decades old), providing required background information or testimony and, when necessary, attending and participating in a trial. This document does not address the specific types of actions or claims that may be brought in the wake of a harmful backup, nor does it detail the ensuing litigation process. In the event of a claim or legal action, counsel should be consulted to explain the highly technical legal and factual issues involved in defending the municipality against liability.

Liability Questions from Property Owners

In the event of a sewer backup, the municipality should promptly complete (among other documents) a Sewer Backup Follow-up Investigation report and forward it to the MIIA Claims Department within 24 hours of the investigation (see Appendix D). All municipal personnel should be instructed never to discuss any findings or observations regarding a sewer backup or its potential cause(s) with a claimant or with a claimant's insurer, adjuster or other service provider. Nor should the municipality share a copy of the Investigation report with anyone but MIIA. This is an important aspect of personnel training. If a citizen or his representative should raise questions about a backup or the municipality's responsibility for any cleanup or resulting harm, a municipal employee should politely advise the citizen or representative that MIIA is actively investigating the issues of coverage, liability and damages. Municipal employees are neither qualified nor authorized to discuss such issues. A MIIA Claims Representative will be happy to discuss the backup, including its potential cause(s) and resulting harm, with the citizen or his representative, on the municipality's behalf.

Keys to Avoiding Litigation

Often litigation over the injuries or damages caused by a sewer backup cannot be avoided, even when the municipality is free from fault. Still, litigation is less likely to ensue or, when a claim is made or suit is filed, a municipality is less likely to be found liable, if:

- A routine maintenance program is adopted and followed;
- Inspections and repairs are timely performed and thoroughly documented;
- Reports of problems are promptly addressed and thoroughly documented;
- Recurring problem areas are prioritized and timely corrected;
- Citizens are treated with respect, courtesy and patience;
- Citizen inquiries are responded to promptly (if possible), or referred to a MIIA Claims Representative; and
- Complete and accurate reports (including the Sewer Backup Follow-up Investigation report) are promptly provided to the MIIA Claims Department.

Failure to Act

It is important to balance the development of a sewer program to reduce sewer backup risk against consideration for the potential to create documents that could hurt in the defense of claims later. If a municipality fails to commit fully to the implementation of the program it develops, the written procedures, checklists and forms recommended in this document could serve as evidence that, for example, the municipality failed to follow established standard procedures or to address a known problem. This is not to say that these documents shouldn't be used, as they serve an important purpose in helping a municipality prioritize needs and allocate limited resources, but it is critical that all staff understand that failure to act as prescribed in an established program, or acting in a manner contrary to that program could open the municipality up to additional liability. All personnel with input to, control of, or participation in any element of a sewer program must be given proper training to thoroughly understand its goals, benefits and risks, in addition to the policies, procedures, and paperwork.

Five Steps to an Effective Sewer System Management Plan

This document provides a great deal of information relevant to proper management of a sewer system. This information can be summed up in our five steps to an effective sewer system management plan, which are:

1. **DOCUMENT IT** – (Complaints, Repairs, Maintenance)
   a. Log all complaints, repairs, maintenance (date, time, location, etc.) as per the Sewer Backup Intake Report
   b. Fully utilize the filing systems for complaints and responses
   c. Notify MIIA Claims Department

2. **MAP IT** – (Sewer Collection System)
   a. Size of system – length of pipe and number of manholes and other structures
   b. Location and connectivity of pipes, manholes, and other structures
   c. Numbering system for pipelines and manholes
   d. Identify problem areas

3. **TRACK IT** – (Log Complaints, Problems, Repairs)
   a. Track complaints
   b. Identify problem areas
   c. Fully track all relevant and proposed/current repairs

4. **FIX IT** – (Preventative Maintenance and Emergency Response)
   a. Schedule cleaning
   b. Track preventative maintenance schedule
   c. Utilize Repair Order Form
   d. Ensure personnel are trained to handle emergency response situations

5. TEACH IT – (Public Education)
   a. Brochures detailing cause of backups and overflows, options to prevent backups
   b. Educational Press Releases and Flyers

Technology & Documentation

Technology

Properly operating and maintaining a sewer system requires all assets be managed regularly to reduce the risk of catastrophic failure. This includes inventory, condition assessment, preventative maintenance, repair and capital improvement planning. Technology in the form of computer hardware and software should be used to efficiently conduct an asset management program. Tackling the implementation of technology in an asset management program is easiest using a phased approach.

There are multiple options for managing sewer system assets using software. It can be as simple as a spreadsheet or as sophisticated as a custom Computerized Maintenance Management System (CMMS) with several options in between. The basic components of each system are defined as follows:

Spreadsheets

Spreadsheets provide an inexpensive option for managing utility assets from condition assessments to preventative maintenance conducted. Forms can be completed on paper and keyed into a spreadsheet to categorize static asset information; age, condition, and immediate and/or future work needed. Spreadsheets provide the ability to sort and filter asset criteria based on the answer provided for a given question on the paper form. In order to fully maximize the integrity of the data collected it is suggested that answers are provided to the inspector in the form of multiple choice selections, i.e., condition = Poor - needs immediate attention, Fair - will require attention within 12 months, Good - may require attention in 24-48 months. Limiting the answer choices on the initial form will ensure the ability to extract consistent information through the use of spreadsheet sort and filter functions.

Limitations of spreadsheets include additional man-hours to re-key data collected in the field and human error which occurs during the data entry process. Because spreadsheets get saved as a single copy it prevents multiple employees from accessing and analyzing the data at the same time. This method is appropriate for small operations where multi-use access to the data is not a concern.

Mobile Data Collection

Utilizing a mobile data collection tool can enhance the efficiency of the condition assessment process and preventative maintenance in the field. Mobile platforms allow for the creation of forms inspectors use on mobile devices in the field. Many mobile data collection tools have enhanced logic capabilities allowing the form to show or hide additional questions based on the answer provided in specific fields. For example, if a condition question is answered ‘Good’ no additional questions are asked regarding condition; however, is the same question is answered ‘Poor’ the form would ask the inspector to identify the problem, describe work needed and/or take a picture of the asset. Another benefit is the ability to make specific questions required thus limiting the instance of missing information.

Mobile data collection platforms can offer varying levels of features such as, embedding pictures into the form, conducting calculations, validating data against a specific range or conditional values and providing warnings or errors if data is missing or is not within the expected range.

One key feature to investigate is the ability to operate the data collection tool offline, with no internet connection. Many sewer pump stations assets are located in multi-level structures with some assets below ground in a steel building where connectivity to the internet is sporadic. If the mobile data collection tool loses connectivity to the internet it is crucial that information is stored locally on the device and will be saved until connectivity is restored.

Collecting information digitally may allow the user to view trends in performance directly on the device while in the field. For example, sewer pump station daily inspections can provide a graph of pump runtimes that visually alert the user to an abnormal pattern in pump runtimes over a period of time.

Most mobile data collection platforms enable the end user to download collected information in the form of a spreadsheet. This reduces errors caused by handwriting analysis and data entry mistakes when using paper forms. Some platforms offer access to an application program interface (API) which can integrate data collected in the field into external computer applications. Integrating data with an API requires knowledge of both systems data structure and additional custom programming.

Geographic Information Systems (GIS)

Geographic Information Systems (GIS) is a tool that can be used for managing sewer assets that includes asset locations. GIS allows users to map assets, store static information about assets as well as attach electronic documents to that asset. Documents may include electronic inspections, CCTV inspections, record drawings and tie cards. GIS allows the user to locate assets in the field using a map view, generally the use of these maps in the field on a mobile device will require an internet connection.

Some GIS platforms have integrated mobile data collection tools that can be used for routine inspections in the field. If field data collection is integrated into GIS, static information about the asset can be pre-populated in the inspection form saving time in the field. The results of these inspections can then be symbolized within GIS to quickly and easily identify trends with assets and/or highlight critical assets in need of repair. Integrating inspection data in GIS would allow the user to drill-down into the inspection report as well as symbolize assets that are in immediate need of maintenance or repair.

Open-source Asset Management Software

A more cost-effective platform would be open-source asset management software. EPA offers Check Up Program for Small Systems (CUPSS), a free desktop asset management program for municipalities. The EPA's website describes the system as "CUPSS is a free, easy-to-use, asset management tool for small drinking water and wastewater utilities. CUPSS provides a simple, comprehensive approach based on EPA's highly successful Simple Tools for Effective Performance (STEP) Guide series. Use CUPSS to help you develop:

- A record of your assets,
- A schedule of required tasks,
- An understanding of your financial situation, and
- A tailored asset management plan.

The CUPSS package is an installed application that runs on one machine in a given location. There is no mobile platform that integrates with this software and requires the user to manually enter asset information and maintenance history. The added benefit of CUPSS is that it has a financial component which helps users calculate the annual costs of rehabilitation and replacement.

Computerized Maintenance Management System

There are multiple software packages available that maintain a computer database of information about an organization's maintenance operations, commonly referred to as Computerized Maintenance Management System (CMMS) or Enterprise Asset Management (EAM). These sophisticated systems contain components such as, Work Order Tracking, Preventive Maintenance, Predictive Maintenance, Asset Management, Inventory Tracking, Purchasing, Scheduling, and Budgeting.

These systems can be industry specific or more broad-based. Industry specific programs are inherently more adaptable for municipal use, however, systems that handle sewer assets proficiently may not be as ideal for other asset management within a municipality, such as facilities or pavement management.

These software packages offer a broad base of options which results in a higher start-up cost and can contribute to a complex and lengthy implementation process. It is recommended that key personnel, someone who understand the sewer system's maintenance and operation, be involved in the design and setup of the CMMS. Understanding assets, asset classes and how they relate, is integral to setting the foundation of any asset management system as well as defining likelihood of failure (LOF) and consequence of failure COF algorithms.

Mobile Devices

There are multiple options for choosing mobile devices that will perform field data collection. Some forms, depending upon the complexity, can run on a smart-phone, which may already be supplied to field personnel. Tablets range in size and price and it may be beneficial to purchase multiple tablets for a pilot to determine which option is the best. Any mobile device being used in the field should be protected with a ruggedized case to extend its life. When used in the field for maintaining sewer assets the device case should be waterproof or water resistant. If the mobile platform requires connectivity to the internet a device with cellular capability is critical.

There are many technology options available for developing a systematic approach to management and maintenance of sewer assets. If possible, pilot a small asset class to test the complete approach and

determine the optimal choice. Consider the scalability of the platform to ensure it is agile enough to grow as more assets are implemented. Check that the system is flexible and customizable to meet the needs of the departments overall asset management plan. Engage the end-users in the decision-making process, this helps to not only choose an option that fits their needs but develops buy-in and less resistance to implementing new technology. The most expensive part of any asset management system is the data development creation and updating.

Education & Training

A critical component of preventing sewer system backups and SSOs is regular and appropriate education and training for all individuals having association with the sewer system. From the highest elected official of a municipality down to a property owner depressing the lever on the toilet, everyone plays a part in preventing backups and SSOs and needs to understand their role. In addition, municipal employees responsible for operating and maintaining the sewer system require formal training.

Education

Education should be provided to a full range of stakeholders and through a variety of methods. Among other important facts, educational materials should explain:

- Typical causes of sewer backups and overflows;
- What activities the municipality undertakes to prevent backups and overflows;
- How to help prevent backups and overflows by avoiding the deposit of grease, non-soluble items, and wipes down drains and toilets;
- How and where to report backups and overflows, and what response actions are typically taken by the municipality;
- That significant financial investment by the municipality is required to properly operate, maintain, and improve the sewer system to prevent backups and overflows;
- That insurance endorsements are available to property owners to protect against damages from sewer backups.

Example educational materials for sewer personnel, as well as other municipal personnel and the general public, are provided in Appendix A of this document.

Qualifications and Training

Sewer employees must meet Federal, State, and local qualifications and licensing requirements, if any. In Massachusetts, licensing and associated training requirements for employees operating sewage treatment facilities are specified in the Code of Massachusetts Regulations (CMR), 257 CMR 2.00 CERTIFICATION

OF OPERATORS OF WASTEWATER TREATMENT FACILITIES, an official copy of which can be obtained from the State Bookstore or from the Secretary of State's CMR Subscription Service (unofficial copies can be downloaded from various websites including the Department of Environmental Protection). However, 257 CMR 2.00 does not specifically govern employees operating sewer collection systems; therefore, with the exception of safety and health training as per Federal and State labor laws, no licensing or training requirements currently exist for collection system staff.

In the absence of licensing requirements, the New England Water Environment Association (NEWEA) developed and implemented a voluntary Collection Systems Certification Program. This program, offering the examination and certification of wastewater collection system personnel in the New England States, was established in order to promote the employment of trained, experienced, reliable and efficient personnel for the operation of public and industrial wastewater works; and to establish standards and facilities whereby wastewater collection systems personnel can demonstrate proficiency. Sewer system employees should be strongly encouraged to earn this certification.

