

TOWN OF WATERVILLE VALLEY, N.H.

Department of Municipal Services

Municipal Water & Sewer Regulations

Town of Waterville Valley, NH
Municipal Water & Sewer Regulations
December 13, 2018

TABLE OF CONTENTS

Section I	GENERAL STATEMENT	page 1
	Purpose (I-A)	page 1
	Definitions (I-B)	page 2
Section II	WATER AS A PRECIOUS RESOURCE	page 4
Section III	USE OF PUBLIC SEWER REQUIRED	page 4
Section IV	SEWER WASTE RESTRICTIONS	page 5
Section V	POWERS OF ASSESSMENT AND COLLECTIONS	page 9
Section VI	CUSTOMER SERVICE	page 9
	Application Procedure (VI-A)	page 9
	Connection Procedure (VI-B)	page 10
	Connection Procedure (Building Sewers) (VI-C)	page 11
	Maintenance of System (VI-D)	page 12
	Right to Access (VI-E)	page 12
	Liability for Interrupted or Unsatisfactory Service (VI-F)	page 13
Section VII	PROTECTION OF SYSTEM'S PROPERTY	page 13
Section VIII	MAIN EXTENSIONS	page 14
	Purpose (VIII-A)	page 14
	Construction Application Procedure (VIII-B)	page 14

Town of Waterville Valley, NH
Municipal Water & Sewer Regulations
December 13, 2018

Main Extension Financing (VIII-C)	page 15
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Section IX **MATERIALS AND METHODS – WATER SYSTEM** page 16

General Material Specifications (IX-A)	page 16
Materials-Water Distribution System (IX-B)	page 16

Section X **CONSTRUCTION METHODS WATER DISTRIBUTION SYSTEM**page 19

Excavation (X-A)	page 19
Backfilling (X-B)	page 20
Pipe Laying (Water) (X-C)	page 21
Blocking Restraints (X-D)	page 22
Hydrant Installation (X-E)	page 22
Service Connections (X-F)	page 22
Gate Valve Boxes (X-G)	page 23
Testing (X-H)	page 23
Flushing and Disinfecting (X-I)	page 23

Section XI **MATERIALS AND METHODS – SEWER SYSTEM** page 24

Plastic Non-Pressure Sewer Pipe, Fittings and Joints (XI-A)	page 24
Manholes (XI-B)	page 24
Brick Masonry (XI-C)	page 25
Non-Shrinking Mortar (XI-D)	page 25
Frames and Covers (XI-E)	page 25
Cast-in-Place Concrete (XI-F)	page 25
Sand Backfill (XI-G)	page 26
Backfill (XI-H)	page 26

Section XII **CONSTRUCTION METHODS – SEWER SYSTEM** page 26

Excavating (XII-A)	page 26
Backfilling (XII-B)	page 28
Pipe Laying (Sewer) (XII-C)	page 28
Service Connection (Sewer) (XII-D)	page 29
Manholes (XII-E)	page 29
Inverts and Shelves (XII-F)	page 31
Frames and Covers (XII-G)	page 31
Connection to Existing Sewer (XII-H)	page 31

Section XIII **INSPECTION OF CONSTRUCTION** page 31

Section XIV **SUBMISSION OF RECORD DRAWINGS FOR UTILITIES** page 32

Section XV **PENALTIES** page 32

Section XVI **OWNERSHIP** page 32

Section XVII **GUARANTEE** page 33

Section XVIII **MUNICIPAL SERVICES – RATES AND CHARGES** page 33

Point/Unit System (XVIII-A)	page 34
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Section XIX **INSPECTION** page 30

Section XX **PENALTIES AND REMEDIES FOR NONPAYMENT OF
WATER/SEWER CHARGES** page 30

Section XXI **RATE SCHEDULE** page31

The Town of Waterville Valley, N.H. owns and operates a combined water and sewer department.

The Water System consists of three gravel packed wells, (Well #2, Well #3 and Well #4) a network of mains and a reservoir storage capacity of 880,000 gallons of water in two tanks. The Water System is designed to supply both domestic water and fire protection water with a number of hydrants located throughout the Town.

The Sewer System includes a network of collector mains and an advanced treatment plant which utilizes tertiary chemical-physical treatment and is capable of processing 550,000 gallons per day which is ultimately discharged into the Mad River.

Section I – GENERAL STATEMENT

- a) **Purpose:** The Rules and Regulations herein set forth, the maintenance and operation of the Waterville Valley Municipal Water and Sewer Systems have been established by the Selectmen of the Town of Waterville Valley, and the delivery of water service to private customers is conditional upon their acceptance.
 - i) They are also established as necessary or desirable for the efficient operation of said Waterville Valley Municipal Sewer System and for accomplishing the purposes of RSA 485, 485-A and 485-C, as amended, and RSA 147, as amended and for the protection of the health and safety of the people of the Town of Waterville Valley.
 - ii) Pursuant to the above referenced state statutes, and every other authority thereto enabling, the Selectmen of the Town of Waterville Valley herewith enact and ordain the following Rules and Regulations effective from October 1, 1973 forward and as they may be amended and revised from time to time.
 - iii) All or any part of these terms, conditions or rates may be changed and deleted and new terms, conditions or rates may be added at any time by the Board of Selectmen when in its opinion, it would be in the best interest of the Town, the customers or the department to do so.
- b) **Definitions:** Unless the context specifically and clearly indicates otherwise, the meaning of terms and phrases used in the Ordinance shall be as follows:
 - i) **General**
 - (1) **Board:** Shall mean the Board of Selectmen
 - (2) **Construction Standards:** Shall mean those specifications and standards as may be determined by the Town
 - (3) **Department:** Shall collectively mean the Municipal Services Department and shall individually mean either the Water or Sewer Department.
 - (4) **Industrial Wastes:** Shall mean all wastes discharged from any industrial establishment, other than sanitary sewage.

