

**Appendix A**  
**Sewer Overflow Response Plan**

for  
**Town of Hanover**  
**Sanitary Sewer Collection System**

April 28, 2017

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## 1. RESPONSE INFORMATION

### RESPONSE COORDINATOR & ALTERNATE

#### *Collection system emergencies*

*Michael Chase*

Office: 603-643-3327

Cell: 603-359-1971

Home: 802-436-2516

*James Cray*

Office: 603-643-3327

Home: 802-331-1035

Cell: 802-249-3261

#### *Pump Station Emergencies*

*Kevin MacLean*

Office: 603-643-2362

Home: 603-272-4816

Cell: 603-254-3174

Pager: 603-615-6642

### GOVERNMENTAL RESPONSE UNITS

1. Hanover Fire Department	Tel. 603-643-2222 (non-emergency)
2. Hanover Police Department	Tel. 603-643-2222 (non-emergency)
3. Hanover Ambulance	Tel. 603-643-2222 (non-emergency)
4. Hanover Dispatch	Tel. 603-643-2222 (non-emergency)
5. Liberty Utilities (power company)	Tel. 911 (life-threatening) Tel. 1-855-349-9455 (customer outages)
6. Dartmouth Hitchcock Medical Center	Tel. 1-888-598-6326 (priority 3 outage)
7. NH DES	Tel. 603-650-5000
8. USEPA	Tel. 603-271-1494 Tel. 1-617-918-1510

In the event the telephone and radio systems do not operate, the procedure for communication is outlined in the Town's Emergency Operations Plan.

## Collection System Sanitary Sewer Overflow

**The first response step** when a Collection System Sanitary Sewer Overflow (SSO) occurs is to notify the Operations Manager—he is responsible for managing the response and making key decisions. Their responsibility is to assess the situation and initiate a series of response actions based on the type and severity of the event. The table below identifies the key personnel who will be responding in emergency situations.

### ***Collection System Responsibilities Chart:***

Name and Title	Responsibilities During a SSO response	Contact Numbers
Peter Kulbacki, P.E., Director of Public Works	Responsible for overall management and decision-making for the sewer collection system. Takes the lead in providing information the public and news media.	Phone: 603-643-3327 Cell: 603-359-3524
Michael Chase, Operations Manager	Takes the lead in providing information to regulatory agencies and for managing the response to a SSO. Responsible for determining the need to contact Fire Department (for response to toxic spills and containment booms, eg), local conservation department(s), and/or town officials.	Phone: 603-643-3327 Cell: 603-254-3174
Jim Cray, LM&C Supervisor	In charge of operating the collection system, performing inspections, maintenance and relaying critical information, assessing facilities, and providing recommendations to the Operations Manager. Responsible for organizing crews for response.	Phone: 603-643-3327 Cell: 802-249-3261
Adriane Coutermarsh, Administrative Assistant	Responsible for administrative functions in the office including receiving phone calls and keeping a log of events. Will provide a standard carefully pre-scripted message to those who call with general questions. Additional information will be released through the Director of Public Works.	Phone: 603-643-3327
Todd Bragg, LM&C Worker	Delivers emergency notices and supports collection system operator.	Phone: 603-643-3327 Cell: 603-304-5101

## Pump Station Sanitary Sewer Overflow

The first response step when a Pump Station Sanitary Sewer Overflow (PSSSO) occurs is to notify the Wastewater Superintendent—he is responsible for managing the response and making key decisions. Their responsibility is to assess the situation and initiate a series of response actions based on the type and severity of the event. The table below identifies the key personnel who will be responding in emergency situations.

### ***Pumping Station Responsibilities Chart:***

Name and Title	Responsibilities During a SSO Response	Contact Numbers
Peter Kulbacki, P.E., Director of Public Works	Responsible for overall management and decision-making for the sewer pumping system. Takes the lead in providing information to the public and news media.	Phone: 603-643-3327 Cell: 603-359-3524
Kevin MacLean, Wastewater Superintendent	Takes the lead in providing information to regulatory agencies and for managing the response to a Pump Station SSO. Responsible for determining the need to contact Fire Department (for response to toxic spills and containment booms, eg), local conservation department(s), and/or town officials.	Phone: 603-643-2362 Cell: 603-254-3174
Jim Cray, LM&C Supervisor	In charge of operating the collection system, performing inspections, maintenance and relaying critical information, assessing facilities, and providing recommendations to the Operations Manager. Responsible for organizing crews for response.	Phone: 603-643-3327 Cell: 802-249-3261
Adriane Coutermash, Administrative Assistant	Responsible for administrative functions in the office including receiving phone calls and keeping a log of events. Will provide a standard carefully pre-scripted message to those who call with general questions. Additional information will be released through the Director of Public Works.	Phone: 603-643-3327

### **1. Recording the Report of Possible Sanitary Sewer Overflow (SSO)**

Generally, telephone calls from the public reporting possible sewer overflows/ basement back ups are received at the Hanover Dispatch Center, Wastewater Superintendent, or by the Public Works Administrative Assistant.

For phone calls reporting overflows and backups, the Dispatcher, Wastewater Superintendent or Administrative Assistant obtains all relevant information available regarding the overflow including:

- a. Time and date of the call;
- b. Specific location of the overflow;
- c. Description of problem (e.g., what is overflowing, extent of spill, if the cause is obvious, etc.);
- d. Time possible overflow was noticed by the caller;
- e. Caller's name and phone number;
- f. Observations of the caller (e.g., odor, duration, back or front of property); and
- g. Other relevant information that will enable the LMC or WRF staff to quickly locate, assess and stop the overflow.

See Appendix C for the Bypass or Sewer Overflow Report & Pump Station/Collection System Overflow Questionnaire.

## **2. Confirming Overflows**

A Hanover sewer response crew is dispatched by Operations Manager or Wastewater Superintendent to confirm the overflow (See Section 5, below).

## **3. Reporting Overflows**

The LMC or WRF completes a Sewage Overflow Report (Ref. Appendix C) within 24 hours of the sewer overflow confirmation and provides the information by phone to the NHDES and EPA (see Section 6).

## **2. INTRODUCTION**

Our collection system is an integral part of the Town of Hanover's unseen infrastructure, taking sanitary wastes from residences, commercial establishments, Dartmouth College, DHMC, Centerra Business Park, Sachem Village and surrounding areas of Lebanon as well as industry to the Hanover Water Reclamation Facility at 121 South Main Street. If the capacity of the collection system is exceeded, or if blockages occur, overflows may result. Untreated wastewater overflows that occur upstream of the treatment plant are called Sanitary Sewer Overflows (SSOs). SSOs are a threat to public health and the environment because the SSO may discharge pollutants such as pathogens, floatable materials, toxics, and other pollutants, all of

which may impact public health, drinking water supplies, water quality and/or aquatic ecosystems.

## **2.1: Goals:**

The goal of this Sewer Overflow Response Plan (SORP) is to document Hanover's plans for mitigating or preventing potential emergency overflows whenever possible, to prepare Hanover's personnel and responding departments to deal efficiently with the effects of such events, and to protect health, environment, and property.

Quick response to an SSO will minimize the overflow impacts on public health, water quality, the environment, and customer service. This SORP is designed to ensure that appropriate crews are immediately dispatched to all reported SSOs to stop the overflow as quickly as possible; to minimize the effects of the overflow on public health and the environment; to minimize the impact of the overflow on collection system operations; and to report the overflow to the appropriate regulatory agencies, and to the public when warranted. The objectives of this plan include controlling waste discharge and providing procedures for managing sanitary sewer overflows, preventing harm to public health and the environment, and satisfying regulatory and reporting requirements.

Additional objectives of the SORP are to: provide appropriate customer service, protect collection system personnel and the water reclamation facility, and protect private and public property beyond the collection and treatment facilities.

This plan will be updated as necessary to reflect any changes in staffing or notification requirements, including contact numbers. It should and must be revised as insight and experience dictate.