Collection system employees should also receive training and regular review on local policies and procedures related to operation of the sewer system, receipt of and response to complaints, recordkeeping, etc. In addition, employees should be trained on all aspects of the local sewer system Emergency Response Plan including, but not limited to:

- Sewer system inspection and cleaning methods, procedures, and equipment use;
- How to clear a sewer blockage without causing damage to downstream or neighboring properties;
- Methods to prevent (or mitigate) the threat to health, property and the environment from releases of sewage from the sewer system, and to clean up the sewage;
- Municipal responsibility for service laterals (as per local code, all or a portion of the lateral may be the responsibility of the property owner);
- Investigating and documenting conditions that might have caused the backup;
- Documenting any release of sewage to property or the environment, and especially any damage to private property;
- How to provide citizens with courteous, accurate information about overflows without suggesting cause or responsibility;
- When and how to refer property owner questions to the municipal insurance carrier;
- When and how to report complaints or claims to the insurance carrier;
- Documenting all actions taken and information gathered.

All training should be documented and updated at least annually.

Example documents to support training efforts are provided in Appendix B of this document.

Chapter 2: Proper Sewer System Management

Introduction

The primary goal of this document is to help municipalities develop and implement a program that, through proper management of the sewer system will prevent sewer system backups and overflows to the maximum extent possible, and should an overflow occur, will ensure staff takes immediate and appropriate corrective action to mitigate risks to health and property.

Capacity, Management, Operation and Maintenance (CMOM)

Recognizing the need to reduce the frequency and magnitude of SSOs, the U.S. Environmental Protection Agency (EPA) embarked on an effort to require owners of sewer treatment works to provide proper Capacity, Management, Operation and Maintenance (CMOM) for their sewer collection systems. In an effort to offer assistance, the EPA developed their CMOM Self-Assessment Checklist, a copy of which is included in Appendix C of this document. Municipalities should complete this checklist and develop and implement a Corrective Action Plan for addressing identified or perceived inadequacies.

Prior to the implementation of the CMOM Program, MIIA developed a similar checklist specifically designed to assist municipalities with the prevention (or reduction) of SSOs and associated insurance claims. A copy of this Sanitary Sewer Overflow (SSO) Prevention or Reduction Program Verification Checklist is provided in Appendix C. This checklist can be used as a quick reference specific to SSO prevention.

Preventative Maintenance

A primary goal of any sewer system program should be to reduce reactive, or emergency, maintenance by performing appropriate preventive maintenance on a regular basis. Municipalities should include the following minimum preventive maintenance components in their sewer system program:

- Schedules for planned inspection in every area of the sewer collection system, including all manholes and pipelines. Local conditions will determine the type and frequency of inspection needed for sewers and manholes. As a general guideline, it is recommended that inspection of the public sewer system take place every 18 to 36 months.
- Schedules for planned maintenance in every area of the sewer collection system, including cleaning of sewer lines where evidence of impeded water flow is identified. Local conditions and equipment will determine how frequently sewers and manholes should be scheduled for cleaning.
- Schedules for more frequent inspection and cleaning of known or potential problem areas, as identified by

sewer staff or consulting engineers (e.g., sewers with excess debris accumulation, intruding tree roots, flat slopes, etc.).

- Schedules for inspection and cleaning of pump stations. Pump stations should also be equipped with alarms that ring to a staffed location or on-call pager in the event of a power failure or high wet-well level, and an alternative power source to maintain a minimum level of service during outages.
- A process and schedule for inspection, maintenance, and improvement of municipally-owned portions of sewer service connections (if appropriate).
- A process for monitoring and gauging the impact on the sewer system of rainfall so that appropriate actions can be initiated as may be necessary to prevent or mitigate surcharging and SSOs;
- Procedures for avoiding an excess surge in downstream lines when removing blockages;
- A plan to identify, prioritize, and fund the repair or replacement of deteriorated system components;
- Appropriate methods for documenting inspection, maintenance, and improvement activities (see example inspection and maintenance forms in Appendix D).

If preventive maintenance cannot be completed at the scheduled time, a supervisor should be notified immediately and the activity rescheduled as soon as possible.

Sewer System Emergency Response Plan

Every sewer system owner should prepare, and regularly review/revise, an emergency response plan (ERP). The ERP should be developed to assure that applicable personnel are prepared to take timely and efficient action in the case of a sewer incident. Sewer system ERPs should include at least the following:

- Primary response personnel designated for each section of the municipality, including names, titles and emergency phone numbers (see example Reference & Emergency Contact List in Appendix D);
- Back up personnel to be contacted, should those in the primary response positions not be reached (see Reference & Emergency Contact List in the Appendix);
- A list of all emergency cleanup or pumping equipment, and where it is stored.
- Contact information for specialty contractors that may called upon 24-hours a day for materials, equipment, or services in the event of a sewer system emergency;
- Police and Fire Department non-emergency phone numbers for notification (if needed) that the municipality is responding to a sewer system emergency;
- Names and telephone numbers of regulatory or environmental agencies that may need to be notified in the event of sewer system emergency;

- Name and contact information for the assigned management personnel authorized to speak to the media in the event of a major problem that may affect the larger community or the health or safety of citizens. All personnel should know the name of the authorized media spokesperson.

In addition to general information relating to any type of emergency that might be experienced in the sewer system, every municipality should include sewer-related topics within their town-wide Hazard Mitigation Plan and also expand upon specific procedures for responding to sewer system backups and overflows. The latter is addressed in detail below.

Sewer Backup Response Procedures

Response to any report of a backup in the sewer system should be considered an emergency due to the health and environmental risks associated with the release of sewage from the system. Sewer system owners should develop and implement standard procedures for responding to backups, with additional steps to be taken in the event that the backup results in an overflow from the system into a building or to the environment (e.g., street, ground, etc.)

Office Response to a Citizen Report

Proper response by municipal personnel when receiving a report of a sewer backup can greatly reduce the anxiety of the person making the report. The person should be treated with consideration and empathy, especially when the report involves sewage overflowing on the person's property. The report should be accepted, or quickly referred, and the following minimum information collected and documented in writing (an example Sewer Backup Intake report is provided in Appendix D):

- The location of the sewer backup, including street address and nearest cross street;
- A brief description of the scope and magnitude of the problem, including whether sewage is being released and, if so, to where;
- Any immediate risks to people and property;
- Name and telephone number of the person making the report (so that additional information can be collected if needed, or a return made to advise of findings and/or progress);
- Name and contact information for the property owner or manager (if not the caller).

The person making the report should also be provided with the following minimum information:

- Expected response action by the municipality and an estimated timeframe;

- Suggestions for proper precautions that may be taken to minimize risks to health and property.
- If the overflow is to private property, a recommendation that the property owner report the overflow to his/her property insurance agent.

Field Response to a Citizen Report

Timely action taken by field response personnel is critical in minimizing risks to health and property in the event of a backup, and especially a SSO. Equally important is treating the person making the report courteously and professionally, and showing respect for the owner's property and possessions. An example Onsite Sewer Backup Assessment form to assist with response procedures and documentation is provided in Appendix D. In brief, the procedures include the following:

- Follow established sewer backup and SSO procedures as provided in the municipality's ERP discussed above;
- Delegate one person to be the point of contact for property owners;
- Explain to the owner what actions will be taken to investigate the reported backup/overflow, including advising the owner that the backup may be the property owner's responsibility;
- If need arises to enter upon private property, always request permission from the owner (or in the absence of the owner, the occupant);
- Do not enter the property alone;
- Inspect and photograph the sewer backup area and take steps to protect people and property that may be at immediate risk;
- Take necessary steps to determine the cause and location of the backup:
    - Check the flow in manholes above and below the backup location;
    - If necessary, televise the sewer line(s) to identify and document the problem (see example Sewer Inspection & Maintenance Report in Appendix D)

<u>Blockage is Municipal Responsibility</u>

If the blockage is confirmed or suspected to be in the municipally owned sewer main or municipal portion of the service connection (if applicable), quickly arrange to correct the problem and mitigate any SSO.

- If a blockage has caused the backup, remove the cause of the blockage and try to preserve it as evidence;
- If possible, pump out the blocked area first, to avoid excess downstream surge;
- Upon relieving the blockage, advise the person who reported the problem and/or a supervisor (if part of your municipality's standard procedures).

If the backup resulted in a release of sewage to public or private property (SSO):

- If the SSO was to public property, clean and sanitize the area.
- If the SSO was to private property, follow established municipal procedures as to whether or not to provide assistance with initial cleanup (e.g., removal of water and sewer solids). Otherwise, if authorized, provide the municipality's list of local cleaning companies or suggest they use the yellow pages. Do not make recommendations.
- If the SSO was to private property, thoroughly document all observation and actions (see example Sewer Inspection & Maintenance Report in Appendix D), including photographing the impacted area if possible.
- Never discuss with the property owner fault, liability for damage, or other matters of legal claim. Instead, refer the property owner to the municipal insurance carrier (MIIA) claims department, who will investigate and make final decisions regarding responsibility based on the facts;
- Before departing, provide the property owner with the name and telephone number for the established point of contact for sewer overflow incidents in the event that the owner has questions or needs more information.

Blockage is Owner's Responsibility (Private Portion of Sewer Service Connection)

If the blockage is confirmed or suspected to be in a privately owned sewer main or private portion of the service connection (if applicable):

- Clearly explain the inspection findings and that the problem falls within the responsibility of the property owner.
- If authorized, provide the municipality's list of local plumbing/sewer line inspection and repair companies or suggest they use the yellow pages. Do not make recommendations.
- Before departing, provide the property owner with the name and telephone number for the established point of contact for sewer overflow incidents in the event that the owner has questions or needs more information.

Sewer Backup Documentation and Reporting

SSO Reporting

The municipality is legally bound to report SSOs of municipal responsibility to the EPA and the DEP. SSOs must be reported by telephone within 24 hours of initial observation, followed by a written report within five days. A copy of the required DEP Sanitary Sewer Overflow (SSO)/Bypass Notification Form, and associated instructions are included in Appendix E. Since this form could have legal consequences for the municipality and signatory, it is recommended that sewer staff seek advice and review by an appropriate municipal official or, ideally, counsel.

In addition, the EPA requests that municipalities also report any SSOs of private responsibility that they may have occasion to observe. As stated on the DEP form discussed above, private SSOs should not be

reported on the municipal form. It is recommended that the municipality develop and utilize a separate form for reporting private SSOs, which easily differentiates private and public SSOs, and provides for a written record of private SSOs. An example form for reporting observed SSOs of private responsibility is also provided in Appendix E.

In addition, all SSOs to private property should be reported to the MIIA claims department within 24 hours. MIIA requests that municipalities submit the following documentation, copies of which are provided in Appendix D:

- A completed Initial Sewer Backup Intake Report. This form should be filled out upon receiving the initial report of a sewer backup.
- A completed Onsite Sewer Backup Assessment report. This form should be filled out during the site visit, answering all questions on the report that can be reasonably determined.
- A completed Sewer Backup Follow-up Investigation report. Additional follow-up investigations may also be important, particularly if there has been any question as to responsibility for the backup, or if something could be done to improve future responses.

Copies of all reports, documentation, and causal evidence should be forwarded to the designated municipal personnel and to MIIA's claims department.

Documentation

Regardless of the cause or responsibility for the backup, the incident and response actions should be thoroughly documented in writing. Documenting sewer backup incident investigations is important for providing insurance coverage information and reducing the risk of litigation against the municipality. Accurate information helps MIIA establish claim responsibility. If a claims examiner is contacted by a claimant, it is critical that they have been provided with accurate information about the incident, so they can discuss liability issues and options for the claimant.

Documentation of sewer backups is also important for proper management, operation, and maintenance of the sewer system. An analysis of the frequency and severity of sewer backup incidents can provide information to identify vulnerable areas of the system, the need for changes in inspection schedules, and/or a lack of accountability by personnel. Identification of problems is also critical in preventing future backups.

Infiltration and Inflow Control Plan

In 2014, the Massachusetts Department of Environmental Protection (DEP) revised the operation regulations at 314 CMR 12.00, *Operation, Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Dischargers* to require all sewer system authorities to develop and implement a plan to control infiltration and inflow (I/I) to the sewer system. Extraneous water from I/I sources reduces the capacity and life of sewer and treatment facilities, which transport and treat domestic and industrial wastewaters. The mitigation of I/I by sewer system rehabilitation and inflow source removal, combined with an ongoing operation and maintenance program, is essential to protect the significant capital investment in sewers and wastewater treatment facilities as well as for the protection of the environment.

Changes to the regulations now require sewer system authorities to develop and implement an ongoing I/I program. This I/I program should be designed to provide a phased evaluation, using DEP guidance, to identify and eliminate excessive I/I sources. In addition, the I/I program should develop the framework for mitigation for new sewer connections to systems.

