Town of Hanover Sewer Collection System Preventive Maintenance and Sewer Overflow Response Plans

April 28, 2017

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1. COLLECTION SYSTEM MANAGEMENT

a. Goals

Hanover's preventive maintenance plan (PMP) covers the assets we manage in our wastewater collection system and is one component of our overall Capacity, Management, Operations and Maintenance (CMOM) Plan. The PMP combines preventive, predictive and corrective maintenance strategies with our best management practices. The CMOM Plan and PMP have been prepared to help Hanover effectively manage our wastewater collection system and achieve the following goals:

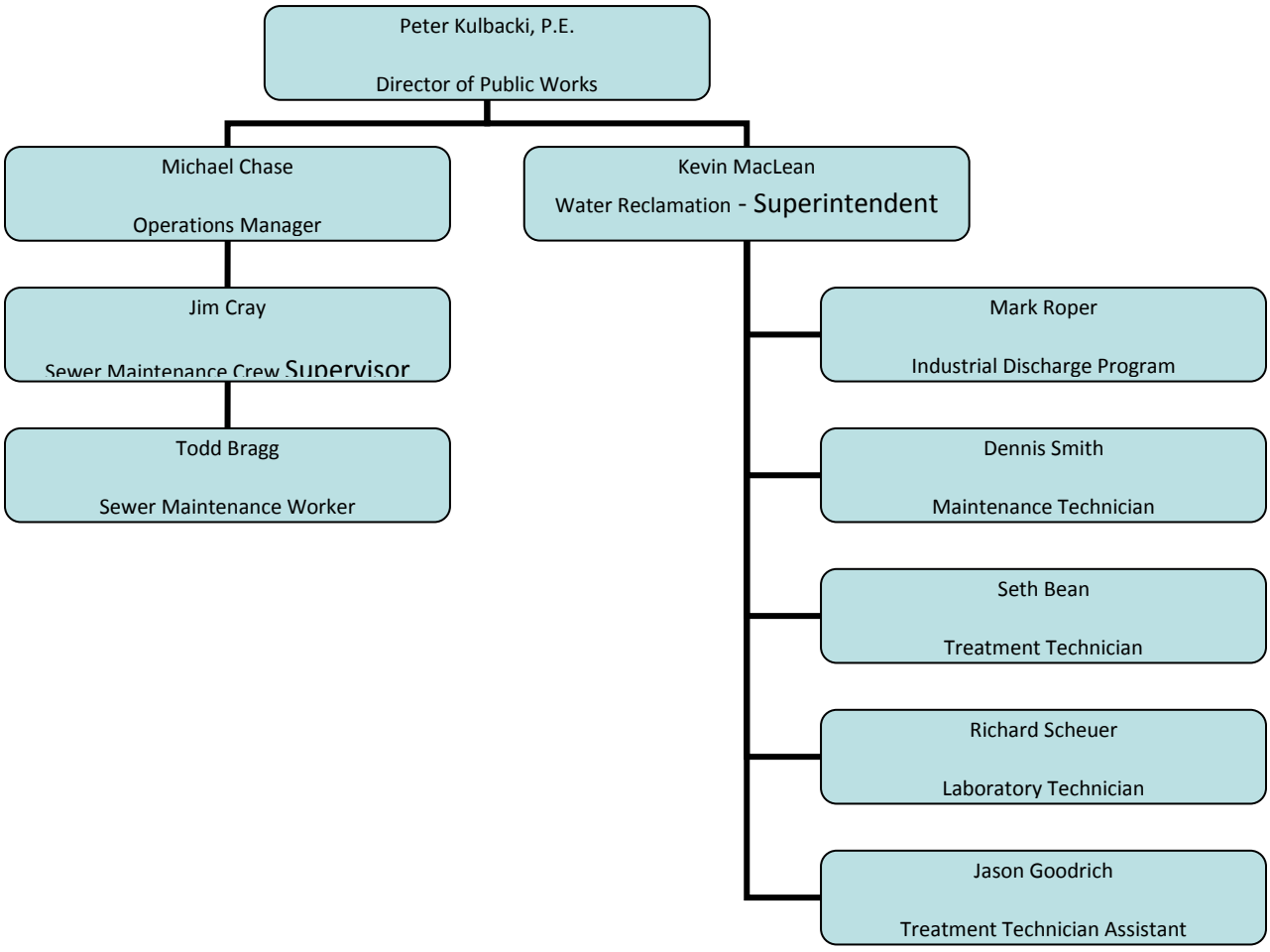
- Prevent public health hazards
- Protect the environment
- Comply with regulations
- Minimize the frequency of SSOs
- Mitigate the impact of SSOs
- Minimize disruptions in service
- Minimize complaints
- Provide quick response to any disruption in service that occurs
- Protect Hanover's large investment in the sewer collection system by maintaining maximum capacity and extending the useful life of the associated assets
- Prevent unnecessary damage to public/private property
- Efficiently use the funds available for the maintenance of the infrastructure and the operation of services
- Reduce expenditures for emergency maintenance
- Convey wastewater to the Town of Hanover's waste water treatment facility with a minimum of infiltration, inflow and exfiltration
- Provide adequate capacity to convey peak flow
- Provide immediate, responsive, and efficient service to all emergency calls
- Provide a safe work environment for employees, employers, and residents in Hanover

- Perform all operations in a safe manner to prevent personal injury
- Utilize evolving technology to increase our effectiveness and efficiency
- Provide reliable service now and into the future

b. Organization

Hanover's Line Maintenance and Construction (LMC) is a division within the Department of Public Works (DPW) and are responsible for the maintenance and upkeep of the gravity wastewater collection system. LMC has a staff of two full-time maintenance positions, which is sufficient to meet daily maintenance needs, but uses on-call contractor services as needed for specific maintenance activities and for emergency support. Pump stations, lift stations and the treatment facility are operated and maintained by the six full-time staff of the Wastewater Treatment Facility (WWTF) or Water Reclamation (WR) division. The chart below shows the organizational structure of the DPW.

Hanover's Line Organizational Chart:



Director of Public Works-Provides administrative and engineering oversight to all operations and activities of the Public Works Department. Plans, coordinates, directs, organizes and participates in the public works activities of the Town. Supervision is exercised over the work of all employees within the Public Works Department.

Operations Manager-Plans and directs operational exercises and activities. Leads staff and delegates responsibility, allocates resources, authorizes outside contractors to perform services, inspects on-going work efforts and may serve as public contact.

Line Maintenance Supervisor-Manages field operations and maintenance activities, provides relevant information to agency management, prepares and implements contingency plans, leads emergency response, inspects sewer assets as needed, investigates and reports SSOs, and trains field crews. Hanover's Line Maintenance Supervisor is required to have a Grade IV Operator's License.

Water Reclamation Superintendent-Manages the operations of the Water Reclamation Facility (WRF) or wastewater treatment plant including pump stations and force mains, ensures compliance with regulatory requirements of treatment and discharges. Plans and budgets for upcoming operational and compliance needs.

Field Crew-Conduct staff operations and preventive maintenance activities. Mobilizes and responds to notification of stoppages and SSOs, as well as address and clean-up of events as required. As the situation requires, additional man-power and assistance is available through on-call local contractors as well as other divisions (e.g. highway) that contains four members that are cross-trained to assist in tasks as needed.

Administrative/Public Relations-Support staff operations and preventive maintenance activities, assist with data entry, billing, dispatch, payroll, customer response, outreach, education and other support functions as needed.

Relation to Other Municipal Functions

The management, operations and maintenance of the wastewater collection and transmission system is the responsibility of the LMC and WRF divisions. The Water and Highway Divisions of the DPW support LMC & WRF. Cross-training and assistance creates interest, involvement and redundancy which are invaluable to the community. Conversely, LMC & WRF personnel are also utilized for the benefit of other DPW divisions and activities as appropriate.

- Collection system mapping is supported by the DPW's Administrative Coordinator/GIS Specialist. The position is responsible for the development, maintenance and updates to the town's GIS existing sewer infrastructure mapping system.

- Resources and budget are overseen by the Director of Public Works and the Director of Administrative Services.

- Contingency equipment and replacement inventories are managed and maintained by the respective divisions within Public Works and ultimately by the Director.

- Training for our maintenance team and department is provided through many regulatory, private and institutional groups, including but not limited to: New Hampshire Department of Environmental Services {NHDES}, New Hampshire Water Pollution Control Association {NHWPCA}, Granite State Rural Water Association {GSRWA}, United States Environmental Protection Agency {USEPA}, New England Interstate Water Pollution Control Commission {NEIWPCC}, North East Water Wastewater Training Associates {NEWWTA}, National Association of Sewer Service Companies {NASSCO}, and New Hampshire Department of Labor {NHDOL}.

- Outreach to plumbers and building contractors is largely done by the Town's Planning, Zoning and Codes Department, which issues Building Permits and performs inspections for code compliance on building projects in Town.

- Design and construction standards for installation, rehabilitation and repair are overseen and reviewed by the Director of Public Works or his designee which is either the Operations Manager or Line Maintenance Supervisor, depending on the situation.

- Standards for inspection and testing are developed by the Director of Public Works.

- Inspection of grease interceptors/separators is performed by the Industrial Discharge Program Coordinator.

- Outreach for Fats, Oils and Grease is performed jointly by the LMC personnel, Industrial Discharge Program Coordinator and Building Inspector.

- Personnel hiring and administration are performed by the Director of Public Works with support from the Human Resources Department.

- Procurement of non-routine equipment, services or supplies is authorized by the Director of Public Works.

- The Town Attorney provides legal advice, reviews and opines to the department for legal concerns, contracts and agreements, and is responsible for handling all claims against the Department and for prosecuting violations of all Sewer Use Ordinances.

- The Highway division coordinates paving services to LMC on all sewer repairs performed within public streets and works to coordinate street-paving schedules with sewer and other utility work.

- The Town Clerk maintains copies of Resolutions and Hanover Ordinances passed by the Selectboard related to the operation of the Wastewater Collection and Treatment Systems.

c. Training/Safety

Hanover's training program provides mechanisms for educating employees and establishing their technical competence through a variety of organizations dedicated to supporting wastewater collection system operators and treatment facilities, including: NHWPCA, NHDES, NASSCO, GSRWA, NEIWPCC, NEWWTA, NHDOL, and USEPA. Hanover utilizes a combination of in-house skill training and the purchase of specialized training through state and national associations, the self-study technical wastewater training courses offered through California State University- Sacramento, conferences and vendor training programs to enhance skills for performing daily work duties and provide certified operators continuing education hours. Skills training for LMC employees include, but are not limited to:

- Routine Line Maintenance
- Heavy Equipment Operation
- Maintenance Equipment Operation
- Line Testing and Inspection
- Infrastructure Installation
- Closed Circuit Television of Lines
- Electrical and Instrumentation
- Emergency Response
- Public Relations
- Safety

Safety training is obtained from training agencies including New Hampshire HealthTrust. Hanover expects employee adherence to the following written safety policies and procedures:

- Confined-Space Entry
- Hard Hat Policy
- Vehicle Operation Policy
- Seat Belt Policy
- Excavation Safety Policy and Program
- Injury Reporting Policy
- Joint-Loss Management Committee
- Personal Protective Equipment (provided for the employee)
- First-Aid, CPR and AED (First-aid supplies are available in crew areas and vehicles)
- Flaggers
- Emergency Action Plan
- Defensive Driving Program

Training records are maintained for each employee at the Public Works office. The LMC and WRF divisions maintain appropriate safety equipment including: protective clothing, safety glasses, hard hats, gloves, harnesses, tripods, hoists, and fire extinguishers. The division also maintains and calibrates atmospheric testing equipment. Lights, barricades, signage and exhaust fans are also available at the Public Works facility and also on-board the Department service vehicle.

d. Customer Service

The Hanover Water Reclamation Facility {WRF} is open to public, private and institutional groups for tours. Annually the facility averages around 30 groups. Many are recurring groups that have built it into their curriculum activities. Informative text is provided in the annual budget as well as the annual Town report outlining current, past and future activities and planning. The WRF has also participated in “A Day Without Water”, NHWPCA “Clean Water Week”. Staff have also provided off-site informational training for residents and other wastewater professionals.

Hanover has established protocols for informing the public if/ when services will be affected. This is typically done through person-to-person contact, phone calls and web page notifications.

1. Complaint Management Program

Complaints and requests are received by various means. Phone calls, e-mails, other DPW divisions and in-person accounts are all typical for community and department communication. Regardless of the nature or means of receipt, all complaints and requests are relayed to the LMC division or the Operations Manager. An aggressive response, diagnosis and repair plan is initiated. The Town is in the process of developing an online work order system which will allow for all complaints to be assigned and tracked. The work order system will allow the detailed information to be tracked and work to be assigned to the appropriate staff.

Once a complaint is assigned, our field personnel perform an investigation. If the problem cannot be immediately resolved, DPW will generate a work order to take appropriate action for permanent correction of the problem. If the Town of Hanover is not responsible for correcting the problem, the DPW will provide the complainant with guidance on a recommended course of action. Once an investigation has been completed, the staff enters closeout information into the work order system.

2. Public Information and Education Program

Hanover uses a variety of outlets for providing information and education to residents/customers. The outlet(s) used to disseminate information is often based on the type of information and the targeted audience. Hanover routinely uses the outlets listed below to help provide its citizens with the most up-to-date information possible:

- Hanover website-ordinances, rates, notices and capital improvement information
- Hanover Annual Town Reports
- Public Hearings
- Personal Visits/Phone Calls
- Door Hangers
- Customer Mailings
- Neighborhood/Town Hall Meetings
- Hanover Selectboard

The Hanover community consists of an atypical population dynamic due to the presence of Dartmouth College (transient student population) and the region's largest hospital, Dartmouth-Hitchcock Medical Center. As such, the local populace is comprised of an educated and actively-involved public. Throughout the year, the Town has a number of facility field trips for school groups and various committees/groups in the community.

Additionally, a number of other sources of information and activities are available for the public and business-owners to utilize. Copies are generally available at the Water Reclamation Facility as well as Town Hall and the Public Works facility.

Outreach Information (source) and Activities:

- Town Building Permits contain questions as to how the water and wastewater needs of the project are being managed—based on the building information, the Town provides applicants with appropriate information.
- Sewer Use Ordinances
- Industry Pretreatment Requirements
- Sewer Use Rates
- Grease Handling and Disposal Information (NHDES)
- Service Connection Requirements

e. Information Management and Geographic Information Systems

The Town of Hanover is currently transitioning from an Excel-based spreadsheet to manage information on our collection system to an online Geographic Information System (GIS). Some of the data is being integrated into the Town's work order program as well. The table below shows some of the collection system information that is included in our GIS.

Collection System Map Information Included in Hanover's GIS:

Attribute Fields in Sewer Manhole Table:

TOH_ID	LOCATION	INVERT_MAT
FEAT_TYPE	INSTALLED	INSP_DATE
_ID Char	MATERIAL	INSP_TYPE
GRID_LOC	FRAME_SIZE_IN	COVER_COND
CC	RIM_ELV_FT	SHELF_COND
CLD_ID	INVERT_DEPTH_FT	FLOW_COND
OWNER	INVERT_ELV_FT	INFILTRATN

INL1_DIA_IN	INL3_DIA_IN	OUT1_DIA_IN
INL1_FR_DR	INL3_FR_DR	OUT1_TO_DR
INL1_FR_ID	INL3_FR_ID	OUT1_TO_ID
INL1_DROP_FT	INL3_DROP_FT	OUT2_DIA_IN
INL2_DIA_IN	INL4_DIA_IN	OUT2_TO_DR
INL2_FR_DR	INL4_FR_DR	OUT2_TO_ID
INL2_FR_ID	INL4_FR_ID	NOTES
INL2_DROP_FT	INL4_DROP_FT	SOURCE

Attribute Fields in Sewer Lines Table:

TOH_ID	TO_ID	FROM_ELEV_FT
FEAT_TYPE	INSTALLED	TO_ELEV_FT
_ID	DIAMETER_IN	LENGTH_FT
GRID_LOC	MATERIAL	AV_SLOPE
CC	SLIPLINED	NOTES
FLOW_TYPE	FLUSHED	SOURCE
FROM_ID	TO_DIR	

Attribute Fields in Sewer Pump Station Table:

TOH_ID	CLD_ID	TRANS_SMH
FEAT_TYPE	LOCATION	EM_GEN
_ID	ELEC_SERV	NOTES
GRID_LOC	PUMP_STATS	SOURCE
CC	POLE_NUMB	

Also links to All Pump Stations Specs.pdf and pump station schematics ex:PS#5 Sections.pdf

Attribute Fields in Sewer Syphon Table:

TOH_ID	INSP_DATE	OUT1_DIA_IN
FEAT_TYPE	INSP_TYPE	OUT1_TO_DR
_ID	COVER_COND	OUT1_TO_ID
GRID_LOC	SHELF_COND	OUT2_DIA_IN
CC	FLOW_COND	OUT2_TO_DR
CLD_ID	INFILTRATN	OUT2_TO_ID
OWNER	INL1_DIA_IN	NOTES
LOCATION	INL1_FR_DR	SOURCE
INSTALLED	INL1_FR_ID	
MATERIAL	INL1_DROP_FT	
RIM_ELV_FT	INL2_DIA_IN	
INVERT_DEPTH_FT	INL2_FR_DR	
INVERT_ELV_FT	INL2_FR_ID	
INVERT_MAT	INL2_DROP_FT	

Attribute Fields in Emergency Generator Table:

TOH_ID
FEAT_TYPE
_ID
GRID_LOC
CC
STRUCTURE_SERVED
LOCATION
OUTPUT_KW
FUEL_TYPE
TANK_CAP
GPH
RUN_TIME
MAKE
MODEL
SERIAL
INSTALLED
LAST_INSP
NOTES
SOURCE

Force Mains are not a separate layer. They are indicated in the "type" field in the Sewer Lines table.

Assets are managed using real-time online websites for GIS (currently Maps Online) and materials and equipment (Facilities Dude). The information includes:

General

- Parts Inventory
- Equipment and Tools

Collection System

- Collection System Mapping
- Collection System Inventory
- FOG Compliance
- Flow Monitoring
- SSO/Emergency Response

Maintenance Program

- Routine and Priority Planned Maintenance (cleaning, etc.)
- Inspection Scheduling and Tracking
    - Manhole
    - Pipeline [Closed Circuit Television (CCTV), camera]
    - Pump Station
- Work Orders
- Monitoring/Sampling Scheduling for FOG
- Vehicle Maintenance

Customer Service Program

- Complaints
- Customer Service Response

Any activity performed by department personnel is generated and tracked through the online work order and GIS system. The work order system produces daily digital work orders for the performance of routine maintenance as well as repairs and corrective actions in response to inspection findings or customer complaints. Upon completion of the task(s), data related to the work order is entered into the Maintenance Edge online work order software for tracking performance and historical information on pump station equipment, manhole servicing, interruptions and related collection system responses.

Our work order and online GIS programs are cloud-based. The systems are backed up daily and both are access-restricted. Passwords are provided to Town employees designated for access, at various levels. Administrators restrict ability to modify information, review critical details and share information.

f. Legal Authorities and Controls

1. Sewer Use Ordinance

Hanover has established and implemented regulations regarding the use of the wastewater collection system. Hanover has operated with a comprehensive sewer use ordinance, consistent with EPA's model ordinance, since 07/31/1987. As regulations and requirements have changed, Hanover has adopted additional ordinances to address the issues and needs. Ordinances (Appendix B Sewer Use Ordinance) are kept up-to-date and are available

electronically at http://www.hanovernh.org/sites/hanovernh/files/uploads/ordinance_14_-hanover_municipal_sewer_system.pdf.

The items addressed through our sewer ordinances include: sewer use and standards, access to pipelines and structures, FOG management, pretreatment requirements, service connections, hauled waste/septage, user rates, permitting of flows into the system, inflow/infiltration control, enforcement of proper design, installation, and testing standards, and inspection requirements for new and rehabilitated sewers. Hanover also has an Inter-municipal Agreement (IMA) (Appendix E) with the City of Lebanon, NH to accept sewer flows emanating from certain geographic areas in Lebanon. Hanover reviews the adequacy of user rates annually (see Ordinance #14, Appendix 3-Sewer Rental Rates and Charges pages 70-75).

2. Joint Sewer System Agreement

Hanover has an Inter-municipal Agreement (IMA) that allows the conveyance of wastewater from sections of the City of Lebanon sewer collection system since 09/02/1969. The agreement was last amended on 10/09/2012. The main items in the agreement are described below:

- Hanover has authorized the City of Lebanon to discharge up to 0.65 million gallons per average day (MGD) of wastewater, and a peak daily flow from "Gile Tract Watershed" (Rte. 120) of 0.90 MGD and from Route 10 0.187 MDG (total of 1.087 MGD). In addition, Hanover has authorized up to 1,050 5-Day BOD pounds per day (lb/day) and 945 lb/day of TSS.

- The City of Lebanon retains ownership of sewers within their corporate limits as well as maintenance and repair responsibilities to designated manholes in Hanover.

- The City of Lebanon is assessed an annual sewer charge updated each May after Town Meeting is held. The sewer maintenance service charge includes: costs for sewer maintenance flow monitoring, inspection and maintenance, wastewater treatment, and contribution to the sewer reserve fund.

- The City of Lebanon is responsible for the maintenance and repairs for the sewer system within the Lebanon City limits, including any portion that conveys flow to the Hanover Water Reclamation Facility. Maintenance and repairs include routine inspection, rodding, unplugging or flushing, as well as CCTV inspection of their own collection system.

- Lebanon is responsible for determining the annual sewer maintenance service charge to Lebanon users. The sewer maintenance service charge includes: costs for sewer maintenance, wastewater treatment, and a sewer reserve fund.

- Lebanon is required to adopt, and from time to time revise, a Sewer Use Ordinance, local limits, and an Industrial Pretreatment Program as restrictive as Hanover's Ordinance.

- To date, Hanover has not encountered legal issues regarding wastewater flow from Lebanon.

2. GENERAL INFORMATION ABOUT THE HANOVER SANITARY SEWER SYSTEM

a. Wastewater Treatment and Collection System Description

Hanover's first formal wastewater collection system dates back to the 1800s with the first wastewater treatment facility being constructed in 1969. The collection system transports wastewater to the treatment facility (Water Reclamation Facility), located at 121 South Main Street, behind Pine Knolls Cemetery.

The oldest portion of the system is in the downtown (former Hanover Precinct), which includes the areas in the vicinity of North & South Main Streets, parts of East and West Wheelock and the small neighborhood to the southwest of South Main Street and West Wheelock. This area corresponds to the highest density of commercial customers as well. In 1969, Hanover constructed a primary treatment facility to treat wastewater. In 1986, Hanover upgraded the treatment facility to a 2.3 MGD activated sludge treatment facility that provides secondary wastewater treatment for both communities. The last major upgrade of the wastewater treatment facility was completed in 2013 and included anaerobic digestion rehabilitation, process pumps, methane collection and use, dewatering, SCADA, HVAC and electrical upgrades. The treated wastewater is discharged to the Connecticut River; NHDES designated Section [NHLAK801040402-03].

Hanover and the City of Lebanon each own and maintain the wastewater collection system within respective jurisdictions. Hanover's collection system includes 4 municipally-owned pump stations and approximately 45 miles of sewers, ranging in size from 6 inches to 20 inches in diameter. Hanover also has 1 private pump station at Kendal at Hanover that Hanover is responsible for maintaining. Additionally, there is a private pump station at the Storrs Pond Recreational Facility owned by the Hanover Improvement Society.

Hanover does not own or maintain any portion of the sewer laterals, mains or manholes that drain each privately owned parcel. However, Town crews assist property owners in the prevention of backups and spills on their properties.

LMC staff and contractors perform planned maintenance tasks at scheduled frequencies. Frequencies are established based on experience and collection system information to

minimize the risk of blockages or equipment failures that could lead to sewer overflows. Some portions of the wastewater collection system are maintained more frequently than others based upon past history of the effective operation of the wastewater collection system.

b. Collection System Details

- Service Area: 5.1 Square miles
- Population Served in primary community: 8,600
- Population in interconnected community: 800

System Inventory owned by Hanover:

Miles of Gravity Sewer	Miles of Force Main	Number of Manholes	Number of Pump Stations		Number of Siphons	Number of Air Relief Valves
			Public	Private		
41	3	1,244	4	1	4	0

- Number of Service Connections:
  - Residential: 1,733
  - Commercial: 174
  - Industrial:
  - Total: 1,907

WWTF Flow Characteristics in MGD—2016 data:

Annual Average Daily System Flow	Average Daily Dry Weather Flow	Peak Wet Weather Flow	Treatment Plant Design Capacity (MGD) 2.3	
1.235 MGD	1.101	3.794 MGD	Average: 2.3 MGD	Maximum Flow: 7.6 MGD {peak day}

c. Age Distribution of Collection System

Hanover conducts an ongoing program to assess the structural condition and maintenance needs of the collection system as a part of our Cleaning, Inspection and Assessment program described in Section 3 and our capital planning described in Appendix G. Hanover has categorized our sewer system by age and size.

The ages of the components of our wastewater collection system are as follows:

Age	Gravity Sewer Miles	Force Main Miles	Number of Pump Stations
Post-1990	13	4	4
1966-1990	6	1	
1941-1965	8		
Pre-1940	15		

d. Length of Pipe by Diameter:

Pipe Diameter	Material	Length
4”	AC	195’
4”	VC	85’
4”	DI	52’
4”	PVC	542’
6”	VC	21,017’
6”	DI	21,510’
6”	PVC	2,807’
8”	VC	90,854’
8”	AC	8,952’
8”	DI	13,691’
8”	PVC	37,433’
10”	VC	1,529’
10”	DI	5,365’
10”	PVC	1,359’
12”	VC	2,559’
12”	DI	5,170’

Pipe Diameter	Material	Length
12”	PVC	5,179’
15”	VC	5,777’
15”	DI	1,153’
15”	PVC	1,774’
16”	VC	412’
16”	DI	21,629’
18”	AC	201’
20”	DI	4,509’
2 FM	PVC	380’
6 FM	DI	3,191’
10 FM	DI	1,412’
12 FM	VC	960’
Total		**259,612’**

e. Sanitary Sewer Overflow History

Hanover has experienced 5 sanitary sewer overflows (SSOs) since 2011. Appendix K describes the overflow dates, locations, quantities and causes.

To assure sewer capacity, Hanover has developed programs to address capacity, inflow/infiltration, and condition of our collection system.

f. System Map

A map of the system is shown in the figure below. The map is a work-in-progress being updated constantly with releases of updated information at least semi-annually. Beginning in 2012, the Town of Hanover began developing and maintaining GIS data layers. In 2012, CLD was hired to GPS all sewer manholes. Town staff continues to collect and update collection system information and update GIS data. The data is added on a quarterly or less-frequent basis depending on the ability to collect information (weather and construction schedules related).

The map is also available on the web at: https://www.mapsonline.net/hanovernh/toh_basemap.html.

3. CLEANING, INSPECTION AND ASSESSMENT PROGRAM

In 2012, Hanover began development of a preventive maintenance plan (PMP). This includes a cleaning, inspection, and assessment program to assess the maintenance needs and structural condition of the entire collection system. The goal of this program is to complete the entire system assessment within 5 years.

The cleaning, inspection and assessment efforts are performed by LMC and/or private contractors, as needed. All data is entered into field logs or data collection sheets and then submitted for quality assurance and computerized data entry into the GIS system.

Hanover began the cleaning, inspection and assessment program with a focus on the known problem areas and the older sections of the system. Historic knowledge of the condition of the system has been used to adjust the cleaning schedule frequency for identified problem areas.

The cleaning, inspection and assessment program includes: sewer cleaning, CCTV inspection of piping, visual inspection and classification of manhole structures and flow channels, an evaluation of the condition of the pipes and manholes, and I & I investigations. Results from the assessment program are used to categorize the cleaning and inspection frequencies and possible repair or replacement of pipe for both the sub-areas and problem pipe sections (described in more detail below and in Gravity Line Preventive Maintenance, Section 4).

The cleaning and CCTV schedules are closely coordinated. Hanover's goal is to have a complete cleaning, inspection and system assessment every 5 years, approximately 5 percent of the system is reviewed by CCTV each year. Approximately 25 percent of the system is cleaned annually: the cleaning performed each year includes the priority cleaning plus 25 percent of the remaining parts of the collection system, factoring in the intermediate and long-term interval cleaning schedules. Most of the system cleaning is for gravity lines, as described in more detail in section b, below.

Information from cleaning and inspections (see Inspection section, below), including any findings, is entered into data collection sheets, and incorporated into an online maintenance program for scheduled maintenance and capital improvement. This information is also used to update this long term Preventive Maintenance Plan (PMP).

a. Cleaning

Our primary sewer maintenance activity is sewer line cleaning. The Hanover service area is divided into 5 sewershed areas as shown in the figure above.

The cleaning of sewer lines, manholes, siphons and other appurtenances is categorized as: priority (annual or more frequent cleaning); intermediate (2-5 year interval); or long term (6 or more year interval).

Cleaning Schedules—Priority Cleaning

Pipe sections on a priority cleaning frequency are identified based on known trouble spots and Critical Service Area lists. The trouble spots have a history of blockages or overflows as noted in the table below.

Collection System Inventory of Trouble Spots and Schedule for Priority Monthly Cleaning:

Tax Map #	Location	SMH#	to	SMH#	Distance	Problem
22	West Street (sidewalk)	523		524	160’	Flat pipe/low cleansing velocity
23	Brockway Road	377a	Upstream		100’	Roots
23	Currier Street	173		173A	112’	FOG
23	Currier Street	173	Upstream		375’	FOG
33	Allen Street	156		157	280’	FOG
33	North Main	417		418	220’	Roots/debris
33	School Street	157	Thru 158	159	210’	Grease
33	School Street	159		159A	340’	Grease
33	School Street	159		Thru	161	Grease
34	East Wheelock	482		483+	290’	Roots and debris
34	South Main/ CVS	191A	Thru 192	193	470’	Grease
34	South Main Street/Molly’s	193		193A	255’	Grease
34	South Main Street	193	Thru 194	195	480’	Grease
34	Lebanon Street/Loading dock	473	Thru 474	475	289	FOG
37	Choate Rd	328		329	272’	Roots and debris
37	Occom Ridge	531		532	227’	Roots and debris
39	Valley Rd	502		601	217’	Flat pipe
22	Weatherby Rd	265		265A	250’	Low cleansing velocity
46	Fletcher Circle	827		827	243’	Flat pipe/low cleansing velocity
46	Fletcher Circle	814		815	345’	Flat invert in SMH 814

The Critical Service Areas listed below, locations where sewer malfunctions would lead to major disruption, are inspected and maintained at greater frequency due to the importance of their function. Inverted siphons of all diameters are typically treated as trouble spots and receive higher frequency care due to potential grease build up and/or debris settling.

Collection System Critical Service Areas:

Component	Location	Description	Cleaning Schedule	Contact #
Critical Facilities Served				
DHMC hospital, Elderly housing, nursing homes and retirement communities	Lebanon Street, Park Street, Lyme Rd	FOG, continuous high flow	SA/A	DHMC 603-650-5000 603-643-2222 (Hanover Dispatch)
Hanover High School, Richmond Middle School, Bernice A Ray Elementary School	Lebanon Street, Reservoir Rd, Lyme Rd	Continuous high flow	SA/A	603-643-2222 (Hanover Dispatch)
Restaurants and cafes	Mostly in the downtown area	FOG and debris	M/Q	603-643-2222 (Hanover Dispatch)
Dartmouth College	Throughout the town	FOG, roots and debris	M/Q	603-643-2222 (Hanover Dispatch)

Cleaning—Gravity Lines Routine Cleaning

This section details schedules for the routine cleaning of each sub-area of the collection system.

During the first cycle of the Cleaning, Inspection and Assessment program, each pipe and manhole is evaluated to determine cleaning frequency. Our push camera and visual

inspection is used to evaluate each sewer line to determine the need for cleaning and/or a CCTV structural inspection. A pipe section that has not been cleaned in over 5 years, but has been evaluated using the push camera and shown that cleaning is not warranted, is assigned to the long-term cleaning frequency (5+ years). If the camera evaluation indicates a need for cleaning, the pipe section is put on the intermediate cleaning frequency. The cleaning schedules for other pipe sections in the sub-area will determine whether the cleaning frequency will be closer to 2 years or 5 years.

The priority cleaning schedule (described above) includes approximately 5,200 linear feet of sewer; the intermediate schedule changes frequently based on findings of our routine inspections, and the long term schedule is the remaining lines that have shown no issues or are newer additions to the system. Hanover's sewershed areas consist of two basic areas. The first is the gravity segment that flows to pump station 5 and the second segment is the section that flows via gravity to the treatment plant.

The sewershed that runs directly to the treatment plant has the highest percentage of sewers on the priority cleaning schedule due to the number of restaurants and potential for grease blockages. In other sections of our gravity sewer, the routine cleaning schedule is listed in our database and revised as necessary based on findings and as reported by the crews to the supervisor.

Sewershed Area Name	**Pipe Diam. (in)**	**Length of Segment (lf)**	**Pipe Material**	**Notes**
Sewershed Area 1				
Upper Lyme Rd, Dresden area, Rip Rd, Grasse Rd developments, Hemlock, Ledge, Pine and Heneage Roads	6",8"and 10"	Approximately 95,000	VC, PVC, AC, DI	Suspected minor I & I in these areas. One of our routine monthly flushing segments is in this shed area
Low, Haskins, Rayton, Kingsford, Valley Rd areas	6",8"and 10"	42,000	VC, PVC, AC, DI	Root intrusion issues and flat pipe runs are apparent in these areas. One of our routine monthly flushing segments is in this area.

Sewershed Area 2				
Dartmouth College, DHMC Hospital, all of North and South Main St, South and South East parts of town	6",8", 10, 12" 16"	110,000	CI, VC, PVC, DI, CI	A few suspected areas of root intrusion. FROG issues are repeatedly apparent.

All cleaning records are kept in a database that tracks the following:

- date, time and location of cleaning activity;
- specific lines cleaned;
- Identify any problems or concerns

Each line segment cleaned is identified by an upstream and downstream manhole number. A data sheet is submitted at the end of each week of any work or changes completed. Support from contractors such as Stearns Septic is also used for cleaning and repairs, as well as for emergencies during non-business hours.

Manhole deficiencies are also noted in cleaning logs and data collection sheets (see Section b, below). Information about manholes requiring attention is provided to the Director of Operations and either a repair work order is issued or it is added to the capital repair schedule. Manhole condition is assessed by our maintenance crew along with how soon repairs are needed.

b. Pipe and Manhole Inspection

Planned manhole and pipe inspections are coordinated with the cleaning program and generally follow the cleaning schedule. The cleaning, inspection and assessment program goal is to inspect and clean the entire collection system within 5 years. Prior to cleaning, Hanover uses its own Snake Push Camera to screen a pipe section to determine the cleaning frequency and whether a full CCTV screening is necessary to assess the pipe for structural or other deficiencies to document:

- the structural condition of the pipe
- root intrusion
- grease

- protruding taps
- evidence of inflow and infiltration (I/I) or surcharging
- buried manholes, and
- other deficiencies that factor into condition assessment

In the event an obstruction is encountered, the blockage is immediately removed and service is reinstated. After the obstruction is removed the line is evaluated with the push camera again to determine if an inspection with a CCTV crawler is needed to assess the condition of the pipe.

All newly-constructed sewer lines are required to be CCTV inspected by the contractor or developer to verify as-built drawings and ensure the line has no construction defects. Additionally, all new pipes are pressure-tested and manholes are vacuum tested to ensure tightness and prevent release of sewer odors and future infiltration of storm and ground waters. This inspection and testing process must be completed prior to backfilling and before Hanover will accept the infrastructure. In addition, new construction is required to submit an as-built plan documenting the construction effort prior to final acceptance of the work. Once the as-built drawing is received a field GPS survey is conducted and the infrastructure in added to our GIS.

The following table lists the schedule for the types of cleaning and inspections that are performed.

Combined Routine Cleaning and Inspection Schedule:

Description	Priority	Information on Asset	Monthly	Semi-Annual	Annual	2-5 Year	>5 Year
See monthly flushing schedule	H	Past blockages and root intrusion	C & A				
See root cutting schedule	H	Root intrusion causing past overflows			RC		

Description	Priority	Information on Asset	Monthly	Semi-Annual	Annual	2-5 Year	>5 Year
Sewershed area 1	NC	Suspected I & I, Roots, Older barrel block constructed manholes		I/I, G	G, S, L	C & A	
Sewershed area 2		FOG, high flow, roots, old pipe, old brick manholes			S, L, G	C & A	

Table Legend:

Priority: High (**H**); Non-critical (**NC**)

Work Codes: Clean and Assess (**C & A**); Rodding (**R**); Jetting (**J**); Root Cutting (**RC**)

Visual Inspections: Inspect General condition and overflow evidence (**G**); Inspect for surcharging evidence (**S**); Inspect for loose bricks/mortar (**L**); Inspect for evidence of I & I (**I/I**)

Manhole inspections help keep our asset inventory up-to-date and are used not only to update collection system maps, but to determine structural condition. During manhole inspections, field crews take a complete inventory of each manhole including construction materials, ring size, depth to invert, flow conditions and evidence of problems according to the checklist in Appendix C—Forms. Information is recorded on data sheets and then transferred to our database and used to schedule maintenance and repairs.

Manhole inspection results are reviewed for condition rating. Manholes receiving a high priority rating are repaired immediately, and routine repairs are coordinated with re-paving work (see Section 5). When repairs are recommended, as described below, work orders are created and entered into.

Hanover's LMC division is responsible for completing structural repairs to manholes. Repairs include invert work, frame and cover grade adjustments and replacements, as well as rehabilitating manhole cones and risers. More comprehensive repairs, such as complete relining of the manhole structure, are performed by qualified contractors. Hanover maintains

an inventory of frames and covers. Work is completed based on priority as noted on work orders which are tracked and completed in our work order database.

c. Assessment

While routine cleaning and visual inspection are used to assess the condition of manholes and surface facilities, CCTV video inspections are the primary method used to assess the condition of the sewer pipes. All records are entered into our asset management system.

The results from routine inspection and monitoring are used to prioritize areas needing CCTV inspections to assess pipe condition such as manholes with evidence of slow flow or surcharging. The assessment is logged into GIS and the online facilities program.

Pipe condition information is used to determine short- and long-term maintenance strategies including increased cleaning, root treatment, sewer line repair, or replacement. The condition assessment helps establish the cleaning frequency and inform Hanover's capital planning. As more condition assessment information becomes available, the priority of capital projects may change. Sewer line repair or replacement projects are also coordinated with re-paving schedules (see Section 5).

Condition assessments document the following details and deficiencies:

- Characteristics including pipe diameter, and age and type of material
- Dips in line
- Grease build-up
- Root intrusion
- Sediment accumulation and encrustation
- Structural condition, including cracks, corrosion and erosion
- Joint alignment and movement
- Reverse slope
- Obstructions
- Deformations in line

Hanover's web-based GIS system includes a defect assessment where each asset (pipe, manhole, pump, etc.) is rated for specific criteria (e.g., roots, grease, sedimentation, cracks, etc.). Based on the criteria ratings, the staff assigns an overall priority of repair or replacement for each asset.

d. Staffing and Equipment

Hanover has four (4) staff that are trained for cleaning, inspection and assessment. The staff is deployed in 2-3 person crews year-round for cleaning. Inspection work is coordinated with general cleaning and data collection.

The crew will select an area of interest based on the scheduled maintenance needs as described above. The crew will clean and inspect the system (or, in the case of preliminary evaluation, determining if cleaning is needed) within the assigned area within the specified time-frame. Crews receive training on use of equipment and how to address problems that might be encountered while cleaning the collection system (roots, fats, oils and grease, and blockages), including recognizing when outside contractor services are warranted.

Crews report back on a daily basis on progress and problems including any inconsistencies between the information contained within the GIS system and the actual sewer system. Data corrections are noted and submitted with the crew's log to the GIS personnel for data entry. As the crews perform cleaning and evaluation, the long term cleaning schedule for the entire sub-area is reviewed to determine if any lines designated for long term cleaning need to be cleaned before the crew moves to a new area.

Cleaning crews also perform manhole inspections during cleaning. This practice results in nearly one third (1/3) of the system's manholes being inspected in a typical year. On average, the LMC crew is adequate for any routine maintenance needs. Occasionally, workload warrants the need for an extra person(s). Cross-trained highway division personnel assist when necessary.

The following equipment, which are both capable of cutting roots are available for pipe line cleaning:

- High-pressure jet equipment with an assortment of attachments is used for most cleaning.
- A power rodder is used in the event of a blockage that the high pressure jet is unable to dislodge.

4. GRAVITY LINE PREVENTIVE MAINTENANCE

a. Fats, Oils and Grease (FOG)

Grease and grease-like products can significantly increase the likelihood of sewer overflows by causing blockages aggravating blockage conditions due to roots or structural deficiencies. Restaurants, cafeterias and other food service facilities, as well as industrial facilities, can

discharge grease as part of their normal sanitary flows that can, over time, lead to blockages, backups and overflows.

The discharge of fats, oils and grease (FOG) is regulated through our Industrial Pretreatment Program; however, backups can sometimes occur. Areas of the collection system with known grease problems are recognized, monitored and cleaned on a regular cleaning schedule.

Hanover began assessing FOG in the collection system in 2008, and found that most blockages occurred in the downtown area which is where most food services and dining areas are located. Although commercial facilities account for a high percentage of the FOG-related blockages, they are not the only contributors of grease to the collection system. Residences also contribute grease to the system. In 2008, the Public Works Department developed a FOG program. The purpose of the program was to minimize the introduction of fats, oils, and grease into Hanover's wastewater collection system. The FOG program includes education for commercial/industrial facilities and residences, annual inspection and periodic sewer cleaning. Details of our FOG program are found in Appendix B.

The existing sewer use ordinance grants authority to the Department of Public Works to regulate discharges to the sewer system, including grease. Hanover's sewer use ordinance prohibits discharges to the collection system containing more than 100 ppm of FOG, or at levels that interfere with the operation of the system. The ordinance also authorizes inspection and enforcement of facilities contributing flow to the sewer system. To date, the FOG program has been effective in reducing blockages due to grease.

The Town issues Industrial Discharge Permits (IDP) to all commercial and industrial grease generating facilities and requires the installation and maintenance of grease interceptors and/or automatic grease removal devices, as well as requires records of their maintenance and operation. The policy also provides for periodic inspections by the Industrial Pretreatment Program Coordinator (IPPC). In addition, the Fire Department and Health Officer inspect commercial kitchens and alert the IDPC of any potential issues. If the grease interceptor has not been maintained (with documented removal of accumulated grease and cleaning), has been bypassed, or if significant grease is discovered within the service connection, the Town has the authority to discontinue a discharge as well as provide a fine and a billing surcharge for non-compliance.

b. Root Control

Hanover currently uses mechanical means, as well as high-pressure water, to clear root intrusions. As warranted, the severity of the problem is reviewed and as necessary, the pipe section is placed on the list for priority cleaning. Cutting a tree's roots actually stimulates root growth, requiring that the treatment must be repeated every year or two. This frequency is factored into the cleaning schedules.

c. Installation and Repairs of Service Laterals to be Done in Accordance with Town Specifications

Hanover does not maintain service laterals from buildings to the sewer main (portions in the public right-of-way). Service laterals from the building to the sewer main are the property owner's responsibility. Hanover does not repair laterals that are located in the public right-of-way when responding to service complaints. If a complaint is received and the LMC field crew determines that the problem is limited to the lateral between the building and the main the owner is brought aware of this and recommended to contact private contractors for repair or cleaning.

