

SSO Volume Estimation

DURATION of the OVERFLOW

The total duration of the overflow is a significant factor in estimating the volume of the SSO. Start time is typically will occur sometime before the initial observation and reporting of the overflow condition.

START TIME: Estimate start time of the overflow based on initial notification, observation, or other indications of when the overflow began.

STOP TIME: Based on when overflow ended.

ESTIMATED OVERFLOW VOLUME BY OVERFLOW CONDITION:

Broken Force Main

Estimate volume of overflow based on pump station meter readings or pump rate and actual pump run time over the duration of the overflow. Apply a factor as needed that estimates the percent of pumped flow that escapes the broken force main based on the size of the break and/or visual observation.

Overflow Volume (gallons) = Pump rate (gpm) x pump run time (min) x % of flow lost

Pump Station Overflow due to Power Outage, Pump Failure or other condition

Estimate overflow volume based on typical pump station average daily flow, time the overflow occurs, and duration of the overflow.

Average Daily Flow (ADF) (gallons/day) = Pump rate (gpm) x average daily pump run time (min/day) or from meter readings, recorded data.

Overflow Volume (gallons) = ADF (gpd) / 1440 min/day) x overflow duration (min)

Consider applying a factor to account for the time of day the overflow occurred). Example:

Min Flow Period (12AM - 6 AM):50% of ADF,
Max Flow Period (12PM – 6PM): 200% of ADF

Manhole Overflow/Gutter Method

Overflows from manholes may occur due to surcharging that occurs due to high flows or blockages. Estimate overflow volume based on depth of flow, width of flow stream, and flow velocity. Flow velocity can be estimated by observing floating objects in the flow stream and measuring the time it takes to travel a measured distance. typical pump station average daily flow and duration of the overflow.

Overflow Volume (gallons) = Area (ft²) x Velocity (ft/sec) x 449 (gpm/ft³) x Duration (min)
Area (ft²) = Average flow depth (in) x average flow width (in) / 144 (in²/ft²)

Sample SSO Volume Estimation Worksheet

Date: _____

SSO Address/Location: _____

Spill Start Date: _____

Spill Start Time: _____

Spill End Date: _____

Spill End Time: _____

SSO Volume Methodology Used:

Force Main Break

Pump Rate (gpm) _____

Pump Run Time during overflow (min) _____

% Factor (portion of flow that escapes pipe) _____

Estimated Overflow Volume (gallons) _____

Pump Station Overflow

Pump Rate (gpm) _____

Average Daily Pump Run Time (min) _____

Average Daily Flow Rate (gpm) _____

Overflow Duration (min) _____

% Factor (based on time of day) _____

Estimated Overflow Volume (gallons) _____

Manhole/Gutter Overflow

Average Depth of Flow (in) _____

Average Flow Width (in) _____

Flow Area (ft²) _____

Flow Velocity (ft/sec) _____

Duration (min) _____

Estimated Overflow Volume (gallons) _____

Other (describe)

Time Following SSO Event	Public Notification Task	Notes
2 Hours	Public advisory notification shall be completed unless the Commissioner has approved in writing a longer time period being no longer than 24 hours after discovery of the discharge	<p>Posted on permittee's website</p> <p>Issued electronically to Department; U.S. EPA; Mass Department of Public Health, municipal BOH or the health department where outfall or overflow is located, the BOH or the health department and shellfish constables (if applicable), for any municipality directly impacted by the discharge or overflow, the public water supplier(s) where drinking water supplies may be affected, the Massachusetts Division of Marine Fisheries where shellfish growing areas may be affected, the Massachusetts Department of Conservation and Recreation when its water recreation properties may be affected, the Massachusetts Division of Fisheries and Wildlife when its boat ramps and fishing piers may be affected, and operators of any potentially affected bathing beaches</p> <p>Email or text to any person who subscribed to receive such public advisory notifications</p>
4 Hours	Confirm a potentials SSO discharge or overflow commencing from the time a permittee initially receives relevant information.	
8 Hours	Permittee shall issue a public advisory notification update after the initial public advisory notification is issued.	
Every 8 Hours following	Permittee shall continue to issue public advisory notification updates every eight hours if the discharge is still ongoing and shall issue a public advisory notification within two hours after the	

	discharge or overflow ceases or is projected to cease.	
48 Hours	Within 48 hours of issuing a public advisory notification, if the permittee becomes aware that no discharge or overflow actually occurred, the permittee shall issue a retraction of the public advisory notification to all parties required to receive notifications.	
5 Days	Submit a written report to MassDEP within 5 calendar days of the times you become aware of the overflow, bypass, or backup.	<p>Include the following:</p> <ul style="list-style-type: none"> -All the activities that led up to the event -Steps taken to minimize the impact of the event on public health, safety and the environment -Steps taken to prevent such an event from happening in the future

Newspaper Public Notification

Media Outlets: The Cricket, The Gloucester Daily Times

Sewer Overflow Advisory

Date:

Incident No.:

Notice of Sewer System Overflow

The Town of Manchester-by-the-Sea is notifying the public of a Sewer System Overflow in town.