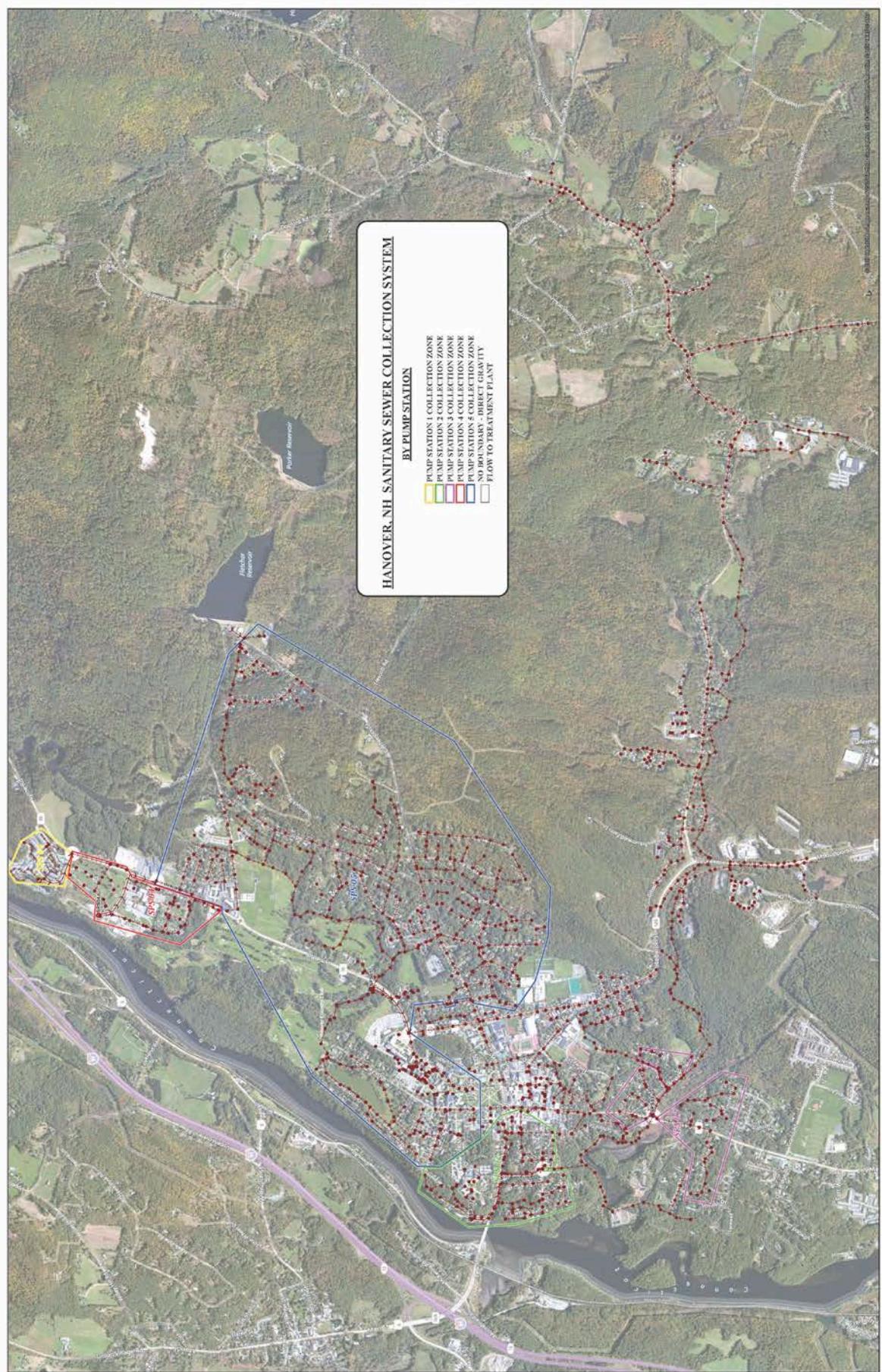
This plan is prepared pursuant to NPDES Permit Number NH0100099.

## **3. OVERVIEW**

This section provides a general description of the Town of Hanover's collection system and critical facilities. Response personnel must be familiar with the collection system and its components to effectively execute the response procedures described in this plan. For further details on the collection system, crews are directed to our Preventive Maintenance Plan (PMP).

The Town of Hanover has a population of approximately 11,250 of which approximately seventy-five percent (75%) are served by our collection system. The sewershed area extends from the north at Kendal on Route 10 to Etna Village to the east, south to Quail Hollow, DHMC, Centerra, and Altaria in Lebanon and to the Town boundary on the West, as shown in the Figure below. The sewer system is divided into 5 areas, all of which feed into the Hanover

Water Reclamation Facility located at 121 South Main Street on the edge of the Connecticut River. The 5 areas are: SPS01 {Kendal}, SPS02 {PS#2}, SPS03 {PS#3}, SPS04 {PS#4} and SPS05 {PS#5}. The collection system map provides detail in the Figure below.



Hanover's wastewater collection system includes the following components: approximately 232,000 linear feet of sanitary sewers; 4 siphons; 9,000 linear feet of force main; 5 Town maintained (4 owned) pumping stations and one private pump station. The system is comprised of components ranging in age from the 1800s to 2016. Materials include vitrified clay pipe, ductile iron, cast iron, PVC, HDPE and AC pipe. The collection system is described in detail in the PMP which is available at <http://www.hanovernh.org/sewer-line-maintenance>.

Hanover's collection system contains several critical facilities. Depending on the specific critical facility, a sewer system failure could potentially impact: Mink and Girl Brooks and the Connecticut River. Critical collection system facilities are described later in this section.

### **3.1: Specific Known Vulnerabilities**

Certain areas of Town are known to be more vulnerable to system blockages and overflows than others and require additional maintenance. These vulnerable areas include: the main interceptor serving DHMC, South Main and Currier Street, and West Wheelock Street. In addition, a blockage in the Occom Ridge sewer can potentially affect the Occom Pond.

A review of past maintenance records and citizen complaints indicates that roots and FOG have consistently contributed to the occurrence of SSOs in the central business district. Hanover has increased maintenance (as described in the PMP) in these areas in response to the problems identified.

#### **3.1.1: Siphons**

A siphon, or depressed sewer, is a dip in a pipeline designed to pass under something, such as a stream. An inverted siphon is always full of wastewater under pressure and below the hydraulic grade line of the collection system. Hanover's collection system includes 4 siphons. Siphon locations are described in Table 1. A siphon is considered a critical facility because of their location near surface waters and under major transportation facilities.

##### ***Siphons:***

Siphon Location	Diameter (in)	Pipe Material	Year Built (or Rehabbed)	Potential Impact Areas(s)
Etna Post Office	8	DI	1972	Overflow to upper Mink Brook
Etna Highlands	8	DI	1972	Overflow to Upper Mink Brook

Lower Mink Brook/ Tanzi property	16	DI	1972	Overflow to Lower Mink Brook
Lower Mink Brook/ Buck Rd	16	DI	1972	Takes flow from under Rt. 120. Could overflow into lower Mink Brook.

### 3.1.2: Pump Stations:

Hanover has five (5) pumping stations in the five (5) collection system sub areas. Of the 5 pumping stations, there are four (4) critical pumping stations:

- SPS02, SPS03, SPS04 and SPS05

The other pump station within the collection system serves as lift station for an individual user (Kendal at Hanover).

#### ***Pump Stations:***

***Kendal (SPS01) -***Type: Smith & Loveless custom built serial # 08-8340-T

*Wet well capacity: ~ 2,700 gallons [both in service]*

*Pump capacity: 120 gpm @ 78' TDH (each pump)*

*Power: 10 hp, 3 phase, 460 volts*

*Discharge size: 4"*

*[2016] Average daily flow: 51,889 gpd, Maximum daily flow: 93,600 gpd*

***PS#2 (SPS02) –***Type: Smith & Loveless recessed wet well package station [RWWMPS], serial # 14-819T

*Wet well capacity: ~ 1541 gallons / 5'dia.x 10.5" depth*

*Pump capacity: 300gpm @ 139' TDH (each pump)*

*Power: 25 hp, 3 phase, 208 volts*

*Discharge size: 4"*

*[2016] Average daily flow: 65,282 gpd, Maximum daily flow: 225,360 gpd*

***PS#3 (SPS03) -***Type: Engineered wet pit / dry pit

*Wet well capacity: ~ 2,700 gallons [both in service]*

*Pump capacity: 630 gpm @ 20' TDH (each pump)*

*Power: 10 hp, 3 phase, 460 volts*

*Discharge size: 6"*

*[2016] Average daily flow: 81,885 gpd, Maximum daily flow: 199,300 gpd*

**PS#4 (SPS04)** -Type: Smith & Loveless recessed wet well package station [RWWMPS], serial # 14-1867-Q

*Wet well capacity: ~ 3911 gallons / 5'dia.x 10.5" depth*

*Pump capacity: 200 gpm @ 95' TDH (each pump)*

*Power: 15 hp, 3 phase, 208 volts*

*Discharge size: 4"*

*[2016] Average daily flow: 26,789 gpd , Maximum daily flow: 85,080 gpd*

**PS#5 (SPS05)** - Type: Engineered wet pit / dry pit

*Wet well capacity: ~ 8,886 gallons [both in service]*

*Pump capacity: 1840 gpm @ 132' TDH (each pump)*

*Power: 100 hp, 3 phase, 460 volts*

*Discharge size: 10"*

*[2016] Average daily flow: 351,077 gpd, Maximum daily flow: 887,000 gpd*

*Latitude & Longitude:*

**SPS01**- 43.7301, -72.270687

**SPS02**- 43.7045, -72.298566

**SPS03**-43.6937, -72.290006

**SPS04**-43.7266, -72.273576

**SPS05**-43.7104, -72.279649

### 3.1.3: Force Mains

Hanover's waste water collection system includes four (4) force mains with a total length of 9,000 linear feet (lf). The force mains range in age from 15 years to 24 years. The size and material for each of the force mains are as follows:

Sub Area Name	Force Main Diameter (in)	Force Main Length (lf)	Pipe Material	Year Built (and Rehabbed)
Kendal to Lyme Rd.	4"	800'	DI	1993
PS #4 to Lyme Rd.	6"	1285'	DI	1995
PS #5 to Lyme Rd./ Park St.	8"	1425'	DI	2002
PS #2 to West St.	6"	2325'	DI	1999

All force mains have been identified as critical facilities because of the large volume of flow that they carry. Some of these force mains are located near Girl Brook which is considered to be potential impact areas. Failures along these force mains can result in extensive damage and/or inconveniences to the public. The force mains and impact areas are listed in the table below.

***Force Main Potential Impact Areas:***

<b>Location of Force Main</b>	<b>Pump Station</b>	<b>Potential Impact Area(s)</b>
From Kendal along Lyme Rd.	4	Overflow into the Connecticut River, backflow into Kendal
From PS 4 to Lyme Rd.	4	Overflow into Connecticut River. Overflow could affect The Richmond School
PS 5 to Park St.	5	Overflow into Girl Brook
PS 3 to the treatment plant.	3	Overflow into lower Mink Brook and the Connecticut River

Specific response procedures vary according to the type of facility where the emergency is occurring. Response procedures for each of the critical facilities identified in this section are specified in Section 5. The emergency response procedures reflect the types of facilities and the likely types of failures and vulnerabilities in our collection system. Notification response, Section 4, below, provides the process and contacts for reporting sewer overflows.

## **4. OVERFLOW NOTIFICATION PROCEDURE**

### **4.1: Overview**

When an SSO or other collection system emergency occurs, a number of individuals must be notified. Depending on the size and severity of the problem, different notifications are needed. While minimum notification procedures are in place for all overflows, more specific notification procedures are required for more severe overflows. For example, a small, contained overflow with no impact to a water body or other sensitive area will have fewer notification requirements than an overflow that has discharged into surface water.

#### **4.2: Receipt of Information Regarding an SSO**

An overflow may be detected by Hanover employees or by others. LMC is the primary department responsible for responding to SSOs. The LMC is responsible for acting based on received phone calls or reports of possible sewage overflow from the wastewater collection system, and providing immediate response to investigate and/or correct the problem.

Generally, telephone calls from the public reporting possible sewer overflows are received at the Hanover Dispatch Center or Public Works. Information is collected and dispatched as described in Section 1, Response Information.

LMC will confirm the overflow and implement measures to stop the overflow as noted in our procedures in Section 5, below.

The Operations Manager or designee completes a Sewage Overflow Report (Appendix C) within 24 hours of the sewer overflow confirmation and provides the information by phone to the NHDES (603-271-1494) and USEPA (1-617-918-1510) per NPDES #NH0100099, Section G-8, Verbal Reports and Verbal Notification Requirements. WRF established practice holds the initial responder at the scene to initiate the phone call. The WRF Superintendent will furnish the "5 day letter".

If the overflow may affect beach or swimming areas, or public drinking water intakes, the LMC shall notify the NHDES and the Hanover Health Inspector by phone within two hours of becoming aware of the discharge.

If the overflow results in a fish kill, the LMC shall notify the Fish & Game Department by phone within two hours of becoming aware of the results of the fish kill.

The Wastewater Superintendent is responsible for reviewing, updating and signing the final Sewage Overflow Report. Sewage Overflow Reports and clean up information will be reviewed at the beginning of the next day's work shift by the Director of Public Works with results reported to the Hanover Health Officer.

Pump/lift station failures are monitored by SCADA and remote monitoring alarms and received by the WRF or Dispatch depending on the pump station. The operator on duty immediately conveys all information regarding alarms to available technicians to initiate the investigation.

### **5. RESPONSE TO OVERFLOWS**

Response procedures provide guidance for the evaluation, mitigation and correction of the conditions that are causing or contributing to an unpermitted discharge of untreated waste

water. The primary objectives of these emergency response procedures are to provide standard protocols, minimize risk, and protect public health and the environment.

Emergency response procedures appropriate to the vulnerabilities, sensitive areas and critical facilities identified for LMC have been developed. These procedures reflect best management practice.

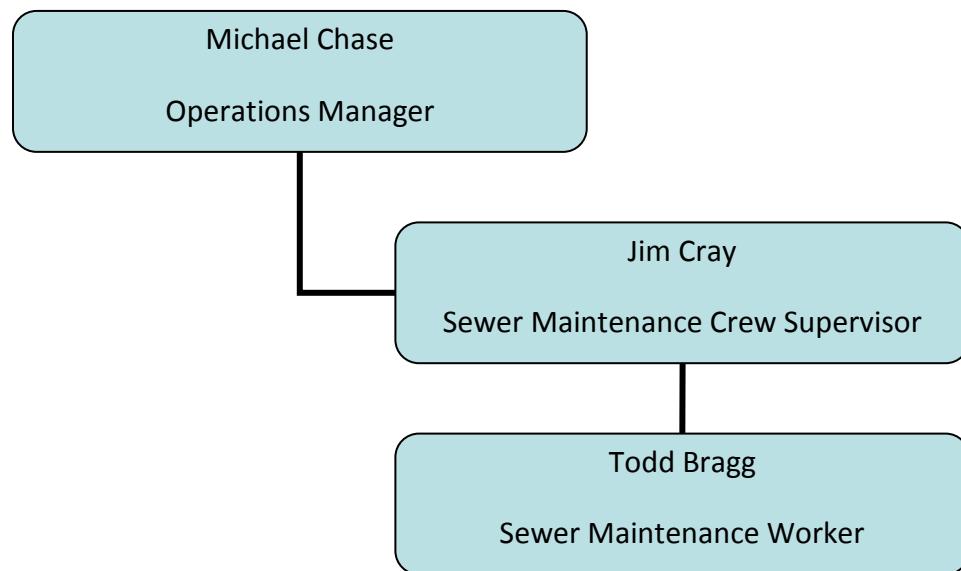
The Hanover Operations Manager or Wastewater Superintendent dispatches sewer maintenance personnel with appropriate equipment to confirm and contain the overflow, and determine the cause. Crews and equipment are available to respond to any SSO locations. The Hanover LMC currently has two (2) crew members available for response both during the normal hours (7 am to 3:30 pm) and outside of the normal work day. The LMC relies on both radio and telephone communication to dispatch personnel to the scene of the overflow.

The WRF currently has six (6) crew members available for response to pump station SSO during the normal work day (7 am to 3:30 pm) and one (1) crew outside the normal work. The WRF relies on pagers, radios, SCADA, and telephone communication to dispatch personnel to the scene of the overflow.