Hanover continues to evaluate flow monitoring data to determine the amount of infiltration from laterals and will consider funding lateral rehabilitation if it proves to be cost effective.

5. EASEMENTS AND PAVING: MAINTENANCE AND ACCESS

a. Maintenance of Right-of-Way and Easements

Easements give Hanover the right to install and maintain municipal utilities on property not owned by the Town. Easements in Hanover are typically 20 feet in width, but can be substantial in length. Hanover has several sewer access easements. These easements are recorded at the Grafton County Registry of Deeds, but copies are typically available at Town Hall or the Department of Public Works. The Inventory of Sewer System Easements listed below lists the easements for the sewer collection system.

Inventory of Sewer System Easements:

Location	**Assoc. Manhole ID # *(eg GIS #)***	**Owner of Property**	**Comments**	**Type of Maintenance, Frequency, and Responsible Party**
Great Hollow to Greensboro	909 to 914	Conservation & Hypertherm		Manhole inspections. Brush and regrowth control when needed
Greensboro to Route 120	65 to 98	private		Brush control, mowing yearly
Route 120 to Brook Rd	60 to23	Conservation & private		Yearly mowing, brush cutting

Location	Assoc. Manhole ID # *(eg GIS #)*	Owner of Property	Comments	Type of Maintenance, Frequency, and Responsible Party
Low Rd to Haskins	576 to 578	private		Yearly inspection and brush cutting when needed
Haskins to Rayton	608 to 606	private		Yearly inspection, brush cutting and mowing when needed
Rayton to Kingsford	603 to 605	private		Yearly inspection and brush cutting when needed
Kingsford to Valley	586 to 588	private		Yearly inspection and brush cutting when needed
Rope Ferry to Hilton Field Lane	516 to 513	private		Yearly inspection
West Wheelock to Maple	517 to 261	private		Yearly inspection and mowing, Brush cutting if needed
South Main to treatment plant	23 to 001	Conservation		Yearly mowing brush cutting if needed
Lebanon Street to PS #3	64 to 202	School		Yearly inspection, mowing and brush cutting as needed

Easements are important for our ability to operate and maintain our collection system. Hanover's goal is that all easements remain clear of any fences, buildings, gardens, trees, shrubs and extensive landscaping, to allow equipment access for inspection, maintenance and repairs as needed. Crews are instructed to work cooperatively with the property owner to the extent possible.

Maintenance of easements is accomplished in various ways. Easements on privately-owned parcels are often maintained by the owner. The Town's Building Inspector refers construction questions to LMC as they arise. Easements on public land are maintained by the entity responsible for property upkeep, as indicated in the Inventory of Sewer System Easements

table below. All manholes are located using GIS which allows for field crews to locate them particularly within easements. Manholes in easements are inspected as part of our ongoing preventive maintenance program.

Hanover intends to begin a program to identify and improve easement access where needed.

Collection System Easements with Limited Access:

Location	**Manhole IDs *(eg GIS #)***	**Owner of Property**	**Description of Access Problem**	**Plans to Improve Access**
Buck Rd syphon		State of New Hampshire	Wet area, brush and over growth	Add gravel, cut and trim brush
Lower Esker Circle	234, 234A, 234B	Terry Hall	Over growth, wet	Cut brush, establish a road, add gravel

Hanover has a number of manholes that have been paved over, or are on plans but have not been field-located. The following list includes suspected manhole locations and the schedule for locating and uncovering them.

List of Suspected Manhole Locations to be Cleared:

Physical Location of Manhole	**Manhole IDs *(eg GIS #)***	**Description of Suspected Problem**	**Schedule for Manhole Access**	**Date for Manhole Access**
Huntley Rd	#172A	Paved over because of curbing location	Manhole scheduled for inspection and cleaning in the summer of 2016	Spring of 2016
Morrison Rd	#767	Paved over because of plow damage	Inspection needed in spring of 2016	Spring of 2016
East Wheelock	#574	Paved over	Inspection needed	Spring of 2016

b. Street Paving Coordination

Hanover's Highway department is responsible for coordinating street resurfacing and ensuring that all utilities are aware of scheduled resurfacing. A prioritized list of streets to be paved is developed on an annual basis each budget year. This list is distributed and shared with other Town departments to facilitate coordination of all underground work. Each department assesses the condition of their associated infrastructure to determine where repairs may be necessary, and notifies Public Works as to which streets need underground infrastructure work completed prior to resurfacing.

When the LMC crew obtains the resurfacing list, the streets are reviewed for the presence of sewer lines. If a street does not have a sewer line under the pavement, no further action is taken. The remaining streets are cross-checked against the results of the Cleaning, Inspection and Assessment program to identify sewer lines that may need repair or replacement prior to the paving effort. Additionally, predictable problems that are likely to develop within the lifetime of the paving treatment being proposed are assessed.

As sewer lines are inspected and assessed (see Section 3), repairs are scheduled in conjunction with the repaving schedule whenever possible. Sometimes work is performed on a priority basis so that repairs are completed on the highest priority street, working in coordination with the paving schedule. In this case, the Cleaning and Inspection schedules are adjusted to coordinate with the other relevant schedules of the divisions of Public Works. Upon completion of the sewer repairs for an individual street, it is released for resurfacing.

During paving work, LMC prepares manholes prior to the re-paving of any street with sewer lines. The manhole is first inventoried to determine if repairs are necessary. Then the frame and cover are removed, lowered and covered with a steel plate so that the milling and or paving process can continue. Once the surface work is done the manhole cover and frame are raised to grade and concreted in place.

6. PUMP STATION/FORCE MAIN MAINTENANCE

Hanover owns and operates four (4) wastewater pump stations listed in the following table.

Pump Station Locations:

Pump Station Location	Description	Inspection Frequencies
West Wheelock/Ledyard Bridge LAT:43.7045 LON: -72.298566	PS#2	Daily
114 S. Main/Brook Rd LAT:43.6937 LON: -72.290006	PS#3-upgraded in 2007	Daily
Lyme Rd adjacent to CRREL LAT:43.7266 LON: -72.273576	PS#4	Daily
16-18 Lyme Rd/Girl Brook LAT:43.7104 LON: -72.279649	PS#5-upgraded in 2009	Daily
Kendal at Hanover LAT:43.7301 LON: -72.270687	Kendal PS	Daily

The collection system also includes one private pump station. The pump stations owned and operated by Hanover are routinely checked by trained personnel. The maintenance for the one private pump station {Kendal} is the responsibility of Hanover. However, Kendal is expecting to add additional units in the coming years, at which point the pump station maintenance will either be turned back to the owner or it will be eliminated with flows being routed to pump station #4. This is expected to occur within the next five (5) years.

The performance of the Hanover pump stations is monitored through daily inspections and pump stations #3 and #5 are also connected to the WRF Supervisory Control and Data Acquisition (SCADA) system. During these inspections, a Treatment Technician or other assigned staff reviews the pump run hours, total flow, wet well levels and alarms. Back-up generators are exercised weekly. On an annual schedule, a private contractor such as Hartigan Vactor Services pumps the wet wells to allow for inspection and remove grease and other build-up.

Inspection, maintenance and repairs are recorded on checklists, logbooks at each station and logged into WRF laboratory computer which is backed-up by the Public Works server. If a problem or maintenance issue is encountered, personnel must also report it immediately directly to the Superintendent. A Computerized Maintenance & Management System {CMMS} is currently being configured and is being run through a trial phase.

The Hanover SCADA system located at our water reclamation facility (WRF) also includes the monitoring and control ability for two of the pump stations. The SCADA system has the

capability to remotely control and monitor pump station operations, as well as issue alarms to the on-call pager in the event of a malfunction or emergency. The SCADA system records most activities at connected pump stations and provides the ability for a hard-copy printout for backup documentation for select parameters. The SCADA provides continuous status of pump station operations and some user-defined fields for the following items:

- Number of pumps in operation
- Status of pumps, including operational alarms
- Current discharge pumping flow rate
- Historic discharge flow rate—totalized 24-hr flow
- Pump start/stop cycles
- Power status, including power failure alarms
- Wet well conditions: depth, lead/lag elevations
- Personnel status: entry/exit alarm exists at PS#3 only

The SCADA allows for remote monitoring of the pump stations and reduces the need for daily physical inspections at two of the pump stations. The two non-SCADA compatible stations are inspected daily as is the private station at Kendal.

Manufacturer's Operation and Maintenance (O&M) manuals for equipment are located in the WRF office.

Pump stations pump rebuilding, motor rewinds, the majority of impeller, seal and motor replacements as well as HVAC repairs are contracted to various vendors. Repairs to motor control centers, flow meters, remote monitoring equipment, valve, and macerators are typically repaired by WRF personnel. In general, any replacement parts that are difficult to acquire are kept in stock by the WRF; other parts are obtained from local vendors or the manufacturer's service center. As pumps and parts are replaced, the WRF staff is working toward standardizing pump station equipment, to the extent practical. In general, any equipment repairs required to be completed by others are returned to the OEM or authorized service center.

All service/repairs are planned to be recorded in the Town's work order system once the CMMS is established.

a. Mechanical and Electrical Maintenance

The size of the pump station and its related equipment determine its specific mechanical and electrical maintenance needs. The Maintenance Technician is responsible for incorporating the routine maintenance of each pump station into the routine operations. The Maintenance

Technician uses manufacturers' Operation and Maintenance manuals to establish action items for pump station equipment. A general description of weekly and bi-annual maintenance performed on pump stations by the Maintenance Technician and all assigned staff is listed as follows:

Mechanical Maintenance/Inspections	Electrical Maintenance/Inspections
Daily	
Review pump run hours	Ensure all breakers are on
Review totalized flow	Ensure that all switches and controls are in the correct position
Check wet well levels, check for debris, turbulence or unusual noise	Check chart recorder
Check alarms	Check Motor Control Centers (MCC)
Ensure that all switches, controls and valves are in the correct position	Check level controllers
Pick up litter, general housekeeping	Check electrical service feed
Record findings in log book	Check remote monitoring equipment
Log pump hours	Check indicator and alarm lamps
Check hydraulic levels	Check general electrical items (lighting, etc.)
Operate each pump	Check and release intrusion alarm
Check drive belt	Check lighting and HVAC
Check bearings and packing	
Check for pump vibrations, unusual noise, and excessive heat	
Check pump and pump base connections	
Check chart recorder for routine pump performance	
Check valve operations and signs of leakage	
Lube and grease equipment (as required by manufacturer)	

Check, clean and maintain property Check backup generator, exercise stand by power Check sump pump operation	
Weekly	
Pump down wet wells for inspection, cleaning Test alarming systems	
Bi-Annually	
Replace hydraulic fluids and oils (as required by manufacturer) Inspect pumps (oil levels, seals, packing, bearings, etc.) Replace packing Inspect pump impellers and clearances Inspect discharge piping Check outflow pressure Check for corrosion problems Exercise check valves Check air release valves Check floats (clean and/or replace) Inspect building and grounds Check operation of building heat and fans Inspect HVAC equipment Check building security	Inspect internal Motor Control Center components Inspect & grease electrical contacts Inspect electrical pump cables Inspect electrical breakers Perform amperage readings on equipment Check MCC for proper operations Check Generator: oil level water level [*if a level gauge is installed]* fuel level inspect hoses and belts check piping for leaks check battery condition
Annually	
Service and calibrate flow meters	Alternate Power Sources checked

Capacity and discharge head in the pump stations are reviewed annually, following confirmation that the pumps are in good working order. Changes in capacity and discharge

head are evaluated to determine whether cleaning of the force main is warranted. All mechanical and electrical maintenance activities are recorded on a log sheet, entered and tracked by the pump station logbooks.

b. Force Main Maintenance

Hanover currently has four (4) force mains in the collection system with a combined length of approximately 7,800 feet (1.5 miles). The South Main Street force main is not long enough to warrant air release valve. All air release valves and valve vaults are inspected for signs of corrosion, connection point leakage or improper operating characteristics.

The pressure on the discharge side of the pump is used to determine the need for force main cleaning. If the backpressure is more than 25 percent greater than the expected total operating head, the discharge pipe will be cleaned. Pressure gauges are calibrated during the annual inspection.

c. Private Pump Stations

Hanover currently has 2 private pump stations at Kendal and at Storrs Pond. The following table lists the private pump stations, owners and locations in Hanover.

Private Pump Stations:

Pump Station Name	Location	Owner	Owner/Operator Contact Information
Kendal	80 Lyme Rd	Kendall Retirement home	Owner – Kendal at Hanover, 603-643-8900 Operator - Town of Hanover WRF, 121S. Main St. Hanover, NH 03755. 603-643-2362
Storrs Pond	49-59 Oak Hill Drive	Hanover Improvement Society	603-643-2408

Kendal discharges an average of 53,000 gallons per day to the collection system. This privately-owned and operated pump station is maintained by Hanover staff as required. Kendal staff manage losses of power, utility costs and is responsible to notify Hanover staff of any issues in a timely fashion. Kendal staff is required to notify Hanover when the station is scheduled to have grease removed from the wet well.

The Kendal private pump station has a history of coordination and communication issues among staff representatives. At this time a record of such instances are not officially recorded.

The Storrs Pond is a minor seasonal pump station. The pump station serves a campground and related activities that are open between May and September with an average daily use less than 600 gallons.

d. Corrosion Control

The dissolved oxygen content of the wastewater is often depleted in the wet well of pumping stations. This wastewater passing through the force main not only lacks oxygen, but often contains sulfides. These sulfides have led to corrosion in manholes. Frequent cleaning and inspection of these areas is required to prevent solids and grease buildup and minimize corrosion due to the high concentration of sulfides.

7. REACTIVE MAINTENANCE

This chapter outlines the process used by Hanover to respond to non-overflow, unplanned maintenance needs in our collection system. It also provides an overview of responsibilities for emergency events. While Chapter 3 outlines Hanover's preventive maintenance program, maintenance events that don't result in overflows or backups of sewage into basements are incorporated into the regular inspection and maintenance of the collection system.

Sewer Overflow Response is always a priority. Details are provided in Hanover's Sewer Overflow Response Plan (see Appendix A). Responsibilities for reactive maintenance are assigned by the Operations Manager or Wastewater Superintendent based on level of priority for response and the locations.

a. Corrective Maintenance

Most repair needs are identified while conducting routine maintenance, inspections and assessments. Because there is such a wide range of potential unexpected events that it is not possible to prescribe the appropriate repair for every possible scenario, Hanover has established a prioritization scheme for determining the timing of repairs outlined in the table below. This is based on the types of problems that have occurred in the collection system in the past or could occur in the future. While this contingency analysis focuses on system upsets that would not result in immediate sewer overflow, the response timing is based on the potential for a resulting sanitary sewer overflow. Overflow response is covered in Appendix A.

Low-risk items, such as light bulbs or broken hand tools, and small non-critical valves, are planned for run-to-failure, and as such, are not part of the PM Program. These items are replaced when they fail. When assets critical to the process fail, they are scheduled for

corrective maintenance either on an urgent or routine schedule. Some of these repairs are handled under the operations and maintenance account, and some must be put in as capital improvements as part of our asset management activities depending on asset cost and life expectancy. Assets valued at greater than $10,000 and with a useful life of greater than 3 years are included in the capital budget.

Corrective maintenance repairs include (but are not limited to):

- cleaning to eliminate flow problems that are noted during inspections
- spot repair or replacement of a pipe that shows signs of deterioration
- replacing a rattling or failed manhole cover
- repairing or replacing a pump that is becoming clogged or has been damaged by debris
- responding to, investigating and mitigating customer complaints (see the SORP, Appendix A, for response to complaints of sewer overflows)
- repairing system parts subject to vandalism

b. Scheduling

Scheduling of repairs runs the range from repairing components found to be in substandard condition during inspection, immediate repairs to pump stations that are malfunctioning, to major, capital-intensive repair projects, such as a manhole-to-manhole pipe replacement or rehabilitation (see Appendix A for manhole to manhole pumping on an emergency overflow). An emergency, however, always supersedes scheduled maintenance. Timing of other repairs is done by annual assessment and prioritization based on effect of possible failures. Major replacement or rehab has been integrated into our capital replacement plan as part of the Town's capital improvement program (CIP).

Collection System Non-Emergency Response and Repair Priority:

Problem	Response Time	Action	Repair Time Goal
Pump failure at a pump station	Within one (1) hour of initial alarm.	For SCADA linked stations—log in upon receipt of alarm and confirm lag pump operation. Review existing conditions to evaluate if site visit is required. For non SCADA stations—a site visit is required.	Within one working day.
Pipe integrity failures, pipe separations	Within one hour of initial report if exfiltration is suspected. Within one day otherwise.	Repair with our own equipment and supplies unless the situation is deemed beyond our abilities. Then a contractor will be hired.	Within one day if exfiltration is suspected. Within one week otherwise.
Manhole cover collapse or failure in manhole integrity	Within one day.	Repair or replace anything that may create a SSO in the near future.	Within one day.
Failure of backup generator	Such a failure is critical and will be addressed immediately.	Hanover Fleet services shall be notified and repair will be handled internally or by authorized service contractor.	Within one week.
Rattling, loose or broken manhole covers	Within one day.	Repair or replace.	Within one day.

c. Tracking and Recording Repairs

Line Maintenance personnel document corrective maintenance needs in the data collection program when completed and then sheets at the time of the event. Corrective maintenance tasks are recorded and entered into our GIS system. CCTV or other failure analysis may also be

done by staff as a corrective maintenance task after a problem occurs when routinely inspecting pipe and manholes or if there is a backup complaint to diagnose the cause of the problem and recommend repairs and schedule changes if needed. Findings may lead to a spot repair of the pipe, root cutting, root foaming with an herbicide, re-cleaning for grease or debris removal on a periodic preventive basis, and if so, these tasks are included in an update of our schedule as described in Section 3, Cleaning, Inspection and Assessment.

d. Complaint Response

Collection System and Service Complaints

The LMC crew is responsible for responding to sewer service complaints. Complaints are generally related to sewer stoppages, overflows, or odors. Response is performed by the LMC crew at all hours. We have our 2 full-time crew members and a well-qualified contingency of 4 from the highway department to assist the line crew in emergencies, after hour calls or routine issues that may arise. The normal business hours are 7:00 AM to 3:30PM, Monday through Friday. Complaint response includes both assessing the complaint and resolving the problem. The majority of our complaints are related to odors and lateral blockages. During work hours, a cleaning crew is diverted to remove stoppages. During non-work hours, the 24 hour Hanover Dispatch Center alerts the Operations Manager of a complaint, who in turn will assign a crew to respond to the issue.

Pump Station Complaints

The WRF crew is responsible for pump station issues. Complaints are received from the Hanover Dispatch as well as from alerts by our SCADA and alarming systems. Hanover has 6 full-time Treatment Facility operators. A similar process is employed outside of normal business hours. During work hours, 1-2 WRF operators are dispatched by the Superintendent or his designee. During non-work hours, the on-call operator responds directly to the location. In the event in which a pump station has SCADA, the operator is able to diagnose the issue prior to responding. In an event in which a pump station doesn't have SCADA, alarms are sent directly to Hanover's 24 hour Dispatch Center. The emergency or complaint is relayed to the on-call operator by the Dispatch Center.

e. Reactive Response Summary

Response information—refer to Appendix A.

8. EQUIPMENT AND TOOL INVENTORY

a. Essential Day-to-Day Items

Hanover provides operations and maintenance crews with the essential work-related items they use on a day-to-day routine basis. When new or replacement equipment or tools are necessary, the Crew Leader notifies the Operations Manager or in the event of a pump station-related need the operator notifies the Wastewater Superintendent. The Operations Manager or the Wastewater Superintendent, depending on the area, will issue the crew leader stocked items. For non-stocked items, the supervisor will advise the operator or crew leader of a pre-established vendor. The operator or crew leader will then procure the requested items through the local vendor in an "in-stock" format.

b. Spare Equipment and Tools

Hanover keeps a limited supply of spare equipment and tools for personnel. In lieu of maintaining a full supply of spare equipment and tools for personnel, Hanover arranges with select vendors for essential common equipment and tools. Non-bid equipment and tools can be purchased in amounts up to five thousand dollars ($5,000.00) with approval of the Operations Manager in the case of collection system-related items or the Wastewater Superintendent in the case of pump station-related items.

The large equipment and tools needed for certain tasks such as deep manhole replacement are obtained through current rental contracts or purchased through the Finance Department with approval of the Director of Public Works.

An inventory of the equipment, tools and materials used by Hanover to maintain the wastewater collection system is maintained in our online work order and maintenance software. Specialized attachments are often used with these tools to perform specialized maintenance tasks such as root cutting and jetting heads. A list of current equipment and tools is available in Appendix L.

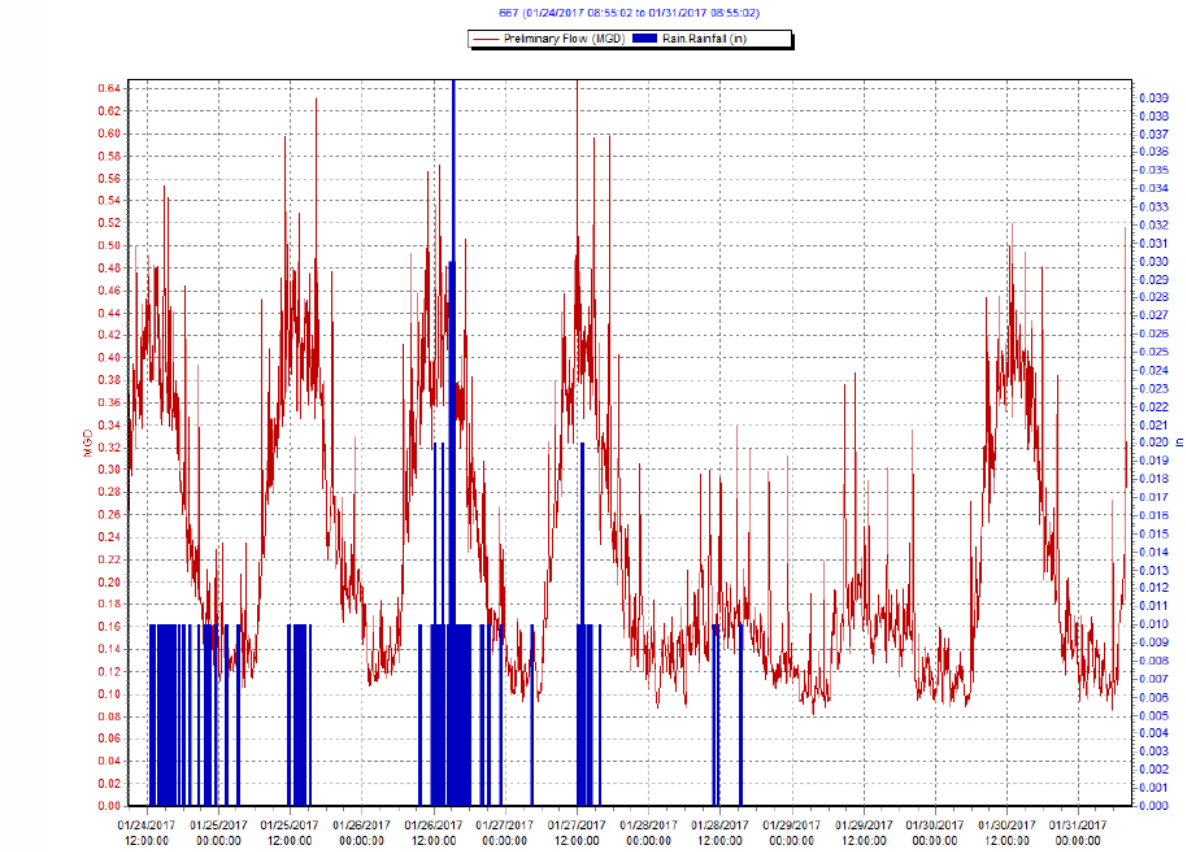
9. CAPACITY MANAGEMENT

a. Capacity Background

Hanover's collection system has not exceeded design capacity to contain wastewater flows from the town. While there have been historic inflow issues is sections of the City of Lebanon Route 10, recent modifications appear to have rectified this issue. Real-time flow and rainfall monitoring was installed in 2016. Flow monitoring occurs at all Lebanon connections to the Hanover System. There are inflow issues that are being investigated in the Pump Station #5

catchment area that we continue to investigate. The following tables and discussion summarize the state of our system capacity to carry and contain flows.

Example of flow monitoring:



Hanover is in the process of developing a list of collection system and building overflows/backups to assess the collection system capacity.

Hanover has implemented the following measures to remedy and/or alleviate potential overflows:

- Structural rehabilitation measures, i.e. elimination of pipe restrictions; elimination of storm sewer--sanitary sewer cross connections; storm sewer catch basin redirection; manhole, sewer, and private lateral replacement; pump station expansions; etc.
- Implementation of private extraneous flow incentive or disincentive programs
- Increased cleaning to maintain collection system capacity
- Implementation of Fats, Oils & Grease programs {2008}

- Quarterly review of flows received from satellite communities
- Implementation of sewer/DPW reviews of building permits

b. Sewer Capacity Certification/Connection Policy

Sewer Capacity Certification is a process where any new development requiring the connection of its sanitary sewer service to the Hanover sewer system is reviewed to determine whether adequate sewer system capacity exists to convey the new wastewater flow from the proposed development to our wastewater treatment facility. A capacity certification analysis by a professional engineer is required for all developments greater than 5,000 gallons per day. In addition, Hanover requires applicants of multi-family, commercial or institutional discharges to assess the downstream collection system to determine potential capacity restrictions. If restrictions or limitations are identified applicants are required to provide necessary improvements that will enable new or substantially modified flows to be accommodated.

The connection fee for newly-constructed homes and renovated and newly-constructed businesses are required to pay a sewer capacity charge based on the value of capital assets divided by the Water Reclamation Facility capacity. Hanover staff is in the process of a collection system analysis to determine the necessary capital improvements required in the collection system. The analysis is expected to be completed by the fall of 2018.

c. Lateral Inflow Elimination

Hanover has 44 miles of sewer mains and 20-25 miles of private service laterals. All substantial building renovations or replacement require service to be videoed and if necessary replaced to eliminate infiltration and inflow (I/I). The Hanover Sewer Ordinance prohibits non-sanitary connections to the sanitary system.

10. RESOURCES AND BUDGET

a. Budget Process

Hanover's LMC and WRF budgets are developed for adoption in the Hanover municipal budget cycle, which requires that the annual budget be completed on or about March 1st of each year. The process begins in the late fall at the department level and is submitted to the Town Manager for review in the middle-to-late December. The Town Manager reviews and makes modifications to meet the Select Board's budget target levels and submits to the Board in February.

The Selectboard holds a series of public hearings where the budget is reviewed and input is accepted from the public. As part of the process, capital items are reviewed as part of the

Capital Improvement Plan appropriations and expenditures. At the end of February to early-March the Selectboard votes on a final budget which is posted in the Town Meeting warrant and voted on during a public meeting held on the second Tuesday in May. Upon adoption by Town Meeting, the budget becomes effective on July 1 of any given year. The fiscal year runs from July 1 to June 30.

b. Rate Setting, Budgetary Policies and Financial History

The Town of Hanover's rate-setting policies are based on the following principles:

1. Rates and fees will be based on the actual cost to deliver each service.
2. Current rates must be sufficient to cover current costs and to meet all bond covenants.
3. Rates will include funding for Capital Improvement Plan projects included in an annually-updated five-year capital financial plan.
4. Contributions to and usage of fund balances are appropriated as needed. Each year, after reviewing operating costs and any other non-recurring financing uses of excess fund balance, the annual rate is determined. The Select Board's policy is retain 10-15 percent of the operating costs as fund balance. This policy is reviewed annually to ensure adequate reserves and protections as well as rate-setting is achieved.

Hanover's Wastewater Fund operates as an enterprise fund with no funds raised through taxation. The Wastewater fund's revenue is generated from user fees, connection fees from new customers, pretreatment permits, fines, engineering review and inspections, interest earnings, and other miscellaneous income.

The quarterly user charge has two components: a base charge which covers fixed costs an and a volume charge based on metered flows. The metered flow also includes a strength component charge. The entirety of the charges cover operating expenses including operation and maintenance, debt service, and capital reserve fund replenishment.

c. Historical Rate Review

Our current sewer rate structure is based on meter water usage. Customers are billed quarterly for wastewater services based on 100 percent of the metered water use. In addition to flow charges, customers are also assessed a base charge to recover fixed costs, based on meter peak capacity.

The current Preventive Maintenance program will result in minor increases in the sewer user rates. Once a comprehensive Sewer Improvement Plan has been completed a budget will be developed.

Sewer rates over the last three (3) years is available in Appendix F.

d. Operating and Maintenance Expense

The operating expenses for the LMC division are back charge to the WRF budget for labor, materials, equipment and vendors used in the maintenance of the wastewater collection system.

Operating and maintenance expenses include:

- Employee salary and compensation
- Operating supplies
- Utilities
- Repair and maintenance
- Professional services
- Routine capital outlay
- Debt service expenses for repair and replacement

Professional Services include planning and engineering studies for replacement projects.

Contractor Services include contractual work for cleaning sewer lines, pumping wet wells and manholes, CCTV, manhole rim adjustments related to paving, and Capacity Assessments of the collection system.

Routine Capital Outlay include items that are considered capital assets and are purchased from annual operating revenue rather than through bonds or the capital reserve fund. Routine items include: specialized maintenance equipment, pumps, motors, office equipment and other smaller items with a cost less than $10,000.

Collection System Construction & Maintenance

The operational budget includes funding for slip lining and repairs to identified sections of the collection system which have structural or infiltration issues as well as ongoing capacity assessments. In general, repairs are limited to sewer manhole replacement, short sections of main replacements, slip lining and sewer rerouting. Capacity assessments include: flow monitoring, smoke and dye testing, and videoing. Refer to Appendix D for the annual budget amount.

Debt service is the annual principal and interest payments for bonds, loans and other fiduciary instruments owed by the Town of Hanover. The debt service supports capital improvement projects.

e. Capital Improvement Program Overview

The Capital Improvement Plan (CIP) is part of the long-term CMOM planning. Once the collection system analysis has been completed, projected needs for maintaining the integrity of the collection system and expanding sewer capacity to accommodate growth will be incorporated into the CIP.

Currently, Hanover has 67 assets in the Wastewater Equipment and Capital replacement plan including pump station upgrades. Hanover develops a long-range CIP program covering a 10-year period that is updated annually. The CIP describes each proposed project, the budgeted cost for the project and the financing source(s). The CIP was primarily SRF loans and funds from the capital reserve fund.

The capital reserve funds appropriations are based on the equipment replacement and infrastructure improvements schedule. The capital reserve fund also accounts for inflation based on a 10-year average of the Municipal Cost Index (MCI) developed by the American City and County organization. The available reserve funds generally range from $300,000 to $600,000. The amount varies based on the proposed capital outlay.

f. Capital Improvement Plan

Appendix G shows the proposed CIP adopted by Town of Hanover. The CIP shows both funded and un-funded projects. The un-funded projects are included for tracking purposes and to allow for changes in the priority of the projects and as funding levels change.

The total 10-year CIP exceeds the available funds by $1,952,000. It is anticipated that as existing bonds are paid off, the bonding capacity will be available to complete the unfunded projects in future years.

Hanover currently has three (3) outstanding State Revolving Loans (SRF) with a combined principal and interest payment of approximately $642,000 which are due to be repaid by 2027.

1. Population Growth

Hanover has been growing steadily for a number of years. In the 2000 census, the population was 10,850. In 2016, the population had grown to 11,260, an average growth of 0.3 percent per year. The long-range population growth for Hanover is expected to continue at a similar rate due to the current zoning through the year 2025, reaching a population of 11,500.

2. Capacity and Fees

The service and treatment of capacity meets the needs of the current service area and provides for additional capacity to accommodate projected residential growth through the

year 2025. This service capacity includes current average sewer demands of 1.4 MGD and growth-related reserves of 0.9 MGD for a total sewer capacity for the 2.3 MGD Collection System and Wastewater Treatment Plant of 2.3 MGD. 0.65 MGD of the total Treatment Facility capacity has been allocated to properties in Lebanon as part of an Inter-municipal Agreement (IMA).

Connection fees are used to fund planned capital improvements and are set based on those plans. The current capital program identifies $10,289,750 in capital projects to meet the projected future needs. Growth over the next 20 years expected to be very modest, with the exception of increased development in Lebanon. Based on these assumptions and known capital needs the current level of $136,930 will need to increase by 176 percent to meet future capital needs of $377,400 annually. However, much of these capital needs will likely be funded through bonding utilizing the current bonding capacity within the budget.

3. Capital Facilities Projects and Financing

The total cost of the planned 67 capital and equipment projects during the 2019-2056 period is $10,298,750. Two (2) of the projects are classified as capacity projects: Pump Station #2 replacement, at a cost of $850,000 and Pump Station #4, at a cost of $800,000. Non-capacity related projects are estimated to be $8,600,000 (See Appendix G).

4. **Operating Impact of Service Capital Improvements**

The cost of operating the proposed capital improvement projects during the next five-year period is estimated at $1,560,000 (See Appendix G.).

11. SEWER SYSTEM PREVENTIVE MAINTENANCE PLAN UPDATES

a. Plan Update Process

Hanover will complete annual reviews of our Preventive Maintenance program in the month of July and this plan beginning in 2017. The review will consider the progress that has been made in developing and implementing our Preventive Maintenance Program, the results of our monitoring program described in Section b, below, and will incorporate updates to this Plan including:

- Changes to organizational structure, information management, contacts, and system maps
- Changes to information on the collection system, such as the size and age of pipes, to incorporate information on repairs completed during the year

- Incorporation of successful cleaning, inspection and assessment program improvements during the past year
- Changes to our Sewer Use Ordinance and Fats, Oils and Grease programs
- Updates to our pump station inspection and maintenance program,
- Updates as we evaluate our collection system capacity
- Budget and Capital Planning updates

As the sewer inspection history of any segment of pipe is retrievable electronically and the data is used to develop condition ratings, this will aid in the prioritization of future sewer rehabilitation projects, maintenance activities, and updating this plan.

b. Monitoring, Measurement, and Program Modifications

As noted in Chapter 1, Hanover currently maintains complaint and blockage records in a paper log and online work order software database. Hanover maintains records of cleaning and other preventive maintenance activities, and records problems (e.g., excessive debris, observed manhole defects) identified through regular sewer maintenance activities in a paper log as well as the GIS database.

The sewer inventory, mapping and maintenance database is currently under development, discussed in Chapter 1. Hanover tracks and utilizes records related to any sewer segment in our system. Using a log and the GIS system, complaints and service are recorded and linked to preventive and reactive maintenance activities.

The information available in the GIS and the SSO reporting system will be used to help measure the effectiveness of our program by tracking various parameters related to service calls and our maintenance and inspection activities. We also measure our effectiveness by comparing SSO trends from previous years and identifying system components that continually contribute to system failures. We are developing our strategy to track the following parameters with which to measure the effectiveness of this Plan and its effectiveness in reducing SSOs and meeting the goals we set (described in Chapter 1):

- Number of SSOs per year
- Volume of SSOs per year
- Number of dry weather SSOs per year
- Number of SSOs per year by cause (e.g., roots, grease, pipe failure, I/I, pump failure or other deficiency, etc.)

- Response time to SSOs and other service calls (time from call received to first responder arriving on site)
- Length of gravity sewers cleaned annually
- Actual versus scheduled cleaning dates for gravity sewers
- Length of gravity sewers CCTV inspected annually
- Record of pump station maintenance work orders completed annually
- Percent of system rehabilitated (repaired or upgraded) each year
- Number of FOG inspections and compliance with FOG requirements
- Improvements in capacity due to reductions in I/I
- Safety history/incidents
- Ratio of funds spent on preventive maintenance versus reactive and emergency response

This information will be assessed and reported in the annual Town report as well as on the Town LMC website to continue to inform citizens of our infrastructure condition. Changes to this Preventive Maintenance Plan will address issues identified through this monitoring program and during our annual update and review.

Appendix A

Sewer Overflow Response Plan

for

Town of Hanover

Sanitary Sewer Collection System

April 28, 2017

TABLE OF CONTENTS-APPENDIX A

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)
	Tel. 911 (life-threatening)
5. Liberty Utilities (power company)	Tel. 1-855-349-9455 (customer outages)
	Tel. 1-888-598-6326 (priority 3 outage)
6. Dartmouth Hitchcock Medical Center	Tel. 603-650-5000
7. NH DES	Tel. 603-271-1494
8. USEPA	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 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

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.

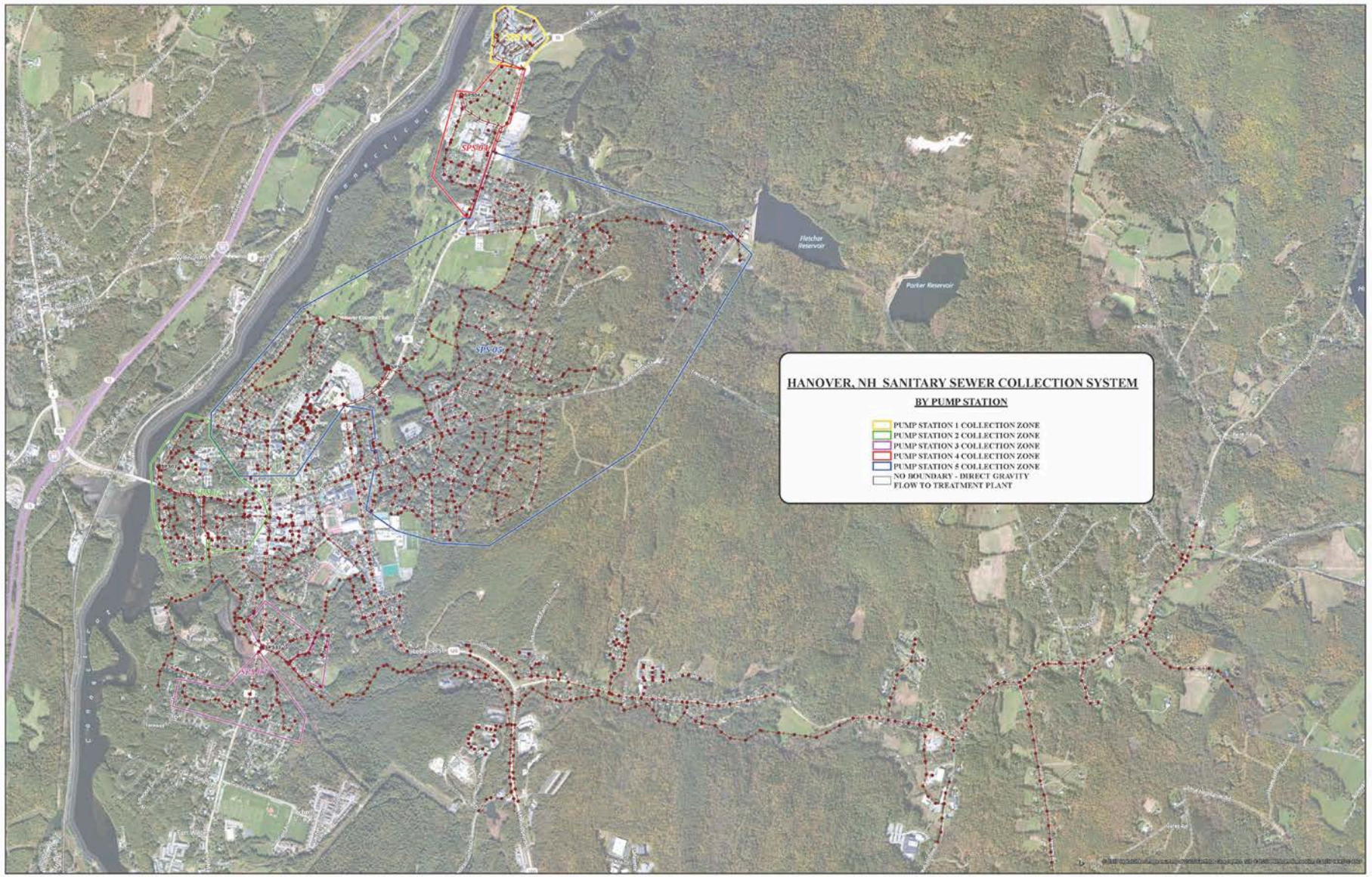
This plan is prepared pursuant to NPDES Permit Number NH0100099.

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, NH SANITARY SEWER COLLECTION SYSTEM
BY PUMP STATION
PUMP STATION 1 COLLECTION ZONE
PUMP STATION 2 COLLECTION ZONE
PUMP STATION 3 COLLECTION ZONE
PUMP STATION 4 COLLECTION ZONE
PUMP STATION 5 COLLECTION ZONE
NO BOUNDARY - DIRECT GRAVITY FLOW TO TREATMENT PLANT
Fletcher Reservoir
Parker Reservoir
SPS#1
SPS#2
SPS#3
SPS#4
SPS#5

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:

Location of Force Main	Pump Station	Potential Impact Area(s)
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.

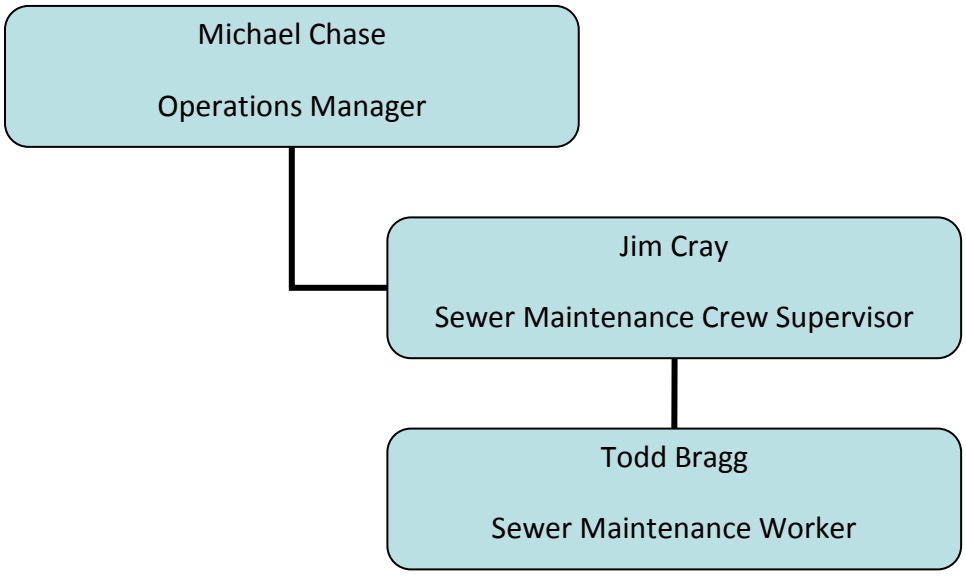
The Hanover Operations Manager or Wastewater Superintendent dispatches sewer maintenance personnel with appropriate equipment to confirm and contain the overflow, and determine the cause. Crews and equipment are available to respond to any SSO locations. The Hanover LMC currently has two (2) crew members 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.