- (5) Inspectors: Shall mean those authorized representatives of the Town who are charged with the responsibility of inspecting the construction and installation of water main and service pipes and of sewer mains, laterals and building sewers.
- (6) Improved Property: Shall mean any property within the Town of Waterville Valley upon which there is erected a structure intended for continuous or periodic occupancy by human beings from which sanitary sewage or industrial waste will be discharged.
- (7) Manager: Shall mean Town Manager.
- (8) Natural Outlet: Shall mean any outlet into a watercourse, pond, ditch, lake, or other body of surface or groundwater.
- (9) Owner: Shall mean any person vested with ownership of any improved property.
- (10) Person: Shall mean any individuals, partnerships, firms, associations, corporations, or other legal entities.
- (11) Sanitary Sewage: Shall mean normal water-carried household and toilet wastes discharged from any improved property, excluding ground, surface or storm water.
- (12) Sewer System: Shall mean all facilities located in the Town of Waterville Valley, owned and operated by the Town of Waterville Valley, and used for collecting, pumping, transporting, treating, and disposing of sanitary sewage and industrial wastes.
- (13) Building Sewer: Shall mean that part of the piping which receives the discharge from inside the walls of a building and conveys it into a sewer lateral.
- (14) Sewer Lateral: Shall mean a sewer pipe extending from a building sewer into a sewer main.
- (15) Sewer Main: Shall mean a sewer pipe that collects discharge from the lateral pipes.
- (16) Municipal Sewer Main: Shall mean a sewer main that is generally located along highways, streets and roads which are dedicated to public use and are owned and maintained by the Town. A municipal sewer main may collect discharge from either a private sewer main or from lateral pipes.
- (17) Private Sewer Main: Shall mean a sewer main that is located within the boundaries of a private development, is intended for that development's use, and is owned and maintained by the private development.
- (18) Town: Shall mean the Town of Waterville Valley.
- (19) Water System: Shall mean all facilities located in the Town of Waterville Valley, owned and operated by the Town of Waterville Valley, and used for obtaining, pumping, storing, and disbursing potable water to improved properties within the Town.
- (20) Main Pipe: Shall mean any supply pipe over two (2) inches inside diameter from which service connections are made to supply water to customers.

(21) Municipal Water Main: Shall mean any supply pipe over eight (8) inches inside diameter that is generally located along highways, streets and roads which are dedicated to public use and are owned and maintained by the Town. A municipal water main may supply water to customers through private water mains or through service connections.

(22) Private Water Main: Shall mean any supply main that is located within the boundaries of a private development, is intended for that development's use, and is owned and maintained by that private development.

(23) Service Pipe: Shall mean the water pipe running from the main pipe to the building to be served.

- ii) Exceptions to the above mentioned eight inches (8") inside diameter are the six-inch (6") installation along Lower Greeley Hill Road and the four-inch (4") installation along Elliot Road which are already in place and shall be treated as Municipal Water Mains. Authorization of Municipal Water Mains of less than eight inches (8") inside diameter may be given by the Selectmen if they feel the situation warrants a smaller main.

Section II **WATER AS A PRECIOUS RESOURCE**

(a) Domestic water, in Waterville Valley, is considered to be a precious resource. It shall not be wasted.

(b) The Department reserves the right to limit usage of domestic water, when in its judgment; it is in the best of interest of the Town to do so.

Section III **USE OF PUBLIC SEWER REQUIRED**

(a) Pursuant to RSA 147:8, the owner of any property within one hundred feet (100 feet) of a public sewer main shall connect the improved property to the sewer main, in such a manner as the Town may require, within forty-five (45) days after notice to such owner from the Town to make such connection for the purpose of discharge of all sanitary sewage and industrial wastes from such improved property into the sewer system, subject to such limitations and restrictions shall be established by the Town from time to time. Each owner shall, within the same time limit, cease and desist from all further discharge of sanitary sewage and/or industrial wastes into any other conduit or pre-existing system whether privately or publicly owned.

(b) If the owner of any improved property located within the Town and is benefitted, improved, served, or accommodated by any sewer main or to which any sewer main is available, after the forty-five (45) days notice from the Town, in accordance with Section III. (a), shall fail to connect such improved property as required, he shall be subject to the actions and penalties prescribed in RSA 147 and regulations issued pursuant thereto; or the Town may make such connection and may collect from such owner the costs and expenses thereof by such legal proceedings as may be permitted by law. The Town shall have full authority to enter on the

owner's property to do whatever is necessary to properly drain the improved property via a lateral sewer into a sewer main.

- (c) All sanitary sewage and industrial wastes from any improved property, after connection of such improved property with a sewer as required under Section III. (a) shall be connected to a sewer main subject to such limitations and restrictions as shall be established herein or otherwise shall be established by the Town from time to time.
- (d) No person shall place or deposit or permit to be placed or deposited upon public or private property within the Town any sanitary sewage or industrial wastes in violations of Section III. (a).
- (e) No person shall discharge, or permit to be discharged, to any natural outlet within the Town any sanitary sewage or industrial wastes in violation of Section III. (a), except where suitable treatment has been provided which is satisfactory to the Town and the New Hampshire Water Supply and Pollution Control Commission.
- (f) No privy vault, cesspool, sinkhole, septic tank, or similar receptacle shall be used and maintained at any time upon any improved property which has been connected to a sewer main or which shall be required under Section III. (a) to be connected to a sewer main.
- (g) No privy vault, cesspool, sinkhole, septic tank, or similar receptacle shall be connected to a sewer at any time.
- (h) Improved properties benefitted, improved, served, or accommodated by any sewer main or to which any sewer main is available, and within the 400 ft. Sanitary Protection Radius of a potable water supply must connect to the sewer within sixty (60) days of the main becoming operational in accordance with paragraphs (a) and (b) above even if they have a properly functioning privately maintained sewer disposal property.
- (i) Improved properties benefitted, improved, served, or accommodated by any sewer main or to which any sewer main is available, and outside the 400 ft. Sanitary Protection Radius but within the 1,000-foot Wellhead Protection Area Radius of a potable water supply must connect to the Town's sewer system within sixty (60) days if their privately owned and operated sewer disposal system malfunctions or otherwise becomes inoperable in accordance with paragraphs (a) and (b) above.