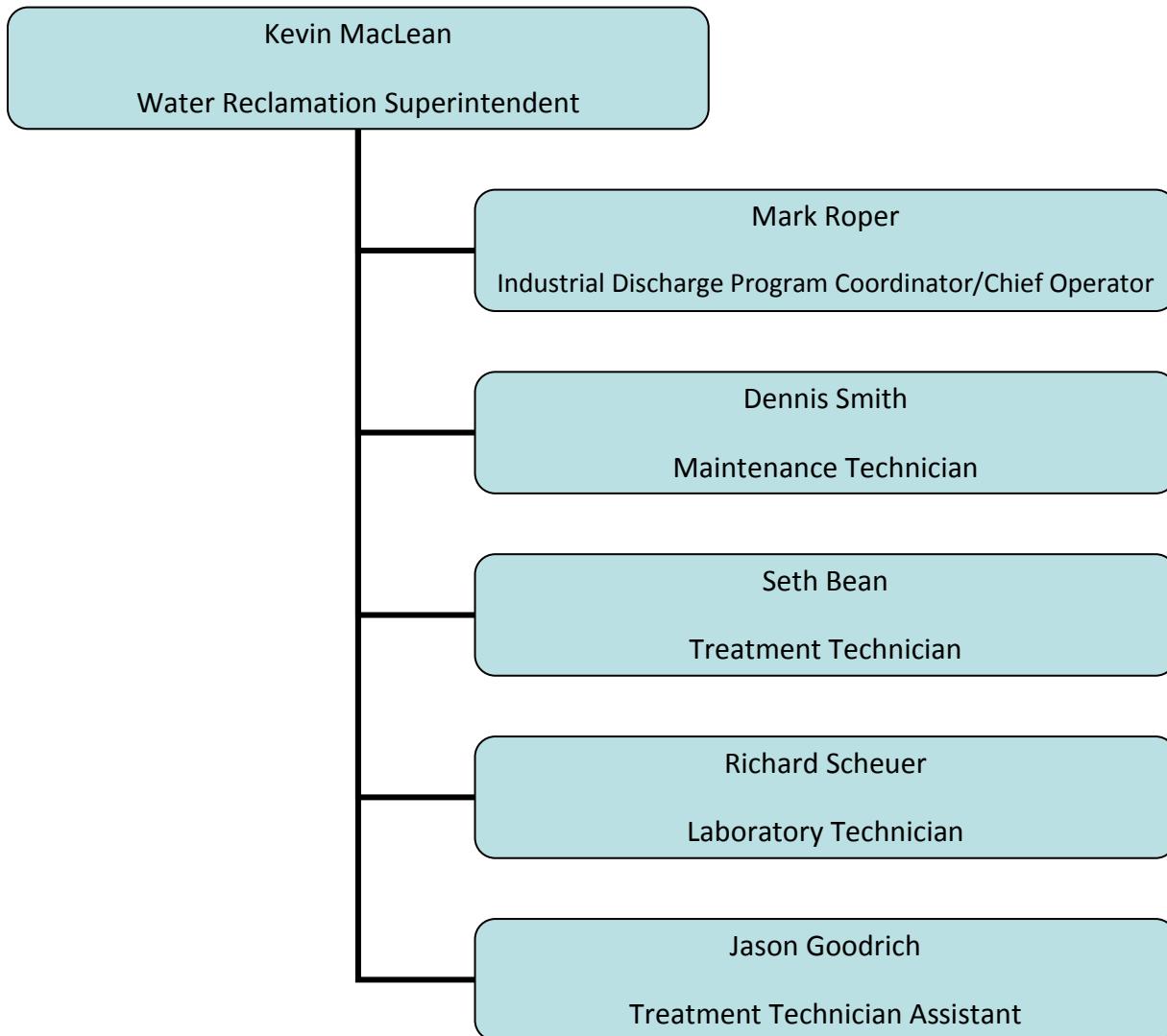
While investigating emergencies the crew should maintain radio contact with the base station at all times to keep them informed of the progress and any problem(s). Upon completing an assignment, and before returning to the shop, the crew should call the base by radio for any other assignment or update.

Additional maintenance personnel are placed “on call” by the Operations Manager in the event extra crews are needed.

### **Collection System**



## Pump Stations



### 5.1: Preliminary Assessment

Upon arrival at the reported sewer overflow site, and based on observations, the sewer response crew may request additional personnel, material, supplies, and equipment from the Highway Department.

Upon arrival, all safety precautions are taken to assure the safety of the public as well as the responding crew. In the case of an overflow onto private property responding personnel shall request permission to enter if necessary. In all cases, response crews report their findings, including possible damage to private and public property, to the Operations Manager immediately upon making their investigation. If the Operations Manager has not received findings from the field crew within one (1) hour, the Operations Manager contacts the response crew to determine the status of the investigation.

The Operations Manager will visit the site of the overflow, if possible, to ensure that provisions of this overflow response plan are met. The Operations Manager is responsible for informing the NHDES and EPA of all SSOs within 24 hours of becoming aware of the release.

If hazardous substances are suspected in the overflow, personnel are to contact the Fire Department via 911 immediately.

## **5.2: SSO General Equipment**

The following items are available to response crews. These items are stored in the department truck, the department bay, or in dry storage located at DPW. Personnel are responsible for ensuring supplies are appropriate and in working order and are responsible for obtaining additional supplies as needed. A full description of departmental equipment (including emergency equipment) is available in Appendix G and in Section 1 of the PMP.

### **Job Site Safety Equipment:**

Ladder (extra heavy duty industrial with IA duty rating), traffic wand, traffic control devices such as flags and cones, flashing barricades, caution tape.

May Need: safety harness and lifeline, tripod, safety rope, gas detector, silt fencing, flag stands, barricades, and detour arrow board.

### **Construction Materials:**

Clean rags, tape, assorted hand tools (e.g., screwdrivers, wrenches, hammers, brooms, sledge hammers, pry bars), bucket with rope, assorted ropes, picks and shovels, spray paint, portable generators, electrical power tools and any PPE that the task may require.

### **Personal Safety Equipment:**

Hard hat, safety glasses, safety vests, gloves, rain suit, steel toed work and/or rubber boots, isopropyl alcohol, and ear protection.

First Aid kit, flashlight, waterless soap and hand towels.

### **Other:**

Sandbags, sand trap, log forms, camera and video, portable blower and sufficient hose, assorted mirrors, high intensity flash light, gas meters, dye.

### **Inspection:**

As with any vehicle or major equipment, the operator should perform a pre-use inspection before beginning work activities.

**Crews are instructed to have and use the job site and personal safety equipment that is appropriate for each emergency situation.**

**Confined Space Entry:**

For permit required confined space entries, all personnel shall refer to the procedure in the Code of Federal Regulations, 29 CFR 1910.146 and the State of New Hampshire Department of Labor requirements.

**The following specific response procedures are contained in the following pages:**

1. PROBLEM: Sewer Blockage or Back up into Basement
2. PROBLEM: Overflowing Sewer Manhole Resulting from Surcharged Trunk Sewer (No backup into building)
3. PROBLEM: Cavities and Depressions in Streets and Lawns
4. PROBLEM: Partially or Totally Blocked Siphon
5. PROBLEM: Sewage Force-Main Break
6. PROBLEM: Sewer Main Break/Collapse
7. PROBLEM: Waste Water Pump Station Alarms General Response Actions
8. PROBLEM: Pumping Station Failure Caused by Secondary Power Failure During Power Outage
9. PROBLEM: Pumping Station Failure Inside Valve Pit, pump or valve failure (submersible type application)

## **1. PROBLEM: Sewer Blockage or Back up into Basement**

### **EMERGENCY PROCEDURES:**

- Dispatcher refers to sewer maps for location and to determine critical facilities and sewer sub-area to provide to dispatch crew. If the area of the complaint is served by a pump station, check to confirm whether any alarms from the pump station have been received.
- Dispatch the crew immediately to the complainant address with details. Crew notifies complainant/property owner(s) when they are on site.
- If the flow is questionable (not reasonable for the given service area) go to the upstream manhole to visually compare flows.
- If the flow from both manholes is reasonable for the area, notify the property owners that the problem is in their service lateral and to contact a plumber or sewer service contractor to relieve the blockage as described under **“Steps to be Taken By Property Owners When Sewage Back-Up Is Determined to be Due to Blockage In Private Lateral Connection”**. Provide homeowner with handout with guidance and instruction to notify their insurance and professional cleaners.
- If the downstream manhole is full and there is a potential for overflow, immediately begin the set up for pumping around the blockage (see “Overflowing Sewer Manhole” procedure)
- Request additional manpower and equipment as needed (e.g. excavating crew, bypass pumping equipment, etc.)
- Set up pump out equipment and hoses from the upstream manhole to the nearest flowing manhole below the blockage.
- Continue checking manholes downstream until a dry manhole is found indicating a blockage upstream.
- See “Overflowing Sewer Manhole” procedure for pumping around the blockage while the line is repaired.
- Note: if no blockage is found and the problem is attributable to a pump station problem refer to Pump Station responses.
- If vactor and jetter are available, jet line and have vactor clear. If not, install the proper size sandtrap in the downstream invert of the manhole before clearing the blockage to capture the debris.