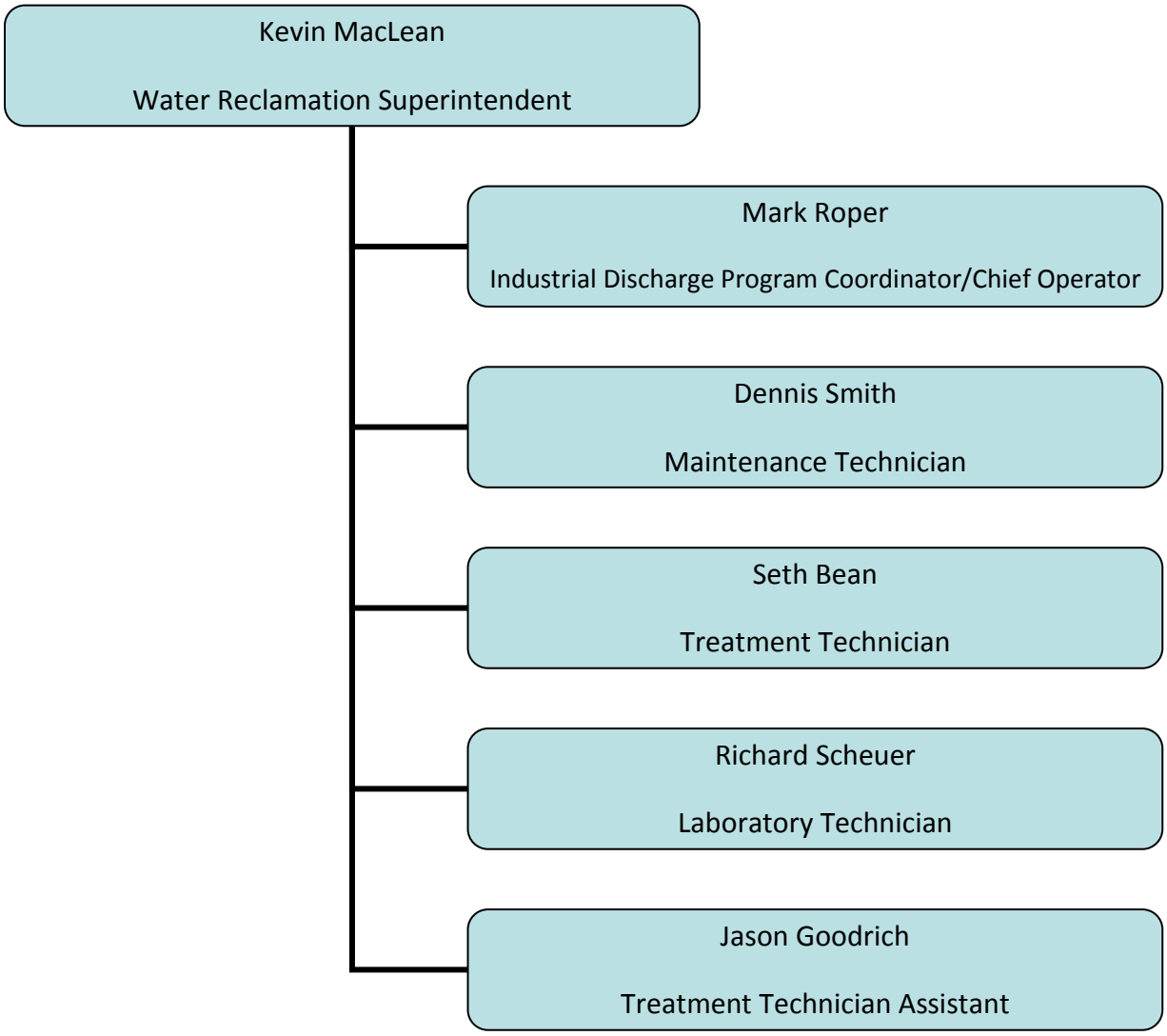
While investigating emergencies the crew should maintain radio contact with the base station at all times to keep them informed of the progress and any problem(s). Upon completing an assignment, and before returning to the shop, the crew should call the base by radio for any other assignment or update.

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.

Sewer Blockage or Back up into Basement, Minimum Levels of Staffing (people): 2	
Minimum Emergency Equipment	**Specialized Equipment**
• Jet flushing unit if available (sand trap) • Rodding machine & associated cleaning/cutting attachments (sand trap) • Standard harness and lifeline if applicable • Air blower with hose	• Closed Circuit Television camera unit • Truck with hoist • Vactor unit • Power saw (circular)

• Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Gas meter—for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• Pipe cutter (hydraulic) • Sand trap

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.

Overflowing Sewer Manhole, Minimum Levels of Staffing (people): 2-3	
Minimum Emergency Equipment	**Specialized Equipment**
• Jet flushing unit if available (sand trap) • Rodding machine & associated cleaning/cutting attachments (sand trap) • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Caution Tape • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment • Sand bags	• CCTV camera unit • Truck with hoist • Vactor unit • Power saw (circular) • Pipe cutter (hydraulic) • Caution tape • Sand trap • Floatation booms if necessary

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.

Cavities and Depressions in Streets and Lawns , Minimum Levels of Staffing (people): 1	
Minimum Emergency Equipment	**Specialized Equipment**
• Safety cones/barricades • Refer to emergency procedures for sewer break if confirmed	• Caution tape

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.

Partially or Totally Blocked Siphon, Minimum Levels of Staffing (people): 4	
Minimum Emergency Equipment	**Specialized Equipment**
• Jet flushing unit if available (sand trap) • Grease solvent, if needed • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose	• TV camera unit • Truck with hoist • Vactor unit • Caution tape • Sand trap

• Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• Floatation booms if necessary • Self Contained Breathing Apparatus (SCBA)

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 septage 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.

Sewage Force-Main Break, Minimum Levels of Staffing (people): 4-5	
Minimum Emergency Equipment	**Specialized Equipment**
• Portable bypass pumping units • Hoses • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• CCTV camera unit • Truck wit hoist • Vactor unit or septage hauler • Power saw (circular) • Pipe cutter (hydraulic) • Caution tape • Sand trap • Floatation booms if necessary • Self Contained Breathing Apparatus (SCBA)

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.

Sewer Main Break/Collapse, Minimum Levels of Staffing (people): 4	
Minimum Emergency Equipment	**Specialized Equipment**
• Portable bypass pumping units • Hoses • Jet flushing unit if available (sand trap) • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• CCTV camera unit • Truck with hoist • Vactor unit • Power saw (circular) • Pipe cutter (hydraulic) • Sand trap • Caution tape • Floatation booms and sand bags as necessary • Self Contained Breathing Apparatus (SCBA)

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. C heck 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 lugged, the check valve will not open.

Wastewater Pump Station Alarms General Response Actions, Minimum Levels of Staffing (people): 2	
Minimum Emergency Equipment	**Specialized Equipment**
• Gas meter-for oxygen deficient, explosive or toxic gases • Self Contained Breathing Apparatus (SCBA) • Harness and lifeline	• As applicable for trouble-shooting

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.

Pumping Station Failure Caused by Secondary Power Failure During Power Outage, Minimum Levels of Staffing (people): 2-3	
Minimum Emergency Equipment	**Specialized Equipment**
• Harness and lifeline • Flash light • Emergency lighting • Portable generator • Gas meter-for oxygen deficient, explosive or toxic gases	• Power testing equipment

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 identity 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.

Pumping Station Failure Caused by Force-Main Break inside valve pit, pump or valve failure, Minimum Levels of Staffing (people): 2-4	
Minimum Emergency Equipment	**Specialized Equipment**
• Harness and lifeline • Flash light • Emergency lighting • Portable pumps and hoses • Gas meter-for oxygen deficient, explosive or toxic gases	• Self Contained Breathing Apparatus (SCBA)

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:

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

Appendix B

Sewer Use Ordinance (SUO)

Town *of* Hanover

ORDINANCE #14

HANOVER MUNICIPAL SEWER SYSTEM

ORDINANCE OF THE BOARD OF SELECTMEN

Adopted: **July 31, 1987**
Amended: **September 13, 2010**

DECLARATION OF PURPOSE: THE RULES AND REGULATIONS HEREIN SET FORTH IN THIS SEWER ORDINANCE ESTABLISHED BY THE BOARD OF SELECTMEN OF THE TOWN OF HANOVER AS NECESSARY AND DESIRABLE FOR THE EFFICIENT OPERATION OF THE HANOVER MUNICIPAL SEWER SYSTEM AND FOR THE PROTECTION OF THE HEALTH AND SAFETY OF THE PEOPLE OF HANOVER PURSUANT TO RSA CHAPTER 149-I AND THE HANOVER TOWN CHARTER 1963, LAWS CHAPTER 374.

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APPENDIX 5 – FATS, OIL & GREASE CONTROL

TOWN OF HANOVER
ORDINANCE OF THE BOARD OF SELECTMEN

THE BOARD OF SELECTMEN ORDAINS AS FOLLOWS:

HANOVER MUNICIPAL SEWER SYSTEM

DECLARATION OF PURPOSE: THE RULES AND REGULATIONS HEREIN SET FORTH IN THIS SEWER ORDINANCE ESTABLISHED BY THE BOARD OF SELECTMEN OF THE TOWN OF HANOVER AS NECESSARY AND DESIRABLE FOR THE EFFICIENT OPERATION OF THE HANOVER MUNICIPAL SEWER SYSTEM AND FOR THE PROTECTION OF THE HEALTH AND SAFETY OF THE PEOPLE OF HANOVER PURSUANT TO RSA CHAPTER 149-I AND THE HANOVER TOWN CHARTER 1963, LAWS CHAPTER 374.

Be it ordained and enacted by the Selectmen of the Town of Hanover, State of New Hampshire as follows:

SECTION 1 - GENERAL PROVISIONS

1.1 Purpose and Policy

This Ordinance sets forth uniform requirements for users of the Publicly Owned Treatment Works (POTW) of the Town and enables the Town to comply with all applicable State and federal laws, including the Clean Water Act (33 United States Code § 1251 *et seq.*), the General Pretreatment Regulations (40 Code of Federal Regulations Part 403), and for accomplishing the purposes of the Town Charter 1963, Laws Chapter 374. The objectives of this Ordinance are:

A. To promote the following:

- The prevention or reduction of pollutants at the source whenever feasible;
- Recycling in an environmentally safe manner;
- Treatment in an environmentally safe manner of pollution; and
- Disposal or other release into the environment in an environmentally safe manner only as a last resort.

To encourage the development of these efforts, the Town may:

- Set Town-wide pollution prevention goals;
- Organize an assessment program task force;
- Review data and inspect sites;
- Develop pollution prevention options;
- Conduct a feasibility analysis of selected options; and

- Promote implementation of pollution prevention techniques.

B. To prevent the introduction of pollutants into the POTW that will interfere with its operation;

C. To prevent the introduction of pollutants into the POTW that will pass through the POTW, inadequately treated, into receiving waters, or otherwise be incompatible with the POTW;

D. To protect both POTW personnel who may be affected by wastewater and sludge in the course of their employment and the general public;

E. To promote beneficial reuse of biosolids from the POTW;

F. To provide for fees for the equitable distribution of the cost of operation, maintenance, and improvement of the POTW; and

G. To enable the Town to comply with its National Pollutant Discharge Elimination System permit conditions, biosolids use and disposal requirements, State of New Hampshire Administrative Rules (RSA 485-A, or revisions thereto), and any other federal or State laws to which the POTW is subject.

This Ordinance shall apply to all users of the POTW. The Ordinance authorizes the issuance of industrial wastewater discharge permits; provides for monitoring, compliance, and enforcement activities; establishes administrative review procedures; requires user reporting; and provides for the setting of fees for the equitable distribution of costs resulting from the program established herein.

1.2 Administration

Except as otherwise provided herein, the Director of Public Works shall administer, implement, and enforce the provisions of this Ordinance. Any powers granted to or duties imposed upon the Director of Public Works may be delegated by the Director of Public Works to other Town personnel.

1.3 Abbreviations

The following abbreviations, when used in this Ordinance, shall have the following designated meanings:

- BMP - Best Management Practice
- BOD - Biochemical Oxygen Demand
- CFR - Code of Federal Regulations
- COD - Chemical Oxygen Demand
- IDR - Indirect Discharge Request
- EPA - United States Environmental Protection Agency
- gpd - Gallons per day

- IDP - Industrial Wastewater Discharge Permit
- mg/l - Milligrams per liter
- NHDES - New Hampshire Department of Environmental Services
- NPDES - National Pollutant Discharge Elimination System
- POTW - Publicly Owned Treatment Works
- RCRA - Resource Conservation and Recovery Act
- RSA - Revised Statutes Annotated
- NAICS - North American Industry Classification System
- TSS - Total Suspended Solids
- ·U.S.C. - United States Code
- °F , °C - degrees Fahrenheit, degrees Celsius

1.4 Definitions

Unless a provision explicitly states otherwise, the following terms and phrases, as used in this Ordinance, shall have the meanings hereinafter designated.

1. Act or "the Act." The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 U.S.C. § 1251 *et seq.*

2. Authorized Representative of the User.

   (a) If the user is a corporation:

      (i) The president, secretary, treasurer, or a vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

      (ii) The manager of one or more manufacturing, production, or operation facilities; provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

   (b) If the user is a partnership or sole proprietorship: a general partner or proprietor, respectively.

   (c) If the user is a Federal, State, or local governmental facility: a director or highest official appointed or designated to oversee the operation and performance of the activities of the government facility, or their designee.

(d) The individuals described in paragraphs (a) through (c), above, may designate another authorized representative if the authorization is in writing, the authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the user, and the written authorization is submitted to the Town.

(e) If the authorization under paragraph (d) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for environmental matters for the company, a new authorization satisfying the requirements of paragraph (d) of this section must be submitted to the Town prior to or together with any reports to be signed by an authorized representative.

3. Best Management Practices. Schedules of activities, prohibitions of practices, maintenance Procedures, and other management practices to implement the pollutant control prohibitions of the Town's Sewer Use Ordinance. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

4. Biochemical Oxygen Demand or BOD. The quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedures for five (5) days at 20° centigrade, usually expressed as a concentration (e.g., mg/l).

5. Biosolid. The nutrient-rich organic materials resulting from the treatment of sewage sludge (the name for the solid, semisolid or liquid untreated residue generated during the treatment of domestic sewage in a treatment facility). When treated and processed, sewage sludge becomes biosolids which can be safely recycled and applied as fertilizer to sustainably improve and maintain productive soils and stimulate plant growth.

6. Building Drain. That part of the lowest horizontal piping of a drainage system that receives the discharge from waste pipes inside the walls of the building and conveys it to the building sewer. The building sewer begins five (5) feet outside the inner face of the building wall.

7. Building Sewer. The extension from the building drain to the public sewer or other place of disposal, also called house connection or sewer service.

8. Bypass. The intentional diversion of waste streams from any portion of a wastewater treatment facility.

9. Categorical Pretreatment Standard or Categorical Standard. Any regulation containing pollutant discharge limits promulgated by EPA in accordance with Section 307(b) and (c) of the Clean Water Act (33 U.S.C. § 1317) that applies to a specific category of industrial users and that are found in 40 CFR, Subchapter N, Parts 405 through 471.

10. Combined Sewer. A sewer intended to receive wastewater and storm, surface or ground water.

11. Compatible Pollutant. Biochemical oxygen demand, suspended solids, pH, and fecal coliform bacteria.

12. Connection Fee. A fee assessed to all new service connections to pay for a share of the existing facilities pursuant to Appendix 3 of this Ordinance.

13. Control Authority. The term Control Authority, as used in the Ordinance, refers to the Regional Administrator of the EPA.

14. Domestic Septage. "Domestic septage" means either liquid or solid material removed from a septic tank, cesspool, or similar containment area that receives only domestic sewage.

15. Domestic Sewage. "Domestic sewage" means sewage comprised of waste and wastewater from household or commercial operations, that:

    (1) Contains no industrial waste; and

    (2) Is discharged to or otherwise enters a treatment works.

16. Easement. An acquired legal right for the specific use of land owned by others.

17. Environmental Protection Agency or EPA. The U.S. Environmental Protection Agency or, where appropriate, the Regional Water Management Division Director, or other duly authorized official of said agency.

18. Equivalent User. Shall mean a residential connection producing 450 gallons per day (gpd) of wastewater equal to a three bedroom single family residence.

19. Excessive Pollution Surcharge. Additional fee for all sewage prior to dilution from non-industrial wastes received from a permitted user that exceeds the adopted screening levels pursuant to Appendix 3.

20. Food Service Facility. Restaurants, schools, hospitals, nursing or retirement homes, catering services, supermarkets, and any other facility that handles fats, oils and grease (FOG) and which discharges wastewater containing fats, oils and grease (FOG) into the Town of Hanover collection system.

21. Fume Toxicity Screening Level. "Fume toxicity screening level" means that concentration of a pollutant in water which, under equilibrium conditions, a confined environment**,** and a standard temperature, would cause the concentration of the pollutant in the air over that water to exceed the exposure limit.

22. Garbage. The animal and vegetable waste resulting from the handling, preparation, cooking, and serving of foods.

23. Grab Sample. A sample that is taken from a waste stream without regard to the flow in the waste stream and over a period of time not to exceed fifteen (15) minutes.

24. Grease. That material removed from a grease interceptor (trap) serving a restaurant or other facilities require such grease interceptors. Also means volatile and non-volatile residual fats, fatty acids, soaps, waxes and other similar materials.

25. Hauler. Those persons, firms, or corporations, who pump, haul, transport, or dispose of septage and who are licensed by the Commissioner of the New Hampshire Department of Environmental Services (NHDES) and conform to the requirements set forth in RSA 485-A, or revisions thereto.

26. Headworks. "Headworks" means that portion of a Water Reclamation Facility which first receives the total influent flow for initial treatment.

27. Headworks Loading Limit. or Maximum Allowable Headworks Loading Limit means the maximum allowable quantity of pollutants at the headworks of a Water Reclamation Facility when the following environmental criteria are considered:

    (1) Water quality standards for the receiving water;

    (2) Discharge permits limits;

    (3) Inhibition of biological treatment processes;

    (4) Biosolids Land Application Criteria;

    (5) Corrosive destruction of the POTW;

    (6) Air quality limitations;

    (7) Worker safety; and

    (8) Sludge Toxicity Characteristic Leaching Procedure.

28. Human Excrement and other Putrescible Material. The liquid or solid matter discharged from the intestinal canal of man or other liquid or solid waste materials that are likely to undergo bacterial decomposition; provided, however, that these terms shall not include garbage as defined by RSA 485-A, or revisions thereto.

29. Incompatible Pollutant. Any pollutant that is not a compatible pollutant.

30. Indirect Discharge. "Indirect discharge" means the introduction of pollutants into a

POTW from any non-domestic sources.

31. Indirect Discharger. "Indirect discharger" means a facility that discharges waste, as defined by RSA 485-A:2, XVI, alone or in combination with sanitary sewage to a POTW.

32. Industrial Wastewater Discharge Permit (IDP). The written permit between the Town and an industrial user that discharges wastewater to the POTW, which outlines the conditions under which discharge to the POTW will be accepted.

33. Industrial User (or User). A source of pollutants into the POTW from any non-domestic source regulated under Section 307(b), (c), or (d) of the Clean Water Act.

34. Industrial Waste. Any liquid, gaseous or, solid waste substance or pollutant from any process or from development of any natural resource by industry, manufacturing, trade, business, or governmental entity.

35. Industrial Wastewater. Any wastewater that contains industrial waste, as distinct from sanitary sewage or unpolluted water.

36. Inspection Fee. Fee for connecting to the public sewer which includes costs for one (1) inspection and administrative work. Re-inspections will be subject to an additional fee pursuant to Appendix 3 of this Ordinance.

37. Instantaneous Maximum Allowable Discharge Limit. The maximum concentration of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete or composite sample collected, independent of the industrial flow rate and the duration of the sampling event.

38. Interference. "Interference" means an indirect discharge which, alone or in conjunction with indirect discharge(s) from other sources:

(1) Inhibits or disrupts the POTW's treatment processes or operations, or its processing, use, or disposal of sludge in compliance with applicable statutes and rules;

(2) Is a cause of a violation of any requirements of the POTW's federal or state discharge permit; or

(3) Prevents sewage sludge use or disposal in compliance with the following statutory provisions and rules or permits issued there under:

a. Env-Wm 101-102, 201-210, 301-316, and 2100- 3700 relative to solid waste management;

b. Env-A 100-3800 relative to air pollution control;

c. The General Pretreatment Regulations for Existing and New Sources of

Pollution, 40 CFR 403;

d. The Federal Toxic Substances Control Act;

e. The Federal Marine Protection, Research and Sanctuaries Act; and

f. Env-Ws 800 and 40 CFR 503 relative to use or disposal of sewage sludge.

39. Local Limits. Enforceable numeric limitations on the types and quantities of pollutants that may be discharged to the POTW and are established by the Town, as distinct from State or federal limitations for industrial wastewater discharged to the POTW.

40. May. Means permissive (see "Shall").

41. Medical/Infectious Waste. Any solid waste that is generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals. Examples include isolation wastes, infectious agents, human blood and blood products, pathological wastes, chemotherapy wastes, sharps, body parts, contaminated bedding, surgical wastes, potentially contaminated laboratory wastes, and dialysis wastes.

42. Municipal Sewer Use Ordinance. "Municipal sewer use ordinance" means that set of ordinances, bylaws**,** or regulations duly adopted by the governing body of the municipality relating to the POTW and all appurtenant structures, including any pretreatment facilities as are required for the proper maintenance and operation of the foregoing enumerated facilities.

43. Municipality. "Municipality" means, for the purposes of these rules, any state**,** county, city, town, district, governmental subdivision of the state**,** or any other public entity, other than federal agencies, responsible for the operation and maintenance of the treatment works.

44. National Pollutant Discharge Elimination System or NPDES Permit. A permit issued pursuant to Section 402 of the Clean Water Act (33 U.S.C. 1342).

45. Natural Outlet. Any outlet, including storm sewers and combined sewer overflows, into a watercourse, pond, ditch, lake, or other body of surface water or groundwater.

46. NHDES. New Hampshire Department of Environmental Services.

47. Noncontact Cooling Water. Water used for cooling that does not come into direct contact with any raw material, intermediate product, waste product, or finished product and is not degraded in quality by mixing with or addition of industrial waste or pollutants other than heat.

48. Normal Sanitary Sewage. Wastewater generated by residential users.

49. Notice. Actual notice or written notice mailed postage prepaid first-class mail to any Person's last known address.

50. Other Wastes. "Other wastes" means other wastes as defined by RSA 485-A:2, VIII, namely "garbage, municipal refuse, decayed wood, sawdust, shavings, bark, lime, ashes, offal, oil, tar, chemicals and other substances other than sewage or industrial wastes, and any other substances harmful to human, animal, fish or aquatic life."

51. Owner. Any Person vested with ownership, legal or equitable, sole or partial, or possession of any Improved Property.

52. Pass Through. "Pass through" means a discharge to a POTW in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of applicable water quality criteria.

53. Person. "Person" means person as defined by RSA 485-A:2, IX, namely "any municipality, governmental subdivision, public or private corporation, individual, partnership, or other entity."

54. pH. A logarithmic measure devised to express the hydrogen ion concentration of a solution, expressed in Standard Units. Solutions with pH values greater than 7 are basic (or alkaline); solutions with pH values less than 7 are acidic.

55. Pharmaceutical Waste. Means a prescription drug, as defined by RSA 318:1, XVII, or a nonprescription or proprietary medicine, as defined by RSA 318:1, XVIII, which is no longer suitable for its intended purpose or is otherwise being discarded.

56. Pollutant. Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, medical wastes, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, municipal, agricultural and industrial wastes, and certain characteristics of wastewater (e.g., pH, temperature, TSS, turbidity, color, BOD, COD, toxicity, or odor).

57. Pollution Prevention. The use of processes, practices or products that reduce or eliminate the generation of pollutants and wastes or that protect natural resources through equipment or technology modifications; process or procedure modifications; reformulation or redesign of products; substitution of raw materials; and improvements in housekeeping, maintenance, training, or inventory control. The term "pollution prevention" does not include any practice that alters the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant, or contaminant through a process or activity that itself is not integral to and necessary for the production of a product or the providing of a service.

58. Pretreatment. "Pretreatment" means the application of physical, chemical, or biological processes, either singly or in combination, to reduce the amount of pollutants in or alter the nature of the pollutant property in a waste prior to discharge into a POTW.

59. Pretreatment Requirements. Any substantive or procedural requirement related to pretreatment imposed on a user, other than a pretreatment standard.

60. Pretreatment Standards or Standards. Pretreatment standards shall mean prohibited discharge standards, categorical pretreatment standards, and local limits.

61. Private Sewer. A pipe or conduit that carries wastewater, storm water, groundwater, subsurface water, or unpolluted water from any source, which is not controlled by a governmental agency or public utility. Private sewers shall not be allowed. Existing private sewers are excluded from this condition. (see *Public Sewer*)

62. Prohibited Discharge Standards or Prohibited Discharges. Absolute prohibitions against the discharge of certain substances; these prohibitions appear in Section 2.4 of this Ordinance.

63. Publicly Owned Treatment Works or POTW. "Publicly owned treatment works" or "POTW" means a treatment works as defined by Section 212 of the Clean Water Act (33 U.S.C. §1292) that is owned by the Town. This definition includes any devices or systems used in the collection, storage, treatment, recycling, and reclamation of sewage or industrial wastewater of a liquid nature and any conveyances that convey wastewater to a treatment facility. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW. The term also means the municipality that has jurisdiction over discharges to and the discharges from such a treatment works.

64. Public Sewer. A pipe or conduit that carries wastewater, storm water, groundwater, subsurface water, or unpolluted water from any source, which is controlled by a governmental agency or publicutility. (See *Private Sewer*)

65. Director of Public Works. The Director of the Town of Hanover Public Works Department, and the person designated by the Town to supervise the operation of the POTW, and who is charged with certain duties and responsibilities by this Ordinance, or his duly authorized deputy, agent, or representative.

66. Quarter. One-fourth (1/4) year, or a three (3) month period.

67. Radiological Waste. Means radioactive waste as regulated by RSA 125-F.

68. Sanitary Sewage. Wastewater consisting solely of normal water-carried household and toilet wastes or waste from sanitary conveniences of residences, commercial buildings, and industrial plants, excluding ground, surface, or storm water. (See also: Industrial Wastewater.)

69. Sanitary Sewer. A public sewer that carries liquid and water-carried wastes from residences, commercial buildings, industrial facilities, and institutions, together with minor quantities of ground, storm, and surface waters that are not admitted intentionally.

70. Screening Level. That concentration of a pollutant that under baseline conditions could cause a threat to personnel exposed to the pollutant, or could adversely impact the structures of the POTW. A screening level may be adjusted upward or downward within an IDP to account for site-specific conditions at the point of discharge and administered as a local limit.

71. Septage. Any liquid, solid, or sludge pumped from chemical toilets, vaults, septic tanks, or cesspools or other holding tanks, which have received only domestic wastewater.

72. Septage Tank Truck. Any watertight vehicle that is used for the collection and hauling of septage as described above and which complies with the regulations of the Commissioner of the New Hampshire Department of Environmental Services (NHDES) (RSA 485-A, or revisions thereto).

73. Sewage. "Sewage" means "sewage" as defined by RSA 485-A:2, X, namely "the water carried waste products from buildings, public or private, together with such groundwater infiltration and surface water as may be present."

74. Sewer. A pipe or conduit that carries wastewater, storm water, groundwater, subsurface water, or unpolluted water from any source.

75. Shall. Means mandatory (see "May").

76. Significant Indirect Discharger. Means an indirect discharger that meets one or more of the following criteria:

    (1) Is subject to national categorical pretreatment standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N;

    (2) Discharges an average of 10,000 gallons per day or more of industrial wastewater;

    (3) Discharges industrial wastewater which contributes 5 percent or more of the hydraulic or organic loading to the Water Reclamation Facility;

    (4) Discharges medical/infectious waste, pharmaceutical waste, or radiological waste; or

    (5) Is designated as such by the municipality as having a reasonable potential for adversely affecting the POTW's operation or performance or for violating any pretreatment standard or requirement.

77. Significant Noncompliance or SNC. An industrial user is in significant noncompliance if its violation meets one of the following criteria:

(a) Chronic Violations. A pattern of violating the same pretreatment standard daily maximum or average limit (any magnitude of exceedance) sixty-six percent (66%) or more of the time in a 6-month period;

(b) Technical Review Criteria (TRC) Violations. Thirty-three percent (33%) or more of the measurements exceed the same pretreatment standard daily maximum limit or average limit by more than the TRC factor in a 6-month period [The TRC factor is 1.4 for biochemical oxygen demand (BOD), total suspended solids (TSS), and oil & grease and 1.2 for all other pollutants except pH.];

(c) For pH monitoring, excursions shall be considered SNC when:

(i) An individual excursion from the allowable range of pH values exceeds 60 minutes; or
(ii) An excursion occurs that the Town believes has caused, alone or in combination with other discharges, interference or pass-through; or endangered the health of the Water Reclamation Facility personnel or the general public; or

(d) Any other discharge violation that the Director of Public Works believes has caused, alone or in combination with other discharges, interference or pass through, including endangering the health of POTW personnel or the general public;

(e) Any discharge of pollutants that have caused imminent endangerment to the public or to the environment, or have resulted in the Director of Public Work's exercise of his emergency authority to halt or prevent such a discharge;

(f) Failure to meet, within ninety (90) days of the scheduled date, a compliance schedule milestone contained in an Industrial Discharge Permit or enforcement order for starting construction, completing construction, or attaining final compliance;

(g) Failure to provide within thirty (30) days after the due date, any required reports, including IDP applications, periodic self-monitoring reports, and reports on compliance with compliance schedules;

(h) Failure to accurately report noncompliance; or

(i) Any other violation(s), which may include a violation of Best Management Practices, that the Director of Public Works determines will adversely affect the operation or implementation of the local pretreatment program.

78. Sludge. "Sludge" means "sludge" as defined by RSA 485-A:2, XI-a, namely "the solid or domestic septage; provided, however, sludge which is disposed of at solid waste

facilities permitted by the department shall be considered solid waste and regulated under RSA 149-M.".

79. Sludge Toxicity. "Sludge toxicity" means the degree to which a sludge has a toxic effect on living organisms.

80. Slug Load or Slug Means:

(a) Any discharge of water, wastewater, sewage, or industrial sewage that, in concentration of any given constituent or in quantity of flow, exceeds for any period of duration longer than fifteen (15) minutes, more than five (5) times the average twenty-four (24) hour concentration or flow during normal operation;

(b) Any discharge at a flow rate or concentration that could cause a violation of the prohibited discharge standards in Section 2.4 of this Ordinance; or

(c) Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge, which may adversely affect the collection system and/or performance of the POTW.

81. State. The State of New Hampshire.

82. Storm Sewer. A sewer for conveying storm water, groundwater, subsurface water, or unpolluted water from any source.

83. Storm Water. Any flow occurring during or following any form of natural precipitation, and resulting from such precipitation, including snowmelt.

84. Surface Waters of the State. "Surface waters of the state" means "surface waters of the state" as defined by RSA 485-A:2, XIV, namely "perennial and seasonal streams, lakes, ponds, and tidal waters within the jurisdiction of the state, including all streams, lakes, or ponds bordering on the state, marshes, water courses and other bodies of water, natural or artificial."

85. Total Suspended Solids (TSS). The total suspended matter that floats on the surface of, or is suspended in, water, wastewater, or other liquid, and that is removable by laboratory filtering.

86. Town. The Town of Hanover, Grafton County, a municipality of the State of New Hampshire, acting by and through its Selectmen or, in appropriate cases, acting by and through its authorized representatives, including the Director of Public Works.

87. Treatment Works. "Treatment works" means any device or system used in the collection, storage, treatment, recycling, or reclamation of sewage or industrial waste and includes all collection sewers, interceptor sewers, pumping stations, treatment and appurtenant facilities essential to the operation of an entire system.

88. Unpolluted Water. Water of quality equal to or better than the State Water Quality Standards (Part Env-Ws 432) or water that would not cause a violation of receiving water quality standards and would not be benefited by discharge to the POTW.

89. Upset. "Upset" means "upset" as defined by RSA 485-A:2, XVIII, namely "an exceptional incident in which there is unintentional and temporary noncompliance with permit effluent limitations because of factors beyond the reasonable control of the permittee."

90. User (or Industrial User). A source of pollutants into the POTW from any non-domestic source regulated under Section 307(b), (c), or (d) of the Clean Water Act.

91. User Charge. A charge levied on the user of the POTW for the cost of operations and maintenance of such facilities. The term "operations and maintenance" includes replacement.

92. Waste. Means "waste" as defined by RSA 485-A:2, XVI, namely "industrial waste and other wastes."

93. Wastewater. Any combination of the liquid and water-carried industrial wastes and/or sewage from residential dwellings, commercial buildings, industrial and manufacturing facilities, governmental facilities, and institutions, whether treated or untreated, which are contributed to the POTW.

94. Water Reclamation Facility. "Water Reclamation Facility" means "wastewater treatment plant" as defined by RSA 485-A:2, XVI-a, namely "the treatment facility or group of treatment devices which treats domestic or combined domestic and industrial wastewater through alteration, alone or in combination, of the physical, chemical**,** or bacteriological quality of the wastewater and which dewaters and handles sludge removed from the wastewater."

SECTION 2 - GENERAL SEWER USE REQUIREMENTS

2.1 Use of Public Sewers

A. It shall be unlawful for any person to place, deposit, or permit to be deposited in any unsanitary manner on public or private property within the Town of Hanover (Town) or in any area under the jurisdiction of said Town, any human or animal excrement.

B. It shall be unlawful to discharge to any natural outlet within the Town, or in any area under the jurisdiction of said Town, any wastewater or other polluted waters, except where suitable treatment has been provided in accordance with subsequent provisions of this Ordinance and with State and federal laws and regulations.

C. Sewers for Intended Uses Only. No person shall discharge into any public sewer of the Town, or into any fixture which thereafter discharges into any public sewer, any waste or substance other than for which the particular sewer is intended, designed or provided.

D. Applicable Permits Required. No person shall discharge into any public sewer of the Town, or into any fixture which thereafter discharges into any public sewer, any waste or substance until all applicable permits have been obtained.

E. Use of Sanitary Sewers. Except as specifically provided with reference to some particular sewer, sanitary sewers shall be used only for the conveyance and disposal of sanitary sewage, and for industrial wastewater that is not objectionable as hereinafter provided. No sanitary sewer shall be used to receive and convey or dispose of any storm or surface water, roof drainage, subsoil drainage, or unpolluted water.

F. Use of Storm Sewers. Storm water, roof drainage, subsoil and all other unpolluted drainage shall be discharged to such sewers as are specifically designed as storm sewers, or a natural outlet approved by the Director of Public Works. Industrial cooling water, process waters, or storm water runoff generated in areas of industrial activity (as defined in 40 CFR Part 122) require an NPDES permit prior to discharge to a storm sewer or natural outlet.

G. Use Designation. If the intended or designated use of any particular sewer or drain and allowable discharge thereto is unclear, the Director of Public Works will consider the pertinent facts and make a determination. Said determination will be final and binding.

H. Except as hereinafter provided, it shall be unlawful to construct or maintain any privy, privy vault, septic tank, cesspool, or other facility intended or used for the disposal of wastewater in any area where a public sewer is available, as described in paragraph (I) below. The use of portable chemical toilets is allowed at construction sites and for other temporary purposes provided the wastes are properly disposed offsite.

I. The owner(s) of all houses, buildings, or properties used for human occupancy, employment, recreation, or other purposes, situated within the Town and abutting on any street, alley, or right-of-way in which there is now located or may in the future be located a sanitary sewer of the Town, is hereby required at the owner(s)' expense to install suitable toilet facilities therein, and to connect such facilities directly with the proper public sewer in accordance with the provisions of this Ordinance, within ninety (90) days subsequent to the date of official notice to do so, provided that said gravity public sewer is within one hundred (100) feet of the building.

J. Where a public sanitary sewer is not available under the provisions of paragraph (I) above, the building sewer shall be connected to a private wastewater disposal system complying with the provisions of RSA 485-A, or revisions thereto, of the State of New Hampshire and rules, regulations, standards, and procedures promulgated thereupon. The owner(s) shall operate and maintain the private wastewater disposal facilities in a sanitary manner at all times, at no expense to the Town. At no time shall any quantity of industrial waste be discharged to a private wastewater disposal facility.

K. At such time as a public sewer becomes available to a property serviced by a private wastewater disposal system, the owner shall connect to the public sewer, as provided in paragraph (I) above unless the private wastewater disposal system was approved after 1985 as provided in RSA 147:8. Any septic tanks, cesspools, and similar private wastewater disposal facilities shall be removed or cleaned of sludge and filled with clean, mineral soils, and their use shall be discontinued.

L. No privy vault, cesspool, sinkhole, septic tank or similar receptacle at any time shall be connected with a public sewer.

M. All sanitary sewage and industrial wastewater from any building, subsequent to connection of such building with a public sanitary sewer as required under Paragraph I of this Section, shall be subject to limitations and restrictions as shall be established herein or otherwise shall be established by the Town, from time to time.

N. No person(s) shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface, or tamper with any structure, appurtenance or equipment that is part of the POTW.

O. No statement contained in the preceding paragraphs of this Section shall be construed to interfere with any additional requirements that may be imposed by the Health Officer.

2.2 Building Sewers and Connections

A. No person(s) shall uncover, make any connections with or opening into, use, alter, or disturb any public sewer or appurtenance thereof without first obtaining a building sewer, excavation and connection permits from the Director of Public Works.

B. There shall be three (3) classes of building sewer permits: (a) for residential and commercial service producing only sanitary sewage, (b) for service to establishments producing industrial wastewater and (c) for combination of above two classes. For residential and commercial services, the owner(s) or his agent shall make application on a special form furnished by the Town at least thirty (30) days prior to said service connection. For an establishment discharging industrial wastewater, the application shall be made at least ninety (90) days prior to said service connection. The building sewer permit application shall be supplemented by any plans, specifications, or other information (including pollution prevention studies) considered pertinent in the judgment of the Director of Public Works. A permit and inspection fee (specific fees are available from the Town as Appendix 3 - Sewer Rental Rates and Charges) shall be paid to the Town at the time the application is filed.

C. The Town will, at its expense during construction of a new public sewer, construct a sewer stub for a building located on a lot of record (as defined by Section 9.02 of the Town Zoning Ordinance) as of June 1, 1979 if such building is located within 100 feet of the existing public sewer, and therefore is required to connect to the public sewer as provided in Section 2.1(I), above. All costs and expenses incidental to the installation and connection of the remainder of the building sewer, including connection to the structures served, shall

be the responsibility of the owner of the improved property to be connected. If the building or proposed building is located beyond 100 feet of the existing public sewer and the owner desires to connect to the public sewer then all costs associated with an extension of the public sewer to service the building will be the responsibility of the owner. The owner(s) shall indemnify the Town from any loss or damage that may directly or indirectly be occasioned by the installation of the building sewer. After the initial construction of the building sewer, the owner shall thereafter be obligated to pay all costs of expenses of operation, repair and maintenance and of reconstruction (if needed) of the entire building sewer beginning at the public sewer and ending at the building.

D. If the owner of any building located within the Town and benefited, improved, served or accommodated by any public sewer, or to which any public sewer is available, after 90 days notice from the Town, in accordance with Section 2.1(I), shall fail to connect such building as required, s/he shall be in violation of this Ordinance and the Town may make such connection and may collect from such owner the costs and expenses thereof by such legal proceeding as may be permitted by law. The Town shall have full authority to enter on owner's property to do whatever is necessary to properly drain the improved property into the public sewer.

E. New developments which require sewer extensions shall be responsible for all cost related to sewer extensions required to serve said development including necessary improvements to the downstream collection system and the POTW. When sewer is extended to a currently unsewered area the developer shall extend sewers to the furthest property corner away from the existing sewer on a road of a lot fronting on a Town right-of-way where there is either existing developed or potentially developable lot or lots.

F. A separate and independent building sewer shall be provided for every building. Grouping of more than one building on one building sewer shall not be permitted.

G. Existing building sewers may be used in connection with new buildings only when they are found, on examination and test by the Director of Public Works, to meet all requirements of this Ordinance. The minimum size for commercial services shall be 6" regardless of the condition of the existing service. Commercial services shall only be reused if they are cast iron, ductile iron or PVC and found to be in good shape, alignment and of proper size. Other pipe types shall only be reused if they are slip-lined with an approved material, provide they are found to be in other wise good shape, alignment and of proper size.

H. The size, slope, alignment, materials of construction of a building sewer, and the methods to be used in excavating, placing of the pipe, jointing, testing, and backfilling the trench, shall all conform to the Town's Specifications for Sewer Construction (see Appendix 2 - Standard Specifications for Sewer Line Construction), the requirements of the building and plumbing code or other applicable rules and regulations of the Town. No outside cleanouts shall be allowed in any service. One 221/2 deg elbow will be allowed, a second 221/2 deg elbow may be allowed with prior approval of the Director of Public Works.

In the absence of code provisions or in amplification thereof, the materials and procedures set forth in appropriate specifications of the American Society for Testing and Materials (ASTM) and the Water Environment Federation (WEF) Manual of Practice No. FD-5 shall apply. Any deviation from the prescribed procedures and materials must be approved by the Director of Public Works before installation.

I. All services with a Food Preparation and Serving Facility shall provide a Grease removal system sized pursuant to Appendix 5 – Fats, Oil & Grease Control.

J. In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage conveyed by such building drain shall be lifted by an approved means and discharged to the building sewer at the owner's expense. Pumping systems shall provide adequate storage for a minimum 24 hour power outage and a minimum of one pump run per day.

K . All sewer services where the basement floor is below the sewer main shall have a check valve installed in the service line to prevent backflow into the building.

L. No person(s) shall make connection of roof downspouts, interior or exterior foundation drains, areaway drains, or other sources of surface runoff or groundwater to a building sewer or building drain that in turn is connected directly or indirectly to a public sanitary sewer.