Section IV – SEWER WASTE RESTRICTIONS

- (a) No person shall discharge or cause to be discharged any storm water, surface water, ground water, roof run-off, subsurface drainage, uncontaminated cooling water, or unpolluted industrial process waters to any sewer main.
- (b) Storm water and all other unpolluted process drainage shall be discharged to storm sewers, if available, or to a natural outlet approved by the Town.
- (c) Industrial cooling water or unpolluted process waters may be discharged, on approval of the Town and New Hampshire Water Supply and Pollution Control Commission, to a storm sewer, if available, or to a natural outlet approved by the Town.

- (d) No person shall discharge or cause to be discharged any of the following described waters or wastes to any public sewer main:
- (e) Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid or gas;
- (f) Any waters or wastes containing toxic or poisonous solids, liquids or gases in sufficient quantity, either singly or by interaction with other wastes, to injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard at the sewage treatment plant, including but not limited to cyanides in excess of 0.004 mg/1 as CN in the wastes discharged to the public sewer;
- (g) Any waters or wastes having a pH lower than 5.5, or having any other corrosive property capable of causing damage or hazard to structures, equipment and personnel of the sewage works;
- (h) Solid or viscous substances in quantities or of such size so as to be capable of causing obstruction to the flow in sewers, or other interference with property operation of the sewage works such as but not limited to ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, whole blood, paunch manure, hair and fleshing, entrails, paper dishes/cups, milk containers, etc. either whole or ground by garbage grinders.
- (i) No person shall discharge or cause to be discharged the following described substances, materials, waters, or wastes if it appears likely, in the opinion of the Town, that such wastes can harm either the sewer mains, sewage treatment process, or equipment, have an adverse effect on the receiving stream, or can otherwise endanger life, limb, public property, or constitute a nuisance. In forming such opinion as to the acceptability of these wastes, the Town will give consideration to such factors as the quantities of subject wastes in relation to flows and velocities in the sewers, materials of construction of the sewers, nature of the sewage treatment process, capacity of the sewage treatment plant, degree of treatability of wastes in the sewage treatment plan and other pertinent factors.
- (i) The substances prohibited are:
1. Any liquid or vapor having a temperature higher than one-hundred-fifty (150 degrees Fahrenheit (65° C) ;
 2. Any water or waste containing fats, wax, grease, oils – whether emulsified or not – in excess of one hundred (100) mg/1 or contained substances which may solidify or become viscous at temperatures between thirty two (32) and one-hundred-fifty (150) degrees Fahrenheit (0 to 65° C);
 3. Any garbage that has not been properly shredded. The installation and operations of any garbage grinder equipped with a motor of three fourths (3/4) horsepower (0.76 metric) or greater shall be subject to review and approval of the Town;
 4. Any waters or wastes containing strong acid iron pickling wastes, or concentrated plating solutions whether neutralized or not;

5. Any waters or wastes containing iron, chromium, copper, zinc, and similar objectionable or toxic substances, or wastes exerting an excessive chlorine requirement, to such degree that any such material received in the composite sewage at the treatment works exceeds the limit established by the Town for such materials;
 6. Any waters or wastes containing phenols or other taste or odor producing substances, in such concentrations exceeding limits which may be established by the Town as necessary, after treatment of the composite sewage, to meet the requirements of the state, federal or other public agencies of jurisdiction for such discharge to the receiving water;
 7. Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Town in compliance with application state and federal regulations;
 8. Any waters or wastes having a pH in excess of 9.5.
- (j) No person shall discharge or cause to be discharged any materials which exert or cause the following:
- (i) Unusual concentrations of inert suspended solids (such as, but not limited to, Fuller's Earth, lime slurries and lime residues) or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate);
 - (ii) Excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions);
 - (iii) Unusual BOD, chemical oxygen demand or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment works;
 - (iv) Unusual volume of flow or concentration of wastes or both, constituting slugs widely variant from the normal or average.
- (k) No person shall discharge or cause to be discharged any waters or wastes containing substances which are not amenable to treatment or reduction by the sewage treatment processes employed, or are amenable to treatment only to such a degree that the sewage treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.
- (l) If any waters or wastes are discharged, or are proposed to be discharged, into any sewer main which contain the substances or possess the characteristics enumerated in Section IV A-G of these Regulations, and which in the judgment of the Town may be deleterious to the sewage works, processes, equipment, or receiving waters, or which otherwise create a hazard to life or constitute a public nuisance, the Town may:
- (i) Reject the waste;
 - (ii) Require pretreatment to an acceptable condition for discharge to the public sewers;
 - (iii) Require control over the quantities and rates of discharge;