- Remove the debris from the manhole and observe it to try to determine the cause of the blockage.
- Use the necessary equipment to relieve the blockage, either by jet flushing or power rodding (if jet flushing is not sufficient to clear the blockage, request staff to bring power rodding equipment).
- Notify supervisor and describe the blockage. The supervisor will notify the proper authorities and agencies (See responsibility chart).
- Cordon off the area if ponding occurs on the street or easement (public or private).
- Collect as much of the sewage as possible, disinfect according to policy (see Appendix K—Spill Disinfection Policy), notify surrounding homes (superintendent notifies appropriate officials, as needed).
- Prepare the crew for a CCTV inspection or contact a contractor to schedule a television inspection.
- If the blockage is in a public line, relieve the blockage, clean up the property owner's basement as per policy on disinfecting. If blockage is determined to be in property owner's lateral connection, direct property owner to hire a contractor to clear the line.
- Make out a report indicating the time of the call, a description of the problem, repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file the NHDES & EPA Overflow Notification Log and Overflow Report Form as required (see responsibilities chart).

**NOTES:**

- When available, use collected debris to try to determine the cause of the blockage. Confirm removal of all debris from the manhole.
- Record the water damage to all items in the basement. Record all actions taken (from start to finish) in log/record book, including equipment and personnel that were utilized.

<b>Sewer Blockage or Back up into Basement, Minimum Levels of Staffing (people): 2</b>	
<b>Minimum Emergency Equipment</b>	<b>Specialized Equipment</b>
<ul style="list-style-type: none"> <li>• Jet flushing unit if available (sand trap)</li> <li>• Rodding machine &amp; associated cleaning/cutting attachments (sand trap)</li> <li>• Standard harness and lifeline if applicable</li> <li>• Air blower with hose</li> </ul>	<ul style="list-style-type: none"> <li>• Closed Circuit Television camera unit</li> <li>• Truck with hoist</li> <li>• Vactor unit</li> <li>• Power saw (circular)</li> </ul>

<ul style="list-style-type: none"> <li>• Power vacuum</li> <li>• Portable pumps</li> <li>• Portable generators</li> <li>• Safety cones/barricades</li> <li>• Gas meter—for oxygen deficient, explosive or toxic gases</li> <li>• Confined space entry tripod and associated equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Pipe cutter (hydraulic)</li> <li>• Sand trap</li> </ul>
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**Recommended steps to be taken by property owners when sewage back-up is determined to be due to blockage in a private lateral connection:**

After the Collection System crew has checked the LMC Division sewer for blockage and has found that the public sewer is not blocked, they will notify the property owner. It is Hanover's policy that if the main sewer is clear then the property owner must contact a qualified plumber, drain layer, or sewer cleaner to free any blockage which might exist in the private lateral. The property owner is responsible to pay for this activity.

**NOTE: PROPER RODDING PROCEDURE GUIDELINE FOR PROPERTY OWNERS TO CLEAR PRIVATE LATERAL SEWER CONNECTION**

If the blockage is found in the portion of the sewer house connection located within private property, the owner must hire a licensed contractor to perform the necessary repair work, under permit and inspection from the LM&C Division.

The LM&C Division requires proper rodding procedures. In cases where a property owner needs to free a blockage within their lateral, the plumber must use a 4" cutter at the end of the rod. If they can't break through the blockage, they will then start using smaller cutters back up to 4". If the plumber relieves the blockage, they must then rod the house connection to the main sewer line.

All repair work on the sewer house connection must be performed under an Excavation Permit issued by the Department of Public Works to a licensed contractor, and will be inspected by the LM&C Division personnel.

**WARNINGS:**

If the property owner, licensed plumber, drain layer or sewer cleaner does not call the LM&C Division and request the public sewer line to be checked prior to rodding, the Town of Hanover will not assume liability if the problem is located in the public sewer line.

If there is a blockage, but no record of the house connection, the owner must prove where the blockage is located. This can be done by excavation or electronic locator in the presence of an inspector.

**2. PROBLEM: Overflowing Sewer Manhole Resulting from Surcharged Trunk Sewer (No backup into building)**

**EMERGENCY PROCEDURES:**

- Dispatch the crew immediately to the problem location.
  - Refer to sewer maps for location of sewers (private lands, flow patterns, manholes, etc.) and determine if the area is served by a pump station before responding to the call.
- Go to the location of the overflowing manhole to assess the immediate danger to public health or the environment.
- Determine the location of the blockage by inspecting the downstream manholes until a dry manhole is found. Immediately begin the set up for pumping around the blockage.
  - Request additional manpower and equipment as needed (e.g. excavating crew, bypass pumping equipment, etc.) or to help with evaluating options for pumping around the blockage.
  - Set up pump out equipment and hoses from the upstream manhole to the nearest flowing manhole below the blockage.
- Install the proper size sandtrap in the downstream invert of the manhole before clearing the blockage to capture the debris. Remove the debris from the manhole and assess it to try to determine the cause of the blockage.
- Use the necessary equipment to relieve the blockage, either by jet flushing or power rodding. If jet flushing is insufficient to clear the blockage, request Sterns Septic or first available service contractor to bring power rodding equipment.
- If it is imminent that the waste water will be released into wetlands, receiving waters or a drinking water supply watershed, contact Sterns Septic or first available service contractor and notify supervisor, who will call in extra crew and coordinate emergency equipment. The supervisor will also notify the proper authorities and agencies including the Fire Department to set up flotation booms across streams, brooks, etc. if necessary. (See responsibility chart).

- Gather and remove sewage related debris and organic matter from the affected area.
- If the wastewater is in the streets/roads (public or private), use sand bags or available non-permeable material to contain the waste water to minimize any impact to public health or the environment.
- Sandbag nearby catch basin inlets or paved leak-offs to prevent the waste water from entering the drainage system and causing potential contamination to the receiving waters.
- Cordon off the area if ponding occurs.
- Collect as much of the sewage as possible, disinfect according to policy, notify surrounding homes (superintendent notifies appropriate officials, as needed).
- If the waste water jeopardizes a playground or park, cordon off the entire area. Close the park to the public until the issue has been remedied to the satisfaction of the local and state boards of health and the local park superintendent.
- Complete a report indicating the time of the call, description of the problem, repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file the NHDES & EPA Overflow Notification Log and Overflow Report Form.

<b>Overflowing Sewer Manhole, Minimum Levels of Staffing (people): 2-3</b>	
<b>Minimum Emergency Equipment</b>	<b>Specialized Equipment</b>
<ul style="list-style-type: none"> <li>• Jet flushing unit if available (sand trap)</li> <li>• Rodding machine &amp; associated cleaning/cutting attachments (sand trap)</li> <li>• Standard disinfectants</li> <li>• Safety harness and lifeline if applicable</li> <li>• Air blower with hose</li> <li>• Power vacuum</li> <li>• Portable pumps</li> <li>• Portable generators</li> <li>• Safety cones/barricades</li> <li>• Caution Tape</li> <li>• Gas meter-for oxygen deficient, explosive or toxic gases</li> <li>• Confined space entry tripod and associated equipment</li> <li>• Sand bags</li> </ul>	<ul style="list-style-type: none"> <li>• CCTV camera unit</li> <li>• Truck with hoist</li> <li>• Vactor unit</li> <li>• Power saw (circular)</li> <li>• Pipe cutter (hydraulic)</li> <li>• Caution tape</li> <li>• Sand trap</li> <li>• Floatation booms if necessary</li> </ul>

### **3. PROBLEM: Cavities and Depressions in Streets and Lawns**

#### **EMERGENCY PROCEDURES:**

- When a call is received from the public, confirm the following:
  1. That the problem area is in fact a cavity or depression and not a missing or low manhole cover, gate box cover or catch basin grate.
  2. The location of the reported cavity and the name and address of the party making the call.
- If the caller indicates the problem is severe, extensive or obviously associated with the sewer or water system, investigate and barricade the condition if it appears appropriate to do so. Lights and barricades should be used if the situation is dangerous. Notify the water department immediately to aid in the cause investigation.
- When checking a depression over a main sewer, it is important to check the main sewer at both the upstream and downstream manholes adjacent to the depression to determine if there is a restriction of flow. If there is a blockage, it may indicate a possible main sewer break.
- If the cavity is a result of a sewer failure, refer to procedures for sewer main collapse and repair as appropriate.
- If it has been determined that it is a cavity or depression caused by other utilities (storm drain, water main, etc.), the crew should notify the Public Works office who will contact the appropriate supervisor.
- The crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.
- Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file NHDES & EPA Overflow Notification Log and Overflow Report Form.