By December, 2017, sewer service authorities must submit an I/I Analysis, based on DEP's *Guidelines for Performing I/I Analyses and Sewer Systems Evaluation Survey, dated May, 2017.* In addition, they must assess the risk for sanitary sewer overflows for the 5 year, 24 hour storm event. Finally, sewer system authorities must provide information on their ongoing I/I program. In situations where a sewer system authority has completed the assessment, and are in the process of implementing the recommended actions identified, those plans, along with an update of what's been completed and a schedule, should be submitted to DEP as well.

MIIA Risk Management

Appendix

APPENDIX A: EXAMPLE PUBLIC EDUCATION MATERIALS

APPENDIX B: EXAMPLE EMPLOYEE TRAINING MATERIALS

APPENDIX C: SEWER PROGRAM ASSESSMENT CHECKLISTS

APPENDIX D: EXAMPLE FORMS & DOCUMENTATION

APPENDIX E: FEDERAL AND STATE SSO REPORTING FORMS

Appendix A: Example Public Education Materials

The following public educational materials are offered for your use and/or customization, in developing a comprehensive sewer backup loss prevention training program for your municipal employees.

Feel free to incorporate whatever materials may be useful to you, change them in any way that meets your needs, and add your own letterhead and/or seal.

Facts about Sewer Backup Incidents for Homeowners & Residents

Sewer backups are an unfortunate but common problem in U.S. cities and towns. Although municipal departments make every effort to prevent such incidents, they still may occur. The following information is offered to help property owners and residents understand why backups happen, how they can be prevented, and what steps citizens should take if a sewer backup affects their property. The following questions and answers may be helpful**:**

What causes a sewer backup?

Sanitary sewer overflows can be caused by a number of factors. They usually involve sewer pipe blockages in either main sewer lines or service laterals (lines between buildings and the main line). Causes may include pipe breaks or cracks due to tree roots, system deterioration, insufficient system capacity due to residential or commercial growth, or construction mishaps. In home and office plumbing systems, the main cause is accumulation of grease, tree roots, hair, or solid materials, such as disposable diapers, sanitary napkins or wipes that are too large for wastewater pipes to handle. Such materials may cause major backups in municipal lines as well as in residents' lateral lines. A frequent cause of water stoppages within the municipality's system, however, is vandalism. Leaves, sticks, rocks, bricks and trash have been found stuffed down manholes. We hope you will report observations of any such activity.

How could a sewer backup affect me?

If the backup occurs in a municipally maintained line, the wastewater will normally overflow out of the lowest possible opening, which is usually a manhole. However, in some homes—especially those with basements, or where the lowest level is even with the sewer lines—the overflowing wastewater may exit through the home's lower drains and toilets.

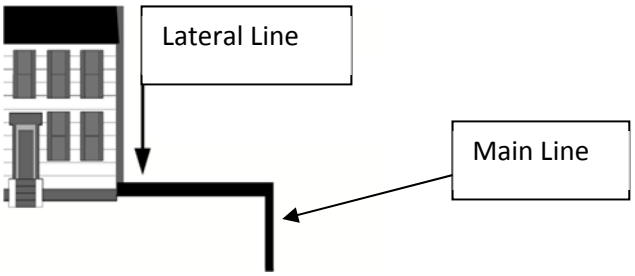
What should I do if sewage backs up into my home?

First, take action to protect people and valuable property:

- Keeping in mind that ceramic plumbing fixtures such as toilets are fragile, quickly close all drain openings with stoppers or plugs. Tub, sink, and floor drains may need additional weight to keep them sealed. A string mop can be used to help plug toilet openings.
- Don't run any water down your drains until the blockage has been cleared.
- A quick check with nearby neighbors will help determine if the backup appears to be in your neighbor's wastewater line, and/or widespread in your neighborhood. In this case, call the Department of Public Works immediately. Numbers are listed at the end of this flyer.
- Call a plumber if the problem is in your lateral service line.
- Call your property insurance agent.

If I call the municipality, what will they do about a sewer backup onto my property?
When you call to report a backup:

- You will be asked questions about the backup timing, location, the property at risk, etc.
- Sewer department personnel will check for blockages in the main line. If found, the blockage will be immediately cleared.
- If the main line is not blocked, you will likely be advised to call a plumbing or sewer contractor to check your lateral line, since maintenance and repair of the lateral line is the owner's responsibility in most municipalities. *(See diagram below.)*



- To minimize damage and negative health effects, you should arrange for cleanup of the property as soon as possible. There are qualified businesses that specialize in this type of cleanup.
- If the sewer backup onto your property resulted from blockage in the main sewer line, sewer department personnel will explain what the municipality can immediately do to help take care of the problem.

Is there anything I can do to prevent sewage backup into my home?
Property owners can take the following steps to help prevent sewage backups:

- Avoid putting grease down your garbage disposal or household drain. It can solidify, collect debris and accumulate in municipal lines, or build up in your own system.
- Never flush disposable diapers, sanitary napkins, paper towels or wipes down the toilet. They could stop up your drains and may damage your plumbing system.
- If the lateral line in your older home has a jointed pipe system, consider whether the roots of large shrubs or trees near the line could invade and break pipes. It is a good idea to know the location of your lateral line(s). Property maps can often be acquired from your municipal planning department.
- If the lowest level of your home is below ground level, such as a basement floor drain, it may one day be affected by a backup. One way to prevent sewage backup through such below ground areas is to install a "back-flow valve" on the lowest drain(s). You can also use a plumber's test plug to close these drains when not in use.
- For further information about preventive measures, contact a plumber or plumbing supply dealer.

What does the municipality do to prevent this problem?
The following general actions are taken by the municipality to prevent sewage backups:

- Every attempt is made to prevent backups in the public wastewater system before they occur. Sewer lines are specially designed to prevent accumulation and stoppages.
- In addition, we have maintenance crews that are devoted to inspecting and cleaning wastewater lines throughout the municipality on a regular schedule.
- Degreasing chemicals are also injected into lines in areas that are prone to stoppages, such as those near restaurants, apartments or high-density housing developments.
- Even with our maintenance schedule, however, backups are often beyond the municipality's control. Most that do occur are confined to the sewage pipeline, rather than backing up into a home.

Will insurance cover any damage to my home or property?
In the majority of cases, a special rider will need to be added to your homeowner's or renter's insurance policy to cover damages related to sewage backups or water damage. This optional coverage is usually not very expensive, but you must usually request that it be added to your policy. Check with your insurance agent about this policy provision.

The municipality cannot assume financial responsibility for damages resulting from sewage backups, since most stoppages are related to conditions that are beyond the municipality's control. That is why it is important that property owners confirm that they are adequately insured—particularly if areas of their home lie below ground level.

How and where should I report a sewer backup?
Emergency crews are on call 24 hours a day to assist you. In an emergency such as a sewer line backup, or if you observe any vandalism associated with the wastewater or sewer lines, contact the department:

Phone Number	Days	Hours
( )	Monday to Friday	a.m. to p.m.
( )	weekends and holidays	24 hours

Coping with a Sewer Backup

(Insert municipal seal and appropriate contact information for sewer backups)

If you have a backup, call us at _____ (during working hours) _____ (after hours). We will dispatch a maintenance crew to your address to find out if the stoppage is in the municipal main or your private line (sewer lateral). If the sewer main is found to be clear, it is the responsibility of the property owner to call a licensed plumber or drain service to correct the problem. The municipality cannot recommend any plumber. Check your Yellow Pages or Business White Pages. You may want to get at least three estimates from reputable plumbers. Check references to be sure you're dealing with a reputable plumber.

The municipality will not pay for private plumber bills unless the municipality directs that a plumber be called to solve a problem that is the municipality's responsibility. If the stoppage is in the municipal main we will fix it as quickly as possible and keep you informed about what is being done.

A sewer backup creates a stressful and emotional situation for all affected parties. Potentially it may cause health and safety exposures as well as significant property loss. Proper responses to sewer backups can greatly minimize losses from negative health effects and property damages. Every backup is unique and will require different responses but there are some universal principles that can be applied to all situations.

Sewer backup can lead to disease, destruction of your valuables, damage to your house, and the risk of electrocution. Prompt cleanup of affected property can help minimize the inconvenience and damage. ***You should immediately arrange for a thorough, professional, sanitized cleanup of your affected property***:

- If a dishwasher, washing machine, shower, bathtub, toilet or other water fixture is operating shut it off immediately.
- Quickly close all drain openings with stoppers or plugs. Tub, sink and floor drains may need additional weight to keep them sealed. A string mop can be used to help plug toilets.
- Keep children and animals out of the affected area.
- Potential health and safety hazards must be identified and, if possible, eliminated prior to implementing cleaning or restoration procedures. Before entering the affected area the potential for electrical shock hazards and gas leaks must be assessed.
- Unplug all electrical appliances, small electrical devices on wet floor covering or other wet areas and turn off the circuit breakers supplying electricity to affected areas.
- Turn off the gas (or other fuel source) to your furnace or heater and hot water heater.

- Call the department of Public Works. Wastewater employees will check to make sure our main lines are not plugged.
- Move any uncontaminated property away from the affected areas.
- Take before-and-after photos of the affected areas.

Sewage and floodwaters contain bacteria and other hazardous microorganisms. These can be transmitted by touching contaminated items or by tracking them into uncontaminated areas on shoes. Children and pets are especially vulnerable. Frequent hand washing with hot, soapy water is an important preventative measure. Wear waterproof boots or waders and heavy-duty rubber gloves and eye protection. To remove gloves, turn them inside out, without touching the contaminated exterior. Dispose of them properly.

Cleaning and sanitizing is most effective when performed by professional service companies. Check your Yellow Pages or Business White Pages for reputable Service Company. A thorough cleanup should include, but is not necessarily limited to, the following:

- Treat all water soaked surfaces, furnishings and items as unhealthy until properly cleaned and sanitized.
- Do not use any electrical equipment while standing in water.
- Wet-vacuum or remove spillage
- Operate wet vacuums only when plugged into a ground fault circuit interrupter or ground fault equipped outlet.
- Mop bare floors and wipe walls with a bleach solution, soap and disinfectants. Bleach solutions (one part bleach to ten parts water) are the most effective disinfectants, but may cause discoloration of many materials.
- Flush out and disinfect plumbing fixtures.
- Remove and discard carpet and steam clean or discard drapes.
- Remove and discard upholstered furniture and porous wood furniture stained by sewage.
- Sanitize and clean hardwood furniture, then thoroughly wipe, dry and apply an oil-based wood polish.
- Sanitize and repair, or remove and discard, paneling, wallboard or wall coverings.
- Clean up appliances or ductwork. If electric motors, wiring or insulation have been saturated have a qualified service technician to remove the motor, dry it, and inspect for damage before plugging them back in and turning them on.
- Ventilate the affected area with floor fans and a dehumidifier, if available, to properly

dry the area. If it has not been directly contacted by water, activate the building's heating, ventilation and air-conditioning (HVAC) system, turn on exhaust or ceiling fans and open windows and doors when conditions are favorable.

- Do not use heat to dry closed building interiors; mildew and expanded water damage may result.
- After the initial cleaning, a second sanitized cleaning should take place.

For More Information Call: *(Insert Department and Telephone Number Here)*

Internet Resources for Additional Public Utility Information

1. The **American Water Works Association** (AWWA) 6666 West Quincy Ave, Denver, Colorado 80235, Phone: (800) 926-7337(4) Fax: (303) 794-8915 www.awwa.org .

   The AWWA is an international nonprofit scientific and educational society dedicated to the improvement of drinking water quality and supply. Members represent treatment plant operators and managers, scientists, regulators, environmentalists, manufacturers, academicians, and others interested in water supply and public health. This website offers technical resources, conference papers, online training for the water industry, and a variety of electronic links of interest to the drinking water community.

   www.awwa.org/links.cfm lists all existing utility districts by State/Province, with links to each individual water district's Web page. This page also directly links to dozens of other Web pages for government updates, water related news, water quality and pollution, international water sites, water resources and education sites, water related organizations and much more.

2. **National Environmental Health Association**, 720 S. Colorado Blvd., Suite 970-S., Denver, CO 80246-1925, Phone: (303)-756-9090, www.neha.org

   The National Environmental Health Association **(NEHA)** had its origins in the state of California where it was incorporated in 1937 to establish a standard of excellence for environmental health practitioners. Today, the association offers seven national credential programs for technicians and a variety of educational conferences, workshops and publications.

3. **Local Government Environmental Assistance Network**, www.lgean.org

   The Local Government Environmental Assistance Network (LGEAN) is a "first-stop shop" providing environmental management, planning, funding, and regulatory information for local government elected and appointed officials, managers and staff. LGEAN enables local officials to interact with their peers and others online. It also manages a toll-free telephone service (877/865-4326) and has a Consultants Directory that enables local government officials and other users to identify and contact consultants who perform specific environmental services.