M. No person shall obstruct the free flow of air through any drain or soil pipe.

N. The applicant for the building sewer permit shall notify the Director of Public Works when the building sewer is ready for inspection and connection to the public sewer. Such notice shall be provided not less than 48 hours in advance of the time any connection is to be made to any public sewer. The connection and testing shall be made under the supervision of the Director of Public Works or his representative. No building sewer or repair thereto shall be covered until it has been inspected and approved by the Town. If any part of a building sewer is covered before being inspected and approved, it shall be uncovered for inspection at the cost and expense of the owner of the building to be connected to a sewer. This requirement shall also apply to repairs or alterations to building connections, drains or pipes thereto.

O. Suitable provisions shall be made at the industrial user’s connection for sampling, which responsibility shall rest with the holder of the sewer connection permit. Sewer manholes are required at the connection of any commercial or industrial establishment and the Town sewer.

P. The Director of Public Works shall maintain a record of all connections made to public sewers and drains under this Ordinance and all repairs and alterations made to building connections or drains connected to or discharging into public sewers and drains of the Town or intended to so discharge. All persons concerned shall assist the Director of Public Works in securing data needed for such records.

Q. All excavations for building sewer installation shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways, and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the Town at the expense of the owner. No excavations within the traveled portion of any road shall remain open overnight. All excavations within the traveled portion of any pavement shall be patched with new asphalt, cold patch or steel plate as approved by the Director of Public Works at the end of each day.

R. Under RSA 485 and 485-A, proposed new discharges from residential or commercial sources in excess of 5000 gpd and which serve more than one building or which require a manhole at the connection and for any proposed pumping station which serves more than one building or has a capacity in excess of 50 gallons per minute require a NHDES Sewer Connection Permit. Applications need not be submitted for domestic connections less than 5000 gpd provided that no new sewerage construction is proposed.

S. If the Owner of any building located within the Town shall fail or refuse, upon receipt of a notice of the Town, in writing, to remedy any unsatisfactory condition with respect to a building sewer, within 45 days of receipt of such notice (except that in the case of dire emergency this time period may be reduced as necessary to protect the health and safety of the residents of the Town), the Town may remedy any unsatisfactory condition with respect to a building sewer and may collect from the Owner the costs and expenses thereof by such legal proceedings as may be provided by law. The Town shall have full authority, as allowed by law, to enter on the Owner's property to do whatever is necessary to remedy the unsatisfactory condition.

T. Every building sewer shall be maintained in a sanitary and safe operating condition by the owner.

U. When a building is demolished and not immediately replaced, the owner, having first obtained a building demolition permit, shall adequately seal off his building sewer where it connects to the public sewer.

V. Where the owner intends to excavate within or otherwise disturb public property, the owner shall follow all directions of the Director of Public Works and shall promptly and safely and at the owner's own expense, complete the action and restore the public property in a manner satisfactory to the Town.

W. Garbage Grinding or shredding devices are prohibited by this Ordinance and shall not be connected to any sanitary sewer.

2.3 Variances

A. The Director of Public Works, with the approval of the Town Manager, may allow reasonable variances from the provisions of Sections 2.1 and 2.2 of this Ordinance, which will not result in a violation of State or federal law, provided:

1. The owner shall be responsible for any administration fee, to be determined by the Board of Selectmen;

2. The variance allowed is the least variance reasonable;

3. The variance will not cause undue harm or inconvenience to the Town, the POTW, or the Owner's neighbors;

4. The variance is justified by substantial reason; and

5. The variance is at the discretion of the Director of Public Works.

B. The Owner shall apply for the variance in writing to the Director of Public Works. The application shall identify the name and address of the Owner, the property in question, the specific variance sought by the Owner and a substantial reason justifying the variance. The variance fee shall be paid with the application or the variance shall be deemed to have been denied. The variance as issued shall identify any changes, limitations or restrictions on the variance as applied for.

2.4 Prohibited Discharge Standards

A. General Prohibitions. No user shall introduce or cause to be introduced into the POTW any pollutant or wastewater that causes pass through or interference. These general prohibitions apply to all users of the POTW whether or not they are subject to categorical pretreatment standards or any other federal, State, or local pretreatment standards or requirements.

B. Specific Prohibitions. No user shall introduce or cause to be introduced into the POTW the following pollutants, substances, or wastewater:

1. Any gasoline, benzene, naphtha, fuel oil or other flammable or explosive liquid, gas, solid, or any substance that may generate or form any flammable, combustible or explosive substance, fluid, gas, vapor or liquid when combined with air, water or other substances present in sewers, including, but not limited to, waste streams with a closed-cup flashpoint of less than 140°F (60°C) using the test methods specified in 40 CFR 261.21;

2. Any waters or wastewaters having a pH less than 5.5 or greater than 11.5 or having any other corrosive property that may be capable of causing damage or hazard to structures, equipment, and/or personnel of the sewage works, or with acidity or alkalinity in such quantities that the Town believes may cause, alone or in combination with other discharges, interference, pass-through or the Water Reclamation Facility's influent pH to be less than 6.0 or greater than 9.0;

3. Solid or viscous substances including water or wastes containing fats, wax, grease, or oils, whether emulsified or not, or containing substances that may solidify or become viscous at temperatures between thirty-two (32) and one hundred fifty (150) degrees

Fahrenheit (0-65 degrees C), in amounts that will cause obstruction of the flow in the POTW or result in interference with the proper operation of the POTW;

4. Any wastes**,** including oxygen-demanding released in a discharge at a flow rate and/or pollutant concentration that, either singly or by interaction with other pollutants, will cause interference with the POTW, constitute a hazard to humans or animals, create a public nuisance, exceed any national categorical pretreatment standards or cause pass through;

5. Wastewater having a temperature greater than 150ºF (65ºC), or that will inhibit biological activity or damage pipes or structures; In no case shall wastewater cause the temperature of the waste stream entering the wastewater treatment facility to exceed 104ºF (40ºC);

6. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil will cause interference or pass through or exceed the levels from Appendix 1 of this Ordinance;

7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

8. Trucked or hauled pollutants, except at discharge points designated by the Director of Public Works in accordance with Section 4.9 of this Ordinance;

9. Hazardous wastes including but not limited to paints, stains, thinners, pesticides, herbicides, anti-freeze, transmission and brake fluids, motor oil and battery acid**,** or any hazardous wastes listed under NHDES Env-Wm 400;

10. Any medical/infectious waste, pharmaceutical waste, or radiological waste except as specifically authorized in an IDP;

11. Any wastewater that would prevent the beneficial use of sludge as defined by NHDES Env. Ws 802.05; and

12. Wastewater causing, alone or in conjunction with other sources, the Water Reclamation Facility's effluent to fail a toxicitytest.

C. Additional Prohibitions. No user shall introduce or cause to be introduced into the POTW the following substances, pollutants or wastewater, unless specifically authorized by the Director of Public Works in an IDP:

1. Wastewater that imparts color that may not be removed by the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, which consequently may impart color to the treatment facility's effluent, thereby violating the Town's NPDES permit;

2. Noxious or malodorous liquids, gases, solids, or other wastewater that, either singly or by interaction with other wastes, are sufficient to create a public nuisance or a hazard to life, or to prevent entry into the public sewers for maintenance or repair;

3. Wastewater containing any radioactive wastes or isotopes except in compliance with applicable State or federal regulations;

4. Storm water, surface water, groundwater, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, non-contact cooling water, or otherwise unpolluted wastewater;

5. Sludges, screenings, or other residues from the pretreatment of industrial wastewater;

6. Wastewater causing, alone or in conjunction with other sources, the wastewater treatment facility's effluent to fail a toxicity test;

7. Detergents, surface-active agents, or other substances that may cause excessive foaming in the POTW;

8. Wastewater causing a reading on an explosion hazard meter at the point of discharge into the POTW, or at any point in the POTW, of more than 10 percent (10%) of the Lower Explosive Limit of the meter;

9. Any quantities of flow, concentrations, or both which constitute a "slug" as defined herein;

10. Waters or wastes which, by interaction with other water or wastes in the treatment works, release dangerous or noxious gases, form suspended solids which affect the operation of the collection system, or create a condition deleterious to structures and treatment processes; and

11. Any materials which exert or cause unusual concentrations of inert suspended solids (such as, but not limited to, Fullers earth, lime, slurries, and lime residues) or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate).

Pollutants, substances, or wastewater prohibited by this section shall not be processed or stored in such a manner that they could be discharged to the POTW.

2.5 Federal Categorical Pretreatment Standards

A. The federal categorical pretreatment standards are found at 40 CFR Chapter I, Subchapter N, Parts 405-471.

B. EPA shall be the control authority for industrial users subject to federal categorical pretreatment standards. As the control authority, industrial users are responsible to the EPA for compliance with categorical pretreatment standards and the requirements of 40 CFR

Part 403. Categorical industrial users shall provide the Town with copies of any reports to, or correspondence with EPA relative to compliance with the categorical pretreatment standards.

C. The industrial user is responsible to determine the applicability of categorical pretreatment standards. The user may request that EPA provide written certification on whether the user is subject to the requirements of a particular category.

2.6 Local Discharge Restrictions

A. All persons discharging industrial process wastes into public or private sewers connected to the Town's POTW shall comply with applicable federal requirements and State standards for pretreatment of wastes (as amended) in addition to the requirements of this Ordinance.

B. Local numerical discharge limitations established by the Town, and all State, and Federal pretreatment standards shall apply, whichever is most stringent. Fume toxicity, explosivity, and ignitability screening levels will be enforced for the protection of personnel or sewer structures.

C. Pollutants of concern are those for which regulatory controls will be administered by the Town of Hanover. These include pollutants that might reasonably be expected to be discharged to the POTW in quantities that may pass through or interfere with the POTW, contaminate the sludge, or adversely impact worker health or safety. The Town has calculated allowable headworks loading limits for all metals for which there are applicable restrictions placed on the POTW.

D. If any waters or wastes are discharged or are proposed to be discharged to the POTW that exceed the standards or restrictions established in Sections 2.4, 2.5, 2.6 and Appendix 1 of this Ordinance, which in the judgment of the Director of Public Works may have a deleterious effect upon the POTW, processes, equipment, or receiving waters, or that otherwise create a hazard to worker safety or health, or constitute a public nuisance, the Director of Public Works may:

1. Reject or prevent any discharge to the POTW after notice has been served to the discharger. The discharger shall respond within 15 days with a corrective action plan;

2. Require pretreatment prior to discharge to the POTW (see Section 3);

3. Require control (e.g., equalization) over the quantities and rates of discharge; and/or

4. Require payment to cover additional cost of handling and treating the wastes.

E. If the Director of Public Works allows the pretreatment or equalization of waste flows, the design and installation of the systems and equipment shall be subject to the review and approval of the Director of Public Works and the State (see Section 3).

F. Maximum Allowable Industrial Loadings. (Headworks Loading Limits) (Appendix 1.1)

1. For all industrial users connected to sewer lines that are tributary to the Town of Hanover POTW, the Public Works Department will not issue permits, which in combination with other industrial loads, exceed the values in Appendix 1.1.

2. All mass loading limitations for metals represent total metals, regardless of the valance state, or the physical or chemical form of the metal. To administer these allowable loadings through IDPs, the Public Works Department may impose concentration-based limitations, mass limitations, or both. For industrial users, the values written into IDPs for the above pollutants shall control the industrial waste stream and may be adjusted to account for dilution with non-industrial wastewaters.

3. Unless specifically identified in an IDP, an industrial user is not allowed to discharge the locally limited pollutants at concentrations greater than normal sanitary wastewater (i.e., background concentrations). Authorization for discharge may be granted subject to the Public Works Department's administrative procedures for managing mass loading limitations.

4. Daily concentration (or mass loading) is the concentration (or mass) of a pollutant discharged, determined from the analysis of a flow-composited sample (or other sampling procedure approved by the Public Works Department) representative of the discharge over the duration of a 24-hour day or industrial operating schedule of less than 24 hours.

G. Screening Levels. (Appendix 1.2)

1. Screening levels are numerical values above which actions are initiated to evaluate, prevent or reduce potential adverse impacts on the POTW, the environment, and/or human health and safety. Screening levels are developed as needed using the methodology of the Public Works Department. The pollutants in Appendix 1.2 (list is not all inclusive) are representative of concentrations above which pollutants shall not be discharged to the POTW without approval of the Public Works Department.

2. If any of the screening levels are exceeded, repeat analysis may be required by the Public Works Department to verify compliance or noncompliance with that screening level. If noncompliance is indicated, then the industrial user may be required, at the discretion of the Public Works Department, to conduct an appropriate engineering evaluation at the industrial user's expense to determine the potential impact of the discharge of this pollutant to the POTW or alternatively, to develop a Pollution Prevention Plan or Best Management Practices Plan specifically addressing the pollutant that exceeds the screening level. This study or plan shall be approved by and conducted under the supervision of the Public Works Department and in accordance with section 3.4 of

this Ordinance. Should the evaluation indicate the impact to be unsatisfactory, the industrial user shall reduce the pollutant concentration to a satisfactory level.

3. If an industrial user proposes to discharge at concentrations greater than the concentration-based screening level maintained by the Public Works Department, then the industrial user may be required to conduct the evaluations described in the previous paragraph. Should the evaluations support an alternate site-specific limitation, then the screening level may, at the discretion of the Public Works Department, be adjusted as a special agreement for the industrial user and administered as a permit limitation for the specific discharge.

4. For industrial discharge applications, conservative pollutant screening levels shall apply at the end of the process train prior to dilution with non-industrial wastewater. Conservative pollutant screening levels contained in IDPs may be adjusted to account for combined sanitary and industrial wastewater present at the point of sampling.

H. Best Management Practices.

1. The Director of Public Works may develop Best Management Practices (BMPs), by ordinance or in IDPs, or require that an industrial user develop BMPs, to implement Local Limits and the requirements of this Ordinance.

2. Such BMPS shall be considered local limits and Pretreatment Standards for the purposes of this Ordinance.

I. Special Agreements. No statement contained in this Section except for paragraphs 2.4(A), 2.4(B), and 2.5 shall be construed as preventing any special agreement or arrangement between the Town and any industrial user whereby an industrial waste of unusual strength or character may be accepted by the Town for treatment provided that said agreements do not contravene any requirements of existing federal or State laws, and/or regulations promulgated there under, are compatible with any user charge system in effect, and do not waive applicable federal categorical pretreatment standards. Special agreement requests may require submittal of a BMP Plan that specifically addresses the discharge for which a special agreement is requested.

2.7 Town's Right of Revision

The discharge standards and requirements set forth in Sections 2.4 (PROHIBITED DISCHARGE STANDARDS), 2.5 (FEDERAL CATEGORICAL PRE-TREATMENT STANDARDS) and 2.6 (LOCAL DISCHARGE RESTRICTIONS), are established for the purpose of preventing discharges to the POTW that would harm either the public sewers, wastewater treatment process, or equipment; would have an adverse effect on the receiving stream; or would otherwise endanger lives, limb, public property, or constitute a nuisance.

To meet these objectives, the Director of Public Works may, from time to time, review and set more stringent standards or requirements than those established in Sections 2.4 (PROHIBITED DISCHARGE STANDARDS), 2.5 (FEDERAL CATEGORICAL PRE-TREATMENT STANDARDS) and 2.6 (LOCAL DISCHARGE RESTRICTIONS) if, in his opinion, such more stringent standards or requirements are necessary to meet the above objectives. At a minimum, this review will be performed at least once every five years. In forming his opinion, the Director of Public Works may give consideration to such factors as the quantity of waste in relation to flows and velocities in the sewers, materials of construction of the sewers, the wastewater treatment process employed, capacity of the wastewater treatment facility, degree of treatability at the wastewater treatment facility, pollution prevention activities, and other pertinent factors. The limitations or restrictions on materials or characteristics of waste or wastewaters discharged to the sanitary sewer shall not be exceeded without the approval of the Director of Public Works.

The Director of Public Works shall allow affected industrial users reasonable time to comply with any changes to the local limits. The conditions and schedule for compliance shall accompany the written notification of any amended screening levels or limitations of this Ordinance.

2.8 Dilution

No user shall ever increase the use of process water, or in any way attempt to dilute a discharge, as a partial or complete substitute for adequate treatment to achieve compliance with a discharge limitation unless expressly authorized by an applicable pretreatment standard or requirement. The Director of Public Works may impose mass limitations on users who are using dilution to meet applicable pretreatment standards or requirements or in other cases when the imposition of mass limitations is appropriate.

2.9 Mass-Based Limitations

Users implementing process changes may request that compliance be determined based on mass limitations in lieu of concentration limitations. Such mass-based limitations will be calculated from the permitted concentration-based limitations and flows, and shall be equivalent to or less than the mass discharge in effect at the time of the request. The intent of a mass-based limit is to encourage and allow pollution prevention and/or water conservation measures that might cause a facility to increase pollutant concentrations in their discharge even though the total mass of the pollutant discharged does not increase, and may in fact decrease. Decisions on granting requests for mass-based compliance limitations will be based on user-specific information and current operating conditions of the POTW, and will be at the discretion of the Director of Public Works. Implementation of mass-based limitations may not contravene any requirements of federal or State laws and/or regulations implemented there under, and may not waive applicable federal categorical pretreatment standards.

SECTION 3 - PRETREATMENT OF WASTEWATER

3.1 Pretreatment Facilities

Users shall provide wastewater treatment as necessary to comply with this Ordinance and shall achieve compliance with all pretreatment standards, screening levels, and the prohibitions set out in Sections 2.4, 2.5, and 2.6 of this Ordinance within the time limitations specified by EPA, the State, or the Director of Public Works, whichever is more stringent. All facilities required to achieve and maintain compliance shall be provided, operated, and maintained at the user's expense. When required, facilities shall be operated by an operator licensed by the State of New Hampshire. Detailed plans describing such facilities and operating procedures shall be submitted to the Director of Public Works for review, and shall be acceptable to the Director of Public Works and the NHDES before such facilities are constructed. Such facilities shall not be connected until said approval is obtained in writing. The review of such plans and operating procedures shall in no way relieve the user of the responsibility of modifying such facilities as necessary to produce a discharge acceptable to the Town under the provisions of this Ordinance. Plans and specifications for a proposed pretreatment facility shall be the result of the design of a professional engineer.

3.2 Additional Pretreatment Measures

A. Whenever deemed necessary, the Director of Public Works may require users to restrict their discharge during peak flow periods, designate that certain wastewater be discharged only into specific sewers, relocate and/or consolidate points of discharge, separate sanitary sewage from industrial wastewaters, and such other conditions as may be necessary to protect the POTW and determine the user's compliance with the requirements of this Ordinance.

B. The Director of Public Works may require any person discharging into the POTW to install and maintain, on their property and at their expense, a suitable storage and flow-control facility to ensure equalization of flow. An IDP may be issued solely for flow equalization.

C. Grease, oil and sand interceptors shall be provided at the owner's expense when, in the opinion of the Director of Public Works they are necessary for wastewater discharges to meet the limitations of this Ordinance. Fat, Oil & Grease interceptors shall be required for all establishments listed in Appendix 5 of this Ordinance. All interception units shall be of a type and capacity approved by the Director of Public Works and shall be so located as to be easily accessible for cleaning and inspection by the owner and the Town. Maintenance of these interceptors requires that the owner be responsible for the proper removal and disposal by appropriate means of the captured materials and shall maintain records of the dates and means of disposal, which shall be subject to periodic review by the Director of Public Works. Reports shall be submitted at the discretion of the Director of Public Works indicating all maintenance and cleaning activities.

D. Users with the potential to discharge flammable substances shall construct containment facilities which will prevent a discharge to the POTW. Users may be required to install and

maintain a combustible gas detection meter at the discretion of the Director of Public Works.

E. Where pretreatment or flow equalizing facilities are provided or required for any waters or wastes, these devices shall be maintained continuously in satisfactory and effective operation bythe owner at his expense.

F. The owner of any building serviced by a building sewer carrying industrial wastewater shall install a suitable control manhole together with such necessary meters and other appurtenances in the building sewer to facilitate observation, sampling and measurement of the wastes. Such manhole shall be accessibly and safely located and shall be constructed in accordance with plans approved by the Town. The manhole shall be installed by the owner at his expense and shall be maintained by him so as to be safe and accessible at all times. The owner shall perform such monitoring as the Town may reasonably require including installation, use and maintenance of monitoring equipment, keeping records and reporting the results of such monitoring to the Town. Such records shall be made available upon request of the Town. The Director of Public Works may allow alternate observation, sampling and measurement location if, in his opinion, an access manhole may be unsafe. Alternate access point shall be submitted to the Director of Public Works for approval.

3.3 Accidental Discharge/Slug Control Plans

Each user shall provide protection from accidental discharge of prohibited materials or their wastes regulated by this Ordinance. Facilities to prevent accidental discharge of prohibited materials shall be provided and maintained at the user's expense.

The Director of Public Works will evaluate all Significant Industrial Users at least once for the need for a slug control plan and conduct follow up evaluations as needed for all other users during routine inspections and permitting.

The Director of Public Works may require any user to develop, submit for approval, and implement an accidental discharge/slug control plan. Alternatively, the Director of Public Works may develop and require the implementation of a Slug Control Plan as part of an enforcement action or permit revision for any user. An accidental discharge/slug control plan shall address, at a minimum, the following:

A. Description of discharge practices, including nonroutine batch discharges;

B. Description of stored chemicals and MSDS sheets;

C. Procedures for immediately notifying the Director of Public Works of any accidental or slug discharge, as required by Section 6.3 and 6.6 of this Ordinance; and

D. Procedures to prevent adverse impact from any accidental or slug discharge. Such procedures include, but are not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site

runoff, worker training, building of containment structures or equipment, measures for containing toxic pollutants, including solvents, and/or measures and equipment for emergency response.

3.4 Best Management Practices (BMP) Plans

In accordance with the provisions of Sections 2.6, and 10.3 of this Ordinance, the Director of Public Works may require any person discharging wastes into the POTW to develop and implement, at their own expense, a BMP Plan (also referenced as a pollution prevention plan). The Director of Public Works may require users to submit as part of the BMP Plan information that demonstrates adherence to the following elements:

A. Management Support. For changes to be effective, the visible support of top management is required. Management's support should be explicitly stated and include designation of a pollution prevention coordinator, goals, and time frames for reductions in volume and toxicity of waste streams, and procedures for employee training and involvement.

B. Process Characterization. A detailed process waste diagram shall be developed that identifies and characterizes the input of raw materials, the outflow of products, and the generation of wastes.

C. Waste Assessment. Estimates shall be developed for the amount of wastes generated by each process. This may include establishing and maintaining waste accounting systems to track sources, the rates and dates of generation, and the presence of hazardous constituents.

D. Analysis of Waste Management Economics. Waste management economic returns shall be determined based on the consideration of:

1. Reduced raw material purchases;

2. Avoidance of waste treatment, monitoring and disposal costs;

3. Reductions in operations and maintenance expenses;

4. Elimination of permitting fees and compliance costs; and

5. Reduced liabilities for employee/public exposure to hazardous chemicals and cleanup of waste disposal sites.

E. Development of BMP Alternatives. Current and past pollution prevention activities should be assessed, including estimates of the reduction in the amount and toxicity of waste achieved by the identified actions. Opportunities for pollution prevention must then be assessed for identified processes where raw materials become or generate wastes. Technical information on pollution prevention should be solicited and exchanged, both from inside the organization and out.

F. Evaluation and Implementation. Technically and economically feasible pollution prevention opportunities shall be identified and an implementation timetable with interim and final milestones shall be developed. The recommendations that are implemented shall be periodically reviewed for effectiveness.

G. Recordkeeping. Documentation demonstrating implementation or compliance with BMPs shall be created, retained, and made available as required.

The review and approval of such BMP Plans by the Town shall in no way relieve the user from the responsibilities of modifying their facilities as necessary to produce a discharge acceptable to the Town in accordance with the provisions of this Ordinance.

SECTION 4 - INDUSTRIAL WASTEWATER DISCHARGE PERMIT (IDP) APPLICATION

4.1 Wastewater Characterization

When requested by the Director of Public Works, a user must submit information on the nature and characteristics of its wastewater within thirty (30) days of the request. The Director of Public Works is authorized to prepare a form for this purpose and may periodically require users to update this information.

4.2 Industrial Wastewater Discharge Permit Requirement

A. No significant industrial user shall discharge wastewater into the POTW without first obtaining an IDP from the Director of Public Works, except that a significant industrial user that has filed a timely and complete application pursuant to Section 4.4 of this Ordinance may continue to discharge for the time period specified therein.

B. The Director of Public Works may require other users to obtain IDPs, or submit an application for an IDP, as necessary to execute the purposes of this Ordinance.

C. Any violation of the terms and conditions of an IDP shall be deemed a violation of this Ordinance and subjects the permittee to the enforcement actions set out in Section 10 of this Ordinance. Obtaining an IDP does not relieve a permittee of its obligation to comply with all federal and State pretreatment standards or requirements or with any other requirements of federal, State, and local law.

4.3 NHDES Indirect Discharge Request (IDR) Requirement

All industrial users classified as class 1 or 2 industrial users shall receive NHDES approval for any new industrial discharge, or any significant alteration in either flow or waste characteristics. For the purposes of this section, the Town defines significant as any increase greater than 20 percent and the discharge of any previously unreported pollutant. The Town of Hanover and the NHDES may require any other user including hauled wastewater users to receive NHDES approval through

submission of an Indirect Discharge Request Form. Such approvals shall be obtained in accordance with Section 6.2 of this Ordinance.

4.4 Industrial Wastewater Discharge Permitting: Application for Existing Connections

Any user required to obtain an IDP who was discharging wastewater into the POTW prior to the effective date of this Ordinance, and is not currently covered by a valid IDP, and who wishes to continue such discharges in the future, shall, within sixty (60) days after said date, apply to the Director of Public Works for an IDP in accordance with Section 4.2 of this Ordinance. Any users who fail to file an application shall not cause or allow discharges to the POTW to continue after one hundred twenty (120) days of the effective date of this Ordinance.

4.5 Industrial Wastewater Discharge Permitting: Application for New Connections

Any user required to obtain an IDP who proposes to begin or recommence discharging into the POTW must obtain an IDP prior to the beginning or recommencing of such discharge. An application for this IDP, in accordance with Section 4.2 of this Ordinance, must be filed at least ninety (90) days prior to the date upon which any discharge will begin or recommence.

4.6 Industrial Wastewater Discharge Permitting: Federal Categorical Pretreatment Standards

Within 120 days subsequent to the effective date of a federal categorical pretreatment standard, an industrial user subject to such standards shall submit an application for an IDP amendment. The application shall contain the information noted under Section 4.7.

4.7 Industrial Wastewater Discharge Permit Application Contents

All users required to obtain an IDP, and other users subject to these rules, as required by the Director of Public Works, must submit a permit application. The Director of Public Works may require all users to submit as part of an application the following information:

A. Description of activities, facilities, and production processes on the premises, including a list of all raw materials and chemicals used or stored at the facility that are, or could accidentally or intentionally be, discharged to the POTW;

B. Number and type of employees, hours of operation, and proposed or actual hours of operation;

C. Each product produced by type, amount, process or processes, and rate of production;

D. Type and amount of raw materials processed (average and maximum per day);

E. Site plans, floor plans, mechanical and plumbing plans, and details to show all sewers, floor drains, and appurtenances by size, location, and elevation, and all points of discharge;

F. Time and duration of discharges;

G. Details of wastewater pretreatment facilities;

H. Copies of Best Management Practices Plans, Slug Control Plans or other similar plans that describe pollution prevention activities that may exist at the facility;

I. An indication of whether the conditions referenced in the application are existing or proposed; and

J. Any other information as may be deemed necessary by the Director of Public Works to evaluate the IDP application.

Incomplete or inaccurate applications will not be processed and will be returned to the user for revision.

4.8 Signatories and Certification

All IDP applications and user reports must be signed by an authorized representative of the user and contain the following 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."

4.9 Hauled Wastewater

A. Septic tank waste may be introduced into the POTW only at locations designated by the Director of Public Works, and at such times as are established by the Director of Public Works. Transport and discharge of such waste shall comply with Section 13 of this Ordinance.

B. The Director of Public Works may require generators of hauled industrial waste to obtain IDPs. The Director of Public Works may require haulers of industrial waste into the POTW to obtain IDPs. The Director of Public Works may also prohibit the disposal of hauled industrial waste to the POTW. The discharge of hauled industrial waste is subject to all other requirements of this Ordinance.

C. Industrial waste haulers may discharge loads only at locations designated by the Director of Public Works. No load may be discharged without prior consent of the Director of Public Works. The Director of Public Works may collect samples of each hauled load to ensure

compliance with applicable standards. The Director of Public Works may require the industrial waste hauler to provide a waste analysis of any load prior to discharge.

D. Industrial waste haulers must provide a waste-tracking form for every load. This form shall include, at a minimum, the name and address of the industrial waste hauler, permit number, truck identification, names and addresses of sources of waste, and volume and characteristics of waste. The form shall identify the type of industry, known or suspected waste constituents, and a certification that the wastes are not hazardous wastes as defined in the State's Hazardous Waste Rules (Env-Wm 110, 211-216, 351-353, 400-1000).

SECTION 5 - INDUSTRIAL WASTEWATER DISCHARGE PERMIT ISSUANCE PROCESS

5.1 Industrial Wastewater Discharge Permit Decisions

The Director of Public Works will evaluate the data provided by the industrial user and may require additional information. Within sixty (60) days of receipt of a complete IDP application for a new, existing or increased discharge, (or 90 days for applications requiring review and approval by the New Hampshire NHDES), the Director of Public Works will determine whether or not to accept the wastewater and issue an IDP. The Director of Public Works may deny any application for an IDP.

5.2 Industrial Wastewater Discharge Permit Duration

An IDP shall be issued for a specified time period, not to exceed five (5) years, or three (3) years in the case of a significant industrial user, from the effective date of the permit. An IDP may be issued for a period less than these intervals at the discretion of the Director of Public Works. Each IDP will indicate a specific date upon which it will expire.

IDPs shall be terminated upon cessation of operations or transfer of business ownership, unless notification of such transfer is provided in accordance with Section 5.6 of this Ordinance.

5.3 Industrial Wastewater Discharge Permit Contents

An IDP shall include such conditions as are deemed reasonably necessary by the Director of Public Works to prevent pass through or interference, protect the quality of the water body receiving the Water Reclamation Facility's effluent, protect worker health and safety, facilitate sludge management and disposal, and protect against damage to the POTW.

A. IDPs must contain:

1. A statement that indicates IDP duration;

2. A statement that the IDP is nontransferable without prior notification to the Town in accordance with Section 5.6 of this Ordinance, and provisions for providing the new owner or operator with a copy of the existing IDP;

3. Effluent limits, including Best Management Practices, based on applicable pretreatment standards and requirements;
4. Identification of applicable federal categorical pretreatment standards;

5. Self monitoring, sampling, reporting, notification, and record-keeping requirements. These requirements shall include identification of pollutants requiring pollution prevention reports and for pollutants to be monitored: sampling location, sampling frequency, and sample type based on this Ordinance, and State and federal laws, rules and regulations;

6. For users with reporting requirements, such reports at a minimum shall require:

    a. Periodic monitoring results indicating the nature and concentration of pollutants in the discharge from the regulated processes governed by pretreatment requirements and the average and maximum daily flow for these process units;

    b. A statement as to whether the applicable pretreatment standards and requirements are being met on a consistent basis and, if not, identification of additional operation and maintenance practices and/or pretreatment systems that are necessary; and

    c. Submittal of any monitoring results performed in addition to the requirements of the IDP using procedures prescribed in the permit.

7. A description of identified pollution prevention opportunities at the facility;

8. A statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedule. This schedule may not extend the time for compliance beyond that required by this Ordinance, applicable State and federal laws, rules and regulations; and

9. A statement allowing authorization of Town of Hanover personnel to enter the permittees' premises and have access to the permittees' records.

B. IDPs may contain, but need not be limited to, the following conditions:

1. Limitations on the average and/or maximum rate of discharge, time of discharge, and/or requirements for flow regulation and equalization;

2. Requirements for the installation of pretreatment technology, pollution control, or construction of appropriate containment devices, designed to reduce, eliminate, or prevent the introduction of pollutants into the POTW;

3. Requirements for the development and implementation of spill control plans or other special conditions including management practices necessary to adequately prevent accidental, unanticipated, or non-routine discharges;

4. Development and implementation of pollution prevention plans to reduce the amount of pollutants discharged to the POTW;

5. The unit charge or schedule of user charges and fees for the management of the wastewater discharged to the POTW;

6. Requirements for installation and maintenance of inspection and sampling facilities and equipment;

7. A statement that compliance with the IDP does not relieve the permittee of responsibility for compliance with all applicable federal and State pretreatment standards, including those that become effective during the term of the IDP; and

8. Other conditions as deemed appropriate by the Director of Public Works to ensure compliance with this Ordinance, and State and federal laws, rules, and regulations.

5.4 Industrial Wastewater Discharge Permit Appeals

Any person, including the user, may petition the Director of Public Works to reconsider the terms of an IDP within thirty (30) days of its issuance.

A. Failure to submit a timely petition for review shall be deemed to be a waiver of the administrative appeal.

B. In its petition, the appealing user must indicate the IDP provisions objected to, the reasons for this objection, and the alternative condition, if any, it seeks to place in the IDP.

C. The effectiveness of the IDP shall not be stayed pending the appeal.

D. If the Director of Public Works fails to act within thirty (30) days, a request for reconsideration shall be deemed to be denied.

E. Aggrieved parties may appeal the conditions of the IDP in accordance with Section 15.2 of this Ordinance.

5.5 Industrial Wastewater Discharge Permit Modification

The Director of Public Works may modify an IDP for good cause, including, but not limited to, the following reasons:

A. To incorporate any new or revised federal, State, or local pretreatment standards or requirements;

B. To address significant alterations or additions to the user's operation, processes, or wastewater volume or character since the time of IDP issuance;

C. A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;

D. Information indicating that the permitted discharge poses a threat to the Town's POTW, Town personnel, or the water quality in the receiving waters;

E. Violation of any terms or conditions of the IDP;

F. Misrepresentations or failure to fully disclose all relevant facts in the IDP application or in any required reporting;

G. Revision of or a grant of variance from categorical pretreatment standards pursuant to 40 CFR 403.13;

H. To correct typographical or other errors in the IDP; or

I. To reflect a transfer of the facility ownership or operation to a new owner or operator.

5.6 Industrial Wastewater Discharge Permit Transfer

IDPs may be transferred to a new owner or operator only if the permittee provides at least sixty (60) days advance notice to the Director of Public Works and the Director of Public Works approves the IDP transfer. The notice to the Director of Public Works must include a written certification by the new owner or operator that:

A. States that the new owner and/or operator have no immediate intent to change the facility's operations and processes that generate wastewater to be discharged to the POTW;

B. Identifies the specific date on which the transfer is to occur; and

C. Acknowledges full responsibility for complying with the existing IDP.

Failure to provide advance notice of a transfer renders the IDP void as of the date of facility transfer.

5.7 Industrial Wastewater Discharge Permit Revocation

The Director of Public Works may revoke an IDP for good cause, as described in Section 10.5.

5.8 Industrial Wastewater Discharge Permit Reissuance

A user with an expiring IDP shall apply for reissuance of the IDP by submitting a complete permit application, in accordance with Section 4.7 of this Ordinance, a minimum of sixty (60) days prior to the expiration of the user's existing IDP. Under no circumstances shall the permittee continue to discharge without an effective permit. An expired permit will continue to be effective and enforceable until the permit is reissued if:

A. The industrial user has submitted a complete permit application at least sixty (60) days prior to the expiration date of the user's existing permit; and

B. The failure to reissue the permit, prior to expiration of the previous permit, is not due to any act or failure to act on the part of the industrial user.

5.9 Regulation of Waste Received from Other Jurisdictions

A. If another municipality, or user located within another municipality, contributes wastewater to the POTW, the Town shall enter into an intermunicipal agreement (IMA) according to RSA 53-A with the contributing municipality.

B. Prior to entering into an agreement required by paragraph (A), above, the Director of Public Works shall request the following information from the contributing municipality:

1. A description of the quality and volume of wastewater discharged to the POTW by the contributing municipality;

2. An inventory of all users located within the contributing municipality that are discharging to the POTW; and

3. Such other information as the Director of Public Works may deem necessary.

C. An IMA-, as required by paragraph (A), above, shall contain the following conditions:

1. A requirement for the contributing municipality to adopt a sewer use ordinance that is at least as stringent as this Ordinance, and local limits that ensure that the pollutant loadings allocated to the contributing municipality are not exceeded. The requirement shall specify that such Ordinance and local limits must be revised as necessary to reflect changes made to the Town's Ordinance or revisions to the loadings allocated to the contributing municipality;

2. A requirement for the contributing municipality to submit a revised user inventory on at least an annual basis;

3. A provision specifying which pretreatment implementation activities, including IDP issuance, inspection and sampling, and enforcement, will be conducted by the contributing municipality; which of these activities will be conducted by the Director of Public Works; and which of these activities will be conducted jointly by the contributing municipality and the Director of Public Works;

4. A requirement for the contributing municipality to provide the Director of Public Works with access to all information that the contributing municipality obtains as part of its pretreatment activities;

5. Limitations on the nature, quality, and volume of the contributing municipality's wastewater at the point where it discharges to the POTW;

6. Requirements for monitoring the contributing municipality's discharge;

7. Requirements for the contributing municipality to adopt water meter testing program and certify compliance with AWWA C700 requirements. Annually, the contributing municipality shall submit third party testing and calibration results of all tested meters, their locations, and size;

8. A provision ensuring the Director of Public Works access to the facilities of users located within the contributing municipality's jurisdictional boundaries for the purpose of inspection, sampling, and any other duties deemed necessary by the Director of Public Works; and

9. A provision specifying remedies available for breach of the terms contained within the intermunicipal agreement.

D. Intermunicipal agreements must receive New Hampshire Department of Environmental Services approval.

SECTION 6 - REPORTING REQUIREMENTS

6.1 Periodic Compliance Reports

A. All significant industrial users shall, at a frequency determined by the Director of Public Works but in no case less than twice per year, submit a report indicating the nature and concentration of pollutants in the discharge that are limited by pretreatment standards and the measured or estimated average and maximum daily flows for the reporting period. All periodic compliance reports must be signed and certified in accordance with Section 4.8 of this Ordinance.

B. All wastewater samples must be representative of the user's discharge. Wastewater monitoring and flow measurement facilities shall be properly operated, kept clean and orderly, and maintained in good working order at all times. The failure of a user to maintain its monitoring facility in satisfactory working condition shall not be grounds for the user to claim that sample results are unrepresentative of its discharge.

C. If a user subject to the reporting requirement in this section monitors any pollutant more frequently than required by the Director of Public Works, using the procedures prescribed in Sections 6.8 and 6.9 of this Ordinance, the results of this monitoring shall be included in the report.

6.2 Reports of Changed Conditions

Each user must notify the Director of Public Works of any planned significant changes to the user's operations or system that might alter the nature, quality, or volume of its wastewater at least ninety (90) days before the change.

A. The Director of Public Works may require the user to submit such information as may be deemed necessary to evaluate the changed condition, including the submittal of an IDP application under Section 4.4 of this Ordinance.

B. Upon approval of the request by the Town, an Indirect Discharge Request (IDR) will be submitted by the Town to the NHDES on behalf of the user. All applicable NHDES review fees shall be provided by the user.

C. Upon approval of the IDR by the NHDES, the Director of Public Works may issue an IDP under Section 5.4 of this Ordinance or modify an existing IDP under Section 5.5 of this Ordinance in response to changed conditions or anticipated changed conditions.

D. For purposes of this requirement, significant changes include, but are not limited to; flow increases greater than twenty percent (20%), and the discharge of any previously unreported pollutants.

6.3 Reports of Slugs or Potentially Adverse Discharges

A. In the case of any discharge, including, but not limited to, accidental discharges, discharges of a nonroutine, episodic nature, a noncustomary batch discharge, or a slug load, that may adversely impact the POTW, the user shall immediately telephone and notify the Director of Public Works and the Water Reclamation Facility Superintendent of the incident. This notification shall include the location of the discharge, type of waste, concentration and volume, if known, and corrective actions conducted by the user.

B. Within five (5) days following such discharge, the user shall, unless waived by the Director of Public Works, submit a detailed written report describing the cause(s) of the discharge and the measures to be initiated by the user to prevent similar future occurrences. Such notification shall not relieve the user of any expense, loss, damage, or other liability that may be incurred as a result of damage to the POTW, natural resources, or any other damage to person or property; nor shall such notification relieve the user of any fines, penalties, or other liability that may be imposed pursuant to this Ordinance. This report must be signed and certified in accordance with Section 4.8 of this Ordinance.

C. A notice shall be permanently posted on the user's bulletin board or other prominent place advising employees who to call in the event of a discharge described in paragraph (A) of this Section. Employers shall ensure that all employees, who may cause such a discharge to occur, are advised of the emergency notification procedure.

D. The permittee shall notify the Town immediately of any changes at its facility that may affect the potential for a slug discharge. The Town may require the permittee to develop or modify a Slug Control Plan or take other actions to control slug discharges.

6.4 Reports from Unpermitted Users

All users not required to obtain an IDP shall provide appropriate reports to the Director of Public Works as he/she may require.

6.5 Notice of Violation/Repeat Sampling and Reporting

If the results of sampling performed by a user indicate a violation, the user must notify the Director of Public Works within twenty-four (24) hours of becoming aware of the violation. The user shall also repeat the sampling and analysis and submit the results of the repeat analysis to the Director of Public Works within 30 days subsequent to becoming aware of the violation.

6.6 Notice of Violation of this Ordinance

All industrial users shall notify the Director of Public Works within 24 hours of becoming aware of any violation of this Ordinance and/or their IDP conditions. Immediate notification is required for any violation of this Ordinance which may cause flammability, chemical reactivity, organic loading, solids loading, interference, pass through, or worker health and safety impacts within the POTW.

6.7 Best Management Practices Reports

Permitted industrial users when required shall report on Best Management Practices activities undertaken to reduce or minimize their industrial wastewater discharges. The Town may publicize these efforts in the annual notification provided for in Section 9.

6.8 Analytical Requirements

All pollutant analyses, including sampling techniques, to be submitted as part of an IDP application or report shall be performed in accordance with the techniques prescribed in 40 CFR Part 136, unless otherwise specified in an applicable categorical pretreatment standard. If 40 CFR Part 136 does not contain sampling or analytical techniques for the pollutant in question, sampling and analyses must be performed in accordance with procedures approved by the Town of Hanover.

6.9 Sample Collection

A. Except as indicated in paragraph (B) and (C) below, the user must collect wastewater samples using flow-proportional composite collection techniques. In the event flow-proportional sampling is infeasible, the Director of Public Works may authorize the use of time-proportional sampling or a minimum of four (4) grab samples where the user demonstrates that this will provide a representative sample of the effluent being discharged. In addition, grab samples may be required to demonstrate compliance with instantaneous maximum allowable discharge limitations (e.g., screening levels established to protect

worker health and safety). A single grab sample may also be used in place of a composite sample with approval of the Director of Public Works when:

- The effluent is not discharged on a continuous basis (i.e., batch discharges of short duration), and only when the batch exhibits homogeneous characteristics (i.e., completely mixed) and the pollutant can be safely assumed to be uniformly dispersed;

- Sampling a facility where a statistical relationship can be established between previous grab samples and composite data; and

- The waste conditions are relatively constant (i.e., are completely mixed and homogeneous) over the period of the discharge.