- (iv) Require payment to cover the added costs not covered by existing taxes or sewer charge of handling and treating wastes.
- (m) If the Town permits the pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the Town and be subject to the requirements of all applicable codes, ordinances and laws.
- (n) Where preliminary treatment or flow-equalizing facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense.
- (o) Grease, oil and sand interceptors shall be provided by the owner of the improved property when, in the opinion of the Town, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts or flammable wastes, sand or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the Town and shall be located as to be readily and easily accessible for cleaning and inspection.
- (p) When required by the Town, the owner of any property serviced by a building sewer carrying industrial wastes shall install a suitable control manhole together with such necessary meters and other appurtenances to facilitate observation, sampling and measurement of the wastes. When required, such manhole shall be accessible, 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.
- (q) All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in these Rules and Regulations shall be determined in accordance with the latest edition of "Standard Methods of Examination of Water and Wastewater", published by the American Public Health Association, and shall be determined at the control manhole provided or upon suitable samples taken at said control manhole. In the event that no special manhole has been required, the control manhole shall be considered to be the nearest downstream manhole in the municipal sewer main at the point the building sewer is connected. Sampling shall be carried out by customarily accepted methods to reflect the effect on constituents upon the sewage works, and to determine the existence of hazards to life, limb or property (the particular analysis involved will determine whether a twenty-four (24) hour composite of all outfalls of a premise is appropriate or whether a grab sample or samples should be taken. Normally, but not always, BOD and suspended solids analysis are obtained from twenty-four (24) composite of all outfalls whereas pH levels are determined from periodic samples).
- (r) No statement contained in the Section shall be construed as precluding any special agreement or arrangement between the Town and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the Town for treatment subject to extra payment therefore by the industrial concern.

Section V – POWERS OF ASSESSMENT AND COLLECTIONS

The assessment and collection of the expense of construction and maintaining the sewer system shall be governed by the provisions of RSA 485, 485-A and 485-C inclusive, and any other applicable general laws. The Selectmen of the Town shall have all powers granted to Boards of Mayor and Aldermen hereunder with reference to establishing and assessing sewer charges and/or rentals.

Section VI – CUSTOMER SERVICE

- (a) **Application Procedure:** No person shall connect into the municipal water or sewer systems until a permit has been granted by the respective department. A copy of the permit application to be filled out by the prospective customer may be obtained from the Town Manager's office.
- (b) **Connection Procedure:** All connections to the water and sewer systems shall be made under the direct supervision of an authorized employee of the Town or its representative.
- (i) Except as herein provided, each improved property shall be connected separately, and independently, with the water or sewer main through a water service pipe or a sewer lateral. Grouping of more than one (1) structure on one building sewer shall not be permitted, except under special circumstances and for good sanitary reasons or other good cause shown but then only after permission of the Town in writing shall have been secured and subject to such rules, regulations and conditions as may be prescribed by the Town.
 - (ii) All costs and expenses of construction of the water service pipe or a sewer lateral, including connection to the structure served, shall be borne by the owner of the improved property to be connected, and such owner shall indemnify and save harmless the Town, its officers and agents from all loss or damage that may be occasioned directly or indirectly as a result of construction of a water service pipe or a sewer lateral on his premises or its connection to the water or sewer systems. Any person desiring new water and/or sewer service shall be charged for all material, labor and equipment involved to make such a connection. That person shall be required to reimburse the Town for the following costs when making a water connection: water meters, meter pits and boxes, tapping sleeves, tapping valves, and all pipes and shutoffs.
 - (iii) Every excavation for a water and/or sewer line shall be guarded adequately with barricades and lights to protect all persons from damage and injury. Streets, sidewalks and other public property disturbed in the course of installation, repair or maintenance of a water service pipe, a lateral or building sewer shall be restored to the cost and expense of the owner of the improved property being served in a manner satisfactory to the Town.

- (iv) No water service line, building sewer or sewer lateral shall be covered until it has been inspected and approved by the Town inspectors. If any part of the foregoing is covered before it has been inspected and approved, it shall be uncovered for inspection at the cost and expense of the owner of the improved property to be connected.
- (v) Winter construction will be limited to emergency service only. In the case of winter construction, the person requiring such service will pay any increased costs involved.
- (vi) All materials used in the construction of the system connections shall conform to the Department Specifications as listed under Section IX *MATERIALS AND METHODS* of these Rules and Regulations.

(c) **Connection Procedure – Building Sewers**

- (i) A building sewer at the point of connection shall be at the same or a higher elevation than the invert of the lateral. A smooth, neat joint using a service boot shall be made, and the connection of a building sewer to the lateral shall be made secure and water tight, and be acceptable to the Town.
- (ii) Every building sewer of any improved property shall be maintained in a sanitary and safe operating condition by the owner of said improved property.
- (iii) It is recommended that a back valve be installed in each building sewer to prevent the backward flow of sewage into the building
- (iv) If the owner of the improved property does not comply with the above, the Town will not be responsible for any damage caused to the improved property by the backup of sewage or sewer gases.
- (v) Under no circumstances will it be legal to use the sewer system for a drain of ground water during construction of any other time.
- (vi) If the building sewer is run under a cement slab or other undiggable material, the sewer lateral shall be air tested to the inside of the building.
- (vii) If the water service and the sewer lateral are run in the same trench, it shall be done in compliance with the National Plumbing Code, and the owner will still be responsible for all maintenance and repair of either line from the respective mains to the building served.
- (viii) Cleanout shall be installed not more than fifty (50) feet apart in the horizontal drainage lines of a 4-inch (4”) diameter or less, and not more than one hundred (100) feet apart for larger pipes. Accessible cleanouts shall be installed at each change of direction which is greater than 45 degrees.
- (ix) All building sewer lines going under building foundations or footings will be at least eighteen (18) inches under the same.
- (x) When any new additions are made to any existing sewer or extension, the new line will be completely blocked from the existing sewers until the new

work is completely clean of sand, rocks, silt, or any other matter that could affect lines, pumps, related equipment, or the treatment process in the sewage treatment plant. Any person, contractor or developer will be responsible for any damage that occurs at the pumping station caused by rocks, sand, gravel, or water that enters the system when making repairs or connecting sewers to mains.