4 . **California State University Sacramento Office of Water Programs**, www.owp.csus.edu/

   The Office of Water Programs at the (CSUS) College of Engineering and Computer Science provides distance learning courses for persons interested in the operation and maintenance of drinking water and wastewater facilities. Their training programs were developed for the U.S. Environmental Protection Agency by people who explain, through the use of manuals and videos, how they operate and maintain their facilities.

5. **Association of Metropolitan Sewerage Agencies**, 1816 Jefferson Place, NW, Washington D.C. 20036-2505, Phone: (202) 833-AMSA, Fax (202) 833-4657,

   www.amsa-cleanwater.org

   AMSA represents the interests of over 300 public agencies and organizations whose objective is scientifically based, technically sound and cost effective laws and regulations for clean water. AMSA maintains a key role in the development of environmental legislation, and works closely with federal regulatory agencies in the implementation of environmental programs. Membership, conferences and publications are offered on the Web site.

6. **American Public Works Association**, www.apwa.net

   The APWA is an international educational and professional association of public agencies, private sector companies, and individuals dedicated to providing high quality public works goods and services. With 67 chapters throughout North America, APWA provides a forum in which public works professionals can exchange ideas, improve professional competency, increase the performance of their agencies and companies, and bring important public works-related topics to public attention in local, state and federal arenas. Current and archived reports of legislative activities are listed and described on the site.

7. **United States Environmental Protection Agency**, **Office of Wastewater Management**,

   www.epa.gov/OWM/ The EPA's Wastewater Management Web Page features a variety of types of information for the water industry. An index links to a long list of alphabetized water topics, including Sanitary System Overflow. A showcase provides information for environmental educators regarding outstanding products related to nonpoint water pollution. Resources come in a variety of formats -- publications, videos, classroom materials, etc.

8. **Water Environment Federation** (WEF), Alexandria, VA, (800) 666-0206, www.wef.org

   Founded in 1928, WEF is a not-for-profit technical and educational organization with members from varied disciplines who work toward the WEF vision of preservation and enhancement of the global water environment. The WEF network includes more than 100,000 water quality professionals from 79 Member Associations in 32 countries. The Website lists workshops, conferences and water legislation updates.

9. **Massachusetts Department of Environmental Protection** (DEP) http://www.mass.dep

   The Massachusetts Department of Environmental Protection (MassDEP) is a state agency responsible for protecting human health and the environment by ensuring clean air and water, the safe management and disposal of solid and hazardous wastes, the timely cleanup of hazardous waste sites and spills, and the preservation of wetlands and coastal resources. The website includes helpful information for consumers, businesses and municipalities notice of public hearings and legislative updates.

How do Sewer Overflows Occur?

During periods of heavy rain, the volume of wastewater that flows to a sewage treatment plant can exceed the capacity of the collection and treatment facilities.

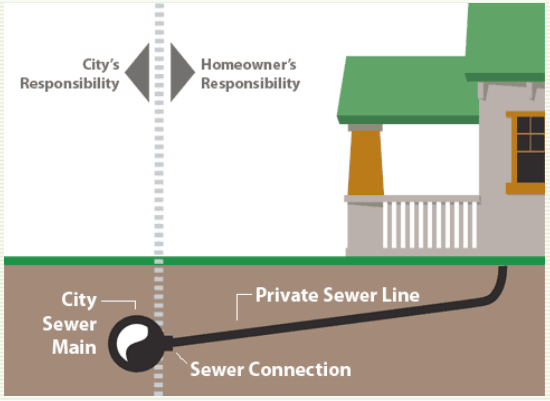
Wastewater can also back up into your home when there is a blockage in the public sewer line or in your sewer service lateral.

Sewage contains bacteria, viruses and other organisms that can cause illness.

This brochure will provide you with information regarding sanitary sewer systems and what you can do as a resident to prevent sewer backups in your home.

How Does the Sewer System Work?

Homes connected to the municipal sewer system contain a service lateral line that connects to the municipal sewer main. In many communities, the service lateral is privately owned.



Waste travels from your home's plumbing system through the lateral to the municipal sewer main. Waste then travels through the municipal sewer mains to a wastewater treatment facility where the waste is properly managed.

What Can Residents Do To Prevent Sewer Overflows?

☑ Pour fats, oils and grease (FOG) into a heat-resistant container and dispose of it in the garbage (after it cools).

✗ Do not pour FOG down the drain.

☑ Dispose of paper products and household trash with solid waste (trash).

✗ Do not flush diapers, wipes or sanitary products down your toilet.

☑ Dispose of food scraps in the garbage with solid waste.

✗ Do not use the toilet as a wastebasket.

These items can block sewer lines resulting in a backup or overflow in your home.

What Can Residents Do To Prevent Sewer Overflows?

✔ Use green cleaning solutions or household chemicals until chemical container is empty and discard empty containers in the trash.

✘ Do not flush household cleaners down the toilet or pour down the drain.

Household chemicals can kill "good" bacteria used for sewage treatment.

✔ Choose and plant trees carefully.

✘ Do not plant trees with shallow, spreading root systems near your sewer service lateral.

Tree roots seek water sources, such as through cracked sewer lines. Once roots have penetrated the sewer line, they can create a dense mat and cause blockages.

Resident Responsibilities

In many communities, residents are responsible for the care and maintenance of the lateral sewer up to its connection with the municipal sewer main.

Residents may consider installing backflow prevention devices to the lateral lines on their property if overflows occur on a frequent basis.

Who do Residents Contact if a Sewer Backup Occurs?

Residents should contact city/town officials immediately if a backup or overflow occurs.

Residents should contact their homeowner's insurance carrier immediately to report property damage resulting from an overflow.

Preventing Sewer Overflows in Your Home

A Guide for Massachusetts Residents

Massachusetts Interlocal Insurance Association
One Winthrop Square
Boston, Massachusetts 02110

APPENDIX B: Example Employee Training Materials

The following sample test, answer key, and training materials are offered for your use and/or customization, in developing a comprehensive sewer backup loss prevention training program for your municipal employees.

Feel free to incorporate whatever materials may be useful to you, change them in any way that meets your needs, and add your own letterhead and/or seal.

(Your Municipal Letterhead)

(Your Municipal Seal)

Sewer Backup Training Review

Employee: _____

Department/Division: _____

Supervisor/Trainer: _____

Training Date: _____

TRAINING REVIEW – SEWER BACK-UP INCIDENTS

1. List at least three (3) basic steps a municipality should take to maintain the integrity of its wastewater system:
   a. _____
   b. _____
   c. _____

2. Name three (3) requirements of our Sewer Use Ordinance that are the responsibility of property owners:
   a. _____
   b. _____
   c. _____

3. In our community, how often are sewer systems to be inspected for maintenance and repair purposes?

4. List three (3) basic steps that should be taken onsite when responding to a sewer backup report:
   a. _____
   b. _____
   c. _____

5. If a sewer backup is found to have been caused by blockage in the city's main line, what information should be conveyed to the property owner/resident?

   _____

   _____

6. If a sewer backup is found to have been caused by blockage in the property's lateral line, whose responsibility is it to correct the problem?

   _____

   _____

7. List three (3) things residents can do to help prevent sewer backup problems:

   a. _____

   b. _____

   c. _____

8. Name three (3) reasons why thorough, documented follow-up investigations of backups can be invaluable:

   a. _____

   b. _____

   c. _____

9. At a minimum, verbal notification of sewer backups/overflows should be forwarded to the following:

   a. _____, within _____hours.

   b. _____, within _____hours.

10. At a minimum, written notification of sewer backups/overflows should be forwarded to the following:

   a. _____, within _____hours.

   b. _____, within _____hours.

   c. _____, within _____hours.

TRAINING REVIEW – SEWER BACK-UP INCIDENTS (ANSWER KEY)

1. List at least three (3) basic steps a municipality should take to maintain the integrity of its wastewater system:

   1) *Assure that sewers are correctly designed and installed*
   2) *Enforce a Community Sewer Use Ordinance*
   3) *Maintain an adequate schedule of inspections and repairs*
   4) *Provide Sewer Policy & Procedures training for employees*
   5) *Monitor rainfall for adequate staffing of pump stations*

2. Name three (3) requirements of our Sewer Use Ordinance that are the responsibility of property owners:

   Reference things in municipality's ordinance; examples:
   1) *Back-flow preventers required for all new construction*
   2) *All restaurants and Laundromats must install grease traps in new or repaired connections*
   3) *Sump pumps and downspouts may not be directed into the sewer system*

3. In our community, how often are sewer systems to be inspected for maintenance and repair purposes? *(to be determined by each municipality, 18 - 36 months is recommended)*

4. List at least three (3) basic steps to be taken onsite, when responding to a sewer backup report:

   1) *Treat property owners with consideration and respect their anxieties.*
   2) *Explain what the crew will be looking for.*
   3) *Take steps to protect people and property at risk.*
   4) *Investigate and determine the cause of the backup.*
   5) *Correct the problem if it is in the main line.*

5. If a sewer backup is found to have been caused by blockage in the city's main line, what information should be conveyed to the property owner/resident?

   Explain that a complete report of the incident will be forwarded to the city/town insurance coordinator.

6. If a sewer backup is found to have been caused by blockage in the property's lateral line, whose responsibility is it to correct the problem?

   Determined by Ordinance/Bylaw for each municipality (state that appropriate for your community).

7. List three (3) things residents can do to help prevent sewer backup problems:

    1) *Avoid putting grease down drains or garbage disposals.*
    2) *Never flush disposable diapers, sanitary napkins or paper towels down the toilet.*
    3) *Avoid planting trees or large shrubs over lateral sewer lines.*
    4) *Install back-flow preventers in drains located below ground level.*
    5) *Periodically have drains cleaned out in older homes.*
    6) Purchase an insurance coverage endorsement for sewer backup damage.

8. Name three (3) reasons why thorough, documented follow-up investigations of backups can be invaluable:

    1) *They can help analyze the need for changes in the sewer maintenance or management system.*
    2) *They can help the insurance carrier accurately determine claim responsibility.*
    3) *They can provide critical documentation in the event of litigation against the municipality.*

9. At a minimum, verbal notification of sewer backups/overflows should be forwarded to the following:

    1) *U.S. EPA Region 1 within 24 hours.*
    2) *M.A. DEP within 24 hours.*

10. At a minimum, written notification of sewer backups/overflows should be forwarded to the following:

    1) *MIIA within 24 hours.*
    2) *U.S. EPA Region 1 within five days.*
    3) *M.A. DEP within five days.*

FIVE STEPS FOR AN EFFECTIVE SEWER MANAGEMENT PLAN

STEP 1 - DOCUMENT IT

Complaints, Repairs, Maintenance

Log all complaints (Date, Time, Location)
Filing system for complaints and responses
Computer tracking system
Notify MIIA Claims Department

STEP 2 - MAP IT

Wastewater treatment and collection system

Size of system – length of pipe and number of manholes and other structures
Location and connectivity of pipes, manholes, and other structures
Numbering system for pipelines and manholes
Highlight problem areas

STEP 3 - TRACK IT

Log complaints, problems and repairs

Track complaints
Identify problem areas
Document repairs

STEP 4 - FIX IT

Preventative maintenance and emergency response

Schedule inspection, maintenance, and cleaning
Track and re-evaluate preventative maintenance
Use maintenance/repair forms or software
Emergency Response - train personnel to handle emergency situations

STEP 5 - TEACH IT

Public education

Brochures detailing cause of backups and overflows, options to prevent backups
Press Release

SEWER BACKUP RESPONSE PLAN

DOCUMENTED WRITTEN PLAN SHOULD INCLUDE

List of emergency cleanup equipment- where stored and pick up location
List of all available emergency personnel – primary and backup
List of available cleanup and lateral sewer line repair contractors
List of regulatory agencies that may need notification
Name of person authorized to speak to media

INITIAL RESPONSE – PHONE CALL

Be courteous and professional but stick to the facts
Suggest precautions resident might take before emergency crew arrives
Document call and response

FIELD RESPONSE

Follow your department procedures
Delegate one person to deal with residents
Be professional and courteous
Explain need to determine cause of backup and location
Advise resident that backup may be their responsibility

OUTSIDE RESIDENCE

Determine location of blockage
Locate and open 'clean out'
Check main line for clear flow
Video inspection of lines
Document location of blockage and size of backup

INSIDE RESIDENCE

Don't enter residence alone
Take pictures of affected areas and damaged items
Explain what will happen next
If authorized offer list of contractors
Give contact number

APPENDIX C: Sewer Program Assessment Checklists

The following checklists are offered for your use in assessing your municipal sewer program. The EPA Capacity, Management, Operation and Maintenance (CMOM) Self-Assessment Checklist is a lengthy questionnaire designed to help municipalities understand the many factors that must be addressed for a comprehensive sewer program. Municipalities should complete this checklist and develop a Corrective Action Plan for addressing identified or perceived inadequacies.