B. Samples for temperature, pH, cyanide, oil & grease, phenols, sulfides, volatile organic compounds and all other pollutants as specified by 40 CFR Part 136 must be obtained using grab collection techniques.

C. Using protocols (including appropriate preservation) specified in 40 CFR Part 136 and appropriate EPA guidance, multiple grab samples collected during a 24-hour period may be composited prior to the analysis as follows: for cyanide, total phenols, and sulfides the samples may be composited in the laboratory or in the field; for volatile organics and oil and grease, the samples may be composited in the laboratory.

6.10 Timing

Written reports will be deemed to have been submitted on the date postmarked. For reports that are not mailed, postage prepaid, into a mail facility serviced by the United States Postal Service, the date of receipt of the report shall govern.

6.11 Recordkeeping

Users subject to the reporting requirements of this Ordinance shall retain, and make available for inspection and copying, all records of information obtained pursuant to any monitoring activities, including documentation associated with Best Management Practices, required by this Ordinance or IDP and any additional records of information obtained pursuant to monitoring activities undertaken by the user independent of such requirements. Records shall include the date, exact location, method, and time of sampling, and the name of the person(s) obtaining the samples; chain of custody; the dates analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses. These records shall remain available for a period of at least five (5) years. This period shall be automatically extended for the duration of any litigation concerning the user or the Town, or where the user has been specifically notified of a longer retention period by the Director of Public Works.

SECTION 7 - POWERS AND AUTHORITIES OF INSPECTORS

7.1 Compliance Monitoring

The Director of Public Works shall investigate instances of noncompliance with the industrial pretreatment standards and requirements. The Director of Public Works shall, as necessary, sample and analyze the wastewater discharges of contributing users and conduct surveillance and inspection activities to identify, independently of information supplied by such users, occasional and continuing noncompliance with industrial pretreatment standards. Each industrial user will be billed directly for costs incurred for sampling and analysis of its wastewater.

7.2 Right of Entry: Inspection and Sampling

All industrial users discharging to the Town's POTW shall allow unrestricted access by Town, State and EPA personnel for the purpose of determining whether the user is complying with all requirements of this Ordinance, and any IDP or order issued hereunder. Users shall allow the Director of Public Works and other duly authorized employees of the Town bearing proper credentials and identification ready access to all parts of the premises for the purposes of inspection, sampling, records examination and copying, and the performance of any additional duties.

A. Where a user has security measures in force that require proper identification and clearance before entry into its premises, the user shall make necessary arrangements with its security guards so that, upon presentation of suitable identification, the Director of Public Works or other duly authorized employee(s) will be permitted to enter without delay for the purposes of performing specific responsibilities.

B. The Director of Public Works or other duly authorized employee(s) shall have the right to set up on the user's property, or require installation of, such devices as are necessary to conduct sampling and/or metering of the user's operations.

C. The Director of Public Works or other duly authorized employee(s) may require the user to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the user at its own expense. All devices used to measure wastewater flow and quality shall be calibrated at least annually to ensure their accuracy.

D. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the user at the written or verbal request of the Director of Public Works or other duly authorized employee(s) and shall not be replaced. The costs of clearing such access shall be borne by the user.

E. Unreasonable delays in allowing the Director of Public Works or other duly authorized employee(s) access to the user's premises shall be a violation of this Ordinance.

F. The Director of Public Works or other duly authorized employee(s) is authorized to obtain information concerning industrial processes that have a bearing on the kind or source of

discharge to the public sewer. Such information may be treated as confidential if the industrial user satisfies the requirements of Section 8.1 of this Ordinance. However, information regarding wastewater discharged by the user (flow, sources, constituents, concentrations, and characteristics) shall be available to the public without restriction.

G. The Director of Public Works or other duly authorized employee(s) of the Town bearing proper credentials and identification shall be permitted to enter all private properties through which the Town holds a duly negotiated easement for the purposes of, but not limited to, inspection, observation, measurement, sampling, repair, and maintenance of any portion of the POTW lying within said easement. All entry and subsequent work, if any, on said easement, shall be done in full accordance with the terms of the duly negotiated easement pertaining to the private property involved.

7.3 Administrative Inspection Warrants

If the Director of Public Works or other duly authorized employee has been refused access to a property where (a) probable cause exists to believe that a violation of this Ordinance exists; or (b) there is a need to conduct a routine inspection or to perform testing or sampling designed to verify compliance with this Ordinance or with any permit or order issued hereunder, the Director or Director's designee may seek an administrative inspection warrant pursuant to the provisions of RSA Chapter 595-B.

SECTION 8 - CONFIDENTIAL INFORMATION/PUBLIC PARTICIPATION

8.1 Confidential Information

Information and data on a user obtained from reports, surveys, IDP Applications, IDPs, monitoring programs, and from the Director of Public Works inspection and sampling activities, shall be available to the public without restriction, unless the user specifically requests, in writing, and is able to demonstrate to the satisfaction of the Director of Public Works, that the release of such information would divulge information, processes, or methods of production entitled to protection as trade secrets under applicable State and Federal law. INCLUDING, BUT NOT LIMITED TO RSA 91-A:5 (EXEMPTIONS UNDER THE RIGHT TO KNOW LAW). Any such request must be asserted, in writing, at the time of submittal of the information or data. When requested and demonstrated by the user furnishing a report that such information should be held confidential, the portions of a report identified by the user which might disclose trade secrets or secret processes shall not be made available for inspection by the public, but shall be made available immediately upon request to governmental agencies for uses related to the NPDES program or pretreatment program, and in enforcement proceedings involving the person providing the report. Wastewater constituents and characteristics and other "effluent data" as defined by 40 CFR 2.302 will not be recognized as confidential information and will be available to the public without restriction.

8.2 Public Participation

The Town shall comply with the public participation requirements of 40 CFR Part 25 in the administration of industrial pretreatment standards and requirements.

SECTION 9 - PUBLICATION OF POLLUTION PREVENTION ACHIEVEMENTS

The Director of Public Works may publish annually, in the largest daily newspaper, circulated in the Municipality where the POTW is located, a list of users whom during the previous twelve (12) months, demonstrated a commitment to reducing the volume and toxicity of waste discharges. All pollution prevention efforts, not just those that affect wastewater discharges, are subject to recognition. The following criteria may be used to identify published users:

A. Innovative ideas the facility has used to implement process changes that eliminate or reduce the volume or toxicity of waste generated;

B. The percentage of the facility's process water reused within the system or process;

C. The percentage of the facility's potential waste reused within the system or process;

D. Implementation of employee pollution prevention training and communication programs;

E. Voluntary performance of pollution prevention audits;

F. Spill control procedures/devices (e.g., secondary containment) the facility initiates to prevent accidental chemical spills from entering the POTW; and

G. The environmental and/or economic benefits or successes derived from implementing pollution prevention methods.

The intent of the publication is to notify local consumers of the environmental responsiveness of local businesses, and to encourage industrial users to identify and implement opportunities for preventing pollution. As part of this publication, the Town may provide an evaluation of the impact of these changes to the POTW, and summarize the current status of pollutant loadings to the POTW and goals established by the POTW for pollution prevention efforts.

SECTION 10 - ENFORCEMENT REMEDIES

10.1 Notification of Violation

When the Director of Public Works determines that a user has violated, or continues to violate, any provision of this Ordinance, an IDP or order issued hereunder, or any other pretreatment standard or requirement, the Director of Public Works may serve upon that user a Notice of Violation. Within the time period specified in the violation notice, an explanation of the violation and a plan for the

satisfactory correction and prevention thereof, to include specific required actions, shall be submitted by the user to the Director of Public Works. Submittal of this plan in no way relieves the user of liability for any violations occurring before or subsequent to receipt of the Notice of Violation. Nothing in this section shall limit the authority of the Director of Public Works to take any action, including emergency actions or any other enforcement action, without initially issuing a Notice of Violation.

10.2 Compliance Schedule Development

The Director of Public Works may require any user that has violated, or continues to violate, any provision of this Ordinance, an IDP or order issued hereunder, or any other pretreatment standard or requirement, to develop a compliance schedule. A compliance schedule pursuant to this section shall comply with the following conditions:

A. The schedule shall contain progress increments in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the user to meet the applicable pretreatment standards (such events include, but are not limited to, retaining an engineer, completing preliminary and final design plans, executing contracts for major components, commencing and completing construction, and beginning and conducting routine operation);

B. No increment referred to above shall exceed nine (9) months;

C. The user shall submit a progress report to the Director of Public Works no later than fourteen (14) days following each date in the schedule and the final date of compliance including, as a minimum, whether or not it complied with the increment of progress, the reason for any delay, and, if appropriate, the action being taken by the user to return to the established schedule; and

D. In no event shall more than nine (9) months elapse between such progress reports to the Director of Public Works.

10.3 Best Management Practices Plan Development

The Director of Public Works may require any user that has violated or continues to violate any provision of this Ordinance, an IDP, or order issued hereunder, or any other pretreatment standard or requirement, to develop a Best Management Practices Plan (also referenced as a pollution prevention plan) in accordance with Section 3.4 of this Ordinance. The plan must specifically address violation(s) for which this action was undertaken. The plan shall be developed using good engineering judgment and shall be submitted to the Director of Public Works no later than sixty (60) days after the user was notified of this requirement.

10.4 Show Cause Orders

The Director of Public Works may order a user that has violated, or continues to violate, any provision of this Ordinance, an IDP or order issued hereunder, or any other pretreatment standard or

requirement, to appear before the Board of Selectmen and show cause why the proposed enforcement action should not be taken. Notice shall be served on the user specifying the time and place for the meeting, the proposed enforcement action, the reasons for such action, and a request that the user show cause why the proposed enforcement action should not be taken. The notice of the meeting shall be served personally or by registered or certified mail (return receipt requested) at least ten (10) days prior to the hearing. Such notice may be served on any authorized representative of the user. A show cause hearing shall not be a bar against, or prerequisite for, executing any other action against the user.

10.5 Industrial Wastewater Discharge Permit Termination

Any industrial user, who violates the following conditions of this Ordinance or an IDP or order, or any applicable State or federal law, is subject to permit termination:

A. Failure to notify the Director of Public Works of significant changes to the wastewater prior to the changed discharge;

B. Failure to provide prior notification to the Director of Public Works of changed conditions pursuant to Section 6.2 of this Ordinance;

C. Misrepresentation or failure to fully disclose all relevant facts in the IDP application;

D. Falsifying self-monitoring reports;

E. Tampering with monitoring equipment;

F. Refusing to allow the Director of Public Works timely access to the facility premises and records;

G. Failure to meet effluent limitations;

H. Failure to pay fines;

I. Failure to pay sewer rental charges or surcharges;

J. Failure to meet compliance schedules;

K. Failure to complete a wastewater survey or the IDP application;

L. Failure to provide advance notice of the transfer of business ownership of a permitted facility;

M. Violation of any pretreatment standard or requirement, or any terms of the IDP or this Ordinance; or

N. IDPs shall be voided upon cessation of operations or transfer of business ownership (except for as allowed in section 5.6). All IDPs issued to a particular user are void upon the issuance of a new IDP to that user.

10.6 Termination of Discharge

Any user who violates a Section 10.5 criterion, or fails to cease and desist from any discharge of wastewater upon termination of their IDP for that discharge, is subject to discharge termination.

Such user will be notified of the proposed termination of its discharge and be offered an opportunity to show cause under Section 10.4 of this Ordinance why the proposed action should not be taken. Exercise of this option by the Director of Public Works shall not be a bar to, or a prerequisite for, taking any other action against the user.

10.7 Emergency Suspensions

The Director of Public Works may immediately suspend a user's wastewater discharge, subsequent to informal notice to the user, whenever such suspension is necessary to terminate an actual or threatened discharge that reasonably appears to present or cause an imminent or substantial endangerment to the health or welfare of POTW personnel or the public. The Director of Public Works may also immediately suspend a user's discharge, after notice and opportunity to respond, that threatens to interfere with the operation of the POTW, or that presents, or may present, an endangerment to the environment.

A. Any user notified of a suspension of its discharge permit shall immediately terminate or eliminate its wastewater discharge. In the event of a user's failure to immediately comply voluntarily with the suspension order, the Director of Public Works may implement such steps as deemed necessary, including immediate severance of the sewer connection, to prevent or minimize damage to the POTW, its receiving stream, or endangerment to any individuals. The Director of Public Works may allow the user to recommence its discharge when the user has demonstrated to the satisfaction of the Director of Public Works that the period of endangerment has passed, or corrective actions have been taken, unless the termination proceedings in Sections 10.5 or 10.6 of this Ordinance are initiated against the user.

B. A user that is responsible, in whole or in part, for any discharge presenting imminent endangerment shall submit a detailed written statement, describing the causes of the harmful contribution and the measures implemented to prevent any future occurrence, to the Director of Public Works prior to the date of any show cause or termination hearing under Section 10.4 of this Ordinance.

Nothing in this section shall be interpreted as requiring a hearing prior to any emergency suspension under this Section.

10.8 Recovery of Expenses

Any person or industrial user violating any of the provisions of this Ordinance shall become liable to the Town for any expense, loss, or damage occasioned the Town by reason of such violation. If the Director of Public Works or Board of Selectmen implemented the disconnection of a building sewer from a public sewer, the Town may collect the expenses associated with completing the disconnection from any person or user responsible for, or willfully concerned in, or who profited by such violation. The Town may thereafter refuse to permit the restoration of the former connection or of any new connection to the property concerned in the violation until the claim of the Town for the cost of completing such disconnection shall have been paid in full plus interest and the reasonable cost of any legal expenses incurred by the Town in connection therewith.

10.9 Harm to Town Property

No person shall maliciously, willfully, or negligently damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment that is part of the POTW. Any person violating this provision shall be guilty of criminal mischief and subject to immediate arrest and/or fines pursuant to the local Ordinances and State and federal statutes. Ref. RSA 634:2.

10.10 Injunctive Relief

When the Director of Public Works determines that a user has violated, or continues to violate, any provision of this Ordinance, an IDP, or order issued hereunder, or any other pretreatment standard or requirement, the Director of Public Works may petition the Lebanon District Court or Grafton County Superior Court through the Town's Attorney for the issuance of a temporary or permanent injunction, as appropriate, which restrains or compels the specific performance of the IDP, order, or other requirement imposed by this Ordinance on activities of the user. The Director of Public Works may also seek such other action as is appropriate for legal and/or equitable relief, including a requirement for the user to conduct environmental remediation. A petition for injunctive relief shall not be a bar against, or a prerequisite for, implementing any other action against a user.

10.11 Penalties (Fines)

A. When the Director of Public Works finds that a user has violated, or continues to violate, any provision of this Ordinance or an IDP and the user's appeal is successful, the payment, together with any interest accruing thereto, shall be returned to the user. The Director of Public Works may deduct the costs of preparing administrative enforcement actions, such as notices and orders, to the fine.

10.12 Civil Penalties

The Town may pursue any other or any combination of remedies for enforcement of this ordinance available to it under applicable law. Each day in which any such violation shall continue shall be deemed a separate offense.

A. Any person or user who has violated, or continues to violate, any provision of this Ordinance, an IDP, or order issued hereunder, or any other pretreatment standard or requirement shall be liable to the Town for a maximum civil penalty of $10,000 per violation, as authorized by RSA 149-I:6, per day, plus actual damages incurred by the POTW. In the case of a monthly or other long-term average discharge limit, penalties shall accrue for each day during the period of the violation.

B. The Town may recover reasonable attorneys' fees, court costs, and other expenses associated with enforcement activities, including sampling and monitoring expenses, and the cost of any actual damages incurred by the Town. The Town shall petition the Court to impose, assess, and recover such sums.

C. In determining the amount of civil liability, the Court shall consider all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained through the user's violation, corrective actions implemented by the user, the compliance history of the user, and any other factor as justice requires.

D. Filing a suit for civil penalties shall not be a bar against, or a prerequisite for, implementing any other action against a user.

E. The Town shall give notice of the alleged violation to the NHDES within 10 days of commencement of any action under this section. (Ref. RSA 149-I:6)

10.13 Criminal Penalties

Any person who willfully or negligently violates any provision of this Ordinance, an IDP, or order issued hereunder, or any other pretreatment standard or requirement shall be subject to criminal prosecution. The Director of Public Works shall cooperate with all law enforcement officials having jurisdiction over such criminal conduct in the event that a prosecution is undertaken. Every separate provision violated shall constitute a separate violation. Every day that a violation occurs shall be deemed a separate violation. Additionally, any violation may be referred to the state for criminal prosecution under its powers. (Ref. RSA 485-A:22 and RSA 485-A:5)

10.14 Nonexclusive Remedies

The remedies provided for in this Ordinance are not exclusive. The Town may take any, all, or any combination of these actions against a noncompliant user. Enforcement of pretreatment violations will generally be in order of potential impact as determined by the Director of Public Works. However, the Town may pursue other action against any user without limitation, including *ex parte* temporary judicial relief to prevent a violation of this Ordinance. Further, the Town is empowered to pursue more than one enforcement action against any noncompliant user.

SECTION 11 - AFFIRMATIVE DEFENSES TO DISCHARGE VIOLATIONS

11.1 Upset

A. For the purposes of this section, "upset" means an exceptional incident in which there is unintentional and temporary noncompliance with pretreatment standards due to factors beyond the reasonable control of the user. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

B. An upset shall constitute an affirmative defense to an action brought for noncompliance with pretreatment standards if the requirements of paragraph (C), below, are met.

C. A user who intends to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and the user can identify the cause(s) of the upset;

2. At the time of the upset, the facility was being operated in a prudent and workman-like manner and in compliance with applicable operation and maintenance procedures; and

3. The user has submitted the following information to the Director of Public Works within twenty-four (24) hours of becoming aware of the upset (if this information is provided orally, a written submittal must be provided within five (5) days):

(a) A description of the discharge and cause of noncompliance;

(b) The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and

(c) Action being implemented and/or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

D. In any enforcement proceeding, the user causing an upset shall have the burden of proof.

E. Users will have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with pretreatment standards.

F. Users shall control production of all discharges to the extent necessary to maintain compliance with pretreatment standards upon reduction, loss, or failure of its treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

11.2 Prohibited Discharge Standards

A user shall have an affirmative defense to an enforcement action brought against it for noncompliance with the general prohibitions in Section 2.4(A) of this Ordinance or the specific prohibitions in Section 2.4(B) of this Ordinance if it can prove that it did not know, or have reason to know, that its discharge, alone or in conjunction with discharges from other sources, would cause pass through or interference and that either:

A. A local limit exists for each pollutant discharged and the user was in compliance with each limit directly prior to, and during, the pass through or interference; or

B. No local limit exists, but the discharge did not change substantially in nature or constituents from the user's prior discharge when the Town was regularly in compliance with its NPDES permit, and in the case of interference, was in compliance with applicable sludge use or disposal requirements.

11.3 Bypass

A. For the purposes of this section:

1. "Bypass" means the intentional diversion of waste streams from any portion of a user's treatment facility.

2. "Severe Property Damage" means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

B. A user may allow any bypass to occur that does not cause pretreatment standards or requirements to be violated, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of paragraphs (C) and (D) of this section.

C. The user shall provide the following notifications for bypass events:

1. If a user is aware in advance of the need for a bypass, it shall submit prior notice to the Director of Public Works, at least ten (10) days before the date of the bypass, if possible.

2. A user shall submit oral notice to the Director of Public Works and the Water Reclamation Facility Superintendent of an unanticipated bypass that exceeds applicable pretreatment standards immediately. A written submittal shall also be provided within five (5) days of the time the user becomes aware of the bypass. The written submittal shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times, and, if the bypass has not been

corrected, the anticipated time it is expected to continue; and steps implemented or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

D. Bypass is prohibited, and the Director of Public Works may initiate enforcement action against a user for a bypass, unless:

1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

3. The user submitted notices as required under paragraph (C) of this section.

E. The Director of Public Works may approve an anticipated bypass, subsequent to considering its adverse effects, if the Director of Public Works determines that it will satisfy the three conditions listed in paragraph (D) of this section.

SECTION 12 - SEPTAGE DISPOSAL

RSA 485-A, or revisions thereto, of the State rules, regulations, standards, and procedures promulgated thereupon require that "any person, firm, corporation, municipal subdivision or institution who removes, transports, or disposes, or intends to remove, transport or dispose of any human excrement or other putrescible material by portable or mobile container shall hold an unrevoked permit for that purpose from the NHDES." Therefore, the holding of such a permit shall be a condition precedent to the privileges to dispose such material at the Town's wastewater treatment facility.

Such permit, as required by RSA 485-A, shall be on file with the Town. Upon renewal or revocation of such permit, the hauler shall be responsible for notification of such renewal or revocation to the Town.

12.1 Septage Hauler Requirements

A. Only haulers registered with a Town with a septage agreement with the Town of Hanover will be allowed to discharge septage into the Hanover Wastewater Treatment Facility from that Town.

B. Such hauler may discharge septage to the facilities provided at the Town's wastewater treatment facility only after paying the charges as set forth in Section 12.4 of this Ordinance.

C. No person, firm, corporation, municipal subdivision or institution shall discharge any toxic, poisonous, radioactive solids, liquids or gases, or the contents of grease, gas, oil and/or sand interceptors into the Town's wastewater treatment facility.

12.2 Temporary Septage Permits

The Director of Public Works shall have the right to issue a temporary permit to allow the discharge of septage at a point of discharge other than the wastewater treatment facility in a situation where such temporary discharge point is necessary to protect the health and welfare of the Town. The Director of Public Works shall issue such permit upon such terms and conditions as the Director of Public Works deems to be in the best interests of the Town. The temporary permit shall be valid for a period not exceeding twelve (12) months. The Director of Public Works shall have the right to revoke or suspend the temporary permit in the event that the terms and conditions are not met.

12.3 Septage Permits

A. Any person, firm, corporation, municipal subdivision, institution or hauler who conforms to RSA 485-A and intends to dispose of septage, human excrement or other putrescible material within the limits of the Town shall first obtain a permit therefore from the Town.

B. Such permit as issued by the Town shall identify:

1. The motor vehicle;

2. The capacity of the tank;

3. The NHDES Permit Number; and

4. Any other details of compliance with the regulations of the NHDES.

C. The following conditions shall constitute conditions precedent to the issuance of each permit by the Town:

1. Each septic tank truck shall have an access port in which the quantity of the contents of each truck may be ascertained by depth measurements.

2. The hauler shall record the following prior to the time of disposal as follows:

   a. The hauler's name;
   b. Date;
   c. Time of disposal;
   d. Volume disposed;
   e. Origin of load (property owner's name, address, and telephone number); and
   f. Nature of the waste (i.e., grease or septage) being disposed.

3. Such record as described in Section 13.3(C)(2) shall be located at the POTW.

4. The Director of Public Works may require liability insurance and reasonable coverage with a certificate of insurance on request.

SECTION 13 - VALIDITY

A. All Ordinances or parts of Ordinances in conflict herewith are hereby repealed.

B. The invalidity of any section, clause, sentence, or provision of this Ordinance shall not affect the validity of any other part of this Ordinance that can be given effect without such invalid part or parts.

SECTION 14 - INTERPRETATION OF REQUIREMENTS

14.1 Interpretation

The provisions of this Ordinance with respect to the meaning of technical terms and phrases, the classification of different types of sewers, the regulations with respect to installing or constructing connections to sewers or drains, and other technical matters shall be interpreted and administered by the Director of Public Works acting in and for the Town of Hanover, New Hampshire through the Board of Selectmen.

14.2 Appeals

A. Any party aggrieved by any decision, regulation or provision under this Ordinance, as amended, from time to time, shall have the right of appeal within thirty (30) calendar days of said decision to the Director of Public Works, who shall issue a decision within thirty (30) calendar days. If said appeal is denied by the Director of Public Works, then the aggrieved party shall have the right to appeal to the Board of Selectmen, provided that said appeal is entered within thirty (30) calendar days from the date of the decision of the Director of Public Works. The Board of Selectmen shall issue a decision within thirty (30) calendar days.

B. Board of Selectmen decisions shall be final.

C. If party fails to act during any prescribed period the decision shall be final and no further appeals may be filed.

SECTION 15 - MODIFICATIONS

The Town reserves the right to adopt, from time to time, additional rules and regulations as it shall deem necessary and proper relating to connections with a sewer and the sewer system, which additional rules and regulations, to the extent appropriate, shall be a part of these regulations.

SECTION 16 - EFFECTIVE DATE

This Ordinance shall be in full force and effect immediately following its passage, approval, and publication, as provided by law.

Duly enacted and ordained this 13th day of September 2010 by the Board of Selectmen of the Town of Hanover in Grafton County, State of New Hampshire, at a duly noticed and duly held session of the said Board of Selectmen.

Hanover, New Hampshire

By: TOWN OF HANOVER
BOARD OF SELECTMEN

_____
Brian F. Walsh, Chair

_____
Katherine S. Connolly, Vice Chair

_____
Peter L. Christie

_____
Athos J. Rassias

_____
Judith A. Doherty, Secretary

APPENDIX 1

LOCAL DISCHARGE RESTRICTIONS

1.1 Maximum Allowable Industrial Loadings

POLLUTANT	MAXIMUM ALLOWABLE INDUSTRIAL LOADING (lb/day)	POLLUTANT	MAXIMUM ALLOWABLE INDUSTRIAL LOADING (lb/day)
Aluminum	197	Manganese	10.3
Arsenic	0.035	Mercury	0.021
Cadmium	0.021	Molybdenum	0.031
Chromium	0.90	Nickel	0.446
Copper	0.80	Selenium	0.056
Cyanide	0.13	Silver	0.081
Iron	56.4	Zinc	3.37
Lead	0.59	-	-

1.2 Screening Levels

Screening levels established for conservative pollutants

POLLUTANT	mg/L	POLLUTANT	mg/L
Aluminum	205	Manganese	10.7
Arsenic	0.036	Mercury	0.022
Cadmium	0.022	Molybdenum	0.032
Chromium	0.93	Nickel	0.46
Copper	0.83	Selenium	0.059
Cyanide (T)	0.14	Silver	0.08
Iron	59	Zinc	3.5
Lead	0.61	-	-

Screening levels established for non metallic pollutants

POLLUTANT	mg/L	POLLUTANT	mg/L
Acetone	372	Methylene chloride	1.0
Benzene	0.001	Oil & Grease (animal and vegetable origin)	250
Biochemical oxygen demand	250	Oil & Grease (petroleum origin)	100
bis-2-Ethylhexyl phthalate	0.073	Phenol	50
Carbon disulfide	0.007	Phenols (total)	1.0
Chloride	1,500	Sulfate	500
Chlorine (Total Residual)	6.0	Sulfide	1.0
Chloroform	0.065	Sulfite	280
p-Cresol (4-methylphenol)	0.015	Tetrachloroethylene (PCE)	0.23
1,2-Dichloropropane	3.0	Tetrahydrofuran	205
Di-isobutylketone (DIBK)	8.0	Toluene	0.69
Ethylbenzene	1.35	1,1,1-Trichloroethane (TCA)	2.7
Formaldehyde	1.47	Trichloroethene	0.32
Isopropyl alcohol	1,488	Total suspended solids	250
Methyl ethyl ketone (MEK)	160	Vinyl chloride	0.0023
Methyl isobutyl ketone (MIBK)	36	Xylenes	1.4
Methyl tert-butyl ether (MTBE)	5.5	-	-

POLLUTANT	S.U.
pH	5.5 – 11.5

1.3 Local Limits

Administration of Local Limits is currently not applicable. None of the evaluated metals are present in the wastewater treatment facility in sufficient quantity to trigger administration of a local limit.

APPENDIX 2

STANDARD SPECIFICATIONS FOR SEWER LINE CONSTRUCTION

2.1 General

A. This information in no way supersedes any part or parts of the Sewer Use Ordinance.

B. Notification: Before any work begins, the Public Works Department will be notified. Notification will be at least 48 hours in advance. The telephone number is (603) 643-3327.

C. Failure to comply with any of these specifications will result in unnecessary re-excavation.

D. Pipe Size, Slope, Alignment, and Depth:

1. Pipe Size:

a. Service force mains shall be a minimum diameter of two (2) inches, PVC Pressure Pipe Class 160 (SDR 26) minimum.

b. Residential service installation shall be no less than four (4) inch diameter SDR 35 PVC pipe. Unless waived by the Director of Public Works, all residential services shall have a sewer backup valve installed inside the building just before the sewer exits the building. Easy access shall be provided to service the sewer backup valve.

c. Commercial and industrial service installations shall be no less than six (6) inch diameter SDR 35 PVC pipe.

2. Pipe Slope:

a. Minimum slopes shall be as follows:

Four (4) -inch diameter pipe, ¼ inch per foot, and six (6) inch diameter pipe 1/8 inch per foot. Pipes larger than 6" shall conform to NHDES requirements.

b. Maximum Slope:

The maximum of slope of any non anchored pipe shall be such that the full flowing velocity shall not exceed 10 fps. Anchored pipes will only be approved by the Director of Public Works on a case by-case scenario and flow velocity shall not exceed 15 fps.

3. Pipe Alignment:

With the exception of direction changes made with acceptable manholes, all pipe will be installed straight between points. On all service laterals only, one 22 1/2-degree bend may be installed without the approval by a designated inspector or Town agent.

4. Depth:

All pipe installed will have a minimum depth cover of four (4) feet cross country and six (6) feet on roadways and driveways.

E. Inspection: Prior to backfilling, all pipes will be inspected by a designated inspector or an agent of the Town. Pipe will be inspected for all items mentioned in Section D above: size, slope, alignment, bedding, and depth of cover.

2.2 Pipe Material Options

Only options listed to be used, options are listed by preference.

A. PVC Pipe (Solid Wall) ASTM D-3034 SDR 35 with push-on joints per ASTM-D-3212 and elastomeric gaskets per ASTM F-477. Pipe will be marked with manufacturer's name, diameter, and thickness class.

B. Ductile Iron Class 50, cement-lined with push-on type joints and elastomeric gaskets. Pipe will be marked with manufacturer's name, diameter, and strength class.

C. Cast Iron Pipe may be used on services. All joints will be made with a Fernco-style coupling.

D. Vitrified Clay Pipe, extra strength, ASTM C-700, with compression joints per ASTM C-425. Pipe will be marked with manufacturer's name, diameter, and strength class.

2.3 Pipe Bedding and Installation

A. Bedding Material:

3/4 inch crushed stone will be used as bedding material.

B. Placement and compaction of bedding material:

3/4 inch stone bed to be no less than twelve (12) inches in depth and brought half way up sides of pipe. Stone must be chinked under haunches of pipe to eliminate any voids.

C. Blanket Material:

Sand will be used as blanket material. Any exceptions will be handled on a case-to-case basis by the Town Inspector or agent.

D. Placement and compaction of blanket material:

Sand blanket is to be compacted to crown of pipe with a 12 inch minimum blanket on top of pipe.

2.4 Manholes

A. Manhole Sub-grades: Manholes will be installed on 12 inches of 3/4 inch crushed stone or greater in sufficient depth to stabilize manhole sub-grade.

B. Manhole Locations: Manholes shall be installed at a minimum every 350 feet and the minimum line size between manholes shall be 8".

C. Manhole Lateral Options: Four (4) foot inside diameter precast concrete with neoprene boots shall be used. Exceptions may be allowed on a case-to-case basis. Manholes shall be provided with reinforced polypropylene ladder rungs at 12" on center meeting the requirements of ASTM C478 and approved by the Town.

1. Five (5) foot inside diameter manholes are required for depths of twelve (12) feet or greater.

2. Five (5) foot inside diameter manholes are required for all manholes with inside drops.

3. All inside drops hardware shall be stainless steel. Inside drops shall utilize drop bowl as manufactured by Reliner-Duran, Inc. or Town approved equal.

D. Manhole Installations: All manhole sections shall have bituminous compound gaskets. Manholes shall have brick and mortar inverts constructed in them. Exceptions to the brick and mortar may be allowed on a case-to-case basis. Manhole frames and covers shall be set to finish grade with mortar joint under and mortar bead above flange. Manhole covers will have the word "sewer" in 3 inch letters cast into them and shall be 30"in diameter.

E. Manhole Sealing: All manholes shall be sealed before hydrostatic or vacuum testing. All section joints lift holes, and other potential sources of leakage shall be sealed with hydraulic cement.

2.5 Backfill and Compaction

A. Backfill Material: Backfill above pipe bedding and sand blanket with excavated material, except when excavated material is unsuitable. Unsuitable materials

include: stones larger than six (6) inches, organic material, pavement or concrete debris, and cohesive soils (clay and silt). In paved areas, replace gravel base course to the same depth as in the adjacent paved areas, or to a minimum depth of twelve (12) inches below the sub-grade elevation for pavement whichever is greater. Pavement patching shall match trench patch requirements.

B. Placement: In roadway areas, backfill shall be placed in loose lifts not to exceed twelve (12) inches in thickness. In landscaped areas, backfill shall be placed in loose lifts not to exceed eighteen (18) inches in thickness. Each lift shall be compacted as specified below. When hand-operated vibratory compaction equipment (vibratory plate compactors and jumping jacks) is used, the lift thickness shall be reduced to six (6) inches in roadway areas and twelve (12) inches in landscaped areas.

Perform dewatering, as required, to allow placement of backfill in-the-dry.

C. Compaction: Earth-moving equipment not specifically designed for compaction shall not be used for the purpose of compaction under paved and graveled roadway areas. Large vibratory rollers should not be used for compaction unless there is at least twelve 12 inches of backfill above the crown of the pipe.

From mid-diameter of pipe to subgrade elevation for gravel base course, backfill materials shall be compacted to at least 95 percent of the material's maximum dry density, as determined by ASTM D1557 (Modified Proctor). Gravel base course shall be compacted to at least 95 percent of the material's maximum dry density, as determined by ASTM D1557 (Modified Proctor). Testing of backfill materials shall be in accordance with ASTM D1556 (Sand Cone Method) or D2922 (Nuclear density gauge).

For small projects, the requirements for compaction testing may be waived by the Director of Public Works. In such case, each lift shall be compacted by at least four passes of approved compaction equipment.

2.6 Manhole and Pipe Testing

A. Manhole Hydrostatic Test:

The manhole will be filled with water to the top of the cone section. If the excavation has not been backfilled and there is no water visibly moving down the outer surface of the manhole, it will be considered satisfactorily water-tight. If the excavation has been backfilled, the contractor has the option to allow a period of time for absorption. At the end of this period, the manhole will be refilled, if necessary and the measuring time of at least eight (8) hours begun. At the end of the 8-hour period, the drop of the water level in the manhole will be measured and compared to the allowable drop or water loss represented by Table 1.

The maximum allowable leakage shall not exceed one (1) gallon per vertical foot

over a 24-hour period. (See Table 1)

B. Manhole Testing:

The manhole will be brought under no less than ten (10) inches of vacuum, no matter what the manhole depth. There must be no more than one (1) inch of drop over a ten (10) minute period for the manhole to be acceptably watertight.

C. All manhole testing will be completed prior to installation of inverts.

D. Pipe Testing (Low Air Pressure):

Pipe testing shall follow Table 2 with a minimum test pressure of four (4) pounds per square inch (psi).

E. Pipe Testing (Deflection):

Sewer lines may be tested for excessive deflection by passing a properly sized "Go: No go" mandrel through the line. This mandrel is to be constructed so it will pass through a line with maximum deflection of five (5) percent.

TABLE 1

MANHOLE DEPTH (FT.)	ALLOWABLE DROP (IN.) PER VERTICAL FT./DAY	ALLOWABLE DROP INCHES/24 HOURS	ALLOWABLE DROP INCHES/HOUR
1	3/8"	3/8"	.02"
2		3/4"	.03"
3		1 1/8"	.05"
4		1 1/2"	.06"
5		1 7/8"	.08"
6		2 1/4"	.09"
7		2 5/8"	.11"
8		3"	.12"
9		3 3/8"	.14"
10		3 3/4"	.16"
11		4 1/8"	.17"
12		4 1/2"	.19"
13		4 7/8"	.20"
14		5 1/4"	.22"
15		5 5/8"	.23"

TABLE 2

PIPE DIAMETER (INCHES)	MININIMUM TIME (MIN:SEC)	MAXIMUM LENGTH FOR MINIMUM TIME	SPECIFICATION TIME FOR LENGTH (L) SHOWN (min:sec)					
			100'	150'	200'	250'	300'	350'
4"	3:46	597 Ft.	3:46	3:46	3:46	3:46	3:46	3:46
6"	5:40	398 Ft.	5:40	5:40	5:40	5:40	5:40	5:40
8"	7:34	298 Ft.	7:34	7:34	7:34	7:34	7:36	8:52
10"	9:26	239 Ft.	9:26	9:26	9:26	9:53	11:52	13:51

Note: Allowable drop in pressure will be no greater than 0.5 psi over the test duration.

2.7 Road Excavation

A. Backfill and compaction (refer to Section 2.5.)

B. Sub-base: Sub-base to be good quality crushed gravel no less than 12 inches in depth and thoroughly compacted.

C. Pavement: Pavement to be replaced in two compacted lifts no less than three (3) inches total depth, shaped to conform to existing road grade, per Trench Patch standard. Base course shall be 2" minimum.

D. At the end of each day, all excavations within the right of way shall be backfilled to grade unless otherwise approved in writing by the Director of Public Works. In addition, at the end of each day, the traveled surface shall be repaired to an acceptable asphalt surface except in the case where the road surface is gravel or if otherwise approved in writing by the Director of Public Works.

E. Any work within the road right of way requires an Excavation Permit from the Town of Hanover and all work must conform to the Excavation Permit which supersedes this document in the event of any conflicting information.

2.8 Traffic Control and Signing

A. Warning signs will be located at both ends of the job in a manner as to give motorists plenty of advance warning that there is construction going on in the street.

B. There will be barricades or traffic cones marking open manholes or trenches for the duration of time that they pose traffic safety problems.

C. When needed, flagmen will be used to aid in traffic flow.

D. Lights on barricades will be used in all cases where a potentially dangerous situation exists during hours of darkness.

APPENDIX 3

SEWER RENTAL RATES AND CHARGES

3.1 Sewer Rates

A. The assessment and collection of the expense of constructing and maintaining the POTW shall be governed by the provisions of RSA 149-I and the Charter of the Town of Hanover 1963 Laws Ch. 374 as amended, and any other applicable general laws. In conformance with Section 15 of the Town Charter, the entire expense of construction and maintenance of the sewage disposal system shall be met by a user charge (hereinafter called sewer rental rate) as herein provided.

B. The revenues collected, as a result of the sewer rental rates levied, shall be deposited in a separate non-lapsing fund known as the Sewer Fund.

C. Fiscal year-end balances in the sewer fund shall be used for no other purposes than those designated. Monies that have been transferred from other sources to meet temporary shortages in the operation, maintenance and replacement fund shall be returned to their respective accounts upon appropriate adjustment of the user charge rates for operation, maintenance and replacement. The sewer rental rate(s) shall be adjusted such that the transferred monies will be returned to their respective accounts within twelve (12) months of the end of the fiscal year in which the monies were borrowed.

D. Each user shall pay for the services provided by the Town based on its use of the wastewater treatment facility as determined by water meter readings (or other appropriate methods) as indicated in the latest Rates and Fee Schedule adopted by the Board of Selectmen.

E. Sewer rates shall be determined on a periodic basis as follows:

1. Base charge covering fixed costs, determined by meter size comparing average flows for each meter vs. total consumption.

2. A Flow charges based on the annual cost of the system operation related to flow and not strength or fixed cost related.

3. A Strength charge based on the cost of treating BOD & TSS. The strength charge shall be based upon three Categories of strength levels as follows:

    a. Category A - Low strength less than 250 mg/l of BOD & or TSS.

    b. Category B - Medium strength greater than or equal to 250 mg/l and less than 400 mg/l of BOD & or TSS.

c. Category C - High strength greater than or equal to 400 mg/l of BOD & or TSS. This category shall include All Food Preparation Establishments without an Approved Automatic Grease Removal System.

Each account strength classification shall be determined by the highest classification of any use within a facility as shown in the Equivalent User Table.

F. Users for whom no water meter readings are available, the sewer rental rate shall be based on a flat use based on the average equivalent user provided in the Rates and Fees Schedule and a surcharge of 25%. No new unmetered services shall be allowed.

G. For users, sewer consumptive rates will be based on the quantity of wastewater discharged based on the water meter readings for water consumed during a billing period.

H. In the event that a water meter is either not registering or incorrectly registering, the Town will estimate consumption based upon an average of previous readings. When no previous readings exist, the consumption will be based upon one half of the Equivalent user flow as indicated in the Equivalent User Flow in Section 3.5. There shall be no more than two (2) consecutive estimated bills.

I. If a large user (> 5,000 gpd) can demonstrate to the Director of Public Works that a substantial quantity (greater than 50%) of metered water is not discharged into the wastewater collection system, the user may submit a request to have a wastewater meter installed as a basis of establishing wastewater discharge. Wastewater meter(s) when approved by the Town shall be installed, maintained, inspected and tested by a qualified third party at the user's expense. An alternate method may be considered when the entire flow of a branch of the water service lines within a facility does not enter the sewer system. In this case a separate meter may be installed, maintained, inspected and tested annually by a qualified third party at the user's expense on the water service line that the entire respective flow does not enter the sewer system. A deduction of flow which is metered shall be applied to the user's consumption total. An additional meter reading and account administration charge shall apply for each additional meter.

J. Any user that discharges any pollutants (as defined in this Ordinance), which cause an increase in the cost of managing the effluent or the sludge from the Town's wastewater treatment facility, or any user that discharges any substance, which singly or by interaction with other substances causes identifiable increases in the cost of operation, maintenance or replacement of the wastewater treatment facility, shall be required to cease or control the discharge or required to pay for such increased costs. The charge to each such user shall be as determined by the by the Director of Public Works and approved by the Board of Selectmen.

K. The sewer rental rate established in this Section shall apply to all users of the Town's wastewater treatment facility.

L. All users contributing wastewater whose waste strength is greater than normal sanitary sewage shall prepare and file with the Town Self Monitoring Reports report that shall include pertinent data relating to the wastewater characteristics, including the methods of sampling and measurement to obtain these data, and these data shall be used to calculate the sewer rental rate for that user. The Town shall have the right to gain access to the waste stream and take its own samples. Should the Town do so and should the results be substantially different from the data submitted by the user, the sewer rental rate for that user shall be revised for the next billing cycle/period.

M. All users shall be billed a minimum of four times per year. Payments are due within 30 days following the billing day. Any payment not made by 30 days following the billing day in which it is due shall be considered delinquent and subject to a late payment penalty of one (1) percent for each thirty days or portion thereof of delinquency, except that, when bills for payment under this section are mailed on or after the billing date, interest shall not be charged until 30 days after the last bill is mailed.