Discharge/Overflow Location: _____

Date and time of discharge/overflow began: _____

Date and time Discharge/overflow ended or ongoing: _____

Duration of discharge/overflow: _____

Estimated volume of discharge/overflow: _____

Water and land area affected by discharge/overflow: _____

The public is advised to avoid contact with these water bodies for 48 hours after the discharge or overflow ceases due to increased health risks from bacteria and other pollutants. See website for more information on whether specific resource areas, such as bathing beaches, are affected. It is important to note that a sewer system discharge/overflow likely consists of untreated or partially treated sewage and waste.

The following link to the Manchester-by-the-Sea Town Website can be used for additional information on sewer system discharges and overflows:

<http://ma-manchesterbythesea.civicplus.com/783/Sewage-Overflow-Notification>



Sewer Overflow Advisory

Date:

Incident No.:

Notice of Sewer System Overflow

The Town of Manchester-by-the-Sea is notifying you that a sewer system overflow has occurred in town. This notification is required by the Massachusetts Department of Environmental Protection (MassDEP). It is important to note that a sewer system discharge/overflow likely consists of untreated or partially treated sewage and waste. The following provides details on the sewer system overflow.

Discharge/Overflow Location: _____

Date and time of discharge/overflow began: _____

Date and time the discharge/overflow ended or ongoing: _____

Duration of discharge/overflow: _____

Estimated volume of discharge/overflow: _____

Water and land area affected by discharge/overflow: _____

Avoid contact with these water bodies for 48 hours after the discharge or overflow ceases due to increased health risks from bacteria and other pollutants. See website for more information on whether specific resource areas, such as bathing beaches, are affected.

The following link to the Manchester-by-the-Sea Town Website can be used for additional information on sewer system discharges and overflows:

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Sewer Overflow Advisory

Date:

Incident No.:

Notice of Sewer System Overflow Update

The Town of Manchester-by-the-Sea is providing this update regarding the sewer system overflow advisory noted above. This notification update is required by the Massachusetts Department of Environmental Protection (MassDEP).

As of this time the sewer system overflow is still occurring. It is important to note that a sewer system discharge/overflow likely consists of untreated or partially treated sewage and waste. The following provides details on the sewer system overflow.

Discharge/Overflow Location: _____

Date and time of discharge/overflow began: _____

Date and time of discharge/overflow ended or ongoing: _____

Duration of discharge/overflow to date: _____

Estimated volume of discharge/overflow to date: _____

Water and land area affected by discharge/overflow: _____

The public is reminded to avoid contact with affected water bodies for 48 hours after the discharge or overflow ceases due to increased health risks from bacteria and other pollutants. See Town website for more information on whether specific resource areas, such as bathing beaches, are affected.

The following link to the Manchester-by-the-Sea Town Website can be used for additional information on sewer system discharges and overflows:

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Sewer Overflow Advisory

Date:

Incident No.:

Notice of Sewer System Overflow Cessation

The Town of Manchester-by-the-Sea is notifying you that the sewer system overflow noted above has ended. This cessation notification is required by the Massachusetts Department of Environmental Protection (MassDEP). It is important to note that a sewer system discharge/overflow likely consists of untreated or partially treated sewage and waste. The following provides details on the sewer system overflow.

Discharge/Overflow Location: _____

Date and time of discharge/overflow began: _____

Date and time of discharge/overflow ended: _____

Duration of discharge/overflow: _____

Estimated volume of discharge/overflow: _____

Water and land area affected by discharge/overflow: _____

The public is reminded to avoid contact with affected water bodies for 48 hours after the discharge or overflow ceases due to increased health risks from bacteria and other pollutants. See Town website for more information on whether specific resource areas, such as bathing beaches, are affected.

The following link to the Manchester-by-the-Sea Town Website can be used for additional information on sewer system discharges and overflows:

<http://ma-manchesterbythesea.civicplus.com/783/Sewage-Overflow-Notification>



Sewer Overflow Advisory

Date:

Incident No.:

Notice of Sewer System Overflow Retraction

The Town of Manchester-by-the-Sea is notifying that the Sewer System Overflow Advisory noted above was issued in error and has been retracted. There was no sewer discharge or overflow incident that occurred. We apologize for the confusion and any inconvenience it may have caused.

The following link to the Manchester-by-the-Sea Town Website can be used for additional information on sewer system discharges and overflows:

<http://ma-manchesterbythesea.civicplus.com/783/Sewage-Overflow-Notification>