The MIIA Sanitary Sewer Overflow (SSO) Prevention or Reduction Program Verification Checklist is a brief questionnaire specifically designed to assist municipalities with prevention of SSOs and associated insurance claims.

United States Environmental Protection Agency, EPA New England

January 2007

(New England Chapter 3 to the Guide for Evaluating CMOM Programs)

Wastewater Collection System CMOM Program Self-Assessment Checklist

Put an "A" in the final column for an issue you intend to address with future action, or leave blank if you have evaluated your program as sufficient.

I. General Information – Collection System Description

Question	Response	*Action
How many people are served by your wastewater collection system?		
What is the number of service connections to your collection system? How many: Manholes, pump stations? feet (or miles) of sewer, force mains? siphons?		
What is the age of your system (e.g., 30% over 30 years, 20% over 50 years, etc.)?		
What type(s) of collection system map is/are available and what percent of the system is mapped by each method (e.g., paper only, paper scanned into electronic, digitized, interactive GIS, etc.)? When was the map(s) last updated?		
If you have a systematic numbering and identification method/system established to identify sewer system manhole, sewer lines, and other items (pump stations, etc.), please describe.		
Are "as-built" plans (record drawings) or maps available and used by field crews in the office and in the field?		
Describe the type of asset management (AM) system you use (e.g. card catalog, spreadsheets, AM software program, etc.)		

II. Continuing Sewer Assessment Plan

Question	Response	*Action
Under what conditions, if any, does the collection system overflow? Does it overflow during wet and/or dry weather? Has your system had problems with: □ hydraulic issues, □ debris, □ roots,		

* Put an "A" in the final column if this is an issue you intend to address with future action.

□ Fats, Oils & Grease (FOG), □ vandalism blockages resulting in manhole overflows, □ basement flooding □ other (specify)? Describe your system's history of structural collapses, and PS or force main failures.		
How many SSOs have occurred in each of the last three calendar years? What is the most frequent cause?		
Of those SSOs, how many basement backups occurred in each of the last three calendar years? How are they documented?		
What is the ratio of peak wet-weather flow to average dry-weather flow at the wastewater treatment plant or municipal boundary for satellite collection systems?		
What short-term measures have been implemented or plan to be implemented to mitigate the overflows? If actions are planned, when will they be implemented?		
What long-term measures have been implemented or plan to be implemented to mitigate the overflows? If actions are planned, when will they be implemented?		
Describe your preventive maintenance program; how do you track it (e.g., card files, electronically, with specific software)?		
How do you prioritize investigations, repairs and rehabilitation? What critical and priority problem areas are addressed more frequently than the remainder of your system? How frequent are these areas evaluated?		
Are septage haulers required to declare the origin of their "load"? Are records of these declarations maintained? Do any of the declarations provide evidence of SSOs?		

* Put an "A" in the final column if this is an issue you intend to address with future action.

III.A. Collection System Management Organizational Structure

Question	Response	*Action
Do you have an organizational chart that shows the overall personnel structure for collection system operations, including operation and maintenance staff? Please attach your chart.		
For which jobs do you have up-to-date job descriptions that delineate responsibilities and authority for each position?		
How many staff members are dedicated to collection system maintenance? Of those, how many are responsible for any other duties, (e.g., road repair or maintenance, O&M of the storm water collection system)?		
Are there any collection system maintenance position vacancies? How long has the position(s) been vacant?		
For which, if any, maintenance activities do you use an outside contractor?		
Describe any group purchase contracts you participate in.		

III.B. Collection System Management: Training

Question	Response	*Action
What types of training are provided to staff?		
Is training provided in the following areas: □ general safety, □ routine line maintenance, □ confined space entry, □ MSDS □ lockout/tagout, □ biologic hazards, □ traffic control, □ record keeping, □ electrical and instrumentation, □ pipe repair, □ public relations, SSO/emergency response, □ pump station operations and maintenance, trench/shoring, □ other (describe)?		
Which training requirements are mandatory for key employees?		
How many collection system employees are certified (e.g, NEWEA certification program) and at what grade are they certified?		

* Put an “A” in the final column if this is an issue you intend to address with future action.

III.C. Collection System Management: Communication and Customer Service

Question	Response	*Action
Describe your public education/outreach programs (e.g., for user rates, FOG, extraneous flow, SSOs etc.)?		
What are the most common collection system complaints? How many complaints have you received in each of the past three calendar years?		
Are formal procedures in place to evaluate and respond to complaints?		
How are complaint records maintained (i.e., computerized)? How are complaints tied to emergency response and operations and maintenance programs?		

III.D. Collection System Management: Management Information Systems

Question	Response	*Action
How do you manage collection system information? (Commercial software package, spreadsheets, data bases, SCADA, etc). What information and functions are managed electronically?		
What procedures are used to track and plan collection system maintenance activities?		
Who is responsible for establishing maintenance priorities? What records are maintained for each piece of mechanical equipment within the collection system?		
What is the backlog for various types of work orders?		
How do you track emergencies and your response to emergencies? How do you link emergency responses to your maintenance activities?		
What written policies/protocols do you have for managing and tracking the following information: complaint work orders, scheduled work orders, customer service, scheduled preventative maintenance, scheduled inspections, sewer system inventory, safety incidents, emergency responses,		

* Put an “A” in the final column if this is an issue you intend to address with future action.

scheduled monitoring/sampling, compliance/overflow tracking, equipment/tools tracking, parts inventory?		

III.E. Collection System Management: SSO Notification Program

Question	Response	*Action
What are your procedures, including time frames, for notifying state agencies, health agencies, regulatory authorities, and the drinking water authorities of overflow events?		
Do you use the state standard form for recording/reporting overflow events? If not, provide a sample copy of the form that is used.		

III.F. Collection System Management: Legal Authority

Question	Response	*Action
Are discharges to the sewer regulated by a sewer use ordinance (SUO)? Does the SUO contain procedures for controlling and enforcing the following: □ FOG; □ Infil-tration/Inflow (I/I); □ building structures over the sewer lines; □ storm water connections to sanitary lines; □ defects in service laterals located on private property; □ sumppumps?		
Who is responsible for enforcing various aspects of the SUO? Does this party communicate with your department on a regular basis?		
Summarize any SUO enforcement actions/activities that have occurred in the last three calendar years.		
Do you have a program to control FOG entering the collection system? If so, which of the following does it include: □ permits, □ inspection □ enforcement? Are commercial grease traps inspected regularly and who is responsible for conducting inspections?		
Is there an ordinance dealing with storm water connections or		

* Put an “A” in the final column if this is an issue you intend to address with future action.

requirements to remove storm water connections?		
Does the collection system receive flow from satellite communities? Which communities? How are flows from these satellite communities regulated? Are satellite flow capacity issues periodically reviewed?		
Does the collection system receive flow from private collection systems? If yes, how is flow from these private sources regulated? How are overflows dealt with?		

IV.A. Collection System Operation: Financing

Question	Response	*Action
Has an enterprise (or other) fund been established and what does it include: wastewater collection and treatment operations; collection system maintenance; long-term infrastructure improvements; etc.? Are the funds sufficient to properly fund future system needs?		
How are rates calculated (have you done a rate analysis)? What is the current sewer charge rate? When was it last increased? How much was the increase?		
What is your O&M budget?		
If an enterprise fund has not been established, how are collection system maintenance operations funded?		
Does a Capital Improvement Plan (CIP) that provides for system repair/replacement on a prioritized basis exist? What is the collection system's average annual CIP budget?		
How do you account for the value of your system infrastructure for the Government Accounting Standards Board standard 34 (GASB 34)?		

IV.B. Collection System Operation: Hydrogen Sulfide Monitoring and Control

Question	Response	*Action
Are odors a frequent source of complaints? How many have been received in the last calendar year?		

* Put an "A" in the final column if this is an issue you intend to address with future action.

Do you have a hydrogen sulfide problem, and if so, do you have corrosion control programs? What are the major elements of the program?		
Does your system contain air relief valves at the high points of the force main system? How often are they inspected? How often are they exercised?		

IV.C. Collection System Operation: Safety

Question	Response	*Action
Do you have a formal Safety Training Program? How do you maintain safety training records?		
Are the following equipment items available and in adequate supply: □ rubber/disposable gloves; □ confined space ventilation equipment; □ hard hats, □ safety glasses, □ rubber boots; □ antibacterial soap and first aid kit; □ tripods or non-entry rescue equipment; □ fire extinguishers; □ equipment to enter manholes; □ portable crane/hoist; □ atmospheric testing equipment and gas detectors; □ oxygen sensors; □ H2S monitors; □ full body harness; □ protective clothing; □ traffic/public access control equipment; □ 5-minute escape breathing devices; □ life preservers for lagoons; □ safety buoy at activated sludge plants; □ fiberglass or wooden ladders for electrical work; □ respirators and/or self-contained breathing apparatus; □ methane gas or OVA analyzer; □ LEL metering?		

IV.D. Collection System Operation: Emergency Preparedness and Response

Question	Response	*Action
Do you have a written collection system emergency response plan? When was the plan last updated? What departments are included in your emergency planning?		
Which of the following issues are considered: □ vulnerable points in the system, □ severe natural events, □ failure of critical system components, □ vandalism or other third party events (specify), □ other types of		

* Put an “A” in the final column if this is an issue you intend to address with future action.

incidents (specify)?		
How do you train staff to respond to emergency situations? Where are responsibilities detailed for personnel who respond to emergencies?		
How many emergency calls have you had in the past calendar year?		

IV.E. Collection System Operation: Engineering – Capacity

Question	Response	*Action
How do you evaluate the capacity of your system and what capacity issues have you identified, if any? What is your plan to remedy the identified capacity issues?		
What procedures do you use to determine whether the capacity of existing gravity sewer system, pump stations and force mains are adequate for new connections? Who does this evaluation?		
Do you charge hook up fees for new development and if so, how are they calculated?		
Do you have a hydraulic model of your collection system? Is it used to predict the effects of system remediation and new connections?		

IV.F. Collection System Operation: Pump Stations - Inspection

Question	Response	*Action
How many pump stations are in the system? How often are pump stations inspected? How many are privately owned, and how are they inspected? Do you use an inspection checklist?		
Is there sufficient redundancy of equipment at all pump stations?		
How are pump stations monitored? If a SCADA system is used, what parameters are monitored?		
How many pump station/force main failures have you had in each of the last three years? Who responds to pump station/force main failures and overflows? How are the responders notified?		
How many pump stations are		

* Put an “A” in the final column if this is an issue you intend to address with future action.

equipped with backup power sources? How many require portable generators? How many portable generators does your system own? Explain how the portable generators will be deployed during a system-wide electrical outage.		
Are operation logs maintained for all pump stations? Are the lead, lag, and backup pumps rotated regularly?		
Are pump operations changed manually, or automatically, during wet weather to increase in-line storage of wet weather flows?		

V.A. Equipment and Collection System Maintenance: Sewer Cleaning

Question	Response	*Action
What is your schedule for cleaning sewer lines on a system-wide basis? At this frequency, how long will it take to clean the system? How are sewer cleaning efforts documented?		
How do you identify sewer line segments that have chronic problems and should be cleaned more frequently? Is a list of these areas maintained and cleaning frequencies established?		
Approximately, how many collection system blockages have occurred during the last calendar year?		
Has the number of blockages increased, decreased, or stayed the same over the past five years?		
What equipment is available to clean sewers? Is any type of cleaning contracted to other parties? If yes, under what circumstances?		
Do you have a root control program? Describe its critical components.		

* Put an “A” in the final column if this is an issue you intend to address with future action.

V.B. Equipment and Collection System Maintenance: Maintenance Right-of-Way

Question	Response	*Action
Is scheduled maintenance performed on Rights-of-Way and Easements? At what frequency? How many manholes in easement areas can not be located?		
Are road paving projects coordinated with the collection system operators. Are manholes paved over? How many manholes in paved areas can not be located? Describe any systems in place for locating and raising manholes that have been paved over.		

V.C. Equipment and Collection System Maintenance: Parts Inventory

Question	Response	*Action
Do you have a central location for the storage of spare parts?		
Have critical spare parts been identified?		
Are adequate supplies on hand and has an inventory tracking system been implemented?		

VI A. SSES: System Assessment

Question	Response	*Action
Do POTW flow records or prior I/I or SSES programs indicate the presence of public/private inflow sources or sump pumps?		
If problems are related to I/I, has a Sewer System Evaluation Survey (SSES) been conducted? When? What is the status of the recommendations?		
Do you have a program to identify and eliminate sources of I/I into the system including private service laterals and illegal connections? If so, describe.		
Have private residences been inspected for sump pumps and roof leader connections?		
Are inspections to identify illicit connections conducted during the property transfer process?		
How many sump pumps and roof leaders have been identified? How many have been removed?		

* Put an “A” in the final column if this is an issue you intend to address with future action.