N. When any bill (including interest and penalty) remains unpaid for one (1) year after the date due, such bill shall be collected in conformance with RSA 149-I, or revisions thereto.

O. Any user who believes his sewer rental rate is unjust and inequitable may make written application to the Town requesting a review of his sewer rental rate. Said written request shall, where necessary, show the actual or estimated average flow and/or strength of his wastewater in comparison with the values upon which the sewer rental rate is based, including how the measurements or estimates were determined. Any user within a category may provide testing, approved by the Director of Public Works, to justify changing to a different category. Testing methods, requirements, frequency and type shall be the sole discretion of the Director of Public Works.

P. Review of the request shall be made by the Board of Selectmen and if substantiated, the sewer rental rates for that user shall be recomputed based on the revised flow and the new sewer rental rates shall be applicable to the next billing cycle/period.

Q. The Board of Selectmen will review the sewer rental rates at least annually and revise the rates as necessary to ensure that adequate revenues are generated to pay the costs of operation and maintenance including replacement and that the system continues to provide for the proportional distribution of operation and maintenance including replacement costs among users and user classes.

R. The Town will notify users at a noticed public hearing of the sewer rental rate being

charged for operations and maintenance, including replacement costs related to the wastewater treatment facility.

S. The sewer rental rates as established by the Town latest Rates and Fee Schedule adopted by the Board of Selectmen shall prevail. Any previous contracts, agreements, or arrangements as to rates, methods for collection, or any other element effecting rates and charges shall be null and void.

T. The Town shall revise or amend sewer rental rates and charges, as deemed necessary for the operation and maintenance of the POTW.

3.2 Public Sewer Connection Fee

A. There is hereby established a connection fee for all new connections to the Town's public sewers. This connection fee herein, shall apply to all persons whose building drains enter the public sewers of the Town.

B. Connection fees as established by the Town latest Rates and Fee Schedule adopted by the Board of Selectmen shall be paid prior to the issuance of a building Certificate of Occupancy.

C. The Connection Fee shall cover past capital expenses which have been fully paid for by existing customers including contributions to the capital reserve fund. The fee shall be based on the total equivalent user gpd flow as established by the Town latest Rates and Fee Schedule adopted by the Board of Selectmen divided by the Treat capacity of 2,300,000 gpd plus the cost of a service inspection.

D. There shall be a charge for each additional service inspection at a rate established in the latest Rates and Fee Schedule.

E. A reconnection's of a non-single family residence service where the previous building has been demolished shall be considered as a new connection and shall pay a Connection Fee.

F. There shall be no connection fee for a single family residence to reconnect the provided a new building receives a Certificate of Occupancy within three (3) years of the prior residence being demolished, the flow doesn't increase (only the increase in flow would be charged) and the user continues to pay the 5/8" meter charge.

G. Any existing service connection with a change in use which increase the quantity or changes the quality of wastewater discharged, a discharge permit must be obtained and a connection fee paid for the additional quantity of flow that is generated based on the new use.

3.3 Pretreatment Charges and Fees

The Town may adopt reasonable fees for reimbursement of costs of setting up and operating the Town's Industrial Pretreatment Program as established in the latest Rate and Fee Schedule adopted by the Board of Selectmen that may include:

A. Fees for IDP applications including the cost of processing such applications;

B. Fees for monitoring, inspection, and surveillance procedures including the cost of collection and analyzing a user's discharge, and reviewing monitoring reports submitted by users;

C. Fees for reviewing and responding to accidental discharge procedures and construction;

D. Fees for filing appeals; and

E. Other fees as the Town may deem necessary to carry out the requirements contained herein. These fees relate solely to the matters covered by this Ordinance and are separate from all other fees, fines, and penalties chargeable by the Town.

3.4 Septage Disposal Charge

A. There shall be a Septage Disposal Charge as established by the Town latest Rates and Fee Schedule adopted by the Board of Selectmen for the receipt of septage into the Town's wastewater treatment facility for treatment. Septage haulers shall be listed by a Town with Intermunicipal Septage Agreement or listed by the Town of Hanover.

B. There shall be a surcharge as established by the Town latest Rates and Fee Schedule adopted by the Board of Selectmen to be added to the tipping rate for any septage received from a Town or City which has banned the Land Application of Septage and/or Biosolids as defined in Env-Ws 800. The surcharge will provide the Town of Hanover the option of an alternate disposal option at its sole discretion.

C. There shall be a reasonable administrative surcharge for septage received from out of town sources as established by the Town latest Rates and Fee Schedule adopted by the Board of Selectmen.

3.5 Inspection Fee

There shall be a fee inspection for a new connection added to the Connection Fee and a fee for each additional inspection to Hanover Public Sewer as established by the Town latest Rates and Fee Schedule adopted by the Board of Selectmen.

3.6 Equivalent Users Flows & Connection Fees

The Connection Fee is based upon the contributing sewage from a service connection as provided in the latest Rate & Fee Schedule adopted by the Board of Selectmen. The flows from the table in the latest Rate & Fee Schedule adopted by the Board of Selectmen are based on normal strength domestic wastewater. The Connection Fee for any wastewater flow that does not meet the criteria in this table will be determined from previous usage history with the flow corrected to normal strength domestic wastewater times a peaking factor of 2. Any wastewater that has less organic loading than normal domestic wastewater will be considered as normal domestic wastewater without any flow correction. The Director of Public Works will determine the flow corrections and the resulting Connection Fee based on the information provided.

APPENDIX 4

PRIORITY POLLUTANTS required to be identified by applicant if expected to be present.

Metals and Cyanide:

114	Antimony	115	Arsenic	109	PCB-1232	110	PCB-1248
117	Beryllium	118	Cadmium	111	PCB-1260	112	PCB-1016
119	Chromium	120	Copper				
122	Lead	123	Mercury	**Organics - Acid Compounds**:			
124	Nickel	125	Selenium				
126	Silver	127	Thallium	024	2-chlorophenol	031	2,4-dichlorophenol
128	Zinc	121	Cyanide	034	2,4-dimethylphenol	060	4,6-dinitro-o-cresol
				059	2,4-dinitrophenol	057	2-nitrophenol
Organics - Volatile Compounds:				058	4-nitrophenol	022	p-chloro-m-cresol
002	Acrolein	003	Acrylonitrile	064	Pentachlorophenol	065	Phenol
004	Benzene	006	Carbon tetrachloride	021	2,4,6-trichlorophenol		
047	Bromoform		(tetrachloromethane)				
007	Chlorobenzene	051	Chlorodibromomethane	**Organics - Base/Neutral Compounds**:			
016	Chloroethane	019	2-chloroethylvinyl ether	001	Acenaphthene	077	Acenaphthylene
023	Chloroform	048	Dichlorobromomethane	078	Anthracene	005	Benzidine
	(trichloromethane)	013	1,1-dichloroethane	072	Benzo (a) anthracene	073	Benzo (a) pyrene
010	1,2 -dichloroethane	029	1,1-dichloroethylene	74	Benzo (b) fluoranthene	079	Benzo(ghi)perylene
032	1,2-dichloropropane	033	1,3-dichloropropene	75	Benzo (k) fluoranthene	043	Bis(2-chloroethoxy)methane
038	Ethylbenzene	046	Methyl bromide	018	Bis (2-chloroethyl) ether	042	Bis(2-chloroisopropyl)ether
045	Methyl chloride	044	Methylene chloride	66	Bis(2-ethylhexyl)phthalate	041	4-bromophenyl phenyl ether
015	1, 1,2,2-tetrachloroethane	085	Tetrachloroethylene	67	Butylbenzyl Phthalate	020	2-chloronaphthalene
086	Toluene	030	1,2-trans-dichloroethylene	040	4-chlorophenyl phenyl ether	076	Chrysene
011	1, 1, 1 -trichloroethane	014	1, 1,2-trichloroethane	082	Dibenzo (a,h) anthracene	025	1,2-dichlorobenzene
088	Vinyl chloride	087	Trichloroethylene	026	1,3-dichlorobenzene	027	1,4-dichlorobenzene
	(chloroethylene)			026	3,3'-dichlorobenzidine	070	Diethyl phthalate
				071	Dimethyl phthalate	068	Di-n-butyl phthalate
Pesticides:				035	2,4-dinitrotoluene	036	2,6-dinitrotoluene
		089	Aldrin	069	Di-n-octyl phthalate	037	1,2-diphen@,lhydrazine
103	Beta-BHC	102	Alpha-BHC	039	Fluoranthene	080	Fluorene
105	Delta-BHC	104	Gamma-BHC	009	Hexachlorobenzene	052	Hexachlorobutadiene
092	4,4'DDT	091	Chlordane	053	Hexachlorocyclopentadiene	012	Hexachloroethane
094	4,4'DDD	093	4,4'-DDE	083	lndeno (1,2,3-cd) pyrene	054	Isophorone
095	Alpha-endosulphan	090	Dieldrin	055	Naphthalene	056	Nitrobenzene
97	Endosan sulfate	096	Beta-endosulphan	61	N-nitrosodimethylamine	063	N-nitrosodi-n-propylamine
98	Endrin	099	Endrin aidehyde	62	N-nitrosodiphenylamine	081	Phenanthrene
101	Heptachlor epoxide	100	Heptachlor	084	Pyrene	008	1,2,4-trichlorobenzene
113	Toxaphene	106	PCB-1242				
107	PCB-1254	108	PCB-1221				

APPENDIX 5

FATS, OIL & GREASE CONTROL

5.1 Purpose

The Town of Hanover often deals with sewer blockages caused by the accumulation of Fats Oil & Grease (FOG). In addition, the Water Reclamation Facility receives excessive amounts of FOG which may cause foaming, bulking, and high organic loading if bypassed to the biological process. Although FOG wastewater is discharged to the sewer system from several sources a significant source originates from Food Preparation Establishments which are any non-single family residential discharge that performs food preparation as part of their functions.

In order to reduce problems associated with FOG, Food Preparation Establishments connected to the Town of Hanover sewer service area that discharge wastewater containing FOG must install and properly operate and maintain an Automatic Grease Interceptor.

This appendix provides guidelines and procedures to ensure compliance with the Town of Hanover Sewer Use Ordinance and is intended to prevent sanitary sewer blockages, obstructions and Water Reclamation Facility (WRF) sludge bulking and loading problems associated with the accumulation of FOG.

5.2 Applicability

Grease interceptors shall be provided at the owner's expense when, in the opinion of the Director of Public Works they are necessary for wastewater discharges to meet the limitations of this Ordinance. Grease interceptors shall be required for all establishments listed in this section. All interception units shall be of a type and capacity approved by the Director of Public Works and shall be so located as to be easily accessible for cleaning and inspection by the owner and the Town**.** Maintenance of these interceptors requires that the owner be responsible for the proper removal and disposal by appropriate means of the captured materials and shall maintain records of the dates and means of disposal, which shall be subject to periodic review by the Director of Public Works Reports shall be submitted at the discretion of the Director of Public Works indicating all maintenance and cleaning activities.

The following Food Preparation Establishments shall have a properly sized and functioning Automatic Grease Interceptor:

1) Restaurants
2) Schools
3) Hospitals
4) Nursing or Retirement Homes
5) Catering Services

6) Supermarkets
7) Any Other Facility that handles FOG and which discharges wastewater containing FOG into the Town of Hanover sewer collection system or otherwise as required by the Director of Public Works.

5.3 Food Preparation Establishment Pre-Treatment Policy

All new Food Preparation Establishments shall install and maintain an Automatic Grease Interceptor to limit FOG. External FOG interceptors may not substitute an internal Automatic Grease Removal System. External FOG interceptors may be required in addition to Automatic Grease Removal Systems to meet the limitations contained in Appendix 1.

Wastewater generated from garbage grinders, pulpers or any other devices used to breakdown food waste is prohibited from being discharged to the sewer unless specifically authorized by an Industrial Discharge Permit issued by the Town of Hanover.

An effluent sample may be required for analyses to determine if discharges meet the oil and grease limitations contained in Appendix 1. Samples shall be collected when the facility is in operation and be representative of a normal discharge day. The Town of Hanover may inspect and sample oil and grease interceptors to determine compliance with this ordinance.

5.4 Existing Establishments

Existing Food Preparation Establishments without any grease interception systems, if required by the Director of Public Works shall install an approved Automatic Grease Interceptor.

The Director of Public Works may require Food Preparation Establishments to obtain Industrial Discharge Permits or submit an application for an Industrial Discharge Permit, as necessary to execute installation of an Automatic Grease Interceptor.

When requested by the Director of Public Works, a user must submit the Industrial Discharge Permit Application within thirty (30) days of the request. Existing Food Preparation Establishments with a traditional manually cleaned internal grease trap or an External Fog Interceptor are required to install an Automatic Grease Interceptor:

1) When improvements are made to a Food Preparation Establishment and a plumbing permit is required.

2) When analyses indicates an existing system exceeds the oil and grease levels contained in Appendix 1.

3) When blockages occur as a result of inadequate existing grease removal equipment.

4) As required by the issuance of an Industrial Discharge Permit.

5.5 Design Specifications for Automatic and External Fog Interceptors

Automatic Grease Interceptors

Automatic Grease Interceptors shall be installed on a building sewer line servicing kitchen flows only and shall be connected to those fixtures or drains where detergents are not utilized and which would allow FOG to be discharged.

The following stations may apply:

(a) Pot sinks;

(b) Pre-rinse sinks;

(c) Any sink into which FOG are likely to be introduced;

(d) Soup kettles or similar devices;

(e) Wok stations;

(f) Automatic hood wash units;

(g) Any other fixtures or drains likely to allow FOG to be discharged.

Automatic Grease Interceptors shall be installed in accordance with the New Hampshire State Plumbing Code and shall meet the following requirements.

(1) Automatic Grease Interceptors shall be sized to properly pretreat the measured or calculated flows using methods approved by the Director of Public Works.

(2) Automatic Grease Interceptors shall be constructed of corrosion-resistant material such as stainless steel or plastic.

(3) Solids shall be intercepted and separated from the effluent flow using a strainer mechanism that is integral to the unit.

(4) The Automatic Grease Interceptors shall operate using a skimming device, automatic draw-off, or other mechanical/hard wired electrical means to automatically remove separated FOG. This automatic skimming device shall be controlled using a timer or level control. The operation of the automatic skimming device shall be field adjustable. The FOG Recovery Unit timer shall be set to operate the unit no less than once per day.

(5) Automatic Grease Interceptor shall be fitted with an internal or external flow control device to prevent the exceedence of the manufacturer's recommended design flow.

(6) Automatic Grease Interceptor shall be located to permit frequent access for maintenance, and inspection.

(7) Automatic Grease Interceptor discharge drains shall be fitted with a sampling port to allow for monitoring of the grease removal system effluent.

External FOG Interceptors

An External FOG Interceptor may be required in addition to an Automatic Grease Interceptor when in the opinion of the Director of Public Works it is needed to meet the limitations contained in Appendix 1.

When required, an External FOG Interceptor shall be installed on a separate building sewer line servicing food preparation establishment flows and shall be connected only to those fixtures or drains which would allow FOG to be discharged. Domestic wastewater or wastewater known to inhibit grease removal performance shall not be conveyed through an External FOG Interceptor.

An External FOG Interceptor shall have a minimum depth of four (4) feet and a minimum detention time of:

(a) At least twenty-four (24) hours of the maximum daily flow from food preparation establishment flows based on water meter records or other methods of calculation as approved by the Director of Public Works, or;

(b) 1,000 gallons, whichever is greater.

External FOG Interceptors shall have a minimum of two compartments. The two compartments shall be separated by a baffle that extends from the bottom of the External FOG Interceptor to a minimum of five (5) inches above the static water level. An opening in the baffle shall be located at mid-water level. The size of the opening shall be at least eight (8) inches in diameter but not have an area exceeding one hundred eighty (180) square inches.

External FOG Interceptors shall be watertight and constructed of precast concrete, or other durable material. It shall be located so as to be accessible for convenient inspection and maintenance. No permanent or temporary structures or containers shall be placed directly over the External FOG Interceptor. External FOG Interceptors installed in areas subject to traffic shall be designed to accommodate traffic loading.

External FOG Interceptors shall be constructed of precast concrete shall meet the following requirements:

(a) All concrete External FOG Interceptors shall be fabricated using minimum 4,000-psi concrete per ASTM standards with four (4) to seven (7) percent air entrainment. (b) The External FOG Interceptor shall have a minimum liquid depth of thirty-six (36) inches, measured from the bottom of the tank to the outlet invert.

(b) The air space provided between the liquid height and the underside of the tank top shall be a minimum of eight (8) inches.

(c) All structural seams and/or lifting holes shall be grouted with non-shrinking cement or similar material and coated with a waterproof sealant. In areas where seasonal high ground water is at an elevation greater than the bottom of the External FOG Interceptor, but below the top of the External FOG Interceptor, the exterior top, sides and bottom shall be coated with a waterproof sealant creating a water tight condition for the tank. In areas where seasonal high ground water is at an elevation greater than the top of the External FOG Interceptor, the exterior of the manhole extensions to grade shall be coated with a waterproof sealant creating a water tight condition for the extension.

(d) The manhole cover shall be placarded with the warning "Entrance into the tank could be fatal".

(e) Voids between the External FOG Interceptors walls and inlet and outlet piping shall be grouted with non-shrinking cement and coated with a waterproof sealant.

(f) The liquid capacity of the tank shall be marked on the top of the tank between the outlet access hole and the outlet wall or on the vertical wall between the top of the tank and the top of the outlet opening.

(g) The invert elevation of the inlet shall be between three (3) inches and six (6) inches above the invert elevation of the outlet.

Separate cleanout covers shall be provided over the inlet and outlet of the External FOG Interceptor so as to provide easy access for inspection and cleaning. Cleanout ports shall be fitted with manhole extensions to grade. In all areas, the extensions shall cast iron frames and round manhole covers. The manholes, extensions, and inlet and outlet access holes to the External FOG Interceptor shall have a minimum inside diameter of seventeen (17) inches.

The inlet piping shall be Ductile Iron pursuant to Appendix 2 Section 2.2B and outlet piping shall be PVC meeting ASTM D 1785 Schedule 40 with rubber compression

gaskets or solvent weld couplings. The joints must meet ASTM D 3212 specifications. The Director of Public Works may approve other piping materials for use. The minimum diameter of the inlet and outlet piping shall be six (6) inches. The inlet and outlet shall utilize a tee-pipe fitting on the interior of the External FOG Interceptor. No caps or plugs shall be installed on the tee-pipes. The tee-pipe on the inlet and outlet shall extend to within twelve (12) inches of the bottom of the tank and at least five (5) inches above the static liquid level of the tank.

The External FOG Interceptor shall be set level of a consolidated, stable base that has been mechanically compacted, with a minimum of twelve (12) inches of ¾" crushed stone so that no settling or tipping of the External FOG Interceptor can occur. Select backfill shall be placed and compacted around the External FOG Interceptor in a manner to prevent damage to the tank and to prevent movement caused by frost action.

The outlet discharge line from the External FOG Interceptor shall be connected to the municipal sanitary sewer through a manhole structure and shall be located to allow for sample collection and routine visual inspection.

The External FOG Interceptor shall be located so as to maintain the separating distances from well water supplies set forth in Section 19-13-B51d of the Public Health Code.

The following minimum-separating distances shall be maintained between the External FOG Interceptor and the items listed below:

(a) Property line 10 ft.

(b) Building served (no footing drains) 15 ft.

(c) Ground water intercepting drains, footing drains and storm drainage systems. 25 ft.

(d) Open watercourse 50 ft.

When necessary due to installation concerns, testing for leakage will be performed using either a vacuum test or water-pressure test.

(1) Vacuum Test - Seal the empty tank and apply a vacuum to two (2) inches of mercury. The tank is approved if 90 percent of the vacuum is held for two (2) minutes.

(2) Water-Pressure Test - Seal the tank, fill with water, and let stand for twenty-four (24) hours. Refill the tank. The tank is approved if the water level is held for one (1) hour.

5.6 Permitting

Food Preparation Establishments may be required to obtain an Industrial Discharge Permit as specified by the Town's Industrial Pretreatment Program.

(1) Food Preparation Establishments are required to possess Class 3 Permits if their regulated flows do not exceed 2,500 GPD.

(2) Food Preparation Establishments are required to possess a Class 2 Permit when regulated flows exceed 2,500 GPD.

(3) Food Preparation Establishments are required to obtain a Class 1 Permit on the basis that the facility has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.

Facilities causing blockages or obstructions in the Town sewer or who violate any other term or condition of this Ordinance may be required to obtain an Industrial Discharge Permit at the discretion of the Director of Public Works.

5.7 Variance/Appeal

Under certain circumstances the interceptor type, size and location may require special exceptions to this Ordinance. If an exception to this Ordinance is requested, the user shall demonstrate that the size, type and location will not cause the facility to exceed the local discharge restrictions contained in Appendix 1.

Any facility with an existing grease removal system which does not meet the Automatic Grease Interceptor requirements contained in section 6 of this appendix shall be required to demonstrate that effluent oil and grease concentrations meet the levels contained in Appendix 1. Existing grease removal systems which do not meet these levels shall install an Automatic Grease Removal System as required by this appendix.

The Director of Public Works reserves the right to make determinations of grease interceptor adequacy and need, based on review of all relevant information (including analytical results) regarding grease interceptor performance, facility site and building plan review, and to require repairs to, or modification or replacement of such removal systems.

5.8 Enforcement

If an obstruction of a Town of Hanover sewer line occurs that causes a sewer overflow and such an overflow can be attributed in part or in whole to an accumulation of FOG in the Town of Hanover sewer main(s), The Town of Hanover will take appropriate enforcement actions, as stipulated in the Town of Hanover Sewer Use Ordinance, against

the generator or contributor of FOG. These actions may include fines, civil penalties or a discontinuance of sewer service as specified in Section 10 of the Town of Hanover SUO.

5.9 Best Management Practices (BMP)

FOG can be managed effectively in Food Preparation Establishments to minimize its discharge to the sewer system and decrease the required maintenance of grease interceptors. By preventing the introduction of grease into the wastewater treatment system you reduce the burden on the grease interceptor and thus reduce maintenance time, costs and disposal fees. The Best Management Practices offered here are techniques used throughout the industry, and have proven effective when implemented properly and consistently. The following BMP's may be required for Food Preparation Establishments:

1) **Train Kitchen Staff**: Train kitchen staff in management practices and methods to reduce the volume of FOG discharged to the sanitary sewer system. Train them to be aware of problems created by FOG in the sewers system, possible violations and fines and the cost of cleaning clogged pipes. Even a small amount of grease on each pot, pan or plate can be substantial when you serve hundreds of meals per day.

2) **Post NO GREASE Signs**: By posting "No Grease" signs above sinks, on dishwashers and near other grease discharge points, it serves as a constant reminder to keep grease out of the system.

3) **Dry Wipe Pots, Pans and Dishware prior to Dishwashing**: Food, fats, cooking oil and grease remaining in pots and pans should be dry wiped or scraped out into the trash prior to wet washing. In some establishments this can substantially reduce FOG discharged to your grease interceptors. Disposing of grease by recycling or garbage is less expensive than pumping out and hauling away FOG from a grease interceptor.

4) **Garbage Grinders and Pulpers are Prohibited**: Ground up food scraps will settle in the grease interceptor and take up valuable space lowering the detention time in the grease interceptor and result in reduced efficiency. Pulper wastewater binds with grease and will fowl an interceptor making it ineffective**.** Instead, recycle or dispose food scraps as a solid waste. This will also help reduce the frequency of grease interceptor cleanings.

5) **Clean Grease Interceptor Routinely and Maintain Records**: Routine cleanings and inspections will ensure proper operation of the interceptor. Make note of the grease level and record it in maintenance log. If the grease level is at its maximum, the cleaning frequency should be increased. Conversely, if best management practices are being implemented effectively and the grease in the unit is minimal, then the cleaning frequency may be reduced. Maintenance records may be requested during inspections.

6) **Witness Cleaning, Disposal and Maintenance Events**: The on duty manager should witness cleaning events to ensure they are performed completely and properly. This will ensure that pumpers/haulers or maintenance workers do not take any shortcuts. To properly clean the interceptor the entire contents must be removed, including grease cap (floating grease) and sludge pocket (settled solids). Failure to remove the slug pocket (settled solids) in the bottom will result in lowered total capacity and reduced detention time. The manager should also be sure removable baffles and screens are replaced after cleaning. Insure that the grease is disposed of properly either as a solid waste or recycled that it is not dumped in another drain at the facility.

7) **Inspect the Grease Interceptor during maintenance**: The design of most grease interceptors is very simple, but each part serves an essential function. The baffles must be in place and properly positioned to be effective. Covers must fit properly so they do not leak. In-ground interceptors should be examined for cracks, which could allow wastewater to leak out or ground water to leak in.

8) **Automatic Grease Interceptors require maintenance**: Automatic Grease Interceptors must be maintained in order to be effective. Solids strainers and the outside grease cup may need to be emptied daily. Wiper blades and the grease outlet trough must be cleaned weekly. Clean the entire unit including sediment at the bottom monthly. Replace wiper blades every 6 months and most importantly make sure your unit is plugged in and the auto timer is set properly.

Appendix C

Forms

Pump Station/Collection System Overflow Questionnaire

Bypass or Sewer Overflow Report

Power Outage – Emergency Contacts

Auxiliary Pumps

Sewer Pipeline Test Form

Sewer Manhole Vacuum Test Form

Sewer Connection Form

Manhole Information Data Collection Sheet

PUMP STATION/COLLECTION SYSTEM OVERFLOW QUESTIONNAIRE

Wastewater Treatment Facility reporting: Hanover, NH Permit No. NH0100099_____

1. Location of overflow:_____

2. Who notified WWTF/municipality?_____

3. Time and date of above notification_____

4. Date overflow started:_____ Time overflow started:_____

5. Date overflow ended:_____ Time overflow ended:_____

6. Cause of failure: _____

_____

7. Amount of overflow:_____

8. Was overflow treated with emergency disinfection?_____ Type of Disinfection _____ Time disinfection started:_____ Amount of Disinfection used: _____

9. What waterbody did the overflow discharge to?_____

10. Detail chronology of events leading to failure/overflow: _____

_____

_____

11. Detail chronology of response indicating all steps taken to minimize the amount of overflow:

_____

_____

_____

12. If applicable, were septage haulers and/or emergency generators used to minimize the amount bypassed? (If use was possible but not implemented, why not?)

_____

_____

_____

13. What actions are being taken to mitigate and/or prevent further occurrences?

_____

_____

_____

Notification of NHDES #: 271-1494; Person Notified_____
Date/Time:_____
By_____

EPA Notification (617)918-1877; Person Notified_____
Date/Time:_____
By_____

BYPASS OR SEWER OVERFLOW REPORT

Date of Report: _____

Date of Incident: _____

Name of System: Town of Hanover

Facility Name: Water Reclamation Facility

NPDES Permit # NH0100099

Name and Title of Person Reporting Incident: _____

Telephone #: _____

Location of Overflow: _____

Receiving Water: _____

Incident Duration: _____

Estimated Total Flow: _____

Treatment Provided: _____

Cause of Incident: _____

Mitigation Measures Taken: _____

Additional Information/Comments: _____

Agency/Person Reported to: USEPA: Joy Hilton 617-918-1877, Fax 617-918-0877
NHDES: Jocelyn.henry@des.nh.gov, 603-271-1494

Memo

To: Staff

From: Kevin MacLean

Date: December 01, 2016 rev.

Re: **Emergency contact information**

Power outage Hotline – 1-855-349-9455

Customer service – 1-800-375-7413 – when prompted about whether this is an emergency – state **yes** – that will connect you to an actual person.

Municipal account manager-Jill Fitzpatrick – 603-952-2999 {7:00-16:30 M-F}, jill.fitzpatrick@libertyutilities.com

EMAIL JILL UPON ANY "BLIP"WHICH AFFECTS ANY EQUIPMENT

LOCATION / Street address	**ACCOUNT #**	**POLE #**
WRF {121 South Main St. / Pine Knolls Drive}	**44607830**	**6/116** {route 10 entrance}
PS#3 {Brook Road / 114 S. Main st.}	**44619707**	**#1**
PS#4 {Lyme Road / CRREL}	**44618547**	**#5**
PS#5 {Girl Brook / Lyme Rd.}	**44630772**	**#6-2**
PS#2 {Ledyard Bridge / West Wheelock}	**44632156**	**#87/21**

EMERGENCY SERVICES - 8-911

Hanover Dispatch – 603-643-2222

Stearns Septic- 603-442-9500

Herrins Septic – 603-448-4139

Hartigan Vactor Service – 1-800-696-0761

Dimmick Services – (802) 728-3805

NHDES – 603-271-1494 {Teresa Ptak – Inspector}

USEPA – 1-617-918-1877 {Joy Hilton}

SCADA – LCS Controls – Office (802) 767-3128, Tom - (802) 345-2216 mobile, Brian - 1-(802)-345-2214 mobile.

Defiance Electric - (603) 632-7970

Royal Electric – (603) 747-2722

Clean Harbors - (603) 224-6626 {HAZMAT}

Evans Fuel - 603-448-3400 {diesel}

Milton Cat - (603) 746-4671 {generators}

City of Lebanon – (603)-298-5986 (Public Works – Wastewater)

NES Rentals - (802) 660-1995

L&M Contractors – (603)-359-1656

Dartmouth College FO&M – 646-2485

DIGSAFE – 811

Utility Locating Services - (603)-763-2474

Fairpoint Communications – (603) 703-9295

Pump Station #3 – 640-3279

Pump Station #5 – 640-3289

WRF SCADA -643-8356

WRF VERBATIM- 603-306-6653

Hanover WRF auxiliary equipment list

Portable pumps

Make	Coupling size/type	Fuel	Year	Output (Max)	Hours	Notes
Ford	4" Cam-Lock	Diesel	1960's	450 GPM	Unknown	
Godwin	4" Cam-Lock	Diesel	2012	1,000 GPM	104.9	
*Hydra-Tech	4" Cam-Lock	Diesel	2004	400 GPM (each)	407.0	*(1) cast iron pump head (heavy slurries)
						*(1) aluminum pump head (effluent)
						*unit is hydraulically driven submersible

Appurtenances

Suction Hose	4" Cam-Lock	200'			
Discharge Hose	4" Cam-Lock	200'			
Drive hoses	1" Feed & Return	75'			
Strainers	3				

TOWN OF HANOVER, NEW HAMPSHIRE
SEWER PIPELINE TEST FORM

Date:_____

Project:_____

Contractor:_____

Location:_____

Size of Pipe:_____

Type of Pipe:_____

Length of Pipe Tested:_____

Minimum Time for 0.5 psi pressure drop from Table 1 :_____

Begin Test Pressure(4.0 psi minimum):_____

End Test Pressure after Minimum Time:_____

Total Pressure Drop after Minimum Time:_____ Pass____ Fail____

Witnessed By:_____ Title:_____

TABLE I
Line Pressure Air Test Using Low-Pressure Air
SPECIFICATION TIME REQUIRED FOR A 0.5 PSIG PRESSURE DROP
FOR SIZE AND LENGTH OF PIPE INDICATED

1 Pipe Diameter (in.)	2 Minimum Time (min:sec)	3 Length For Minimum Time (ft.)	4 Time For Longer Length (sec.)	Specification Time for Length (L) Shown (min:sec)							
				100 ft.	150 ft.	200 ft.	250 ft.	300 ft.	350 ft.	400 ft.	450 ft.
4	3:46	597	.380 L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854 L	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1.520 L	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	239	2.374 L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418 L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342 L	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	133	7.692 L	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41
24	22:40	99	13.674 L	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33

TOWN OF HANOVER, NEW HAMPSHIRE
SEWER MANHOLE VACUUM TEST FORM

The manhole will be brought under no less than ten (10) inches of vacuum, no matter what the manhole depth. There must be no more than one (1) inch of drop over a ten (10) minute period for the manhole to be acceptably watertight.

All manhole testing will be completed prior to inverts being installed.

Date:_____

Project:_____

Contractor:_____

Location:_____

Begin Test Vacuum (10 inches minimum):_____

End Test Vacuum after 10 minutes:_____

Total Vacuum Drop after 10 minutes:_____ Pass____ Fail____

Witnessed By:_____ Title:_____

Connection #:_____

TOWN OF HANOVER
P.O. BOX 483
HANOVER, NEW HAMPSHIRE 03755

SEWER CONNECTION FORM

Map #:_____Lot #_____Sketch Attached:_____

Applicant:_____

Telephone Number:_____

Billing Name & Address: _____

_____

_____

Address of Connection (if different from above):_____

Primary Contractor:_____

Installation Contractor:_____

Connection Date:_____Connection/Fee:_____ Recap/Fee: _____

Please Bill: _____

_____ _____
Date of Inspection Authorized Agent

Distribution:

_____ Applicant
_____ Primary Contractor
_____ Public Works Department
_____ Accounting

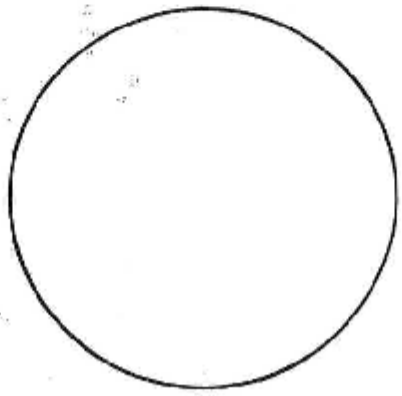
(Revised 4/9/17)

Manhole Information
Data
Collection Sheet

- **Date:**_____
- **Manhole Number:**_____
- **Street Location:**_____
- **Frame Size:**____**Cover Condition:**____**comments:**_____
- **Safty Inspection:** **visual :**_____ **air test:**_____
- **Depth : center** **invert to rim** _____
- **Manhole Construction Mat'l:** _____ **comments**_____
- **Shelf Condition:**_____ **Invert Mat'l:**_____**comments**_____
- **Flow Condition: clear**____ **typical** ___ **cloudy**___ **comments**_____
- **Visible Infiltration:**_____
- **Pipe Information:**

direction	type	size	mat'l	drop y/n depth	flow
____	____	____	____	_____	___
____	____	____	____	_____	___
____	____	____	____	_____	___
____	____	____	____	_____	___
____	____	____	____	_____	___
____	____	____	____	_____	___

- **Sketch:**



Appendix D

Current Fiscal Year Budget

WATER RECLAMATION FACILITY			
Acct	**OBJ_DESC**	**OBJ_CAT**	**FY18BUDG**
05-455-460-020-32309	SEWER CONNECTIONS	FEES, LICENSES, AND PERMITS	21,215
	Connection cost		
	Recapture fee per EU (450 gpd @ $4.27/gal)	*$ 1,922*	
	Inspection fee	*$ 200*	
	Cost per connection	*$ 2,122*	
	Connections (equivalent)	*10*	
	Total	*$ 21,215*	
05-455-460-030-34032	SEWER USE FEE LEBANON RT 10	DEPT REVENUE	140,000
05-455-460-030-34031	SEWER USE FEE DHMC/GILE TRACT	DEPT REVENUE	495,000
05-455-460-030-34030	SEWER USE FEE	DEPT REVENUE	1,830,000
05-455-460-030-34038	SEWER LATE PYMT INTEREST	DEPT REVENUE	500
05-455-460-031-34030	TIPPING FEES AND OTHER	DEPT REVENUE	4,000
05-455-460-032-34030	INDUSTRIAL PRETREATMENT	DEPT REVENUE	6,000
05-455-461-030-34030	OUTSIDE PROJECTS	DEPT REVENUE	50,000
05-455-513-050-33540	STATE AID WATER POLLUTION	STATE GRANTS AND PAYMENTS	149,320
	PS#3 upgrade - 5th out of 5 SAG pymts/Delayed & Deferred	*$ 32,569*	
	New Secondary Clarifier - 5th out of 5 SAG payments/Delayed & Deferred	*$ 76,477*	
	from SAG Amort Sched	*$ 40,274*	
05-455-513-096-39150	TRANSFER FROM RESERVE	WRF EQPT AND PLANT RESERVE	17,000
	Air compressor	*$ 17,000*	
	TOTAL from WRF Eqpt CRF:	*$ 17,000*	
05-455-460-090-39399	PRIOR YEAR SURPLUS	SUNDRY REVENUE	-
		$ -	
		$ -	
05-455-460-080-35020	MISCELLANEOUS REVENUES	SUNDRY REVENUE	-
			2,713,035

05-455-460-110-43260	TREATMENT PLANT OPERATION	FULL TIME SERVICES	410,689
05-455-460-150-43260	TREATMENT PLANT OPERATION	OVERTIME SERVICES	27,882
	Weekend OT duties 6 hours/wk+20 call ins	*$ 13,493*	
	Holiday overtime	*$ 1,337*	
	Pager pay @$256/week	*$ 13,052*	
05-199-150-210-43260	EMPLOYEE BENEFITS	SECTION 125 POINTS	147,018
	reflect 100% of Utility Engineer's benefits vs. 50/50 with Water		
05-199-150-220-41550	EMPLOYEE BENEFITS	SOCIAL SECURITY	33,551
05-199-150-230-41550	EMPLOYEE BENEFITS	EMPLOYER RETIREMENT	49,909
05-199-150-260-43260	EMPLOYEE BENEFITS	WORKER'S COMPENSATION	7,211
	from Primex NTE letter 11/15/2016		
05-455-460-390-43260	TREATMENT PLANT OPERATION	PROFESSIONAL SERVICES	-
05-455-460-391-43260	TREATMENT PLANT OPERATION	SLUDGE DISPOSAL	92,000
	Landfill fees 1400 Wt's@ $55/tn, + hauling	*$ 87,750*	
	NHSQC testing {expanded for renewal} 2015	*$ 3,000*	
	Contingency sampling	*$ 750*	
	Annual NHSQC fee	*$ 500*	
	Total	*$ 92,000*	
05-455-513-341-43260	TREATMENT PLANT OPERATION	TELEPHONE	4,855
	Verizon Line: $32/mo	*$ 384*	
	Alarm Lines: G4 Invoice avg $300/mo	*$ 3,600*	
	Cell Phone @ $35/mth	*$ 420*	
	Pagers - 3 x $27/quarter	*$ 324*	
	Veramark call acctg pro-rated cost	*$ 127*	
		$ 4,855	
05-455-513-410-43260	TREATMENT PLANT OPERATION	ELECTRICITY	125,000
05-455-513-411-43260	TREATMENT PLANT OPERATION	HEAT	26,500
	12,000 gal propane bldg heat @$1.90/gal	*$ 22,800*	
	500 gal propane @ $1.90	*$ 950*	
	Generator Fuel - 1,000 gallons @ $2.75	*$ 2,750*	
	Total	*$ 26,500*	
05-455-513-412-43260	TREATMENT PLANT OPERATION	WATER	2,400
05-455-460-430-43260	TREATMENT PLANT OPERATION	EQUIPMENT REPAIR AND MAIN	49,025
	RAS Pumps (5)	*$ 500*	

	WAS Pumps (2)	*$ 250*	
	Re-circ Pumps (2)	*$ 200*	
	Primary pumps (2)	*$ 250*	
	Primary grinders (2)	*$ 12,000*	
	Secondary scum pit {1}	*$ 75*	
	Headworks screen	*$ 100*	
	Aeration - blowers	*$ 250*	
	Aeration support equipment	*$ 3,800*	
	Pump Station Repair & Parts	*$ 10,000*	
	Oils, lubricants for equipment	*$ 2,000*	
	Primary Clarifiers (2)	*$ 150*	
	Secondary Clarifiers (3)	*$ 1,000*	
	Thickened waste units (2)	*$ 1,250*	
	Polymer makeup systems {4}	*$ 200*	
	Heat exchangers {4}	*$ 150*	
	Disinfection systems	*$ 1,500*	
	Coatings, pipe, fittings, valves, concrete repairs	*$ 2,500*	
	Gas detectors {2} fixed	*$ 500*	
	Methane system	*$ 7,000*	
	Plant air system	*$ 75*	
	Plant water sytem	*$ 50*	
	Screw conveyors	*$ 25*	
	Hot water loop system	*$ 200*	
	Surveillance cameras	*$ 3,000*	
	Draft tube mixer	*$ 250*	
	Pump room sump pumps{4}	*$ 1,750*	
		$ 49,025	
05-455-513-430-43260	TREATMENT PLANT OPERATION	BUILDING REPAIR AND MAINT (IN HOUSE)	3,500
	based on average need	*$ 2,500*	
	Building heat boiler maintenance & repairs	*$ 1,000*	
		$ 3,500	
05-455-513-491-43260	TREATMENT PLANT OPERATION	BUILDING REPAIR AND MAINT (OUTSIDE)	5,250
	Treatment boiler maintenance & repairs	*$ 2,000*	
	HVAC repairs	*$ 1,000*	
	Floor strip/wax/repair	*$ 1,250*	
	Overhead door maintenance & repairs	*$ 1,000*	
		$ 5,250	
05-455-513-490-43260	TREATMENT PLANT OPERATION	BLDG CONTRACTED SERVICES	1,204
	Fire alarm/sprinkler testing	*$ 330*	

	Floor mat/rag rentals	*$ 300*	
	State boiler inspections	*$ 250*	
	Recycling	*$ 324*	
		$ 1,204	
05-455-460-490-43260	TREATMENT PLANT OPERATION	PLANT CONTRACTED SERVICES	69,279
	Landfill (NE Waste)	*$ 15,119*	
	Parts washer	*$ 400*	
	Laboratory Equipment calibration & cleaning	*$ 650*	
	Lab water,distilled & E. coli test	*$ 1,150*	
	Septic Service truck emergency use	*$ 1,750*	
	Flow meter calibration	*$ 500*	
	Odor control	*$ -*	
	Annual QA/QC study (vendor increase)	*$ 400*	
	Electrical Services & Repairs	*$ 7,500*	
	Alarm Services	*$ 1,000*	
	SCADA system programming	*$ 1,500*	
	Motor Control Services	*$ 1,250*	
	Pump station grit removal	*$ 3,000*	
	Hoist & crane inspections - DOL	*$ 750*	
	Whole effluent toxicity test	*$ 1,450*	
	Zee medical cabinet	*$ 350*	
	Lebanon System Flow Monitoring (back charged to Leb)	*$ 32,510*	
		$ 69,279	
05-455-460-540-43260	TREATMENT PLANT OPERATION	ADVERTISING	250
05-455-460-560-43260	TREATMENT PLANT OPERATION	DUES AND MEMBERSHIP FEES	1,290
	3 x $50 every 2 yrs. WW + W	*$ 150*	
	Cert. Testing $50 ea.	*$ 100*	
	NEBRA	*$ 325*	
	NHWPCA 6 @ $35	*$ 210*	
	GSRWA membership (not allowed to split with HW)	*$ 380*	
	WEF membership	*$ 125*	
		$ 1,290	
05-455-513-680-43260	TREATMENT PLANT OPERATION	TECHNICAL SUPPLIES	110,950
	Polymer (price increase)	*$ 50,500*	
	Sodium Hypochlorite (use based on history)	*$ 30,000*	
	Sodium Bisulfite	*$ 8,000*	
	Lab. Chemicals and supplies	*$ 11,000*	