<b>Cavities and Depressions in Streets and Lawns , Minimum Levels of Staffing (people): 1</b>	
<b>Minimum Emergency Equipment</b>	<b>Specialized Equipment</b>
<ul style="list-style-type: none"><li>• Safety cones/barricades</li><li>• Refer to emergency procedures for sewer break if confirmed</li></ul>	<ul style="list-style-type: none"><li>• Caution tape</li></ul>

#### **4. PROBLEM: Siphon Blockage**

##### **EMERGENCY PROCEDURES:**

- Dispatch sewer crew to failing siphon immediately.
- All siphons are double siphons. To divert flow to a parallel siphon, remove slide gate and insert to gate guides of opposite siphon.
- If sewage is discharging to the environment, follow instructions defined in “Overflowing Sewer Manhole Resulting from Surcharged Trunk Sewer” for containment and cleanup.
- Bring a high-velocity jet-flushing vehicle immediately to the site if a blockage is discovered.
- If the cause of a blockage is unknown, use a single port cutting nozzle attached to the jet-flushing machine.
- Insert the proper size sandtrap in the downstream invert of the downstream manhole to trap the debris causing the blockage.
- Using the high velocity jet-flushing, start flushing the siphon between 1000 and 2500 psi against the flow. Work the nozzle back and forth until minimal debris is observed in the downstream manhole.
- If the blockage is grease related, use high pressure hot water and enzymes in accordance with policy. Care should be observed when working with chemicals. Refer to Material Safety Data Sheets (MSDS) prior to use.
- The crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.
- Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file NHDES/EPA Overflow Notification Log and Overflow Report Form.

<b>Partially or Totally Blocked Siphon, Minimum Levels of Staffing (people): 4</b>	
<b>Minimum Emergency Equipment</b>	<b>Specialized Equipment</b>
<ul style="list-style-type: none"><li>• Jet flushing unit if available (sand trap)</li><li>• Grease solvent, if needed</li><li>• Standard disinfectants</li><li>• Safety harness and lifeline if applicable</li><li>• Air blower with hose</li></ul>	<ul style="list-style-type: none"><li>• TV camera unit</li><li>• Truck with hoist</li><li>• Vactor unit</li><li>• Caution tape</li><li>• Sand trap</li></ul>

<ul style="list-style-type: none"> <li>• Power vacuum</li> <li>• Portable pumps</li> <li>• Portable generators</li> <li>• Safety cones/barricades</li> <li>• Gas meter-for oxygen deficient, explosive or toxic gases</li> <li>• Confined space entry tripod and associated equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Floatation booms if necessary</li> <li>• Self Contained Breathing Apparatus (SCBA)</li> </ul>
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## **5. PROBLEM: Sewage Force-Main Break**

### **EMERGENCY PROCEDURES:**

- Dispatch a crew to the site to assess the situation, including determination of who and what might be affected and the immediate danger to the environment.
- Refer to sewer maps for location of sewers (private lands flow patterns, manholes, etc.) and determine the pump station associated and which critical facilities are in the area.
- Set up traffic cones and barricades as needed.
- Initiate measures to contain the sewer overflow, protect any streets, public areas, catch basin inlets, etc. that might be subject to flooding, and collect wastewater that has been discharged so as to minimize impact to public health and the environment.
- Determine if it will be possible to pump around the break, from the pump station wetwell to the force main discharge manhole or other accessible manhole, and if so, prepare to pump around the break as described below:
  - Request additional manpower and equipment as needed (e.g. excavating crew, bypass pumping equipment, etc.)
  - Set up pump out equipment and hoses from the wetwell to the nearest sewer discharge point.
  - Draw down the wet well as much as possible to maintain the low level.
  - Lock-out and tag-out (LOTO) the pumps in the pumping station.
- If pumping around the break is not possible, utilize the Vactor truck or septic hauler (Sterns Septic or first available service contractor) to draw down the wet well as much as possible and maintain a low level.

- Call in additional crews as necessary to help contain the sewer overflow. Set up flotation booms across streams, sandbag storm drains, etc., as necessary.
  - Check the tributary area to determine if the discharge will affect any receiving waters.
  - If it is determined that the receiving water may be affected, the supervisor should notify the Hanover Health Officer & NHDES.
  - If the wastewater is in streets/roads (public or private), contain the waste water to the extent possible with sandbags or other available impervious material.
  - Sandbag nearby catch basin inlets or paved leak-offs to prevent the wastewater from entering the drainage system and causing potential contamination to the receiving waters.
  - Cordon off the area if ponding occurs.
  - Collect as much of the sewage as possible, disinfect according to policy (see Appendix I), notify surrounding homes (superintendent notifies appropriate officials, as needed).
  - If the wastewater jeopardizes a playground or park, cordon off the entire area. Close the park to the public until the issue has been remedied to the satisfaction of the Health Officer.
  - Gather and remove sewage related debris and organic matter from the affected area.
- Drain the force-main:
  - Close down the gate valve on the upstream side of the discharge check valve in the pumping station.
  - Open the check valve by hand and secure it in place.
  - Slowly bleed the force-main back into the wetwell by slowly opening the gate valve on the discharge side of the pump, but only to the point where the force-main stops leaking and there is enough room to make the repair. Constant communication must take place between the crew located at the break and the crew located at the pump station.
  - Close the gate valve and return the check valve to its normal operating position and then fully open the gate valve.

- Repair force main break.
- After the repair is complete, remove Lock Out Tag Out and return the pumps to normal operating position.
- Run the pump in the hand manual position to fill the force-main (Care must be taken during filling of force main—use only one pump during filling). Once completed, observe several pumping cycles before completely back-filling the excavation.
- Upon confirmation of adequacy of the repair, backfill the excavation (if necessary) and restore surface conditions to match existing conditions.
- While the crew is restoring the excavation, the crew leader should conduct a preliminary assessment of damage to private and public property. The crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.
- Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file NHDES/EPA Overflow Notification Log and Overflow Report Form.

<b>Sewage Force-Main Break, Minimum Levels of Staffing (people): 4-5</b>	
<b>Minimum Emergency Equipment</b>	<b>Specialized Equipment</b>
<ul style="list-style-type: none"> <li>• Portable bypass pumping units</li> <li>• Hoses</li> <li>• Standard disinfectants</li> <li>• Safety harness and lifeline if applicable</li> <li>• Air blower with hose</li> <li>• Power vacuum</li> <li>• Portable generators</li> <li>• Safety cones/barricades</li> <li>• Gas meter-for oxygen deficient, explosive or toxic gases</li> <li>• Confined space entry tripod and associated equipment</li> </ul>	<ul style="list-style-type: none"> <li>• CCTV camera unit</li> <li>• Truck with hoist</li> <li>• Vactor unit or septage hauler</li> <li>• Power saw (circular)</li> <li>• Pipe cutter (hydraulic)</li> <li>• Caution tape</li> <li>• Sand trap</li> <li>• Floatation booms if necessary</li> <li>• Self Contained Breathing Apparatus (SCBA)</li> </ul>

## **6. PROBLEM: Sewer Main Break/Collapse**

### **EMERGENCY PROCEDURES:**

- Dispatch a crew to location of break/collapse immediately while referring to the sewer maps for location of sewers (private lands flow patterns, manholes, etc.) to determine which critical facilities are in the area.
- Crew sets up signs, barricades, and/or barrels for traffic control and public safety, rerouting traffic as necessary and deploying traffic control measures such as police or flag person as needed.
- If it is a main line break, the Superintendent shall notify the appropriate authorities and town officials immediately.
- Request additional manpower and equipment as needed based on initial damage assessment (e.g. excavating crew, equipment to pump around the break, etc.)
- Pumping around the break from the upstream manhole to the downstream manhole may be required. If necessary, set up bypass pumping equipment. If not necessary, prepare for repairs while the pipe is flowing.
- Call in additional crews to set up flotation booms across streams, install sandbags, etc., as necessary. Unless special conditions exist, **pumping around the failed sewer main is a priority** before containing the overflow.
- Gather and remove sewage related debris and organic matter from the affected area.
- If the wastewater is in the streets/roads (public or private), use sand bags or other available impervious material to contain the wastewater to minimize any impact to public health or the environment.
- Sandbag nearby catch basin inlets or paved leak-offs to prevent the waste water from entering the drainage system and causing potential contamination to the receiving waters.
- Cordon off the area if ponding occurs.
- Collect as much of the sewage as possible, disinfect according to policy, notify surrounding homes (superintendent notifies appropriate officials, as needed).
- If the waste water jeopardizes a playground or park, cordon off the entire area. Close the park to the public until the issue has been remedied to the satisfaction of the Health Officer.