Have follow-up homeowner inspections been conducted?		
What incentive programs exist to encourage residences to disconnect roof leaders & sump pumps? i.e. matching funds, etc.		
What disincentive programs exist to encourage residences to disconnect roof leaders & sump pumps? i.e. fines, surcharges		

VI.B. SSES: Manhole Inspection

Question	Response	*Action
Do you have a manhole inspection and assessment program?		
Has a formal manhole inspection checklist been developed?		
How many manholes were inspected during the past calendar year?		

VII. Energy Use

Question	Response	*Action
What is your annual energy cost for operating your system? For which pieces of equipment do you track energy use?		
Have you upgraded any of your pumps and motors to more energy efficient models? If so, please describe.		
Have you performed an energy audit in the past three years?		
Where do you use the most energy (fuel, electricity) in operating your collection system?		
If you have a treatment plant, would you be interested in participating in EnergyStar benchmarking of your treatment plant?		

VIII. Other Actions

Question	Response	*Action
Describe any other actions that you plan to take to improve your CMOM Program that are not discussed above.		

* Put an “A” in the final column if this is an issue you intend to address with future action.

MIIA Sanitary Sewer Overflow (SSO) Prevention or Reduction Program
Verification Checklist

LEGAL AUTHORITY

Has the sewer system adopted a Sewer Use Bylaw/ Ordinance which contains the following:	YES	NO
Identification of responsible authority for enforcing sewer use ordinance?		
Control of infiltration and inflow (I/I) such as prohibitions against connection to the sanitary sewer, authority to enter properties for inspection, and enforceable penalties for illegal connections?		
Authority and method to secure funding for removal of infiltration/inflow?		
Ensuring proper design, installation, and inspection of new and replacement sewer lines?		
Maintenance of all sewer line components including those owned by private and public entities?		
Fat, oil & grease (FOG) management?		
Fee and/or fine structure?		

DESIGN & CONSTRUCTION	YES	NO
Does the operating authority have review and input into projects involving design and construction of new or replacement sewers?		
Is there a construction inspection program (if yes, attach documentation)?		
Is new construction tested?		
Is new construction built to standard specifications established by the sewer operating authority that are at least as stringent as those of the state?		

HYDRAULIC CAPACITY	YES	NO
Do written procedures exist to evaluate whether the existing system is adequate for new connections (if so, attach documentation)?		
Is any metering of flow accomplished prior to allowing new connections?		
Is there a hydraulic model of the system to predict the effects of new connections?		
Is any certification as to the adequacy of the sewer system to carry additional flow from new connections required?		
Are new connections/flows balanced by removal of equivalent volumes of I/I?		

DATA MANAGEMENT SYSTEM	YES	NO
Are records kept of sewer system inspection, maintenance, repair, and improvements (attach copies of forms/reports)?		
Are records kept in paper form?		
Are records kept in digital form?		
Does the sewer operating authority use any type of computer information management system to schedule and/or document preventive or repair maintenance (if so, what type of system _____)?		

OPERATION AND MAINTENANCE	YES	NO
Does the sewer operating authority have a preventive inspection and maintenance program?		
If so, does the program include a set schedule for performing preventive maintenance on a system-wide basis (e.g., a set area or percentage each year)?		
Does the sewer operating authority have a routine manhole inspection program?		
If so, how many manholes are inspected per year?		
Is there a record of inspection kept?		
Does the sewer operating authority have a routine television inspection program?		
If so, how many linear feet are inspected per year?		
Does the sewer operating authority have a routine sewer cleaning program?		
If so, how many linear feet are cleaned per year?		
Is there a record of cleaning kept?		
Is cleaning done by municipal staff or contracted out?		
Is there a program to identify sewer segments that have chronic problems and should be inspected and cleaned on a more frequent schedule?		
Does the sewer operating authority have a root control program (if so, attach documentation)?		
What type of equipment does the sewer operating authority use and how many units are available (attach list)?		
Does the operating authority have a dedicated staff for operation and maintenance of the sewer system?		
Does the operating authority have adequate staff and equipment to complete needed O&M?		
Does the operating authority have adequate funding to complete needed O&M?		

MECHANICAL & ELECTRICAL	YES	NO
Is there a preventative maintenance program for pump stations (if so, attach a copy of the program or what it includes)?		
Are pump stations inspected regularly?		
Are maintenance and inspection logs maintained for all pump stations?		
Is there sufficient redundancy of equipment?		
Is standby power provided for all pump stations? If not, what portion of the stations are without it (_____out of _____stations do not have standby power)?		
Are pump stations equipped with alarms to notify staff of problems such as power loss, wet-well high level, etc.? Please attach a list of pump stations, alarms provided, and type of notification system (e.g., flashing light, siren, auto-dialer, etc.)?		

FATS, OIL & GREASE (FOG) CONTROL	YES	NO
Does the sewer system operating authority have a FOG Management Program?		
Does the program identify who is regulated under the program/ordinance?		
Does the program identify the responsible authority within the community?		
Does the program require grease interceptors for larger users?		
Does the program include a regular grease trap/interceptor inspection program?		
Does the program establish grease trap/interceptor design, construction and inspection standards?		
Does the program establish grease trap/interceptor management, operation and maintenance standards?		
Does the program establish record keeping and reporting requirements?		
Does the program regulate additives and alternative grease control devices?		
Does the program issue individual permits or set a performance standard?		
Does the program regulate grease haulers and establish fees?		
Does the program regulate proper disposal of FOG removed from grease traps/interceptors?		

INFLOW & INFILTRATION	YES	NO
Have sewer system evaluation surveys (SSESs) and/or I/I Analysis been performed in the past (if so, attach documentation)?		
Has any sewer rehabilitation work been completed in the past 15 years (if so, attach documentation including linear footage & type of rehabilitation)?		
Does the sewer operating authority have a flow monitoring program (if so, attach documentation)?		
Does the sewer operating authority have a Smoke and dye testing program?		
Is there a record of inspections kept?		
Does the sewer operating authority routinely inspect the areas around force mains and siphons?		

PRIVATE INFLOW	YES	NO
Does the sewer system operating authority have a Private Inflow Control P rogram?		
Does the program include specific schedules for finding and redirecting sources?		
Does the program have a process for direct technical assistance to identify viable, cost-effective alternative discharge options?		
Does the program include assessment of local drainage systems to determine the capacity to accept drainage from private property?		
Does the program include procedures for periodic post-removal inspection to ensure that inflow sources are not reconnected?		
Does the program include outreach and education components to alert homeowners of the effect of private inflow sources on the sewer system?		

EMERGENCY RESPONSE PLANNING	YES	NO
Does a member of the operating authority participate in Emergency Response and Hazard Mitigation Planning at the community-wide level?		
Does the sewer operating authority have a written emergency response plan (ERP) for natural and other hazard events (if so, attach a copy)?		
Does the sewer operating authority have written emergency response procedures for SSOs?		
Does the ERP contain emergency contact information for municipal personnel and departments?		
Does the ERP contain emergency contact information for federal and state spill response divisions?		
Does the ERP contain telephone numbers and forms for required reporting of SSOs to the EPA/DEP?		
Does the ERP contain telephone numbers and forms for documentation and reporting of SSOs to MIIA for insurance purposes?		
Is specialized emergency maintenance equipment available (if so, attach list)?		
Does the ERP contain contact information for specialty contractors can be called upon 24-hours a day for emergency materials, equipment, and services?		

PUBLIC EDUCATION	YES	NO
Does the sewer operating authority have a public outreach and education program?		
Does the program address I/I (public sources)?		
Does the program address private inflow?		
Does the program address FOG control and reduction?		
Does the program address “flushables” (things that should NOT be flushed)?		
Does the program address sewer rates and expenditures/funding?		
Does the program include periodic direct distribution of public information (e.g., bill stuffers, flyers, etc.)?		
Does the program include communication with different types of audiences (i.e., schools, media, ratepayers, environmental organizations, etc.)?		
Does the program include procedures for notifying the public of SSOs?		

APPENDIX D: Example Forms & Documentation

The following sample forms are offered for your use and/or customization, in developing a comprehensive sewer backup loss prevention program for your municipality. Feel free to incorporate whatever forms may be useful to you, change them in any way that meets your needs, and add your own letterhead or logo.

Example forms for Sewer System Inspection and Maintenance

Sewer Inspection & Maintenance Report
Sewer Component Graphics
Manhole Inspection Checklist
Manhole Inspection Report (use checklist or report, not both)
Pump Station Inspection Log
Sewer Cleaning Record
Television Inspection Report
Television Inspection Summary

SEWER INSPECTION & MAINTENANCE REPORT

Date of Inspection: _____ Time of Inspection: _____ a.m./p.m.

Name of Employee Completing Report: _____

Location (be specific by line(s), manhole #(s), etc.: _____

Reason for inspection or maintenance (routine/scheduled/preventive, overflow, problem history, etc.): _____

Conditions found (both usual and unusual: _____

Unusual conditions were reported immediately to the following supervisor(s): _____

List inspection or maintenance work performed: _____

List equipment used: _____

List personnel who performed inspection or maintenance: _____

Other information: _____

Follow-up action needed at this location: _____

Based on conditions found during this visit, it is recommended that this location be inspected/maintained again within:

1 month _____	9 months _____	24 months _____
3 months _____	12 months _____	36 months _____
6 months _____	18 months _____	

MANHOLE INSPECTION CHECKLIST

Manhole Number: _____ Inspector: _____

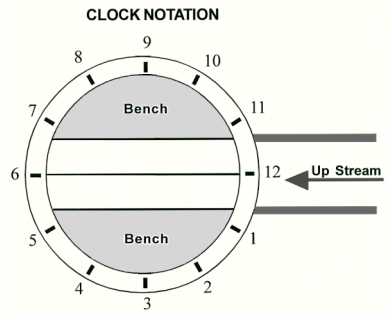
Manhole Barrier Diameter: _____ Interceptor: _____ Manhole Depth: _____ (Rim to Invert)

Item Inspected	Date Inspected (date each line that applies)		Repairs Needed (√ each that applies)		Repairs Made	Date Repairs Made
COVER	Lift Pin	/ /	Needs Pin			/ /
	Bolt Down	/ /	Bolt Missing			/ /
	Locking	/ /	Replace			/ /
	Non-Rocking	/ /				
CASTING	Badly Rusted	/ /	Reset			/ /
	Knocked Loose	/ /	Raise			/ /
	Good Condition	/ /	Replace			/ /
CHIMNEY	Brick	/ /	Leaks			/ /
	Concrete	/ /	Re-mortar			/ /
	Good Condition	/ /	Replace			/ /
	Loose Mortar	/ /				/ /
	Offset Opening	/ /				/ /
	Center Opening	/ /				/ /
BARRELS	Good Condition	/ /	Leaks			/ /
	Slight Corrosion	/ /				/ /
	Bad Corrosion	/ /				/ /
BENCH	Grease Build-up	/ /	Clean			/ /
	Bad Concrete	/ /	Patch			/ /
	Good Condition	/ /				/ /
CHANNEL	Rocks in Channel	/ /	Clean			/ /
	Grease Build-up	/ /				/ /
	Bad Corrosion	/ /				/ /
	Depth of Flow	/ /				/ /
	Depth of Grit	/ /				/ /

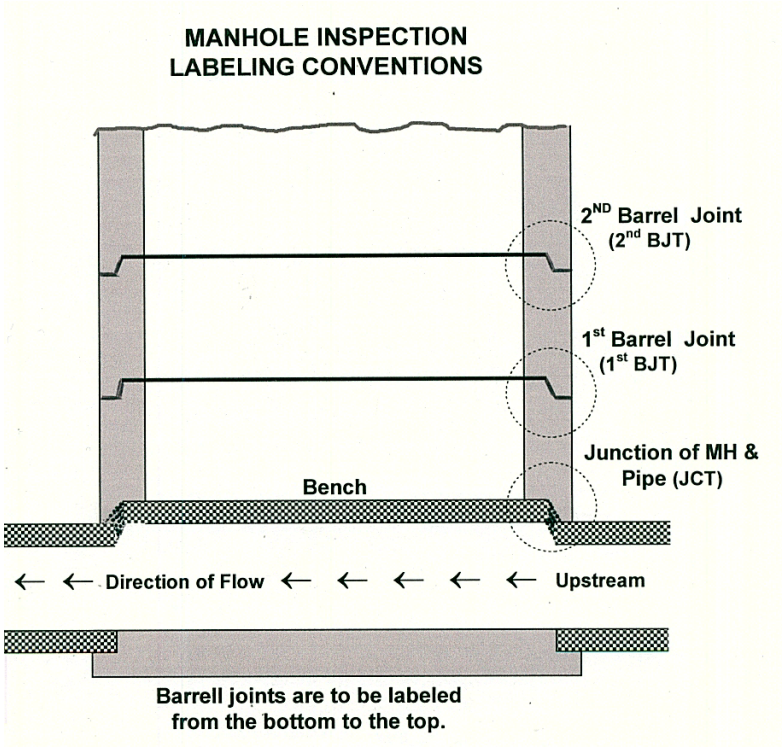
INTER-CEPTER	CHECK	YES	NO	Leaks	
	Lamped				
	Loose Gaskets				
	Infiltration				
	Slight Corrosion				
	Bad Corrosion				
	Scratch Test				
	Scratch Depth		Inches		

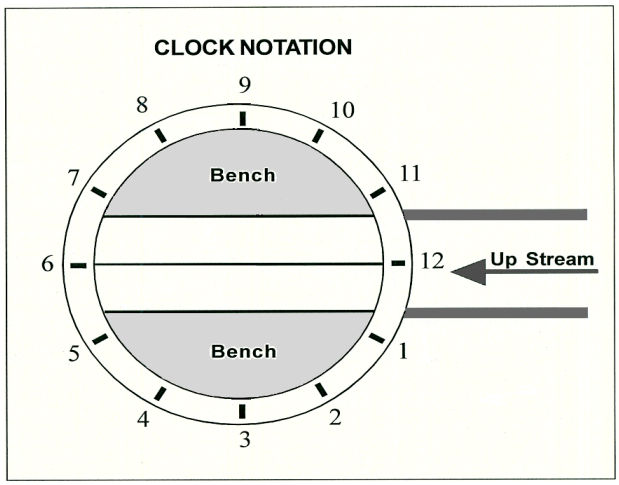
Incoming Lines:
Sketch location, note size, and measure height of all incoming lines (from the pipe invert.)