	Lab. Equipment repair or replace	*$ 3,000*	
	Degreaser, soaps and cleaners	*$ 2,000*	
	NPDES permit additional testing	*$ 2,500*	
	Treatment chemicals (soda Ash)	*$ 1,000*	
	Safety equipment replace/maintain (R/M):		
	Standard PPE for 6 employees	*$ 900*	
	Harness, ropes, lanyards	*$ 1,750*	
	SWPP supplies[stormwater prevention plan}	*$ 300*	
		$ 110,950	
05-455-513-611-43260	TREATMENT PLANT OPERATION	CUSTODIAL SUPPLIES	1,250
05-455-460-619-43260	TREATMENT PLANT OPERATION	UNIFORMS AND CLOTHING	5,170
	6 employees x $820, $250 Utility Engineer	*$ 5,170*	
05-455-460-815-43260	TREATMENT PLANT OPERATION	FOOD AND MEALS	100
05-455-460-620-43260	TREATMENT PLANT OPERATION	OFFICE SUPPLIES	1,500
05-455-460-625-43260	TREATMENT PLANT OPERATION	POSTAGE	1,650
	Quarterly billing split with Water	*$ 1,500*	
	Other misc postage	*$ 150*	
		$ 1,650	
05-455-460-680-43260	TREATMENT PLANT OPERATION	LANDSCAPING	2,000
05-455-460-670-43260	TREATMENT PLANT OPERATION	BOOKS AND SUBSCRIPTIONS	650
	Updated manuals	*$ 200*	
	7-minute safety trainer (BLR)	*$ 450*	
		$ 650	
05-455-460-690-43260	TREATMENT PLANT OPERATION	IPP PROGRAM EXPENSES	8,750
05-455-513-740-43260	TREATMENT PLANT OPERATION	OPERATIONAL EQUIPMENT	7,500
	Maintenance hand tools, pneumatic, etc.	*$ 3,000*	
	Non-sparking tools	*$ 2,500*	
	Welding supplies, new cart	*$ 1,200*	
	Chainsaw PPE	*$ 400*	
	Eye wash stations & refill kits	*$ 400*	
		$ 7,500	
05-455-460-440-43260	TREATMENT PLANT OPERATION	WRF COPIER LEASE & SERVICE	1,980
	lease and service ~$165/month	*$ 1,980*	
05-455-460-810-43260	TREATMENT PLANT OPERATION	EDUCATION	1,500

	Technology & equipment research seminars	*$ 1,500*	
05-455-460-820-43260	TREATMENT PLANT OPERATION	AUTO ALLOWANCE	250
05-455-460-903-43260	TREATMENT PLANT OPERATION	CHARGES FROM PUBLIC WORKS	*165,832*
05-455-460-904-43260	TREATMENT PLANT OPERATION	CHARGES FROM HIGHWAY	*11,600*
05-455-460-910-43260	TREATMENT PLANT OPERATION	CHARGES FROM DISPATCH	*5,865*
	2.25% of Dispatch costs less Chgs/Towns	*5,865*	
05-455-150-900-43260	TREATMENT PLANT OPERATION	CHARGES FROM ADMIN	*135,405*
05-455-460-901-43260	TREATMENT PLANT OPERATION	CHARGES TO/FROM WATER FUND	*52,389*
	50% of cellular collectors	*$ 10,921*	
	50% of hosting fees	*$ 2,165*	
	50% of meter replacement lease payment	*$ 39,303*	
05-455-150-915-43261	TREATMENT PLANT OPERATION	CHARGES FROM FACILITIES	*6,088*
	156 hrs of reg time	*$ 6,088*	
05-455-460-905-43260	TREATMENT PLANT OPERATION	CHARGES FROM MIS	*6,195*
	WRF-MuniSmart annual support	*$ 2,335*	
	Operational Software annual support All Max	*$ 1,760*	
	1/3 cost of People GIS	*$ 2,100*	
	Computer replacement	*$ -*	
05-455-460-908-43260	TREATMENT PLANT OPERATION	CHARGES FROM LINE MAINT	*235,405*
05-455-460-911-43260	TREATMENT PLANT OPERATION	CHARGES FROM FLEET	*54,720*
	Fuel-Line Maintenance	*$ 9,905*	
	Fuel-WWTP	*$ 5,000*	
	Parts-Line Maintenance	*$ 7,125*	
	Parts-WWTP	*$ 4,020*	
	Outside Repairs-Line Maintenance	*$ 1,150*	
	Outside Repairs-WWTP	*$ 2,045*	
	Tires-Line Maintenance	*$ 5,700*	
	Tires-WWTP	*$ 4,150*	
	Fleet Labor	*$ 14,750*	
	Generator load test	*$ 875*	
		$ 54,720	
05-455-513-960-49150	TREATMENT PLANT OPERATION	EQUIPMENT RESERVE	130,000
	Reserve Portion of Recapture Fee (100% of budg)	*$ 21,215*	
	WWTF & Pumping Equipment	*$ 75,000*	

	Vehicles & moving equipment	*$ 33,785*	
		$ 130,000	
			2,003,561
05-455-461-730-43262	OUTSIDE PROJECTS	CAPITAL OUTLAY	50,000
	Indiv/Devpt Collection Sys Projects	*$ 50,000*	
	Total	*$ 50,000*	**50,000**
05-455-513-980-47112	DEBT AND INTEREST	PRINCIPAL-LONG TERM DEBT	464,076
matures 12/1/2027	*12/2007 SRF Loan CS-330197-03*	*$ 148,198*	
matures 7/1/2026	*ARRA SRF Loan #CS-333197-05*	*$ 55,630*	
matures 7/1/2027	*CS-330197-04 initial pymt 7/1/2013*	*$ 260,248*	
05-455-513-980-47212	DEBT AND INTEREST	INTEREST - LONG TERM DEBT	158,399
	12/2007 SRF Loan CS-330197-03	*$ 56,861*	
	ARRA SRF Loan	*$ 18,481*	
	CS-330197-04 initial pymt 7/1/2013	*$ 83,057*	
05-455-150-520-43260	INSURANCE AND BONDS	PROP AND LIAB INSURANCE	20,000
	from Primex NTE letter 11/15/2016		
			642,475
05-455-513-740-49020	CAPITAL PROJECTS FUNDED FROM CRF	CAPITAL EQUIPMENT PURCHASES	17,000
	Air compressor	*$ 17,000*	
		$ 17,000	
50-455-513-741-43260	CAPITAL PROJECTS	CAPITAL OUTLAY-PLANT UPGRADES	-
			17,000

DPW LINE MAINTENANCE			
Acct	**OBJ_DESC**	**OBJ_CAT**	**FY18BUDG**
01-400-423-110-43190	LINE MAINTENANCE	FULL TIME SERVICES	123,625
01-400-423-150-43190	LINE MAINTENANCE	OVERTIME SERVICES	16,307
	375 hours	*$ 16,307*	
01-400-423-390-43190	LINE MAINTENANCE	PROFESSIONAL SERVICES	2,500
	spill cleanup, special-unplanned tasks	*$ 2,500*	
01-400-423-440-43190	LINE MAINTENANCE	EQUIPMENT RENTAL	1,500
	Compactors, backhoes for ROW Maintenance	*$ 1,500*	
01-400-423-490-43190	LINE MAINTENANCE	CONTRACTED SERVICES	10,000
	Emergency repair, unplanned assigments	*$ 10,000*	
01-400-423-560-43190	LINE MAINTENANCE	DUES AND MEMBERSHIP FEES	75
	Association Dues $25 x 3	*$ 75*	
01-400-423-610-43190	LINE MAINTENANCE	TECHNICAL SUPPLIES	3,550
	Specialty items (protective gloves, tapes etc.)	*$ 250*	
	Safety Equipment (confined space entry)	*$ 600*	
	Traffic controls (cones & signs)	*$ 500*	
	Clothing Allowance	*$ 1,600*	
	PPE pers protective eqpt gear ($200 x 3)	*$ 600*	
		$ 3,550	
01-400-423-680-43190	LINE MAINTENANCE	CONST & MAINT MATERIALS	10,937
	Enzymes 4 x $700	*$ 3,080*	
	78' of 8" $3.5/lf	*$ 273*	
	75' of 6" $2.2/lf	*$ 165*	
	30' of 4" $1.1/lf	*$ 33*	
	Riser rings $134/ea x 5	*$ 670*	
	Frames & cover $250/ea x 15	*$ 3,750*	
	Stone 50 tons @ $10/ton	*$ 500*	
	Sand 40 tons @ $14/ton	*$ 560*	
	cement 60 bags @ $9.10/bag	*$ 546*	
	UPM Patch 10 tons $136.00/ton	*$ 1,360*	
		$ 10,937	
01-400-423-685-	LINE MAINTENANCE	COLLECTION SYSTEM CONST &	

43190		MAINT MATERIALS	96,000
	Slip line program 800' @ $45/lin ft	*$ 36,000*	
	CMOM (capacity mgmt ops plan)	*$ 60,000*	
		$ 96,000	
01-400-423-740-43190	LINE MAINTENANCE	TECH EQUIPMENT	2,500
	gas meters for confined spaces	*$ 2,500*	
01-400-423-901-43190	LINE MAINTENANCE	CHARGES TO SEWER	*(235,405)*
	85% regular salaries	*$ (105,082)*	
	20% OT salaries	*$ (3,261)*	
	Professional services	*$ (2,500)*	
	Equipment Rental	*$ (1,500)*	
	Contracted Services	*$ (10,000)*	
	Dues & Fees	*$ (75)*	
	Technical supplies	*$ (3,550)*	
	Const & Mtce materials	*$ (10,937)*	
	Collection System construction materials	*$ (96,000)*	
	Equipment	*$ (2,500)*	
		$ (235,405)	
			31,589

Appendix E

Inter Municipal Agreement (IMA)

INTERMUNICIPAL AGREEMENT
LEBANON, NEW HAMPSHIRE
HANOVER, NEW HAMPSHIRE

PREPARED DATE:

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APPENDICES

1.0 INTRODUCTION

THIS AGREEMENT, made and entered into the 9th day of October, 2012, by and between the City of Lebanon, New Hampshire, a municipal corporation in the State of New Hampshire, hereinafter referred to as "Lebanon," by its City Council, duly authorized and the Town of Hanover, also a municipal corporation in the State of New Hampshire, hereinafter referred to as "Hanover," by its Board of Selectmen, duly authorized (hereinafter jointly referred to as the "Parties"), for the purpose of providing wastewater treatment service to Lebanon through Hanover's wastewater treatment system, for the mutual benefit of Lebanon and Hanover, thereby serving the public health and welfare of the people of the State of New Hampshire and enhancing the water quality of the Connecticut river and its tributaries.

Furthermore, noted that this agreement, in force as of the date stated prior, shall supersede all prior written agreements between Lebanon and Hanover in regards to this service. Including, but not limited to, the agreement dated and signed September 2, 1969

WITNESSETH, WHEREAS:

- Hanover, through its Public Works Department, owns, operates, and maintains a wastewater conveyance system and treatment facility, hereinafter known as the "Hanover system," off South Main Street in Hanover, adjacent to the Connecticut River;

- Lebanon, through its Public Works Department, owns, operates, and maintains a wastewater conveyance system on Route 10 and Route 120, hereinafter known as the "Lebanon system";

- It is deemed in the best interest of the Parties that Lebanon obtain wastewater treatment services through the Hanover system;

- Hanover has agreed to negotiate with Lebanon to receive, treat, and dispose of wastewater from a specified Lebanon Service Area through Hanover's system, in accordance with Federal and State agencies;

- Hanover, through its Town Manager and Board of Selectmen, is authorized to negotiate and execute an agreement with Lebanon, as authorized by RSA 53-A, under which Hanover will provide wastewater service to Lebanon; and

- Lebanon, through its City Manager and its City Council, is authorized to negotiate and execute an agreement with Hanover, as authorized by RSA 53-A, under which Hanover will provide wastewater service to Lebanon.

Now, THEREFORE, in consideration of the mutual undertakings, promises, benefits, and agreements herein contained, Lebanon and Hanover agree as follows:

2.0 OBLIGATIONS OF THE PARTIES

2.1 HANOVER TO PROVIDE WASTEWATER SERVICE

Hanover agrees to provide wastewater service to Lebanon, subject to the conditions hereinafter provided. Hanover shall accept into Hanover's system, and shall treat and discharge to the Connecticut River, all wastewater received from the specified Lebanon Service Area (Appendix A), in accordance with municipal, state, and federal regulations. The Hanover Public Works Department shall possess exclusive jurisdiction and control over Hanover's system and shall be responsible to local, state, and federal authorities having jurisdiction over said facilities. No significant modifications to the Hanover system that may impact Lebanon's user charges or responsibilities will be implemented without notice to Lebanon of not less than thirty (30) days.

2.2 HANOVER FACILITIES

Hanover shall provide all such wastewater facilities as are required to perform its obligations under the terms of this Agreement. Hanover shall be responsible for land acquisition and for the design, construction, maintenance, repair and operation of all wastewater facilities within the geographic area of Hanover. Hanover presently possesses facilities for conveying and treating wastewater from Lebanon, described as follows:

a. A secondary Wastewater Reclamation Facility (WRF) with a capacity of 2.3 million gallons per day (MGD) (based on a yearly average) based on a strength of 194 mg/l BOD (biological oxygen demand) and 174 mg/l of TSS (total suspended solids); and

b. Sewer interceptors extending from the WRF to the Lebanon boundary line as show in Appendix B.

2.3 LEBANON SYSTEM

Lebanon shall provide such wastewater facilities as are required to collect and deliver Lebanon's wastewater to the points of interception with Hanover's system. Lebanon's present Service Area is depicted in Appendix A. Lebanon shall be responsible for land acquisition and for the design, construction, maintenance, repair and operation of all wastewater facilities within the geographic area of Lebanon that is to be serviced by this Agreement.

Lebanon shall own and maintain, at its sole expense, interceptors, pumping stations, and force mains to convey its wastewater through sewer mains to the points of connection with Hanover's system as depicted in Appendix B.

Lebanon is entitled to construct sewerage facilities within Lebanon to connect with future planned sewerage facilities, subject to the flow limitations of this Agreement.

2.4 JURISDICTION

Upon mutual agreement of the Parties, the jurisdiction provided in Sections 2.2 and 2.3 hereof may be modified on the basis of economic or engineering feasibility.

2.5 SEWER CONSTRUCTION

The wastewater flow and loading limitations of this agreement are established to ensure that the size and capacity of the Hanover system will be and remain sufficient to serve the contemplated needs of both Hanover and Lebanon. After signing this Agreement and during its term, Lebanon shall reasonably provide notification of not more than thirty (30) days to the Hanover Director of Public Works of proposed sewer construction and connections to Lebanon's system, so that the Hanover Director of Public Works will be able to coordinate the operation and maintenance of the Hanover system with the development of the Lebanon system.

Lebanon shall submit all proposed sewer construction and connections (NHDES, Application for Sewer Connection Permit) as required by the New Hampshire Department of Environmental Services (NHDES) for review and approval. Copies of all such submittals and subsequent approvals by the NHDES shall be sent to the Hanover Director of Public Works.

2.6 LAWS AND ORDINANCES

Lebanon, within its jurisdiction, shall comply with, and strictly enforce, all federal, state, and local laws, ordinances, rules, regulations, by-laws, permits, and agreements relating to water pollution control in the Lebanon Service Area, and to permitted wastewater characteristics, collection, treatment, and disposal methods, as they apply to Lebanon's system and to Hanover's system. Lebanon shall be liable to Hanover for any damage caused to the Hanover system resulting from the violation of any such law, ordinance, rule, regulation, by-law, permit, or breach of this agreement by Lebanon or any of its users.

Hanover shall comply with, and strictly enforce, all federal, state, and local laws, ordinances, rules, regulations, by-laws, permits, and agreements relating to water pollution control in Hanover, and to permitted wastewater characteristics, collection, treatment, and disposal methods, as they apply to Hanover's System. Hanover shall be liable to Lebanon for any

damage caused to Lebanon's system resulting from a violation of any such law, ordinance, rule, regulation, by-law, permit, or breach of this Agreement by Hanover or any of its users.

Lebanon shall adopt, and from time to time revise, a Sewer Use Ordinance, local limits, and an Industrial Pretreatment Program. Hanover shall provide Lebanon with a notice of any proposed revisions to the Hanover Sewer Use Ordinance and a copy of the proposed and final revisions that affect the flow and loadings allocated to Lebanon. Revisions that affect the limits and/or allocations contained in this Agreement shall be incorporated as an amendment to this Agreement. If necessary, Lebanon shall, within a reasonable time not to exceed 120 days, amend its Code as needed to comply with this Agreement.

2.7 LIABILITY INSURANCE

Lebanon shall defend, indemnify and hold harmless Hanover, and its officials and employees, from and against any and all Losses incurred by Hanover arising out of or relating to Lebanon's alleged negligence or breach of its obligations or warranties set forth in this Agreement, in whole or in part, except to the extent such Losses are caused by negligent acts or omissions of Hanover.

Lebanon shall procure and maintain during the term of this Agreement such public liability and property damage insurance, as shall protect the Parties from claims for damages, for personal injury, including accidental death, and for property damage, which may arise from operations by Lebanon under this Agreement, or by its agents, servants, employees or licensees. Lebanon shall, at its sole expense, obtain and maintain in force, or shall require its subcontractors performing work on behalf of Lebanon to obtain, insurance as described below:

a. General Liability – minimum of $5,000,000
b. Automobile Liability – minimum of $5,000,000
c. Workers Compensation – to the New Hampshire statutory level and $2,000,000 for each accident

Town of Hanover shall be named as an "Additional Insured" and "Certificate Holder" on a Certificate of Insurance (that references this Intermunicipal Wastewater Agreement) issued by the insurance carrier for Lebanon. This Certificate of Insurance shall be provided to Hanover to accompany this Agreement.

Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of any governmental immunity (such as municipal, state or federal) from which such protections are hereby reserved to each respective governmental entity liability provided by law, and subject to the provisions of RSA 507-B, or any other law defining the scope of municipal liability in tort.

Lebanon must provide to Hanover written notice of any cancellation of coverage noted in this article of this agreement at least thirty (30) days prior to such cancellation.

2.8 PERFORMANCE

No failure or delay in performance of this Agreement by either party shall be deemed to be a breach thereof when such failure or delay is occasioned by, or due to, any Act of God, strikes, lockouts, wars, riots, epidemics, explosions, sabotage, breakage or accident to machinery or lines of pipe, the binding order of any court or governmental authority, or any other cause, whether of the kind herein enumerated or otherwise not within the control of the party claiming suspension, provided that no cause or contingency shall relieve Lebanon of its obligation to make payment for wastewater entering the Hanover system, and provided further, that the Hanover Public Works Department shall assume full responsibility for maintaining service in the absence of the above happening, and to maintain standards of treatment as established by the NHDES and the EPA.

2.9 TEMPORARY DISCONTINUANCE

Proper operation of the system may require that the Hanover Public Works Department temporarily discontinue all or part of the service to Lebanon. A minimum of twenty-four (24) hour notice of such discontinuance shall be given to Lebanon unless an emergency disruption occurs. Any claim for damages for such temporary discontinuance, which is not mutually resolved between Lebanon and Hanover, shall be subject to the dispute resolution clause in Section 2.12 of this Agreement.

2.10 TERM OF AGREEMENT: RENEWAL

The term of this Agreement shall be ten (10) years from the date hereof. The Agreement shall be automatically renewed for successive periods of five (5) years, after the expiration of the initial 10-year agreement. At any time either party may elect to terminate this Agreement by written notice to the other with five (5) years notice.

Upon written notice, this agreement may be modified to incorporate new or revised federal, state, or local standards or requirements or to address any significant alterations or changes not specified.

Lebanon shall contract with a firm specializing in wastewater engineering to perform a wastewater feasibility study, which study shall be completed by December 31, 2013. This study shall outline the requirements should a termination of this agreement be necessary or should conditions occur which would prevent Hanover from continuing to receive flow from one or more of Lebanon's connections. The elements to be evaluated shall include regulatory requirements, permitting, treatability, costs, and time to implement infrastructure changes and any other elements or considerations identified to remove Lebanon's flow from

the Hanover system. Upon completion of the initial feasibility study, Lebanon shall complete an updated study one year prior to each five year renewal term and shall provide a certification statement certifying that it can meet the steps identified to remove Lebanon's flow from the Hanover system.

2.11 ENFORCEMENT OF AGREEMENT

In the event that either Party fails to comply with the terms or conditions of this Agreement, Hanover or Lebanon shall give notice of said failure of compliance and Hanover or Lebanon shall immediately and diligently proceed to cure the default. If Hanover or Lebanon fails to respond with corrective methods or procedures to cure the default for 30 days after said notice, Hanover or Lebanon may proceed against Hanover or Lebanon at law or in equity to enforce all provisions of the Agreement.

2.12 DISPUTES

All claims, questions and disputes between Lebanon and Hanover arising out of, or in relation to the interpretation, application, enforcement, or implementation of this Agreement shall be subject to non-binding mediation. Either party may demand mediation by serving a written notice stating the essential nature of the dispute, the actions, amount of time, or money claimed, and requiring that the matter be mediated within sixty (60) days of serving notice. The mediation shall be administered by a person or organization that the parties agree upon. In the absence of a mutually agreeable mediator, the dispute will be mediated by the American Arbitration Association in accordance with their most recent Commercial Arbitration Rules. No action or suit may be commenced unless the mediation occurred but did not resolve the dispute, or a statue of limitation would elapse if suit were not filed prior to sixty (60) days after service notice.

3.0 WASTEWATER CONTROLS / MANAGEMENT

3.1 LIMITATIONS ON FLOW AND STRENGTH CHARACTERISTICS

The net wastewater flow, BOD, and TSS from within the Lebanon Service Area, through the monitoring devices outlined in Section 4.2, into Hanover's system shall be subject to the following daily limitations:

Peak Daily Flow:	Gile Tract Watershed, MGD	0.90
	Route 10, MGD	0.187
	Total, MGD	1.087
Average Daily Flow, MGD (1)		0.65

Daily Average 5-Day BOD, lbs/day (1)	1,050
Daily Average TSS, lbs/day (1)	945

(1) Average daily values shall be based on quarterly average metered flow and strength and reported as specified per section 4.11

(2) The maximum BOD and TSS lbs/day loadings are based on an Average Daily Flow of 650,000 gpd.

In the event that Lebanon's discharge exceeds 80 percent of the Biochemical Oxygen Demand (BOD) or Total Suspended Solid (TSS) loading levels of this Agreement or exceeds flow rates for any continuous 90-day period, Lebanon shall initiate the following actions:

a. Perform repeat sampling and analyses for BOD and TSS to verify compliance status with this agreement and negotiate an increase in the limiting quantities of this Agreement and conditions by which the increase will be accepted, if Hanover determines that there exists sufficient capacity in the Hanover system for handling and treating the wastewater flows and loadings; or

b. Reduce flow, BOD, or TSS or divert excess flow, BOD, or TSS to another facility, if Hanover determines that the Hanover system does not possess sufficient capacity for handling and treating the excess flows or loadings and an acceptable resolution is not reached. Hanover and Lebanon will agree on an appropriate timeframe for such reduction or diversion of flow, based on the specific circumstances.

3.2 LIMITATIONS ON POLLUTANTS

Hanover has enacted an Industrial Pretreatment Program and Municipal Sewer Use Ordinance which limits the discharge of certain pollutants into its system. The Hanover Municipal Sewer Use Ordinance and local pollutant limits may be revised from time to time to reflect changes in the environmental criteria on which the Ordinance is based. Limits shall apply at the points of connection between the Lebanon system and the Hanover system (Appendix B).

Lebanon shall enact limitations that ensure that pollutant loadings allocated to Lebanon are not exceeded. Allocated pollutant loading documentation for Metals and Cyanide are maintained in Appendix C of this Agreement.

In the event that Lebanon's discharge exceeds 80 percent of the allocated loadings for metals and cyanide contained in Appendix C of this Agreement, Lebanon shall initiate the following actions:

a. Perform repeat sampling and analyses of the pollutants exceeding 80 percent of the allocated values to verify compliance status with this agreement.

b. Should repeat analyses verify that 80 percent of the allocated loadings are being exceeded, additional or new sources for that pollutant are not permitted.

3.3 DEFECTIVE SYSTEM

The proper maintenance of systems is required to assure that the limitations outlined in Section 4.0 are not exceeded. If any of Lebanon's system is found to be in defective condition, and such condition adversely affects the operation of the Hanover system, or causes Lebanon to exceed the limitations set forth in this section, then Lebanon shall correct such defective condition within 120 days or a mutually agreed up time.

3.4 INDUSTRIAL DISCHARGE PROGRAM / PERMITS

Lebanon shall adopt a Sewer Use Ordinance as specified by state and federal guidelines which is as stringent as the Hanover Municipal Sewer Use Ordinance. Lebanon shall also administer an Industrial Pretreatment Program (IPP) for its commercial and industrial users tributary to Hanover. IPP implementation activities by Lebanon include Industrial Discharge Permit (IDP) issuance, inspection, sampling, and enforcement. Lebanon shall adopt an IPP as required to meet the concentration and loading limitations contained within this Agreement.

New or increased Industrial User (IU) discharges from Lebanon are subject to prior review by Hanover. To implement this review process, Lebanon shall forward to Hanover a copy of the Indirect Discharge Request (IDR) submittal and supporting documentation. Subsequent to review of the materials forwarded by Lebanon, Hanover may consider several actions including:

a. Requesting supplemental material, such as draft Industrial Wastewater Discharge Permits;
b. Rejecting the discharge; or providing conditional approval of the proposed discharge.

Upon review and approval of the IDR by Hanover, a "Host Community Acknowledgement" form will be submitted by Hanover to the NHDES Water Division. In accordance with NHDES procedures, the IDR submittal will not be reviewed until the completed acknowledgement is received.

Subsequent to IDR approval, Lebanon may issue and IDP to the IU. Industrial Discharge Permitting shall contain Pollutant Limitations which, along with other contributing IU's, will not cause the loading allocations granted to Lebanon to be exceeded. If Lebanon enforces a more stringent collection system screening level, the more strict Party level shall be enforced.

No IU shall be permitted to discharge to the Lebanon system that is tributary to the Hanover System without first obtaining the required IDP. No such permit shall be issued by Lebanon until it determines from the application and from its own investigation that the applicant and

the wastewater discharge of the applicant will comply with the requirements of all federal, state and local laws, ordinances, rules and regulations.

Copies of all new IDP's shall be forwarded to Hanover. All IDP applications and monitoring records shall be maintained as a part of the records of Lebanon's system and made available to Hanover upon request.

Relative to industrial wastewater flow directed to Hanover, both Lebanon and Hanover officials are hereby deemed the agents and representatives of Lebanon for the purpose of undertaking compliance and enforcement actions, including civil, criminal, and equitable court proceedings. Hanover officials may undertake such action only after Lebanon has failed to take such action after reasonable notice by Hanover. Thirty (30) days notice shall be considered reasonable in all cases except, in case of emergency, a lesser period of time shall be reasonable as warranted by the circumstances. All expenses associated with such Hanover intervention shall be the responsibility of Lebanon.

3.5 INSPECTION OF FACILITIES / RECORDS

Hanover shall, upon notice to Lebanon, have the right to inspect all sewers, drains and wastewater facilities in Lebanon which contribute flow to the Hanover system. In an emergency situation, Hanover shall notify Lebanon Dispatch Center of the need to inspect the relevant facilities in Lebanon prior to accessing said facilities. It will be incumbent on the staff of Lebanon Dispatch to notify the relevant Lebanon staff in the event Hanover must gain emergency access to the Lebanon system. Hanover may inspect all engineering records of Lebanon wastewater facilities and drainage systems which contribute flow to the Hanover system upon five (5) days notice during ordinary business hours. Lebanon shall provide to Hanover, copies of all applicable requirements under Capacity, Management, Operation and Maintenance (CMOM) requirements on an annual basis for facilities and conveyance systems from Lebanon into the Hanover system.

3.6 SEPTAGE WASTES

No septage of any kind, whether it is treated or untreated, shall be discharged into the Lebanon system which is tributary to Hanover's system.

3.7 MONITORING REQUIREMENTS AND DEVICES

Sampling and measurements as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be collected at the monitoring points specified in this Agreement and represented on the Lebanon Connections Map, Appendix B. Monitoring points shall not be changed without notification to and approval from Hanover. From the period beginning on the effective date of this agreement, Lebanon shall collect and analyze representative samples not less frequently than indicated in the table below.

Lebanon shall provide flow metering and pollutant monitoring to measure and record flows and monitor pollutants from Lebanon to Hanover at the points of interception for the Centerra, DHMC and Sachem Village connections to the Hanover system as depicted in Appendix B. Flow monitoring shall be continuous with data recording at a minimum of 15 minute increments and shall be accessible 24 hours per day by both Hanover and Lebanon. Flow monitoring devices shall be calibrated at a minimum annually by a certified third party. Pollutant monitoring shall be as per Section 3.7. All the cost of the devices and all related monitoring which measures or monitors the discharge from Lebanon into Hanover shall be borne by Lebanon.

PARAMETER[4]	SAMPLE TYPE / LOCATION / FREQUENCY[1]	DATE(S) REPORTS DUE[3]
DISCHARGE POINTS: ONE ON MEDICAL CENTER DRIVE AND ONE ON ROUTE 120, AS SHOWN IN APPENDIX B MONITORING MANHOLES #1 AND #2		
Aluminum, arsenic, cadmium, chromium, copper, cyanide (grab), iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, zinc.	Time composite 1 x year (JAN – DEC) [2]	January 15th[3] (and as required by Section 4.1.1 of this Agreement)
Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS),	Time composite 2 x year (JAN – DEC) [2]	July 15th, January 15th[3] (and as required by Section 4.1.1 of this Agreement)
Flow	Quarterly meter readings of all incoming water meters, Report quarterly average flows (GPD) for each quarter during the reporting period. (JAN – JUN and JUL – DEC)	July 15th, January 15th[3] (and as required by Section 4.1.1 of this Agreement)
Flow	Daily meter readings from wastewater flow meters. (JAN – JUN and JUL – DEC)	July 15th, January 15th[3] (and as required by Section 4.1.1 of this Agreement)
DISCHARGE POINT: BOUNDARY LINE FROM DUNSTER DRIVE AND WYETH ROAD (SACHEM), AS SHOWN IN APPENDIX B MONITORING MANHOLE #3		

PARAMETER[4]	SAMPLE TYPE / LOCATION / FREQUENCY[1]	DATE(S) REPORTS DUE[3]
Aluminum, arsenic, cadmium, chromium, copper, cyanide (grab), iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, zinc.	Time composite 1 x year (JAN – DEC) [2]	January 15th[3] (and as required by Section 4.1.1 of this Agreement)
Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS),	Time composite 2 x year (JAN – DEC) [2]	July 15th, January 15th[3] (and as required by Section 4.1.1 of this Agreement)
Flow	Quarterly meter readings [4] of all incoming water meters, Report quarterly average flows (GPD) for each quarter during the reporting period. (JAN – JUN and JUL – DEC)	July 15th, January 15th[3] (and as required by Section 4.1.1 of this Agreement)
Flow	Daily meter readings from wastewater flow meters. (JAN – JUN and JUL – DEC)	July 15th, January 15th[3] (and as required by Section 4.1.1 of this Agreement)

NOTES:

(1) If Lebanon monitors any pollutant more frequently than required by this agreement, using test procedures prescribed in 40 CFR Part 136 or amendments thereto, the results of such monitoring shall be submitted to Hanover within 7 days after receipt of analytical results.

(2) Flow-proportional or time composite samples shall be set up to collect a minimum of 24 samples over the duration of a normal day.

(3) The January reports shall cover the prior 12-month period (January – December)

(4) Samples are required to be analyzed by a State-certified analytical laboratory. Copies of analytical laboratory reports must be submitted with all compliance reports.

3.8 REPORTING REQUIREMENTS

In addition to the reporting requirements contained in 3.7 above, Lebanon shall submit a revised user inventory spreadsheet for users in the Lebanon Service Area annually. The spreadsheet should indicate if the user is residential, commercial, or industrial, and the permitting status of the user if commercial or industrial.

3.8.1 Reporting of Emergencies

Immediate notification by Lebanon is required upon the discovery of an accidental or intentional discharge of substances prohibited by the Hanover Sewer Use Ordinance or by this Agreement. Immediate emergency reporting shall be required for any slug loads or spills having potential to adversely impact the Hanover system. Emergency notification shall be directed to the following unless otherwise noted in a specific section:

During normal business hours which are 7:00 a.m. to 3:30 p.m., Monday through Friday, excluding Town holidays, for emergency notification, including illicit discharge, call 643-2362.

At all other times, notify: On-Call Operator through the Hanover Dispatch Center at 643-2222.

3.8.2 Written Reporting

All written reports required by this Agreement shall be submitted to the Wastewater Superintendent and the Director of Public Works at the following address: PO Box 483, Hanover, NH 03755.

4.0 COSTS AND CHARGES

4.1 LEBANON TO PAY FOR SERVICE

In consideration of the wastewater service to be provided by Hanover under the provisions of this Agreement, Lebanon agrees to pay all charges as described within this section of this Agreement.

Lebanon shall be responsible for all costs of maintenance, operation and repair of the sanitary sewer system within Lebanon.

4.1.1 Billings

For billing purposes, Hanover has established a Rate & Fee Schedule for all customers. This schedule is reviewed and revised as necessary on an annual basis. The current Rate & Fee Schedule is available on Hanover's website or from the Hanover Administrative Services Department. For the purposes of this Intermunicipal Wastewater Agreement, the sole Hanover customer for properties within the city of Lebanon discharging to Hanover facilities shall be the City of

Lebanon. Lebanon shall be ultimately responsible for all billed amounts incurred by it or by any of the discharging properties within its city limits.

On a quarterly basis, Lebanon shall submit to the Hanover Administrative Services Department and a copy to the Hanover Public Works Department, the total water meter readings for all accounts, numbers of accounts, meter sizes, and flow and strength category for each account and any sampling results from all sampling points required by Hanover in Table 3.7 during that quarter. This information will be delivered to Hanover no later than 10 working days after Lebanon's quarterly utility billing date to its customers. Hanover shall generate a single quarterly usage bill to the City of Lebanon based upon this information, which will include all Lebanon connections discharging to the system.

Within thirty (30) days of the billing date on the quarterly Hanover bill to Lebanon, Lebanon shall make a quarterly payment to Hanover based upon the above requirements. Late payments shall be charged interest at twelve (12) percent per annum. Said payment shall be mailed to the Hanover Administrative Services Department, PO Box 483, Hanover, New Hampshire 03755.

Annually Hanover shall determine if a surcharge is applicable for the previous annual period as provided in Section 4.2. If not paid within thirty (30) days of the billing date or if no formal letter of protest of such surcharge is received, Lebanon shall be in default and shall pay a twelve (12) percent per annum interest charge on periodic billings.

4.2 RECORDS INSPECTION

Lebanon may inspect, review, and copy any and all records maintained by Hanover that relate to costs, rates, or charges under this Agreement. Independent certified public accountants may act on behalf of Lebanon and at Lebanon's expense.

Hanover may inspect, review, and copy any and all records maintained by Lebanon that relate to costs, rates, or charges under this Agreement. Independent certified public accountants may act on behalf of Hanover and at Hanover's expense.

4.3 FLOW RECORDS AND TESTING REQUIREMENTS

Lebanon shall provide water meter records for all services connected to the collection system in the service area outlined in this agreement and in accordance with the timeframe specified in Section 3.7. Lebanon shall maintain a meter testing program meeting or exceeding the requirements of American Water Works Association C700.

5.0 ADMINISTRATION

5.1 JOINT MEETINGS

On a mutually selected day during June and another mutually selected day during December of each year, regular joint meetings of Lebanon and Hanover shall be held at the offices of the Hanover Department of Public Works at 194 Lebanon Street in Hanover. Special joint meetings may be called by the Hanover Director of Public Works on his/her own motion and shall be called by the Lebanon Director of Public Works or his designee on request of Lebanon. The Hanover Director of Public Works shall represent Hanover and shall preside over said meetings. The Lebanon Director of Public Works or his/her designee shall represent Lebanon at said meetings. The Hanover Director of Public works shall give fifteen (15) days written notice of all regular and special meetings. He/she shall cause to be made, kept and distributed to Lebanon a record of the minutes of each meeting.

Hanover shall review with Lebanon, at each semi-annual meeting, all items relating to operation and maintenance of the system. Other issues which may be addressed include; renewal of the Agreement, anticipated improvements, monitoring issues, industrial pretreatment, operational changes and other related issues.

6.0 UNIFORM PROVISIONS

The Parties hereto believe they have fairly negotiated an Agreement which allocates the benefits and costs of their respective water pollution abatement programs on an equitable basis. Hanover agrees that it will not grant more favorable terms and/or conditions to any other municipality than are contained in this Agreement.

IN WITNESS WHEREOF, the Parties to this Agreement have caused this instrument to be signed in sextuplicate the day and year first above written.