- Determine the location of the break/collapse and make any necessary repairs. Use repair procedures consistent with policy. If the break is on the pipe length, then a repair can be made with a wrap-around sleeve. If the break is at the bell, then a bell-joint clamp may be used.
- Upon confirmation of adequacy of the repair by Operations Manager, backfill the excavation (if necessary) and restore surface conditions to match existing conditions.
- To restore the sewer line to full capacity, the crew should remove any debris that may have entered and accumulated in the sewer line downstream and upstream from the break/collapse. The crew should clean the sewer line as described below.
  - Install the proper size sandtrap in the downstream invert of the downstream manhole to trap any debris which may have accumulated in the sewer line.
  - Using a high velocity jet-flushing vehicle, begin flushing from the downstream manhole against the flow to the upstream manhole.
  - Repeat this procedure for several upstream and downstream pipe reaches.
- The crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.
- Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file NHDES/EPA Overflow Notification Log and Overflow Report Form.

<b>Sewer Main Break/Collapse, Minimum Levels of Staffing (people): 4</b>	
<b>Minimum Emergency Equipment</b>	<b>Specialized Equipment</b>
<ul style="list-style-type: none"> <li>• Portable bypass pumping units</li> <li>• Hoses</li> <li>• Jet flushing unit if available (sand trap)</li> <li>• Standard disinfectants</li> <li>• Safety harness and lifeline if applicable</li> <li>• Air blower with hose</li> <li>• Power vacuum</li> <li>• Portable pumps</li> <li>• Portable generators</li> <li>• Safety cones/barricades</li> <li>• Gas meter-for oxygen deficient, explosive or toxic gases</li> <li>• Confined space entry tripod and associated equipment</li> </ul>	<ul style="list-style-type: none"> <li>• CCTV camera unit</li> <li>• Truck with hoist</li> <li>• Vactor unit</li> <li>• Power saw (circular)</li> <li>• Pipe cutter (hydraulic)</li> <li>• Sand trap</li> <li>• Caution tape</li> <li>• Floatation booms and sand bags as necessary</li> <li>• Self Contained Breathing Apparatus (SCBA)</li> </ul>

## **7. PROBLEM: Wastewater Pump Station Alarms General Response Actions**

### **EMERGENCY PROCEDURES:**

- Send an individual to the station indicating an alarm as soon as possible for a Priority Alarm. **Responders should bring a detailed station-specific trouble-shooting guide with them for that particular station.** If serious trouble is found, call for additional assistance and keep an individual at the station until further instructions are received.
- Always check with the power company when an alarm goes on to see if there is a power outage in the area, although a power failure that has not been reported to the power company can occur at a pump station. The pole number nearest the station should be reported.
- Personnel called in to investigate pump station alarms shall respond to the station even if the alarm has cleared prior to their arrival. All alarm conditions are to be checked and logged. Use the following guidelines and follow confined space entry procedures if applicable:

#### **Wetwell/Drywell Type Stations:**

1. Observe all safety precautions per training.
2. Check the atmosphere within drywell with gas meter prior to entering.
3. Upon entry, identity the storage capacity in the well. This will give some indication of the time available for response. If flooded, skip to pump-out steps under “Pumping Station Failure inside valve pit, pump or valve failure” procedure.
4. Take your time entering the drywell. Never enter a flooded drywell.
5. Note any unusual odors—i.e. burning electrical equipment or paint.
6. Listen and note any unusual noises.
7. Check for heat around pump motors and pump bearing housings. Note any which seem unusually hot.
8. Observe every piece of equipment in the station. Note anything that looks out of place.
9. Record all gauge readings including wet well level, hour meters, flow charts, on-off levels, psi gauges on pump, rpm (on VFD's) and anything else that you feel is significant.

10. Using available information and the trouble shooting guide, systematically run through the system. Use a process of elimination to identify the cause of the failure. Check the level controls, check pump operation using manual position, check pump output by pressing on check valve counterweight as defined in the trouble-shooting guide. Once the cause of the problem is isolated, engage mechanical or electrical disciplines for repairs.
11. Emergency personnel should be absolutely certain that the cause of the pump station alarm or failure has been properly identified and corrected prior to leaving the station.
12. Reset any/all alarm feature indicator lights.

**Submersible Type Stations:**

1. Take all safety precautions per training.
2. Check the atmosphere within the wetwell with a gas meter prior to working over the top.
3. Note any unusual odors—i.e. burning electrical equipment, hot or smoking oil, or paint.
4. Listen for any unusual noises and note if pump(s) are running.
5. Observe every piece of equipment in the station (pay specific attention to the level control system). Note anything that looks out of place.
6. Record all gauge readings from the control panel including: wet well level, hour meters, flow charts, on-off levels, psi gauges on pump, rpm (on VHD's) and anything else that you feel is significant.
7. Using available information and the trouble-shooting guide, systematically run through the system. Use a process of elimination to isolate the cause of the failure. Check level controls, check pump operation using manual position, check pump output by observing the check valve counterweight as defined in the trouble shooting guide. Once the cause of the problem is isolated, engage mechanical or electrical disciplines for repairs
8. Emergency personnel should be absolutely certain that the cause of the pump station alarm or failure has been properly identified and corrected prior to leaving the station.
9. Reset any/all alarm feature indicator lights.

10. Check the O&M manual to trouble shoot the level sensor system and pump controls

11. Pumps may be checked easily for operation by checking the arm of the check-valve in the discharge line of an operating pump. If it feels “spongy” (or soft) when downward pressure is applied with the palm of the hand, the pump is pumping. If a breaker is off and the pump motor is hot to the touch, DO NOT attempt to reset and start. If a pump motor is simply warm, one attempt to restart can be made. Turning the selector switch to manual will normally start a pump, and the check valve arm should move upwards. If the pump has lost prime or is lagged, the check valve will not open.

<b>Wastewater Pump Station Alarms General Response Actions, Minimum Levels of Staffing (people): 2</b>	
<b>Minimum Emergency Equipment</b>	<b>Specialized Equipment</b>
<ul style="list-style-type: none"><li>• Gas meter-for oxygen deficient, explosive or toxic gases</li><li>• Self Contained Breathing Apparatus (SCBA)</li><li>• Harness and lifeline</li></ul>	<ul style="list-style-type: none"><li>• As applicable for troubleshooting</li></ul>

## **8. PROBLEM: Pumping Station Failure Caused by Secondary Power Failure During Power Outage**

### **EMERGENCY PROCEDURES:**

- Dispatch WRF crew to the pumping station immediately. The crew needs to bring the auxiliary generator for that specific station as a backup, assuming that repair to the dedicated generator cannot be made immediately.
- Upon entry, identify the storage capacity in the well. This will give some indication of the time available for response. If flooded, skip to pump-out steps under “Pumping Station Failure inside valve pit, pump or valve failure” procedure.
- Dispatcher shall request the assistance of the power company in restoring power to the station if necessary. Determine the estimated time of arrival of the power company crew and then notify the pumping station operators.
- As they approach the pumping station, the pumping station crew should check the overhead power lines for fuses that might have blown or down power lines. If the crew notices a blown fuse or down power line, identify the location and pole number(s), and notify the dispatcher to relay this information to the power company.
- Lock out and tag out (LOTO) the main line, disconnect (if applicable).

- Check all components of the dedicated generator to determine failure cause. Use the manufacturer-prepared trouble-shooting guide to aid in diagnosis. If it cannot be repaired immediately, connect the portable generator to the auxiliary power connection located outside the building. Examine plug type and ensure consistency. Use adapters as necessary.
- Go through the specific procedures for starting the generator to supply power to the station.
- Obtain the services of a qualified generator repair facility to address the dedicated generator failure.
- Once fully repaired, disconnect the portable generator and reconnect the dedicated unit. Operate the dedicated unit through several pump cycles. Check unit for regular exercise.