(d) **Maintenance of System**

- (i) Maintenance of Water Pipes – The Town shall maintain all Municipal water mains which have been accepted by the Town and shall maintain all private water mains and all service pipes to the shut-off or to the edge of the right-of-way or private property boundary, whichever comes first. Private water mains and water service pipes shall be installed, owned and maintained by the customer. All hydrants, whether located on municipal or private water mains, shall be controlled and maintained by the Town.
- (ii) Maintenance of Sewer System – The Town shall maintain all municipal sewer mains which have been accepted by the Town. The owner shall be obligated to pay all costs of installation, expense of operation, repair, maintenance, and reconstruction (if needed) or private sewer mains, the building sewer and the lateral sewer beginning at the manhole on the municipal water main and ending at the building.
- (iii) Frozen Pipes – When it becomes necessary to thaw a frozen service pipe, and it cannot be determined where it is frozen; and the water department undertakes to thaw the same at the customer's requires, the customer will be charged 50% of the cost of thawing.

(e) **Right to Access**

- (i) The Town reserves the right to enter at any time onto any improved property without prior notice and make whatever repairs it deems necessary in its sole judgment to any water or sewer main, or sewer lateral, or water service pipe if the Town deems that an emergency situation exists that constitutes or could constitute a health hazard to the community or a danger to the system.
- (ii) In the event that the Town deems the effect to be of a nature that does not constitute an immediate hazard to health, the Town shall give notice in writing to the owner of the improved property, who shall be given forty-five (45) days from the receipt of the notice to make such corrections as may be determined by the Town. If said owner shall fail or shall refuse to correct such defect upon receipt of said notice, the Town may remedy the unsatisfactory condition and may collect from the owner the costs and expenses thereof such legal proceedings as may be provided by law. The Town shall have full authority to remedy the unsatisfactory condition.

- (iii) Any authorized representative of the department shall have the right to access at any reasonable time to any part of any customer's premises for the purpose of inspection, meter reading, repair, or replacement of meters or any other legitimate purpose.

(f) **Liability for Interrupted or Unsatisfactory Service**

- (i) If by reason of shortage of supply or for the purpose of making repairs, extensions or connections, or for any reason beyond the control of the Water Department, it becomes necessary to shut off water in the mains, the department will not be responsible for damage caused by dirty water which may be occasioned by cleaning pipes, reservoirs or standpipes, or by the opening and closing of any gates or hydrants.

Section VII – PROTECTION OF SYSTEM PROPERTY

- (a) The water system, including wells, pumping stations, reservoirs, storage tanks, and all mains, is the property of the Town.
- (b) The sewer system, including treatment plant and all mains, is the property of the Town.
- (c) No person shall tamper with, alter, change, cut into, dig up, or do anything to the above systems. This shall not apply to construction for which a permit has been issued by the Town.
- (d) Hydrants may not be used for any purpose other than the extinguishing of fires and for such other purposes as may be mutually agreed to by the Department and the Board, but in no case shall hydrants be opened by any other person other than an agent of the department.
- (e) Any person doing excavation work on or in proximity to any water mains, service pipes, sewers, or sewer property shall be required to notify the department at least twenty-four (24) hours in advance of the planned excavation and shall be responsible for any damage to the foregoing property and liable for all costs involved in repairing or replacing such property. All such work shall be done under the direction of the department.
- (f) Any person wishing to build or rebuild any walkway or driveway or do any other work which may in any way affect any property of the departments, or the amount of cover over any existing mains, service lines, or laterals must first apply to the department for permission to do so and must agree to pay any additional costs to the department as a result of such work.
- (g) Any person violating any of the provisions of this section may be prosecuted to the full extent of the law.

Section VIII – MAIN EXTENSIONS

- 433 (a) **Purpose:** It is the intent of this section to establish regulations and standards governing
434 the extension of water and/or sewer mains within the Town. This section shall apply to
435 developers, sub dividers and land owners intending to utilize the water and/or sewer
436 systems of the Town.
- 437 (b) **Construction Application Procedure:** It shall be unlawful for any person to extend or
438 modify water and/or sewer main with the Town without first having made a formal
439 written application to the Board of Selectmen through the Town Manager.
- 440 (i) Plans for such extensions shall be prepared by a qualified engineer
441 considered competent by the department and submitted to the Board of
442 Selectmen, along with the construction application a minimum of sixty (60)
443 days prior to the projected start of construction. However, prior to the
444 formal application, the person wishing to extend the main is encouraged to
445 review the preliminary plans with the department heads and the Town
446 Manager. In any event, no excavation shall be started until the plans have
447 been approved and all state and Town permits granted.
- 448 (ii) A copy of the Department Rules and Regulations will be given to the
449 applicant, and it shall be the duty of the applicant to comply with the Rules
450 and Regulations contained therein.
- 451 (iii) Mains shall be extended preferably along highways, streets and roads (public
452 or private) which are laid out, in which grades have been established, and
453 which are dedicated to public use; or through utility easements which have
454 been granted to the Town.
- 455 (iv) Mains shall be laid out by the department or an authorized contractor for the
456 department. The Water or Sewer Department Heads shall have final
457 authority over the location of all mains within the system.
- 458 (v) The size and type of pipe shall be determined by the department in
459 accordance with conditions surrounding the extension, including the
460 possibility of future extensions or additions for fire protection service.
- 461 (c) **Main Extension Financing**
- 462 (i) The cost of installing sewer and/or water main extensions may either be
463 financed by the Town through a request presented to the voters at the annual
464 Town Meeting or may be financed by a party or parties other than the Town.
- 465 (ii) In the case of water main extensions that are to be financed or constructed
466 by the Town, the Town Manager (Selectmen) may determine to utilize
467 competitive bidding or such other methods as shall be deemed appropriate.
468 If competitive bidding is utilized for any phase of constructions, the Town
469 reserves the right to reject any and all bids for whatever reason may be
470 deemed appropriate by authorized Town officials. A rejection of a low bid
471 shall not be arbitrary, capricious or unreasonable but may be based upon

such factors as the Town determines appropriate in the public interest, for example, including:

- (iii) The ability, capacity, skill, and availability of any bidder to perform the contract, provide the service indicated or provide additional follow-up services;
- (iv) The bidder's ability to perform promptly, without delay or interference and without regard to any bid completion deadlines;
- (v) The character, integrity, reputation, judgment, experience, and efficiency of any bidder;
- (vi) The quality of performance of previous contacts or services with the Town or with other entities of which the Town has knowledge.

- (d) **Shared Financing** – If the extension is financed by a party, or parties, other than the Town, the total cost of the installation and/or main extension shall be borne by the developer or individual proposing the construction.

Section IX – MATERIALS AND METHODS

- (a) **General Material Specifications**: The purpose of this section is to establish general minimum requirements and specifications relating to materials to be incorporated and methods of installation to be used in the Water Distribution System and Sewer Collection system.
- (b) **Materials – Water Distribution System**: Materials to be incorporated into the construction of the water mains and fittings shall be approved by the Town Manager or the Superintendent of the Water Department. In general, items specified by manufacturer's name below are those presently in use in the existing system and are preferred use items, in order to retain consistency.
 - (i) **Water mains** shall be ductile iron pipe, cement/mortar lined, thickness Class 52 minimum, mechanical or push-on joints, rubber gasket with metal tips or wedges, size of the main shall be eight (8) inches in diameter minimum as shall be determined by the department and shall be manufactured to meet all applicable requirements of AWWA C104-74.
 - (ii) **Fittings** for ductile iron water mains shall be of standard manufacture, cement/mortar lined, mechanical joint, and suitable for the service intended.
 - (iii) **Gate Valves** shall be of the size of the pipe to which they are connected, shall be resilient wedge design, non-rising stems, open by turning left and provided with 2" square nuts, o-ring seals, and shall be manufactured to meet all applicable requirements of AWWA Specifications C500.
 - (iv) **Hydrants** shall be Eddy Compression-type hydrant with break flange construction, figure number F-2640 with 5-1/4" main valve opening and 7" minimum barrel diameter, two 2-1/2" hose nozzle (National Standard thread), and one 4-1/2" pumper nozzle (National Standard thread). The

hydrant valve shall open left. Inlet connection shall be 6" mechanical joint and be equipped with O-ring packing. The barrel length shall be suitable for 5-1/2' cover (6' bury). The operating nut shall be National Standard 1-1/2" pentagon. Hydrants shall be gated from the main with 6" gate valves as specified above.

- (v) Blow-Off Valve shall be installed on all dead-end mains and sub-mains in a location to be determined by the department.
- (vi) Service Connections shall be installed with the following materials and shall be a minimum size of 3/4". Larger sizes will be installed as directed by the department.
- (vii) Corporation stops shall be Hayes ball valve with check compression-type fittings with NPT thread for 2" valves and Mueller thread for 3/4" to 1-1/2" valves.
- (viii) Curb stops shall be Hayes compression-type fittings, inverted key stop with drain and check.
- (ix) Service pipe shall be type K copper and shall run from the shut off at the main to a point within the interior heated spaces of the building or buildings to be served.
- (x) Backflow Preventers shall be incorporated in every service within the heated spaces of the building. These shall be similar in type to Watts series no. 709 QT, or Conbraco XL series for 3/4" and 1" size and similar in type to Watts Series No. 709 QT, and Conbraco XL series for larger size for services.
- (xi) Meters shall be purchased through the Water Department. The size of the meter shall be determined by the Department. Meter installation shall employ standard catalog products for meter settings.
 - 1. Meters shall be installed on all commercial facilities. All water passing through a meter will be charged to the customer.
 - 2. Meters shall be provided by and installed under the supervision of the Water Department. Specific location of the meter within the building must be mutually acceptable to the Town and owner, but shall be set at nearly as possible at the point of entrance of the service pipe into the building and in a proper and accessible location for all purposed.
 - 3. Meter purchase, repairs or replacement will be charged to the owner, however; the meter shall become the property of the Town and must not be tampered with.
 - 4. If additional or auxiliary meters are desired by the customer for the purpose of showing subdivision of supply, the cost of such meters, their installation and maintenance shall be paid for by the customer.
 - 5. In case of meter registration failure or removal of repairs, charges for water consumption will be based on the last similar period.

6. Meters are carefully tested by the manufacturer before installation. If requested by a customer, a meter is tested and found to be within 95% accurate, the customer will be charged the total cost of having the meter tested. If inaccurate, an adjustment for the previous period will be made at no charge to the customer.
7. All water meters two (2) inches or larger shall have a bypass installed so the meter can be removed for service without interrupting the water supply. The Water Department may require a bypass on any size meter if they deem it necessary.

(xii) Water Closest shall be of the low-flow type with a flushometer tank using 1.6 gallons or less per flush. It is recommended that shower heads also be of the low-flow type.