CITY OF LEBANON BY ITS
CITY MANAGER

BY: _____ DATE: 10/10/2012

TITLE: City Manager

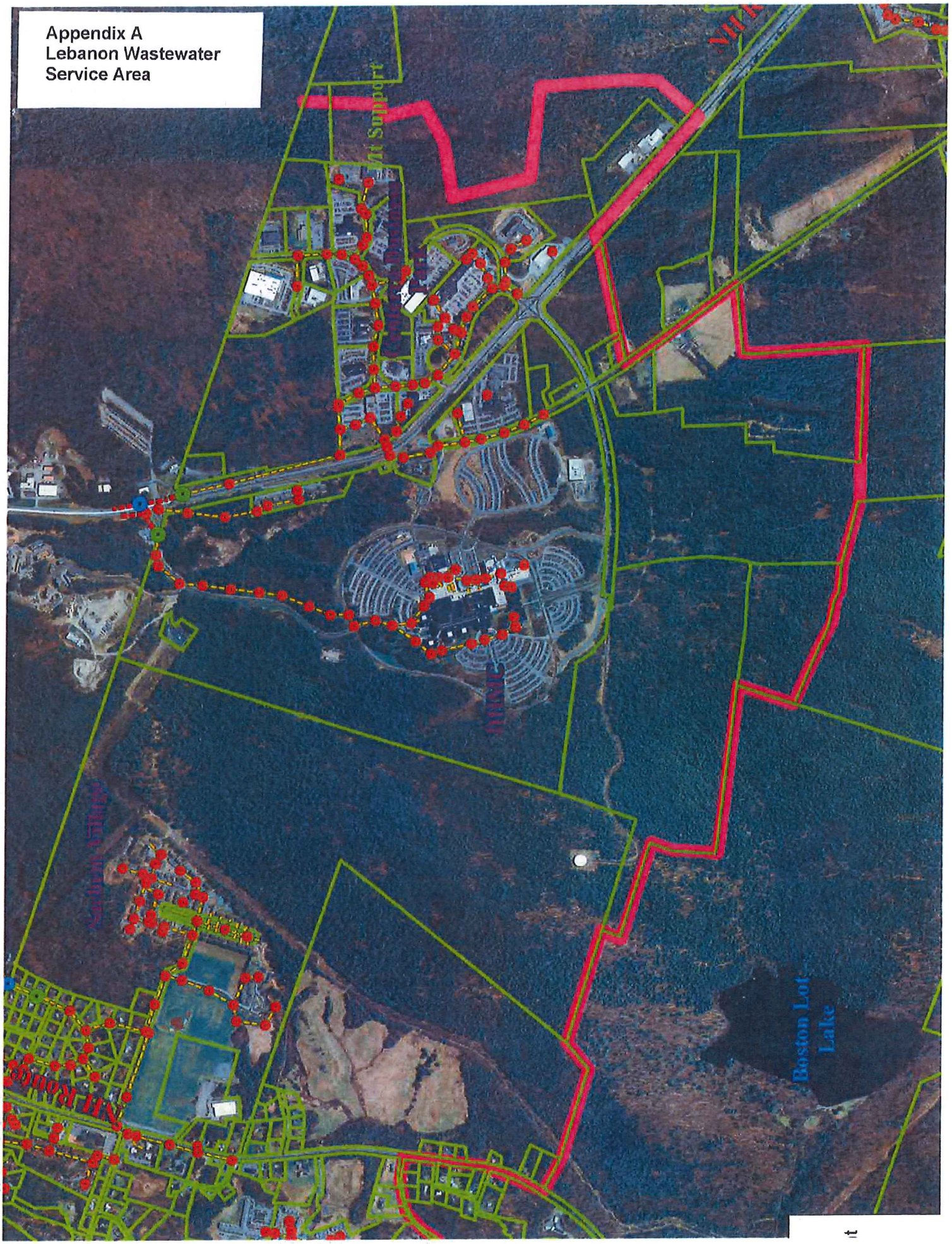
TOWN OF HANOVER BY ITS
TOWN MANAGER

BY: _____ DATE: 10/9/12

TITLE: Town Manager

APPENDIX A
LEBANON WASTEWATER SEVICE AREA

Appendix A
Lebanon Wastewater
Service Area



APPENDIX B
LEBANON POINTS OF CONNECTION MAPS

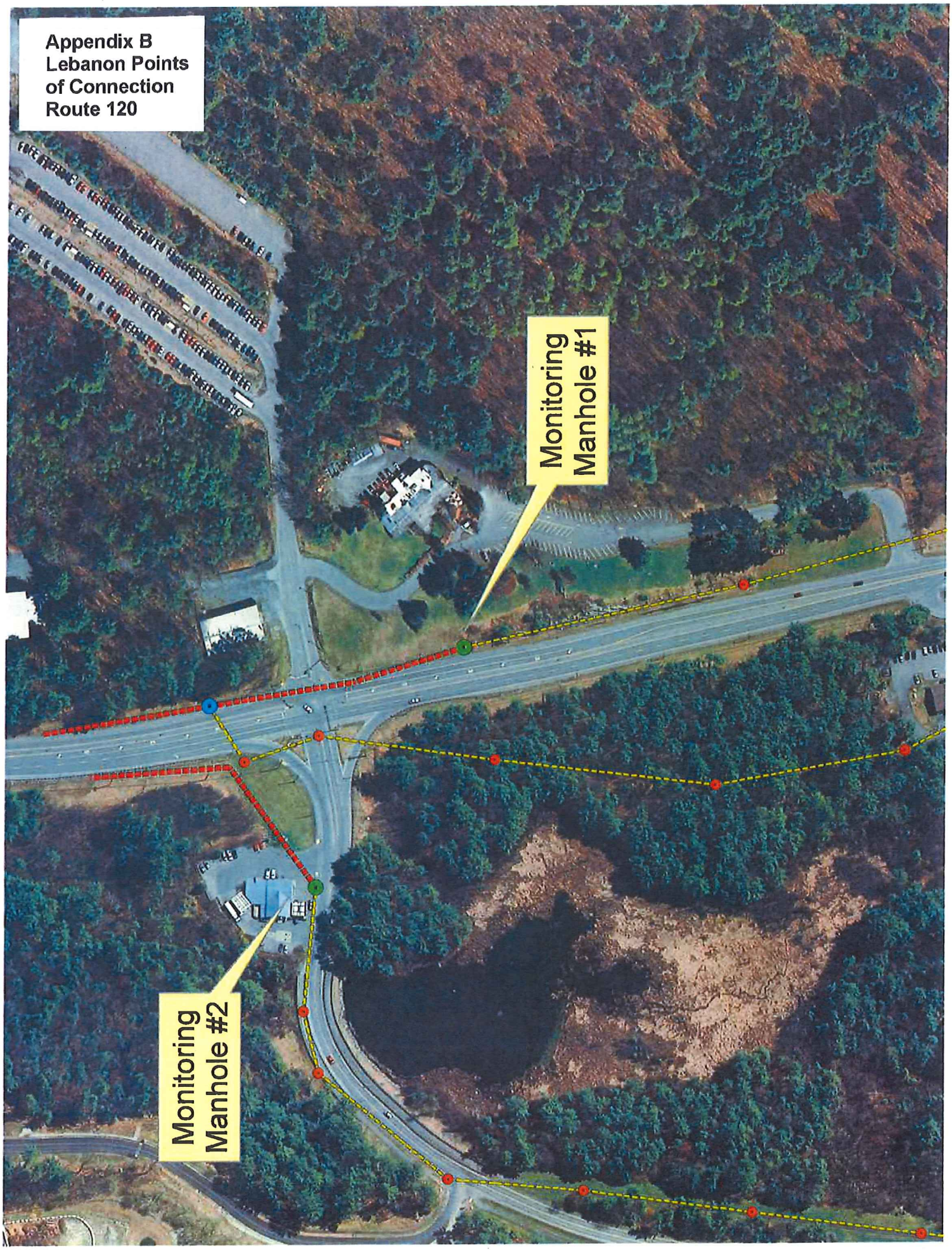
APPENDIX C
SATELLITE COMMUNITY ALLOCATED LOADINGS AND INDUSTRIAL USER SCREENING LEVELS

Allocated Loadings for Metals and Cyanide

POLLUTANT	SATELLITE COMMUNITY TOTAL ALLOCATED LOADINGS (lb/day)	POLLUTANT	SATELLITE COMMUNITY TOTAL ALLOCATED LOADINGS (lb/day)
Aluminum	100.5	Lead	0.326
Arsenic	0.021	Manganese	5.589
Cadmium	0.014	Mercury	0.011
Chromium (III)	0.451	Molybdenum	0.041
Chromium (VI)	0.451	Nickel	0.246
Copper	1.119	Selenium	0.034
Cyanide (T)	0.073	Silver	0.046
Iron	33.794	Zinc	2.350

Appendix C – Continued on next page


Appendix B
Lebanon Points
of Connection
Route 10
N MAIN ST
S MAIN ST
WYETH FARM CIR
GILSON RD
CAMBRIDGE PL
BEACON RD
LASHER RD
LONGWOOD LN
DUNSTER DR
BIRCHBROOK ST
Monito


Appendix B
Lebanon Points
of Connection
Route 120
Monitoring
Manhole #1
Monitoring
Manhole #2

APPENDIX C- Continued
SATELLITE COMMUNITY ALLOCATED LOADINGS AND INDUSTRIAL USER SCREENING LEVELS

Industrial User Screening Levels

POLLUTANT	mg/l	POLLUTANT	mg/l
Acetone	372	Methyl isobutyl ketone (MIBK)	36
Benzene	0.001	Methyl tert-butyl ether (MTBE)	5.5
Benzidine	0.009	Methylene chloride	1.0
Benzo(a)anthracene	0.009	Oil & Grease (animal and vegetable origin)	250
Benzo(a)pyrene	0.009	Oil & Grease (petroleum origin)	100
bis-2-Ethylhexyl phthalate	0.399	Phenol	50
Carbon disulfide	0.007	Phenols (total)	1.0
Chloride	1,500	Sulfate	500
Chlorine (Total Residual)	6.0	Sulfide	1.0
Chloroform	0.065	Sulfite	280
p-Cresol (4-methylphenol)	0.134	Tetrachloroethylene (PCE)	0.23
1,2-Dichloropropane	3.0	Tetrahydrofuran	205
Di-isobutylketone (DIBK)	8.0	Toluene	0.69
Ethylbenzene	1.35	1,1,1-Trichloroethane (TCA)	2.7
Formaldehyde	1.47	Trichloroethene	0.32
Isophorone	0.009	Vinyl chloride	0.0023
Isopropyl alcohol	1,488	Xylenes	1.4
Methyl ethyl ketone (MEK)	160	pH (SU's)	5.5-11

Appendix F

Rates & Fees

Sewer User Fee History *(quarterly charges):*

SEWER DEPARTMENT						
Base Capacity Charge plus Flow Charge	**Adopted FY2014-15**		**Adopted FY2015-16**		**Adopted FY2016-17**	
Meter Size*	Quarterly Base Capacity Charge	Flow Charge per 1000 Cubic Feet of Water Used - See Below**	Quarterly Base Capacity Charge	Flow Charge per 1000 Cubic Feet of Water Used - See Below**	Quarterly Base Capacity Charge	Flow Charge per 1000 Cubic Feet of Water Used - See Below**
5/8"	$22.00	varies	$22.00	varies	$23.00	varies
3/4"	$61.00	varies	$62.00	varies	$65.00	varies
1"	$159.00	varies	$162.00	varies	$170.00	varies
1 1/2"	$318.00	varies	$324.00	varies	$340.00	varies
2"	$508.00	varies	$518.00	varies	$544.00	varies
3"	$1,195.00	varies	$1,219.00	varies	$1,280.00	varies
4"	$1,868.00	varies	$1,905.00	varies	$2,000.00	varies
6"	$11,207.00	varies	$11,431.00	varies	$12,003.00	varies
Average Annual Domestic Bill (185 gallons/day)		$360.00		$365.00		$383.00
Unmetered Sewer Accounts - Include 25% Surcharge Above Average Annual Domestic Bill		$450.00		$456.25		$478.75
Quarterly base charge for single family residence on a private well with a water treatment system installed prior to July 1, 2010 which discharges to the municipal wastewater system - Application of this fee to be determined in consultation with Public Works staff.					$23.00	
* Meter Size:	Meter Size is generally determined by fixture count.					
** Sewer Flow Charge per 1000 Cubic Feet of Water Used -- Flow & Strength Charge per 1000 CF (kcf):						
Category A BOD/TSS < 250 mg/l (most residential accounts)					$32.31	per kcf
Category B BOD/TSS > 250 < 400 mg/l					$36.42	per kcf
Category C BOD/TSS > 400 mg/l					$40.67	per kcf

Appendix G

Capital Improvement Plan (CIP)

Description	Location	Replacement year	life	Cost @ next Replacement
Domestic boiler recirculation pumps	121 South Main	FY36	20	$24,749
Domestic Boiler	WRF Boiler Room	FY46	30	$127,579
WRF Roof	WRF	FY35	20	$237,859
primary pump grinders	Wastewater Treatment Facility	FY26	10	$15,079
Grit removal system	121 South Main	FY32	15	$498,208
Air Compressor	Rolling Stock	FY18	15	$16,600
Pump Station #4	River Crest gravel pit	FY21	50	$798,249
Primary Clarifier rehabilition	Treatment Facility	FY19	35	$380,256
Final effluent flow meter	121 South Main	FY20	15	$13,311
Chemical feed pumps	121 South Main	FY20	15	$31,059
Truck 20224	Rolling Stock	FY20	12	$41,698
Truck 05220	Rolling Stock	FY20	10	$31,273
Skid Steer/Loader	Rolling Stock	FY21	15	$69,182
Flusher	Rolling Stock	FY21	11	$100,798
Cement Trailer	Rolling Stock	FY21	20	$11,326
Rodder	Rolling Stock	FY22	20	$23,358
Primary Pumps	Water Reclamation Facility	FY22	15	$40,472
Dissolved oxygen controllers	121 South Main	FY24	20	$14,465
Pump Station #2	Ledyard Bridge	FY24	50	$849,602
Truck 16222	Rolling Stock	FY24	10	$48,217
Car - General Purpose	Rolling Stock	FY24	10	$21,215
aeration blowers	121 South Main	FY25	20	$387,680
HVAC components	121 South Main	FY25	20	$276,914
Chlorination pumps and bulk storage	121 South Main	FY25	20	$24,615
Flow meter	121 South Main	FY25	20	$22,153
Bulk chemical storage tanks	121 South Main	FY25	20	$18,461
Exhaust fan	121 South Main	FY25	20	$20,922
Effluent flow meter	121 South Main	FY25	20	$12,307
Dechlorination pumps and bulk storage	121 South Main	FY25	20	$24,615
Electric heater	121 Spouth Main	FY25	20	$30,768
Sludge Trailer	Rolling Stock	FY25	20	$116,919
Backhoe loader	Rolling Stock	FY26	10	$59,687
Influent screen	121 South Main	FY27	15	$205,274
Magnetic flow meter - 8"	121 South Main	FY27	20	$12,830
Explorer	Rolling Stock	FY27	10	$37,847
Digester 2 gas pressure sensor	121 South Main	FY28	15	$13,099
Digester 2 membrane cover air system	121 South Main	FY28	15	$13,099
Digester 2 radar sensor	121 South Main	FY28	15	$19,649
Flow meters	121 South Main	FY28	15	$39,297
Mixer control panels	121 South main	FY29	25	$33,435
Truck 27106	Rolling Stock	FY29	12	$106,993
Headworks HVAC	121 South Main	FY30	15	$13,655
Heat trace system	121 South Main	FY31	25	$25,095
Digester transfer pumps	121 South Main	FY32	20	$59,785
Hazardous gas alarm panel	121 South Main	FY32	20	$21,352
Centrifuge screw conveyor	121 South Main	FY32	20	$92,524
Centrifuge feed pump	121 South Main	FY32	20	$64,055
Digester mixing pump	121 South Main	FY32	20	$64,055
Digester spiral heat exchangers	121 South Main	FY32	20	$68,326
Digester recirculation pump	121 South Main	FY32	20	$39,857
Primary digester cover	121 South Main	FY32	20	$170,814
Flow meter local displays	121 South MAin	FY32	20	$85,407
Motor operated valves	121 South Main	FY32	20	$163,697
Centrifuge conveyor #2	121 South Main	FY32	20	$59,785
Centrifuge conveyor #1	121 South Main	FY32	20	$28,469
Draft tube mixer	121 South Main	FY32	20	$49,821
Digester gas holding membrane	121 South Main	FY33	20	$254,335
Digester 2 mixing pump	121 South Main	FY35	20	$60,601
Digester 2 sludge level sensor	121 South Main	FY35	20	$15,150
Digester heat exchangers	121 South Main	FY35	20	$93,932
Digester 1 recirculation pump	121 South Main	FY35	20	$37,876
4 head 480 volt pole light	121 South Main	FY35	30	$18,938
Chemical feed heat trace system	121 South Main	FY35	20	$15,150
Automatic transfer switch	121 South Main	FY37	25	$86,863
Digester level sensor	121 South Main	FY37	25	$16,583
Pump Station #5	Girl Brook & Lyme Rd	FY37	30	$742,094
Trash Pump	Rolling Stock	FY43	30	$35,781
Syphon PS #10	Greensboro & 120 intersection	FY47	75	$274,055
Chlorine contact tanks	121 South Main	FY56	50	$1,875,214
Pump station #3	Brook Road	FY56	50	$881,126

Five Year Capital Plan:

Description	Location	Replacement year	life	Cost @ next Replacement
Air Compressor	Rolling Stock	FY18	15	$16,600
Pump Station #4	River Crest gravel pit	FY21	50	$798,249
Primary Clarifier rehabilition	Treatment Facility	FY19	35	$380,256
Final effluent flow meter	121 South Main	FY20	15	$13,311
Chemical feed pumps	121 South Main	FY20	15	$31,059
Truck 20224	Rolling Stock	FY20	12	$41,698
Truck 05220	Rolling Stock	FY20	10	$31,273
Skid Steer/Loader	Rolling Stock	FY21	15	$69,182
Flusher	Rolling Stock	FY21	11	$100,798
Cement Trailer	Rolling Stock	FY21	20	$11,326
Rodder	Rolling Stock	FY22	20	$23,358
Primary Pumps	Water Reclamation Facility	FY22	15	$40,472

Appendix H

Response Contractors

Business/Agency	Contact	Location	Phone
Analytical Services (biological & chemical testing Labs)			
Eastern Analytical		Concord, NH	(603) 228-0525
Endyne Labs			(603) 678-4891
NH State Lab		Concord, NH	(603) 271-9700
Auto Parts & Service			
Advance Auto Parts		W. Lebanon, NH	298-7036
AutoZone		Lebanon, NH	442-9517
Bond Auto Parts		Lebanon, NH	448-0930
Carquest		W. Lebanon, NH	298-8751
Flanders & Patch		Lebanon, NH	448-3363
Freightliner of NH		Lebanon, NH	448-9955
Gateway Motors		White River Jct., VT	802-295-3124
Miller Auto		Lebanon, NH	448-3770
Napa Auto Parts		Lebanon, NH	448-5944
Sabil & Sons		White River Jct., VT	802-295-7002
Sanel Auto Parts		W. Lebanon, NH	298-8759
The Car Store		Norwich, VT	802-649-1603
Townline Equipment		Plainfield, NH	675-6347
Barricades			
Hanover Public Works		Hanover, NH	643-3327
Hartford Highway		Hartford, VT	802-295-2580
Lebanon Highway		Lebanon, NH	448-3112
AW Direct			800-243-3194
Chief Supply			800-355-4893
Grainger			668-8495
New England Barricade		Newmarket, NH	800-365-8365
United Rental		Hooksett, NH	622-1555
West Fairlee Fire Dept. (cones)		West Fairlee, VT	Through Dispatch

Blasting Contractor			
Ibby Drilling & Blasting		Bradford, NH	938-5741
Key Drilling & Blasting		Sullivan, NH	847-9014
Maine Drilling & Blasting		Gardiner, ME	800-370-2338
Maine Drilling & Blasting		Barre, VT	802-476-0689
Rockaway Drilling & Blasting		Morristown, VT	802-888-7604
Concrete (Poured)			
Carroll Concrete		West Lebanon, NH	298-8777
L.E. Weed & Son		Newport, NH	863-1540
Cullen Concrete Pumping		Northfield, VT	802-286-8057
Concrete (Block)			
Arthur Whitcomb		West Lebanon, NH	298-5959
L.E. Weed & Son		Newport, NH	863-1540
Concrete Precast			
Arthur Whitcomb		West Lebanon, NH	298-5959
Central Concrete		Henniker, NH	(603) 428-7900
SD Ireland (formerly ST Griswald)		Williston, VT	(802) 863-2946
Camp Precast Concrete Products		Milton, VT	(888) 299-2401
L.E. Weed & Son		Newport, NH	863-1540
Construction Pipe line supplies			
Ferguson Waterworks		West Lebanon, NH	(603) 298-5275
EJ Prescott		Concord, NH	224-9545
EJ Prescott		Barre, VT	(802) 223-2385
Cranes & Riggings			
Hutch Crane		W. Lebanon, NH	298-5581
Miller Construction		Windsor, VT	802-674-5525
Ted Knox Tree Service		Windsor, VT	802-448-2418
Vermont Crane Service		Rutland, VT	802-773-6211

Valley Sign			448-1974
Chippers		Lebanon, NH	448-2800
Henderson's Tree		White River Jct., VT	802-296-3771
Damage Assessors			
Eagle Appraisal		Norwich, VT	802-649-3331
Genesis Appraisal		Thetford, VT	802-785-2229
Granite Northland Associates		Canaan, NH	523-7200
Model Appraisal Service		West Lebanon, NH	298-8400
Dartmouth College			
FO&M			646-2485
Dump Trucks, Heavy Equipment & Excavators			
Hanover Highway	(Mutual Aid)		643-3327
Potter Construction	(dump trucks, excavator)	Wilder, VT	802-295-7764
Romano Trucking	(dump trucks, excavator)	West Lebanon, NH	298-5261
Nott Excavating	(dump trucks, excavator)	White River Jct., VT	802-295-2734
Pike	(dump trucks)	West Lebanon, NH	298-8773
Twin State Sand and Gravel	(dump trucks)	West Lebanon, NH	298-8705
Sheldrick Trucking	(dump trucks)	White River Jct., VT	802-295-7233
DR Key	(dump trucks, excavator & heavy equip)	Lebanon, NH	448-3060
L&M Service Contractor	(dump trucks, excavator & heavy equip)	Orford, NH	359-1956
Casella Construction	(dump trucks, heavy equip)	Rutland, VT	802-773-0052
Miller Construction	(heavy equipment)	Windsor, VT	802-674-5525
Milton	(excavator & heavy equipment)	Hopkinton, NH	746-4611
Milton	(excavator & heavy equipment)	Warner, NH	746-4671
Morrill Construction	(heavy equipment)	N. Haverhill, NH	727-6955
Nortrax	(heavy equipment)	Springfield, VT	802-885-6840
Trumbull-Nelson	(heavy equipment)	Hanover, NH	643-3658
United Construction	(heavy equipment)	Newport, NH	863-1240
United Rentals	(excavator & heavy equipment)	Hooksett, NH	622-1555
Upper Valley Equipment Rentals	(excavator & heavy equipment)	W. Lebanon, NH	298-8744

Plainfield Construction	(excavator)	Plainfield, NH	675-5277
Derby Mountain	(excavator)	Lyme, NH	795-4685
Northwood's	(excavator)	Thetford, VT	802-785-3162
K.W. Smith Trucking	(excavator)	Thetford, VT	802-785-4645
Dumpsters (see "Rubbish Removal & Dumpster")			
Casella Waste System			888-822-7056 802-281-4114
Dumpster Depot		Canterbury, NH	783-8050
Electricians			
Dana Electric	Larry Dana	Windsor, VT	(802) 299-7248
Royal Electric		Woodsville, NH	(603) 747-2722
Defiance Electric			(603) 632-7970
Engineers			
Dartmouth College	(Thayer School)		646-2230 or 646-1252
Underwood Engineers	Dave Mercier		(603) 230-9898
Wright Pierce			(603) 606-4420
GZA			(603) 623-3600
Engineering Ventures	Nik Fiore	Lebanon, NH	442-9333
Horizons Engineering	Will Davis	White River Jct., VT	802-296-8300
Shaal Structural	Tim Shaal	White River Jct., VT	802-296-8300
Root Enginnering (Dam)	Morris Root		
RSG	Erica Wygonic	White River Jct., VT	(802) 295-4999
Stewart Engineering (Structural)	Bruce Stewart		(802) 633-3300
CLD Consulting Engineers	Charlie Hirshberg	White River Jct., VT	(802) 698-0370
Pathways Consulting	Rod Finley	Lebanon, NH	448-2200
US Army CRREL		Hanover, NH	646-4100
Excavating Conctractors			
L & M Service Contractors	Ryan Morse	Orford, NH	359-1656
Casella Construction	Charlie Wadleigh		(802) 770-8695
DR Key		Lebanon, NH	
United Construciton	Gary Whipple	Newport, NH	(603) 863-1240

Northwoods Excavating	Zebulon Jenks		(802) 522-9195
Nott's Excavating		White River Jct., VT	(802) 295-2734
Ebngleberth Construciton			(802) 676-7715
Fuel (Gas, Diesel, Home Heating, Propane)			
Bob's Service Center	(gasoline - retail)	White River Jct., VT	802-295-2341
Circle K-Irving	(gasoline - retail)	Hanover, NH	643-9750
Co-Op Service Center	(gasoline - retail)	Hanover, NH	643-6650
Evans Group		Enfield, NH	448-3400
Go Go Mart	(gasoline - retail)	Hanover, NH	643-1526
Irving Oil		Lebanon, NH	526-4400
Jiffy Mart	(96 Hanover St)	Lebanon, NH	448-5510
Jiffy Mart	(151 Heater Rd)	Lebanon, NH	448-3075
The Fort	(gasoline - retail)	Lebanon, NH	448-5510
Champlain Farms	(gasoline - retail)	Lebanon, NH	448-6965
Suburban Propane	(propane)	Lebanon, NH	448-4708
Young's Propane	(propane)	White River Jct., VT	802-281-3037
Simple Energy	(diesel & propane)	West Lebanon, NH	298-7200
Evans Motor Fuels	(gasoline - retail)	Lebanon, NH	448-4221
Evans Motor Fuels	(diesel & gasoline-supplier)	Lebanon, NH	448-3400
Bradford Oil	(gasoline - supplier)	Bradford, VT	802-222-5252
Perry's Oil	(diesel & propane)	Bradford, VT	802-222-9211
Rymes	(diesel & propane)	West Lebanon, NH	298-8234
Irving Oil	(diesel, propane & gasoline-supplier)	West Lebanon, NH	298-8190
Ultramar	(diesel, propane & gasoline-supplier)	Woodstock, VT	802-457-2405
Cota and Cota	(diesel)	White River Jct., VT	802-295-0000
Patriot Fuels	(diesel)	Canaan, NH	632-4318
Pratt's	(propane)	Bradford, VT	802-222-5251
Generators			
Brookfield Service		Northfield, VT	802-485-6567
Controlled Power Co.		White River Jct., VT	802-296-2550

Dartmouth College		Hanover, NH	646-2288
Hanover Public Works		Hanover, NH	643-3327
Lyme Fire Dept.			Through Dispatch
Home Depot		W. Lebanon, NH	298-9540
Milton		Hopkinton, NH	746-4611
Milton (CAT)		Warner, NH	746-4671
Sears		W. Lebanon, NH	298-0600
United Rentals		Hooksett, NH	622-1555
Upper Valley Equipment Rentals		W. Lebanon, NH	298-8744
Gravel, Sand, etc.			
Lebanon Crushed Stone		W. Lebanon, NH	298-8554
Pompy Farms Crushed Stone		Norwich, VT	802-649-1092
Twin State Sand & Gravel		W. Lebanon, NH	298-8705
Don Crate & Sons		Enfield, NH	632-4331
Hanover Public Works			643-3327
HazMat			
Dartmouth College EHS			646-1762
Dartmouth College EHS		EHS Pagers (All Tech. Staff)	442-1058
NH DES	Petroleum Spill Response		271-3644
NH DES	Hazardous Material		271-3899
US Coast Guard Coastal Oil Spills			207-780-3251
National Response Center	Chemical or Oil spills that impact water		800-424-8802
US EPA	24-Hour Emergency inland spills response		617-918-1279
NH State Police	HazMat Response		271-3636
Clean Harbors Environmental	Vermont Field Office	Williston, VT	802-651-0553 802-651-0558
	Emergency Response	**1-800-OILTANK 1-800-645-8265**	
Clean Harbors Environmental	NH Field Office	Bow, NH	224-6626
	Emergency Response	**1-800-OILTANK 1-800-645-8265**	

Jersey Barriers			
Miller Construction		Windsor, VT	802-674-5525
ST Griswold		Williston, VT	802-658-6869
Pike Industries		West Lebanon, NH	298-8774
News Media			
Valley News		Lebanon, NH	298-8711
Union Leader		Manchester, NH	668-4321
Eagle Times		Claremont, NH	543-3100
Pipe sliping lining			
Green Mountian Pipeline			(802)763-7022
Portable Light Towers			
Hanover Public Works			643-3327
Casella Construction		Rutland, VT	802-773-0052
Nations Rent			668-8794
Grainger			668-8495
NH Dept. of Transportation			448-2654 271-6862
Pike Industries		West Lebanon, NH	298-8773
United Rentals		West Lebanon, NH	298-2916
Calkins		Danville, VT	800-282-7634
K&R		Orford, NH	353-4106
Vermont Septic		Randolph, VT	802-565-1763
Hartigan		Middlesex, VT	802-917-0575 888-978-0281
Power Companies			
Liberty Utilities			877-598-6326
Co-op			800-439-8864
CVPS/CT Valley			800-773-8833
PSNH			800-386-4086
Pumping Equipment			
Rain for Rent			800-742-7246
United Rentals			800-877-3687

Radio Equipment, Rental & Maintenance			
Ossipee Mtn. Electronics		Moultonborough, NH	802-295-7160 476-5581
Burlington Communications		Williston, VT	802-862-7092
Radio North		South Burlington, VT	800-762-8974
Joe Truss		East Corinth, VT	802-439-6066
Radio Stations			
WTSL/WGXL/WXXK(KIXX)/WVRR/WMXR			448-1400
WDCR/WFRD			646-3313
WHDQ			800-639-1061 298-0332
WNTK			448-0500 OR 526-9464
WEVH (NPR)			228-8910
Z97.1			802-775-7500
Rubbish Haulers & Dumpsters			
Beauchene's Waste Service	(rubbish removal)	W. Lebanon, NH	443-6354
Casella	(rubbish removal & dumpsters)	White River Jct., VT	802-281-4114 888-822-7056
Waste Management	(rubbish removal)	Londonderry	800-443-5515
Gary's Disposal		Claremont, NH	863-6335
Dumpster Depot	(rubbish removal & dumpsters)		783-8050
Sandbags			
Hanover Fire			643-3424
US Army Corps Engineers			646-4100
Gorman Bag			617-884-7600
Globe Bag			617-935-3311
NH National Guard			448-0024
NH Emergency Management			271-2231 OR 800-852-3792
SCADA Service			
LCS	Tom		(802) 345-2216
LCS	Brian		(802) 345-2214
Snowmobiles & ATVs			
Hanover Fire Department			643-2222

Thetford Fire Department			643-2222
Enfield Fire Department			643-2222
Snow Plowing / Removal			
Hanover Public Works	(Mutual Aid)		643-3327
Lahaye Property Maintenance		Lebanon, NH	443-0882
L&M		Orford, NH	359-1656
Casella Construction		Rutland, VT	802-773-0052
Percy Nott		Wilder, VT	802-295-1962
Twin State Sand & Gravel		West Lebanon, NH	298-8705
Speciality Contractors			
Fabrication/machining			800-649-1088
Construction Divers		Wilder, VT	(207) 273-3699
Coatings		Wilder, VT	(802) 247-3237
State & Federal Agencies			
DRED NH Forests & Lands	Brad Simpkins	Concord, NH	271-2214
Local DRED Forest Ranger			
Homeland Security	24-Hour Duty Officer	Concord, NH	800-852-3792
Homeland Security	State EOC	Concord, NH	800-852-3792
Homeland Security			
NH Public Works Mutual Aid			
NH Fish & Game	Brian Abrams	Concord, NH	271-3422; 271-3421
NH DOT (Iocal)			
NH Highway Department (DOT)		Concord, NH	271-3734
NH State Police	Duty Officer	Concord, NH	271-3636; 800-525-5555
Public Health Network			
State Fire Marshall		Concord, NH	271-3294
USDA-FS; Fire Planner	Erin Lane	Campton	536-6260 (P) 393-0372 (C)
USDA-FS; Forest Technician	John Neely	Campton	536-6261
Traffic Control Device Rental			
Nations Rent			668-8794

NH State Highway			448-2654
United Rentals			802-298-2916
Tree Removal			
Asplundh			529-1690 OR 800-248-8733
Bartlett Tree		Lebanon, NH	448-5150
Fox Tree		Enfield, NH	632-7468
Chippers		Lebanon, NH	448-4800
Henderson's Tree		White River Jct., VT	802-296-3771
Knox Tree		Brownsville, VT	802-484-9780
Morse Tree and Crane		Hartland, VT	802-436-2033
Ted Knox Tree Service		Windsor, VT	802-448-2418
Trees Inc.		Rutland, VT	802-773-2300
Truck Rental			
Budget			800-467-9337
RSD Transportation		West Lebanon, NH	298-5741
Ryder		Lebanon, NH	448-3600
U-Haul		Lebanon, NH	448-6400
TV & Radio			
WNTK			448-0500
WNNE			802-291-7228
WMUR			669-9999
WFRD/99ROCK			646-3313
WCAX			802-652-6300
VPR			802-655-9451
Q106			298-0332
NHPR			228-8910
FOX44			802-859-1344
Dartmouth Media			646-3661
Associated Press			224-3327
KIXX Radio			448-1400

Utilities (Electric, Phone)			
Fairpoint			866-534-2944
NH Electric Coop			800-698-2007 800-343-6432
PSNH			800-662-7764
PSNH Municipal Emergency			800-386-4086
Time Warner Cable			800-627-2288
Verizon			555-1515
Vactor Service			
Stearns Septic Service			(603)442-9500
Hartigan Services			(802) 223-3452
Dimmick Services			(802) 728-3805
Videoing (Sewer line)			
Stearns Septic Service			(603)442-9500
Green Mountian Pipeline			(802)223-3452
Water - Drinkable			
Allan's Vending		Hartford, VT	802-296-7770
Vermont Pure			800-525-0070
Monadnock Springs		Wilton, NH	654-2728
Water - Non Potable			
NH National Guard			724-0756
Tomapo Farm		Lebanon, NH	448-1145
Pike		West Lebanon, NH	298-8774
L&M	Ryan Morse	Orford, NH	359-1956
WRF Equipment vendors			
RAS/WAS pumps			(781) 721-2600
Chemical Feed Pumps			(978) 658-6168
Digester membrane cover			(801) 290-1191
Clarifier driver & Grit system			(978) 838-9996 ext 12
VFD drives			(508) 485-4447
Polymer			(315) 482-3787

Hypochlorite			(603) 880-0535 ext 14
Bisulfide			(800) 639-6000
Primary Pumps			(215) 343-8750
HACH			(800) 227-4224 ext 2266
Screw Conveyors			(770) 683-0149
Biogas boiler			(603) 863-1399
Headworks screen			(800) 383-8479
Seepex Pumps			(860) 953-5350
Plant Water			(207) 324-2405
Transfer Switch			(802) 343-0072
Welders			
Whitcomb Welding		East Thetford, VT	802-356-2100
Darrah TG Welding		White River Jct., VT	295-2159 OR Night 295-3297
DMS Machining and Fabrication		Barre, VT	800-271-4589
Wreckers			
Grizzaffi's		Lebanon, NH	448-5900
Bob's		White River Jct., VT	802-295-2341
Sabil & Sons		White River Jct., VT	802-295-2084
Roberts		Lebanon, NH	448-1381 OR Night 298-8442
Tony Perry		Lyme, NH	353-9011
Plainfield Sales		Plainfield, NH	675-5774
Midnight Auto		Lebanon, NH	252-7376

Appendix I

Guidance on Estimating Sewer Overflow Volumes

Guidance on Estimating Sewer Overflow Volumes[1]

A variety of approaches exist for the estimation of the volume of a sanitary sewer overflow. This appendix documents methods that are often employed. Other methods are also possible. The person preparing the estimate should use the method most appropriate to the SSO using their judgment.

Method 1 "Visual Estimate":

The volume of very small spills can be estimated by imagining the amount of water that would spill from a 5-gallon bucket or 50 gallon barrel. If the spill is larger than the amount of liquid from a 50 gallon barrel, try to visualize how many barrels the standing water would fill and then multiply by the number of barrel volumes by 50. This method can be useful for contained spills that are not more than a couple of hundred gallons.

Method 2 "Measured Volume":

The volume of some small spills can be estimated using this method if it is not raining. The shape dimensions and depth of the spilled wastewater are needed to use this method. The shape dimensions are used to calculate the area of the spill and the depth calculates the volume.

1. Sketch the shape of the contained area of sewage.

2. Measure or pace off the dimensions and add the dimensions to your sketch.

3. Measure the depth in several locations and then average the depth for the spill. (If the shape and depth vary, break your sketch into sections and calculate the volume of each by repeating the steps below).

4. Convert the dimensions to feet (if they are not in feet to begin with).

5. Calculate the area using the following formulas (depending on the shape of the spill):

Rectangle	Area = length X width
Circle	Area = diameter X diameter X 0.785
Triangle	Area = base X height X 0.5

[1] Adapted from information in the following guidance and reporting document: http://www.swrcb.ca.gov/rwqcb2/news_items/sso%20reporting%20requirements%20nov%2011%202004.pdf

6. To get the volume in cubic feet, multiply the area times the average of the depths you measured

7. Multiply the volume by 7.48 to convert to gallons

Method 3 "Duration and Flow Rate"

Calculating the volume of spills where it is difficult or impossible to measure the area and depth requires a different approach. In this method separate estimates are made of the duration (the elapsed time from the start of the overflow to the time the spill is stopped) of the spill and the flow rate.

Start time can be difficult to establish. Here are two approaches to estimating start time:

- For very large overflows, changes in flow on a downstream flow meter can be used to establish the start time. Typically, the daily flow peaks are "cut off" of flattened by the loss of flow. This can be identified by comparing hourly flow data on the downstream flow meter.

- Conditions at a spill site may change with time. Initially, there will be limited deposits of grease and toilet paper. After a few days to a week, the grease forms a light colored residue. After a few weeks to a month the grease turns dark. In the latter two cases the quantity of toilet paper and other materials of sewage origin increase in amount. These changes with time can be used to estimate the start time in the absence of other information.

- Sometimes it is simply not possible to estimate the start time and the date that the overflow was first observed should be used on the form.

- End time is usually much easier to establish. Field crews on site observe the "blow down" that occurs when the blockage has been removed. The end can also be observed in downstream flow meter readings.

  Flow Rate:

  - One way to estimate flow rate is to look at changes in flow rates in the downstream flow meters to estimate how much of the flow rate was lost during the spill (this generally only works for large SSOs)

  - A second way to estimate flow rate is to base it on up-stream connections: Once the location of the spill is known, the number of upstream connections can be determined from records or your computerized system. Multiply the number of connections by 150

to 200 gallons per day per connection or 6-8 gallons per hour for each connection (or other flow rates that are consistent with your data for your connections).

- A Third way is to check with the Administrative Assistant who has access to online actual flow data which is updated every 24 hours.

Once duration and flow rate have been estimated, the volume of the spill is the product of the duration in hours (or days) times the flow rate in gallons per hour (or gallons per day).

Appendix J

Sanitary Sewer Overflow History

SSO Date	Location	Volume Released	Cause of Release
2016/09/20	Currier/S Main Street	Est. 500gpd for a few days.	Pipe deterioration resulting in cross contamination with drainage system.
2014/08/15	Lebanon Street	<100	Roots and/or debris
2014/01/15	East Wheelock/Highland Ave.	<100	Roots and debris
2011/10/15	Lebanon Street	<100	Utility company drilled and set power pole through pipe
2015/08/10	Currier Street	<100	Roots and debris

Appendix K

Spill Disinfection Policy

Standard Procedures for Cleaning Up Domestic Wastewater Spills Inside Buildings

***Please note: Access to the spill area must be restricted until 24 hours after cleanup is completed*.**

If sewage is on nonabsorbent floor material like tile, vinyl, concrete or other nonabsorbent surfaces, cleanup of the visible water and semi-solid material should be accomplished using a vacuum or mop and by using the proper concentrations of sanitizers to disinfect. Make sure that the sanitizer is of proper concentration and that all affected areas are thoroughly sanitized.

If the sewage is on an absorbent floor material, such as carpet, the material that has absorbed the sewage should be vacuumed to remove as much of the waste as possible.

Do not mix cleaning / disinfecting products or chemicals. Cleaning products can react with one another to produce toxic vapor or liquid substances.

The following is a list of common sanitizers:

Chlorine: For chlorine solutions, the chlorine concentration should be in the range of 50 to 1000 parts per million (ppm) or (mg/l) for disinfecting surfaces of appliances and food preparation areas and 200 ppm (mg/l) for walls and floors.
You can verify the chlorine concentration by using test paper available at food supply warehouses or chemical supply companies.

As a rule of thumb, add 3/4 cup Clorox Bleach to one (1) gallon of water. ONLY USE BLEACH THAT HAS "SANITIZES" OR "KILLS GERMS" ON THE LABEL.

Alternative disinfectants: Other disinfectants, which include iodine and quaternary solutions, must be used according to the manufacturer's specifications/recommendations if used for disinfecting sewage spills.

Please note: Using chlorine or alternate disinfectants on absorbent materials (such as carpet) may cause damage to the material and loss of color may occur.

Because it is difficult to adequately sanitize carpet, carpet pad and absorbent flooring materials, ADEC recommends that saturated flooring materials be removed and disposed of at a permitted solid waste disposal facility.

Standard Procedures for Cleaning Up Domestic Wastewater Spills Outdoors

The following are recommended procedures for cleaning up untreated or inadequately treated sewage, spilled to the ground surface.

1. In all conditions:

A. If the area in which the spill occurred is accessible to the public or domestic pets, the contaminated area must be clearly marked or cordoned off to restrict access.

B. Protective clothing (at a minimum, rubber or latex gloves and rubber boots) should be worn when cleaning up a sewage spill. (Dispose of gloves and wash rubber boots when leaving spill site). Keep children and interested bystanders away from cleanup activities.

C. Please note that hydrated lime is a caustic material and can be dangerous to handle and apply. Lime should only be used or applied by people experienced in using this material.

D. Do not mix cleaning / disinfecting products or chemicals. Cleaning products can react with one another to produce toxic vapor or liquid substances.

2. In non-freezing conditions, when sewage is a mixture of liquid and solid material, the following steps should be taken:

A. If the spilled material can't be recovered using hand tools, a commercial vacuum / pump truck should be called to remove all visible liquid and solid material.

B. When the area is visibly clean, either a chlorine / water solution (using Clorox or an equal bleach) or hydrated lime should be applied to the spill area to disinfect. To make a 5% chlorine solution, add 3/4 cup Clorox bleach to one (1) gallon of water. You can verify the chlorine concentration by using test paper available at food supply warehouses or chemical supply companies. ONLY USE BLEACH THAT HAS "SANITIZES" OR "KILLS GERMS" ON THE LABEL.

If the spill occurred in a heavily populated area and odor may be an issue or within 100 feet of surface water, hydrated lime should be applied to the area in place of chlorine bleach. Enough hydrated lime should be applied to raise the pH to at least 12. By raising the pH to 12 for at least 1 hour, the area will be disinfected. You can test the pH by using litmus paper obtained at a chemical supply facility. Because lime is a caustic material, <u>access to the area treated with lime must be restricted during the disinfection period</u>.

C. After the spill area has been cleansed (24 hours after the chlorine solution or hydrated lime has been applied), the barriers may be removed and access to the area restored.

3. In freezing or frozen conditions.

A. An attempt should be made to clean up the spill before it becomes completely frozen.
B. If possible, the frozen sewage should be removed down to the natural ground surface (or at least one inch below the spilled sewage if on thicker ice) and the recovered material disposed of properly. This could require that approval be obtained from the local government for disposal in a permitted landfill. An acceptable alternative solution is to stock pile the frozen sewage in an approved lined containment area until conditions are more favorable for transport and disposal. (Because each spill site and situation is different, please contact your local ADEC office for recommendations regarding constructing an acceptable containment area.) If the material thaws, the liquid must be properly handled and disposed of at a permitted wastewater treatment and disposal facility. Keep in mind that frozen and / or thawed sewage may still contain active, harmful bacteria, cysts and viruses.
C. When the area is visibly clean, either a chlorine / water solution (using Clorox or an equal bleach) or hydrated lime should be spread across the spill area to disinfect. You can verify the chlorine concentration by using test paper available at food supply warehouses or chemical supply companies.
D. If the spill occurred in a heavily populated area and odor may be an issue or within 100 feet of surface water, hydrated lime should be applied to the spill area in place of chlorine bleach. The hydrated lime will raise the pH to 12, which will disinfect the area. By raising the pH to 12 for at least 1 hour, the area will be disinfected. You can test the pH by using litmus paper obtained at a chemical supply facility. Because lime is a caustic material, <u>access to the area treated with lime must be restricted during the disinfection period</u>.
E. When the spill area has been cleansed (24 hours after the chlorine solution or hydrate lime has been spread), the barriers can be removed and access to the area restored.

Appendix L

Current Equipment and Tool Inventory

Current Equipment and Tool Inventory:

Description	Model Year	Purpose	Life	Replacement Year
Backhoe/loader	2016	Line repairs/excavation	12 years	2028
High pressure jet	2010	Cleaning lines	12 years	2022
Power rodder	2005	Root cutting/freeing blockages	12 years	2017
Air compressor	2010	Air tools needed for repair work	15 years	2025
Service truck	2010	Carries all essential small tools needed in the field	10 years	2020
Power pipe saw	2010	Pipe repairs/asphalt /concrete cutting	10 years	2020
Chain saw	2010	Clearing and maintaining ROWs and easements	10 years	2020
Confined Space Entry Equipment	2010	Confined space entry	10 years	2020
Gas Detection Monitor	2015	Confined space entry	10 years	2025
Vac-Con Sewer Cleaner (Combo Jet/Vacuum)	1999	Sewer flushing/vacuuming	20 years	2021
Trash Pump	2013	Pumping excavations	30 years	2043
Assorted hand tools, i.e.: shovels, hammers, pick, rake ,retrieval tool, pipe cutter, mechanic's tools				As needed
Rigid underground utility location equipment	2010	Underground utility locating	10 years	As needed
CCTV equipment	2010	Videoing lines	10 years	As needed
Dump Truck (2-Yard)	2005	Haul sewer debris	10 years	2021
Service Truck (Ranger)	1995	Sewer supervisor truck	10 years	2020

Service Truck (Stand-by)	1995	Sewer service truck	10 years	2015
Compactor/Rammer	2010	Sewer trench compaction	10 years	2020
Gas Generator (2)	2014	Portable power for hand tools and lighting	5 years	2019
Diesel Generator	2010	Emergency generator	12 years	2022
Sewer Power Rodder (2)	2008	Sewer lateral and easement rodding	10 years	2018
Root Cutters	2010	Sewer pipe cleaning	10 years	2020
CCTV Video Camera	2008	Televising sewer laterals	10 years	2018
Centrifugal Pump (3)	2013	Sewer bypass pump	5 years	2018
Mobile Radios (6)	2016	Field vehicle	5 years	2021
Computers/GIS Photography	2016	Sewer system management	3 years	2019

Supplies and Essential Spare Parts:

Description	**Use**	**Quantity On Hand**
Rubber Fernco Fittings, 4” to 12”. VC to PVC, CI, DI pipe	Pipe repairs	2 of each
PVC pipe, 4”,6”,8” 12”	Point repairs and replacement	2 of each @ 13’ lengths
Manhole frames and covers, 24” and 32”	Replacement of broken or unserviceable frames and covers	2 of each
PVC fittings; reducers, 221/2 degree bends, 45 degree bends, couplings	Point repairs and replacement	2-4 of each

Pipe plugs and air bags	Point repairs and replacement	One for each pipe size to 12”
Bacteria bags (Enzymes)	Reduce FOG buildup	2x200