<b>Pumping Station Failure Caused by Secondary Power Failure During Power Outage, Minimum Levels of Staffing (people): 2-3</b>	
<b>Minimum Emergency Equipment</b>	<b>Specialized Equipment</b>
<ul style="list-style-type: none"> <li>• Harness and lifeline</li> <li>• Flash light</li> <li>• Emergency lighting</li> <li>• Portable generator</li> <li>• Gas meter-for oxygen deficient, explosive or toxic gases</li> </ul>	<ul style="list-style-type: none"> <li>• Power testing equipment</li> </ul>

**9. PROBLEM: Pumping Station Failure Inside Valve Pit, Pump or Valve Failure (submersible type application)**

**EMERGENCY PROCEDURES:**

- Dispatch pumping station crew to the pumping station immediately.
- Prior to viewing the wetwell, measure the atmospheric conditions for sufficient oxygen and the presence of explosive or toxic gases.
- Upon arrival the crew should identify the storage capacity in the wetwell. This will give some indication of the time available for response. If flooded, skip to pump-out steps.
- Inspect the main controls looking for failure indications. Check processor to determine failure if applicable. If pump failure is determined, skip to wetwell inspection steps.
- Inspect the valvepit. Observe all valves and force mains. If flooded, arrange to pump out the valve pit. If failure within the valvepit is detected, skip to pump-out steps.

- Constantly monitor the atmospheric conditions while working in or above the wetwell. Inspect the wetwell. Check the wetwell floats or level control system, bar rack and pump volute area for clogging or other problems.

### **Pump-Out Steps**

1. If pump failure, determine if pump out is necessary. If unnecessary, skip to repair procedures.
2. Pump the flow with portable pumps. Call additional crew to bring appropriate portable pump(s) including all required lengths of suction and discharge hose, to the pumping station if necessary. Upon arrival of the portable pump, connect the appropriate lengths of suction hose that will suspend all the way into the wetwell, and then connect enough discharge hose to pump into appropriate manhole or connection (if so equipped). Go through the procedures for starting the portable pump, and begin pumping.

### **Repair Steps**

1. Lock out and tag out (LOTO) the main line, disconnect (if applicable).
2. Monitor the atmospheric conditions for sufficient oxygen and the presence of explosive or toxic gases. If safe, enter valve pit or wet well and inspect the piping and valves for cause of failure.
3. Complete repairs to pipe, pump or valve as per policy. If permanent materials are not readily available, install temporary repairs until the permanent repairs can be completed.
4. Restore facilities to normal and inspect other components of the force main and pumping system for signs of similar failure.
5. Shut down portable pumping operation. Do not disconnect hoses until repair is checked for leaks. Operate pumps to check repair under pressure and normal operating conditions.
6. If no leaks are observed, return pumps to normal conditions by removing LOTO. Monitor pumps to check lead/lag operations.
7. Make out a report indicating the time of the call, description of the problem, the repair work done, personnel present and equipment used.
8. File NHDES/EPA Overflow Notification Log and Overflow Report Form.

<b>Pumping Station Failure Caused by Force-Main Break inside valve pit, pump or valve failure, Minimum Levels of Staffing (people): 2-4</b>	
<b>Minimum Emergency Equipment</b>	<b>Specialized Equipment</b>
<ul style="list-style-type: none"> <li>• Harness and lifeline</li> <li>• Flash light</li> <li>• Emergency lighting</li> <li>• Portable pumps and hoses</li> <li>• Gas meter-for oxygen deficient, explosive or toxic gases</li> </ul>	<ul style="list-style-type: none"> <li>• Self Contained Breathing Apparatus (SCBA)</li> </ul>

### **5.3: Emergency Support**

Addressing some problems may require resources beyond Hanover's forces. This is particularly true of main line breaks where there is a risk of a significant sewer overflow. In these situations, Hanover may enlist the aid of New Hampshire Public Works Mutual Aid. The Director of Public has executed an agreement with the NH Public Works Association to supply equipment, materials, and personnel in an emergency situation:

1. Request assistance only when local municipal resources are deemed inadequate.
2. Request help by contacting other members directly.
  - a) Use the available inventory list to determine what aid is needed.
  - b) Use the resource list to determine which community help will be requested from.
3. You may also use the toll-free number to request help: 1-877-731-9908
4. Follow-up the request in writing and include the following information (as applicable):
  - a) Description of affected area; condition/damage
  - b) I.D. service functions needed (be specific)
  - c) Specify infrastructure affected; i.e. water, sewer
  - d) Describe aid and assistance needs; duration, supplies
  - e) Facility needs; i.e. shelters, staging areas for incoming goods
5. Contact State and Federal assistance if needed.

Hanover also maintains a general services agreement with several companies for situations that require the prompt reconstruction of sewer lines. These companies are capable of mobilizing construction equipment and personnel quickly to handle emergency assignments. The LMC or WRF contract for emergency sewer repairs requires the contractor to respond to the site within one (1) hours of notification to mobilize. This response time and the level of response will vary due to several factors, some of which are identified below:

- Location of the sewer repair in relation to the contractor's equipment yard
- Scope of the repair, size of sewer, depth of sewer and volume of flow
- The size, type and availability of equipment and number of workers
- The time of day, day of the week and the proximity to a holiday
- Weather conditions, clear, rain, snow, extreme cold or heat

**Spill Contractor:**

In the event of a spill that cannot be controlled by the LMC or WRF Response Team, see Appendix H (Response Contractors) that will provide professional services for the control, removal and disposal of contaminated material.

## 6. OVERFLOW REPORTING

### 6.1: Overview

The Operations Manager or Wastewater Superintendent completes an Overflow Report (See Appendix C). The Responsibilities Chart in Section 1 provides guidance on proper reporting. The Operations Manager, Wastewater Superintendent or designee promptly notifies appropriate department and agencies when the overflow is eliminated. The information collected will also provide the Town with valuable information to inform decisions regarding collection system rehabilitation and replacement, scheduling, staffing, equipment needs, budgeting and updating this and other emergency response plans.

Note: NHDES & EPA, must be contacted within 24 hours of when the community becomes aware of a SSO.

Call NHDES at 603-271-1494 and describe the incident. If no one is available leave a message.

Call USEPA at 617-917-1977 and describe the incident. If no one is available leave a message.

### 6.2 Reporting Details

- The dispatcher provides details on the time, location, description, and map locations of overflows
- The start time of the sewer overflow is determined by one of the following methods:

- a. Date and time information received and/or reported to have begun and later substantiated by a sewer investigator or response crew;
  - b. Visual observation.
- The stop time of the sewer overflow is determined by one of the following methods:
  - a. When the blockage is cleared or flow is controlled or contained; or
  - b. The arrival time of the sewer investigator or response crew, if the overflow stopped between the time it was reported and the time of arrival.
- An estimation of the rate of sewer overflow is made by one of the following criteria (See Appendix I for guidance on estimating sewer overflow volumes and flow rates):
  - a. Direct observations of the overflow; or measurement of actual overflow from the sewer main.
  - b. When the rate of overflow is known gallons per minute (GPM), the duration of the overflow is multiplied by the overflow rate; or when the rate of overflow is not known, the surrounding area is investigated for evidence of ponding or other indications of overflow volume.
- Visual observations should be recorded for any unusual observations.
- Photographs and videotapes are taken at the event and response when possible.
- The nature and extent of any damage or impacts to public/private property are assessed.
- Repair crews provide a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.
- Reports are kept in paper copies and our online Maintenance database and evaluated annually to determine patterns and trends and to provide input to our asset management program.

### **6.3 Customer Satisfaction**

The Operations Manager confirming the overflow follows up in person or by telephone with the citizen(s) reporting the overflow. The cause of the overflow and its resolution will be disclosed.

In the event of a longer term emergency response, the following table indicates who will be responsible for communicating with the public and the media:

***Designated spokesperson and alternates:***

<b>Spokesperson</b>	<b>Alternate Collection System</b>	<b>Alternate Pump Station</b>
Peter Kulbacki, P.E. Director of Public Works	Michael Chase, Operations Manager	Kevin MacLean WW Superintendent