Section X – CONSTRUCTION METHODS – WATER DISTRIBUTION SYSTEM

- (a) **General** – Methods of construction and installation of all water mains, fittings, service connections, and accessories shall be in accordance with generally-accepted waterworks practices and the requirements set forth herein. All operations in conjunction with water main installations, particularly the connection to the existing system, shall be coordinated with the department, notices of operation given, and every reasonable attempt made to minimize periods of service disruption.
- (b) **Excavation**
 - (i) Excavation shall conform to the dimensions, elevations and details indicated on the drawings or as necessary to complete the work.
 - (ii) All excavation shall be unclassified and shall include the satisfactory removal of all materials of whatever substance encountered within the indicated limits. If blasting is required, it will be done in strict accordance with all federal, state and local regulations and only by person(s) experienced and skilled in such work.
 - (iii) Elevations of pipes shown on the drawings are invert elevations unless specifically designated otherwise. Trenches shall be excavated to a depth of six (6) inches below the invert elevations.
 - (iv) The maximum width of the trench to a plan of twelve (12) inches above the pipe shall be thirty-six (36) inches. The width above this level may be as wide as necessary for safe and proper performance of the work.
 - (v) The contractor shall provide temporary drains and ditches as required to maintain the site of work and adjacent areas in a well-drained condition. Excavations shall be maintained in a drained state at all times. All water pumped or drained from the work shall be disposed of so as not to endanger public health, property or any portion of the work under construction or completed in a manner consistent with federal, state and local regulations

governing such disposal. *SEWERS SHALL NOT BE USED TO CARRY GROUNDWATER FROM EXCAVATIONS.*

- (vi) The contractor shall provide shoring, sheeting and bracing as may be required to maintain excavations and trenches secure and safe from collapse and to protect adjacent structures, property and utilities. Temporary sheeting and bracing may be removed or cut off below grade as approved by the Town Inspector.
- (vii) Unless specifically designated otherwise, excavations shall be open cut.
- (viii) If through his error or improper protection of the work, the excavation is carried beyond the depths and dimensions indicated on the drawings, the contractor shall, at his own expense, furnish and install approved structural backfill as directed by the Town Inspector.
- (ix) Excavated materials suitable for backfilling shall be stockpiled a safe distance from the trench. Excess material unsuitable for backfill shall be disposed of in areas approved by the Town.
- (x) Should construction operations reveal or express a water line (main or service) running approximately parallel and less than ten (10) feet horizontally from the proposed sewer installation and where it is not practicable to relocate the sewer, the following methods of protection must be employed;
- (xi) If the water line can be kept at least eighteen (18) inches above and three (3) feet to one side of the sewer and supported on a bench of original soil, no other protection is required.
- (xii) If the above separation cannot be achieved, the sewer shall be encased in concrete or else ductile iron pipe the same size shall be utilized. Appropriate manufactured fittings shall be employed to adapt the iron pipe to the sewer pipe.
- (xiii) Should the water line cross over the new sewer line with less than eighteen (18) inches separation, the sewer line for a distance of ten (10) feet on each side of the water line shall be encased in concrete or else ductile iron pipe shall be utilized. Appropriate manufactured fittings shall be employed to adapt iron pipe to the sewer pipe. As an alternative, the water line may be raised, if feasible, to achieve the required separation.
- (xiv) Should the water line in either situation be at or below the sewer elevation, the water or sewer line must be relocated to achieve ten (10) feet separation or the water line raised.

(c) **Backfilling**

- (i) All materials shall be placed and compacted to conform to the lines, elevations and cross sections indicated on the drawings. Backfill shall not be placed on a surface of frozen materials, nor shall snow, frozen earth, rubbish

or debris be incorporated in the backfill. All materials shall be approved by the Town Inspector before use.

- (ii) Sand bedding shall be placed and compacted to provide a minimum thickness of six (6) inches beneath the pipe. The trench bottom shall be carefully cut and shaped so that the barrel of the pipe will have bearings for the entire length. Trench bottoms shall be smoothed and leveled by hand prior to pipe installation. Bell holes shall be provided under each joint.
- (iii) Earth material backfill shall be placed to a depth of one (1) foot over the pipe and thoroughly compacted. This material shall be free from stones larger than two (2) inches maximum dimension.
- (iv) The remainder of the upper trench backfill shall be suitable excavated materials, compacted and placed in lifts not exceeding two (2) feet in depth. Suitable materials shall be free of stones or rock fragments greater than eight (8) inches maximum dimension and shall be such as earth, loam, sandy clay, sands and gravels, etc.
- (v) Compaction shall be by rolling and mechanical tamping. "Puddling" or settling with water will **NOT** be permitted.
- (vi) Any trenches improperly backfilled, or where settlement occurs, shall be reopened as required and refilled and compacted with the surface to proper grade and condition.

(d) **Pipe Laying – Water**

- (i) Proper handling of pipe must be exercised during unloading and lowering operations to prevent damage and cracking.
- (ii) All pipes must be handled, placed and coupled in accordance with the manufacturer's recommendations.
- (iii) Pipe must be swabbed or brushed out prior to lowering in trench. Spigot end of pipe must be checked and wiped clean.
- (iv) All pipes shall be carefully bedded as previously specified and shall be laid in location approved by the Department.
- (v) Even alignment of the pipe shall be maintained. Abrupt changes in direction shall be made only with standard fittings.
- (vi) Pipe shall be cut with a pipe saw.
- (vii) Cut ends of push-on joint shall be beveled prior to joining.
- (viii) Pipe shall be laid to a depth sufficient to provide a minimum of six (6) feet of cover over the pipe to finish grade over the roadway.
- (ix) At least two (2) metal wedges shall be inserted between each joint in the main pipe.

(e) **Blocking Restraints**

- (i) All plugs, caps and fittings at which a change of direction occurs shall be backed with a block of concrete of at least two (2) cubic feet in volume.
- (ii) Joint restraints may be used and shall be employed when so directed by the department.
- (iii) Thrust blocks shall be installed in accordance with good practice.