Additional Comments / Observations: _____



SEWER COMPONENT GRAPHICS
(Sketch / Notate Inspection Findings)

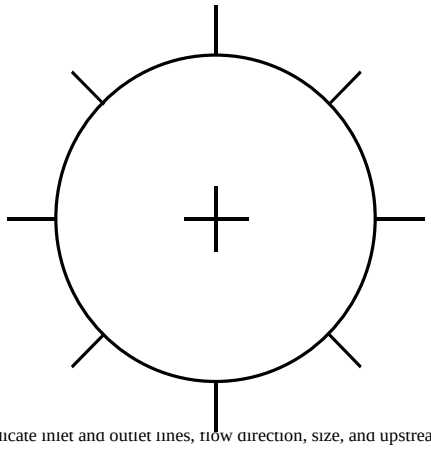




_____, MASSACHUSETTS

MANHOLE INSPECTION REPORT

LOCATION:	INSPECTION DATE:
SUB-AREA:	INSPECTION TIME:
METER AREA:	WEATHER CONDITION:
MANHOLE #:	INSPECTOR:

FT TO MH NO.:		COVER: INCHES PICK INCHES FEET
BURIED: (YES/NO)		SURCHARGE: (YES/NO) FROM INVERT: (YES/NO)
GRADE: IN		CURRENTLY: FEET MARKS TO: FEET
DRAINAGE AREA: (SQFT) X =		GENERAL COMMENTS:
RUNOFF COEFFICIENT:		
STEPS:	Indicate inlet and outlet lines, flow direction, size, and upstream and downstream MH numbers.	

MANHOLE COMPONENTS

Item	Material	Condition	Leaking (gpm)	Defects
Frame				
Corbel				
Walls				
Floor				
Invert				

INCOMING LINE DESCRIPTIONS

From	Rim to Invert Depth	Diameter (in.)	Material	Joint Length (ft)	Flow Depth (in)	Debris Depth (in)	Pipe Connection Leak (gpm)

OUTGOING LINE DESCRIPTIONS

Inspection Log

Inspector(s): _____ **Date** _____

Time

1. PUMP STATION

A. Pumps and Motors

Pump No. 1: Running Stopped
Hand-Off-Auto (HOA)
Run Time (current) _____ Hours
Run Time (previous) _____ Hours
Motor Amperage L1_____ L2 _____ L3 _____
Vibration Check
Motor _____ Pump _____
Discharge Pressure _____
Suction Pressure _____

Pump No. 2: Running Stopped
Hand-Off-Auto (HOA)
Run Time (current) _____ Hours
Run Time (previous) _____ Hours
Motor Amperage L1_____ L2 _____ L3 _____
Vibration Check
Motor _____ Pump _____
Discharge Pressure _____
Suction Pressure _____

Pump No. 3: Running Stopped
Hand-Off-Auto (HOA)
Run Time (current) _____ Hours
Run Time (previous) _____ Hours
Motor Amperage L1_____ L2 _____ L3 _____
Vibration Check
Motor _____ Pump _____
Discharge Pressure _____
Suction Pressure _____

B. Gauge Readings

Portable Water Pressure _____
Line Voltage_____ L1 _____ L2 _____ L3 ____

C. Sump Pump

Hand-Off-Auto (HOA)
Run Time P-1 _____
Run Time P-2

D. Level Control Panel

Wetwell Level _____ Inches
Air Flow _____ SCFH (3)
Compressor (1 Alt 2)
Tanks Drained Yes No

Compressor No.1 Hours _____
Compressor No. 2 Hours _____
Pump Lead Select:
123 231 312 Alt

E. Dehumidifier

Check Operation _____

F. Alarm Test

Yes or No

G. Unit Heater

Check Operation _____

H. Ventilation System

Check Operation _____

I. Breakers

Check for tripped breakers, if any list below:

J. Exercise Gate Valves

Yes or No

K. Check Wet Well

Yes or No

L. Generator

Check the following when running
Volts (AC) ___volts
Amps (AC) ___amps
Frequency ___hertz
Oil Temp. ___
Oil Pressure ___
Water Temp. ___
Run Time ___
Fuel Tank Level ___

2. GENERAL COMMENTS

_____, Massachusetts

Sewer Cleaning Record

Date	Street	Extents of Cleaning		Feet of Sewer Cleaned	Reason for Cleaning (e.g., clear blockage, routine PM, etc.)	List Obstructions Found (e.g., grease, roots, sand, etc.)	Staff Initials
		From MH	To MH				

Weston & Sampson

_____, MASSACHUSETTS

TELEVISION INSPECTION REPORT

Date: _____ Street: _____

Inspectors: _____ Tape #: _____

_____ VTR Index: _____

Section Length: _____ Pipe Type: _____

Pipe Spacing: _____ Line: _____

Grade: _____ Weir Reading: _____

MH#: _____ Condition: _____ MH#: _____ Condition: _____

MH #	Footage	Defect	Flow (gpd)	Comments
MH #				

_____, MASSACHUSETTS
TELEVISION INSPECTION SUMMARY

Location	MH	to MH	Dia. (inch)	Length (l.f.)	Pipe Material	Joint Spacing (ft)	Comments	Flow (gpd)

Weston & Sampson

Example Forms for Sewer Backup Response

Sanitary Sewer Reference & Emergency Contact List
Sewer Backup Intake Report
Onsite Sewer Backup Assessment
Sewer Backup Follow-up Investigation

SANITARY SEWER REFERENCE & EMERGENCY CONTACT LIST

Department/Agency:

Primary Contact: _____ Phone: _____ Pager: _____

Secondary Contact: _____ Phone: _____ Pager: _____

Department/Agency:

Primary Contact: _____ Phone: _____ Pager: _____

Secondary Contact: _____ Phone: _____ Pager: _____

Department/Agency: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Primary Contact: _____ Phone: _____ Pager: _____

Secondary Contact: _____ Phone: _____ Pager: _____

Department/Agency: ENVIRONMENTAL PROTECTION AGENCY

Primary Contact: _____ Phone: _____ Pager: _____

Secondary Contact: _____ Phone: _____ Pager: _____

Department/Agency: POLICE DEPT. (Non-Emergency)

Primary Contact: _____ Phone: _____ Pager: _____

Secondary Contact: _____ Phone: _____ Pager: _____

Department/Agency: FIRE DEPT. (Non-Emergency)

Primary Contact: _____ Phone: _____ Pager: _____

Secondary Contact: _____ Phone: _____ Pager: _____

Department/Agency: CLEANUP CONTRACTORS

Primary Contact: _____ Phone: _____ Pager: _____

Secondary Contact: _____ Phone: _____ Pager: _____

Department/Agency: MEDIA SPOKESPERSON

Primary Contact: _____ Phone: _____ Pager: _____

Secondary Contact: _____ Phone: _____ Pager: _____

Case No. _____

SEWER BACKUP INTAKE REPORT

Complete this checklist each time a backup is reported. Help the caller remain calm and rational. Show empathy and maintain a professional manner. Never insinuate or admit any fault on the part of either the caller or the municipality.

Name of Caller: _____

Date of the call: _____ *Time of the call:* _____ *a.m./p.m.*

Approximate date and time of the overflow, if different than above: _____ *a.m./p.m.*

The location address, or nearest cross street: _____

Location of overflow (basement, restroom, laundry room, etc.) _____

Approximate size of overflow in gallons: _____

Immediate health or safety issues: _____

Property at risk or affected by the overflow: _____

Is the overflow expanding, stationary or receding? _____

What has or is being done by the caller or others? _____

_____

The caller's phone number(s): _____

INSTRUCTIONS TO THE CALLER

1. Instruct the caller to take proper precautions to minimize loss and potential health effects:
    - Keep children, pets and others out of the overflow.
    - Electrical appliances in affected areas present an electrocution hazard.
    - Move uncontaminated property away from the overflow area.
2. Clearly communicate who will be out to the site and approximately when they should arrive.
3. Explain what area(s) they will need to have access to.
4. Explain how the action to be taken is dependent upon the location of the blockage:
    - If blockage is in the municipality's main lines it will be promptly cleaned.
    - If blockage is in the owner's lateral line, the municipality cannot work on private property. In that case, inform callers that they must contact a local sewer service or cleanup firm. You may wish to offer a prepared list of cleaning contractors (without recommendations).
5. Give the caller your name, title and phone number.
6. Never respond to questions about legal responsibility. Explain that MIIA will investigate any responsibility for the backup.
7. Record the information in a daily or weekly incident log.
8. Quickly refer the call, and forward a copy of this report to the appropriate field office and MIIA Claims.

Case No. _____

ONSITE SEWER BACKUP ASSESSMENT

(To be completed after the backup problem is corrected. Complete one assessment for each property involved.)

Date and time you arrived onsite: _____ a.m./p.m.

Property Owner's / Resident's Name: _____

Address or nearest cross street: _____

Municipal personnel involved in clearing overflow: _____

Approximate date & time of overflow: _____ a.m./p.m.

Location of overflow (basement, restroom, laundry room, etc.) _____

Approximate size of overflow in gallons: _____

Use the buddy system when entering a private residence or business.
DO NOT track sewage to uncontaminated areas of the property.

List items that have been affected by the overflow: _____

Did the property owner/resident take action to protect the property? Yes _____ No apparent action _____

Has a cleaning contractor been contacted by the property owner/resident? Yes _____ No _____

Is the backup likely to affect fish or wildlife? Yes _____ No _____

If yes, has the EPA and DNR been notified? Yes _____ No _____

Initial actions taken (sign posted, barricades, sample taken, public notified): _____

Subsequent actions taken to prevent future overflows at this location: _____

Did you observe conditions that may have led to the overflow? Yes _____ No _____ If Yes, what were they?

INFORMATION FOR THE PROPERTY OWNER/RESIDENT

1. Instruct the property owner/resident to take the following precautions to minimize loss and potential health effects, if not already done:
   - Keep children, pets and others out of the overflow.
   - Electrical appliances in affected areas present an electrocution hazard.
   - Move uncontaminated property away from the overflow area.
2. Clearly communicate that if blockage is in the municipality's main lines it will be promptly cleared, but if blockage is in the property owner's lateral line, municipal employees will not be allowed to clear it. In that case, property owners/residents must contact a local sewer service or cleanup firm.
3. Suggest using the yellow pages or offer a prepared list of cleaning contractors, without making recommendations.
4. Show concern and empathy for the property owner/resident, but do not admit or deny liability. Remain calm and professional, even if the property owner/resident is distraught and emotional; if violent, leave the site and call for assistance.
5. Give the property owner/resident your name, title and phone number for future reference.
6. Provide the resident with a copy of the flyer, *"Information for Homeowners & Residents - Facts About Sewer Backup Incidents*
7. Forward a copy of this Report to the appropriate office and MIIA Claims.

Case No. _____

SEWER BACKUP FOLLOW-UP INVESTIGATION

Following an overflow incident, a full investigation may indicate additional follow-up actions to be taken, suggest procedural changes that could improve future responses, and will provide full information to claims adjusters.

Location/Address of Overflow _____

Onsite Response Personal _____ Date of Onsite Response: _____

Property Owner Name _____ Phone: _____

FINDINGS *(Answer all questions that can be determined):*

Date the municipality was first notified of the problem? How notified?	
What action was taken when notified, and when?	
What was the apparent extent of damage to property?	
What was the apparent cause of the backup?	
What methods of investigation were used (visual, videos, etc.)	
What is the estimated age of the sewer main?	
Type of construction of the sewer main?	
What is the record of frequency of inspection/cleaning at the site?	
Last date of inspection/ cleaning prior to the incident?	
Method of cleaning/inspection on that last date (flushed, jetted, rodded, etc.)	
Was this problem found to be in the main or the lateral?	
Have there been prior problems with blockage in the main? When?	
Are there major industries, schools, restaurants on this main? How close?	
Was the municipality doing any work in the area prior to the backup? If so, what was being done?	

The Backup Investigation Report must be completed and returned to _____
within _____ hours of the onsite assessment and action, and forwarded to MIIA's claims department within 24 hours of the investigation.

This Backup Follow-up Investigation Report was prepared by the undersigned at the request of, and for the exclusive use of, legal counsel in anticipation of an actual or potential claim or litigation. The Report is not a public record subject to mandatory disclosure under Massachusetts law. Rather, it is protected work product subject to the attorney-client privilege. This Report must be completed and returned to the City Solicitor/Town Counsel within 24 hours of the on-site assessment and action, with a copy forwarded to the MIIA Claims Department. No copies of this report should be shared or provided to any third person or entity, except at the express direction of the City Solicitor/Town Counsel.

APPENDIX E: Federal and State SSO Reporting Forms

The following reporting forms are offered for your use in developing a comprehensive sewer backup loss prevention program for your municipality:

DEP Sanitary Sewer Overflow (SSO)/Bypass Notification Form Instructions
DEP Sanitary Sewer Overflow (SSO)/Bypass Notification Form
Third-Party Sanitary Sewer Overflow Report

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater 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, industrial or other private wastewater collection system;
- Wastewater utility;
- Wastewater treatment works;
- Facility with a groundwater discharge permit;
- Facility with a surface water discharge permit.

This requirement includes any owner or operator of a satellite municipal collection system or other collection system that is part of a larger POTW not under the same ownership and control.

The following situations require notification to DEP and submittal of the SSO Report Form:

- An un-permitted overflow or bypass;
- Backup of wastewater into public or private property when the event is caused by a condition of the system owned and operated by the sewer authority
- In a combined sewer system, an overflow or bypass during dry weather conditions or at a location not covered by a NPDES permit, or from a portion of the system that has a separate sanitary sewer.

Backups of wastewater into a property which are not caused by conditions in the system owned and operated by the sewer system are not required to be reported. These incidents normally occur due to blockages in service connections to a property or blockages in the internal plumbing system.

What are the procedures for reporting?

Step One:

Immediate Telephone and/or email notification to MassDEP, EPA, and other parties:

Notification to MassDEP and other regulatory authorities is a critical element of the SSO response plan. Notification must be made as soon as possible, and no later than 24 hours after discovery of the event. The agency notifications should include all responsible officials whose duties include management of resources which may be affected by the SSO discharge. A list of agencies, contact staff, phone numbers, and emails should be kept by the Sewer Authority and posted for easy access to responsible staff. A list of some relevant agencies follows:

Agency:	Contact	Requirements
MassDEP	During business hours: Northeast Region: (978) 694-3215 Central Region: (508) 792-7650 Southeast Region:	Report all SSO events to relevant regional office Report SSO's to emergency line during non-business hours

Sanitary Sewer Overflow(SSO)/Bypass Notification Form

Instructions

	(508) 946-2750 Western Region: (413) 784-1100 24-hour Emergency Line: 1-888-304-1133 If you are not sure which Massachusetts DEP Regional Office oversees your facility, go to http://www.mass.gov/eea/agencies/massdep/about/contacts/.	
EPA	EPA New England: (617) 918-1870	Report all SSO events
Local Board of Health	List of local BOH contact information available at http://www.mhoa.com/boh-roster/	Report all SSO events to local BOH(s) where impacts may occur
Department of Conservation and Recreation	State House Ranger Base 617-722-1188	Where DCR beaches or parks affected
MA Division of Marine Fisheries	Boston/Northeast: 617-727-3336 x 165 Southeast: 508-563-1779 x 122	Where shellfish resources may be affected
Drinking Water Resource Managers	List of Drinking Water Supply contacts available at http://www.mass.gov/eea/docs/dep/about/organization/pwscont.pdf	Where Drinking Water Resources may be affected

Hazardous Material Releases: If you believe an overflow, bypass, or any other discharge may have resulted in an oil or hazardous material release, report it to DEP at any time, 24 hours a day, at this toll free number: 1-888-304-1133.

MassDEP may require, on a case-by-case basis, more extensive reporting of the SSO event where determined necessary to protect users of resources affected by SSO discharges.

Step Two:
Submit a written report to DEP within five (5) calendar days of the time you become aware of the overflow, bypass or backup. DEP requires the use of the MassDEP Sanitary Sewer Overflow (SSO)/Bypass notification form, unless an alternative reporting form is authorized by MassDEP in writing.

The Notification form should be fully completed, and shall include a clear description of the overflow, or bypass and its causes, including the best approximation of the dates and times, and if the situation has not been corrected, the amount of time the overflow/bypass is expected to continue, and a description of the measures to be implemented to stop the discharge. The Form or attachments must also include steps taken or planned to reduce, eliminate, and prevent recurrence.

Sanitary Sewer Overflow(SSO)/Bypass Notification Form

Instructions

If you have a discharge permit, check the Monitoring and Reporting Section of your permit to determine if your *Notification Form* should be sent to the attention of DEP's regional Bureau of Waste Prevention (industrial facilities) or the regional Bureau of Resource Protection (nonindustrial facilities). All municipal facilities shall submit their reports to the Bureau of Resource Protection.

Fax the *Notification Form* to the attention of the Bureau of Resource Protection in your DEP regional office:

- Massachusetts Department of Environmental Protection, Northeast Regional Office, 205B Lowell Street, Wilmington, MA 01887. Fax: 978-694-3499.
- Massachusetts Department of Environmental Protection, Central Regional Office, 8 New Bond Street, Worcester, MA 01606. Fax: 508-792-7621.
- Massachusetts Department of Environmental Protection, Southeast Regional Office, 20 Riverside Drive, Lakeville, MA 02347. Fax: 508-947-6557.
- Massachusetts Department of Environmental Protection, Western Regional Office, 436 Dwight Street, Springfield, MA 01103. Fax: 413-784-1149.
- U.S. Environmental Protection Agency, Water Technical Unit (OES 04-4), 5 Post Office Square – Suite 100, Boston, MA 02109-3912 Fax: 617-918-0870

What should I do if I'm not sure of the information I am providing?
For required items such as time of occurrence, causes of incident, volume of overflow, etc., PROVIDE YOUR BEST ESTIMATE OR ASSESSMENT AT THE TIME OF THIS REPORT. You can submit any additions or corrections later.

What is the best way to report the exact location of the overflow, or bypass?
Include with your *Notification Form* a copy of a map indicating its location. Please use 8 ½ " by 11" paper at an appropriate scale between 1:5000 to 1:25000. Specifying the geographic location will help DEP determine the public health and water quality impacts associated with overflows and bypasses.

Why do I need to report backups into buildings?
DEP wants to ensure that sewage backups into buildings as a result of problems in the sewer system are properly repaired and measures are put in place to reduce the likelihood of recurrence. Owner/operators of sewer systems that caused a backup may need to repair, rehabilitate, or upgrade the hydraulic capacity of their system, or change their operations and maintenance procedures.

Are there some overflows or Bypass that are not subject to these reporting requirements?
DO NOT use the *Sanitary Sewer Overflow(SSO)/Bypass Notification* Form in the following situations:

- The overflow is from a properly permitted Combined Sewer Overflow structure. Follow the reporting requirements in your NPDES Permit.
- You are reporting an overflow or bypass of sewage for a collection system or treatment works that is not under your ownership and control. However, please assist DEP by immediately reporting to the appropriate DEP Regional Office by phone or fax any overflows or bypass incidences for facilities other than your own which involve a discharge of wastewater to the environment.

Sanitary Sewer Overflow(SSO)/Bypass Notification Form

Instructions

What are the state regulations that apply to this notification? Where can I get copies?

These regulations include, but are not limited to:

- Surface Water Discharge Regulations, 314 CMR 3.00
- Groundwater Discharge Regulations, 314 CMR 5.00
- Sewer Connection Regulations, 314 CMR 7.00
- Operation and Maintenance Regulations, 314 CMR 12.00

Official copies of the regulations may be purchased at:

State Bookstore
State House, Room 116
Boston, MA 02133
617-727-2834

State Bookstore
436 Dwight Street
Springfield, MA 01103
413-784-1376

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

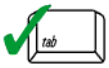
Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

A. Reporting Facility

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Facility Information

Reporting Sewer Authority _____ Permit # _____

2. Authorized Representative Transmitting Form:

First Name _____ Last Name _____ Telephone No. _____

Title _____ E-mail Address _____

B. Phone Notifications:

See DEP Regional Office telephone and fax numbers at the end of this form.

1. **MassDEP staff** contacted: first name _____ last name _____

   Date/Time contacted: Date _____ Time _____ ☐ am ☐ pm

2. **EPA staff** contacted: first name _____ last name _____

   Date/Time EPA contacted: Date _____ Time _____ ☐ am ☐ pm

3. Board of Health contacted: First Name _____ Last Name _____

   Date/Time contacted: Date _____ Time _____ ☐ am ☐ pm

4. Others notified (select all that apply); ☐ Conservation Commission

   ☐ Harbormaster ☐ Shellfish Warden ☐ Division of Marine Fisheries

   ☐ Downstream Drinking Water Supplier ☐ Watershed Association

   ☐ Beach Resource Manager ☐ Other: _____ (specify)

C. SSO Information

1. SSO Discovered: Date _____ Time _____ ☐ am ☐ pm

   By: _____

2. SSO Stopped: Date _____ Time _____ ☐ am ☐ pm

3. SSO Discharge from: ☐ Sanitary Sewer Manhole ☐ Pump Station

   ☐ Backup into Property ☐ Other: _____ (specify)

4. SSO Discharge to: ☐ Ground Surface (no release to surface water)

   ☐ Direct to Receiving Water _____ (surface water)

   ☐ Catch basin to Receiving Water _____ (surface water)

   ☐ Backup into Property Basement

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

C. SSO Information (cont.)

Location: _____
(Description of discharge site or closest address)

5. Estimated SSO Volume at time of this Report: _____

   Method of Estimating Volume: _____

6. Cause of SSO Event:

   ☐ Rain Event ☐ Pump Station Failure ☐ Insufficient Capacity in System

   ☐ Treatment Unit failure

   ☐ Sewer System Blockage: ☐ Pipe Collapse ☐ Root Intrusion ☐ Grease Blockage

   ☐ Other: _____
   (Specify)

7. Corrective Actions Taken:

Impact Area cleaned and/or disinfected: ☐ Yes ☐ No

Corrective Actions Completed: ☐ Yes ☐ No

D. Comments/Attachments/Follow-up

I wish to provide (select all that apply):

☐ Attachment ☐ Additional comments below: ☐ No additional comments or attachments

Additional comments and planned actions:

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

E. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative

Date Signed

Please keep a copy of this report for your records. When submitting additional information, include the MassDEP Incident Number from this report.

MassDEP Regional Office and EPA Telephone and Fax Numbers:

Northeast Region	Phone: 978-694-3215	Fax: 978-694-3499
Southeast Region	Phone: 508-946-2750	Fax: 508-947-6557
Central Region	Phone: 508-792-7650	Fax: 508-792-7621
Western Region	Phone: 413-784-1100	Fax: 413-784-1149
EPA Contact	Phone: 617-918-1870	Fax: 617-918-0870
DEP 24-hour emergency	Phone: 888-304-1133	

_____, MASSACHUSETTS

Third-Party Sanitary Sewer Overflow Report

Date:____/____/____ Time Reported: _____ AM/PM

Address:_____ Reported By:_____

Investigated By:_____ Time Investigated:_____ AM/PM

SSO OBSERVATION

Was there a visible overflow? YES / NO (If yes, see action section below)

If yes, to where was the SSO discharging (circle)?

Catch Basin Ground-Paved Ground-Unpaved Wetland Waterway

Did you enter the building? YES / NO

Was there an overflow in the building? YES / NO (If yes, see action section below)

ESTIMATED VOLUME (Please circle)

> 1 MG 100,000 gal. - 1 MG 10,000 gal. - 100,000 gal. <10,000 gal.

ACTION TAKEN

24-Hour Report via Telephone:

DEP - Kevin Brander: 978-694-3236; Main: 978-694-3215 Time:_____

Name of DEP Contact:_____

EPA - Todd Borci: 617-918-1358; Cell: 617-543-9438 Time:_____

Faxed/emailed SSO Report to (attach email/fax confirmations):

_____DEP _____EPA _____ Health Dept.

BRIEFLY DESCRIBE IN WORDS SSO CAUSE AND RESOLUTION

_____

_____

_____

_____

_____