(f) **Hydrant Installation**

- (i) Hydrants shall be set in the exact locations as determined by the department and shall be set plumb and vertical.
- (ii) Hydrants shall be of proper length to provide ground clearance of at least eighteen (18) inches under the pumper nozzle.
- (iii) Hydrants and leads shall be connected to mains using mechanical joint anchoring fittings and anchoring pipe.
- (iv) Drain pit of crushed stone of at least seven (7) cubic feet in volume shall be provided at the base of the hydrant.
- (v) Hydrants will be flushed, oiled and left in good working condition.

(g) **Service Connections**

- (i) Service connections shall be installed in locations to be determined by the department, and all installation shall be done either by the department or an authorized agent of the department.
- (ii) Tapping of the main shall be accomplished by means of a tapping machine of standard manufacture in good conditions using tap and drill in first-class condition to produce clear sharp threads.
- (iii) Service lines will be installed in a separate trench from the sewer, unless specific prior written permission is granted by the Board. If the same trench is approved, installation shall comply with the standards set forth in the National Plumbing Code.
- (iv) Curb boxes shall be installed plumb and the tops shall be flush with the finish ground.
- (v) Extension of service lines from the main to the building or buildings actually served will be the responsibility of the owner and will be built in accordance with both these regulations and the state standards and under the supervision of the department.

(h) **Gate Valve Boxes**

- (i) Gate valve boxes shall be set plumb, properly centered over the valve, clean from soil and other debris and the tops shall be flush with the finish road surface.

(i) **Testing**

- (i) Formal testing for strength and leakage on the completed water main work is required. Such testing will be done at the installer's expense and no reimbursement will be made by the Department for such testing.
- (ii) Strength tests shall be made by subjecting completed work, or sections thereof, to pressures up to two hundred (200) pounds per square inch for periods of ten (10) minutes and/or leakage tests to be conducted at system pressures over twenty-four (24) hours. Leakage shall be within the requirements of Cast Iron Water Main (AWWAC-600).

(j) **Flushing and Disinfecting**

- (i) Before placing the work or any part thereof in use, the pipelines shall be thoroughly cleaned by flushing and shall be disinfected by injecting and circulating a chlorine solution of not less than fifty (50) parts per million (50 PPM).
- (ii) The chlorine line shall be allowed to stand for at least twenty-four (24) hours, the flushed and a sample taken from the line for sanitary analysis by a laboratory certified by the State of New Hampshire.
- (iii) Flushing and disinfecting procedures will be repeated until no harmful contamination is present and authorization to use the line is received from the commission.

Section X – MATERIALS – SEWER SYSTEM

- (a) **General** – Materials to be incorporated into the construction of sewer mains and fittings shall be approved by the Town Manager or the Superintendent of the Sewer Department. In general, items specified by manufacturer's name are those presently in use in the existing system and are preferred use items in order to retain consistency.

(b) **Plastic Non-Pressure Sewer Pipe, Fittings and Joints**

- (i) Plastic non-pressure sewer pipe is intended to use in conveying sewage in gravity-flow systems.
- (ii) Pipe and fittings shall conform to ASTM D3034, SDR or better, polymer compounding and classification shall be in accordance with ASTM D1784 (class 1454 B).
- (iii) Joint seals for PVC pipe shall be oil resistant compression rings of electrometric material conforming to ASTM D3212. Type shall be push-on, bell and spigot.

(c) **Manholes**

- (i) Pre-case manhole sections shall be reinforced concrete units conforming to the requirements of ASTM C478.

- (ii) Base sections shall be cast monolithically to a height six (6) inches above the inlet pipe opening. Cones shall be eccentric and provide for a thirty (30) inch diameter opening.
- (iii) Concrete for manholes shall have an ultimate strength of 4,000 psi and conform to NH Std. Class AA Concrete.
- (iv) Horizontal section joints shall be sealed with a retained neoprene O-ring gasket or elastomeric sealing strips.
- (v) Horizontal joints shall be water plugged, "Preco", both on the exterior and interior.
- (vi) Pipe to manhole joints shall be watertight, flexible sleeve-type using an aluminum compression ring at the manhole equal to the "Kor-N-Seal" type as manufactured by Nashua Pre-Cast Corp.
- (vii) Completed manhole shell shall be capable of withstanding a standard H-2 loading.
- (d) **Brick Masonry**
 - (i) Bricks for manhole inverts and shelves shall be Grade SM sewer brick conforming to the requirements of ASTM C32073.
 - (ii) Masonry cement shall be a type II Portland cement-base cement meeting the requirements of ASTM C91-71.
- (e) **Non-Shrinking Mortar**

Non-shrinking mortar for pointing and sealing manholes shall be equal to "Waterplug" as manufactured by Standard Drywall Products
- (f) **Frames and Covers**
 - (i) Manhole frames and covers shall provide a thirty (30) inch clear opening and be fabricated of heavy-duty cast iron capable of sustaining a standard H-20 loading.
 - (ii) Castings shall be of uniform quality, free from blowholes, porosity, hard spots, distortion, or other defects. They shall be cleaned by sandblasting and coated with two coats of asphalt paint which shall result in a smooth coating, which shall be neither tacky nor brittle when cold.
 - (iii) The word SEWER shall be cast in the center of the cover and bearing surfaces shall be machined to provide a true, non-rocking fit.
- (g) **Cast-In-Place Concrete**
 - (i) Concrete for encasement and protective arches at wyes shall conform to NH Standard Class C, having an ultimate strength of 2000 psi.
 - (ii) Concrete for support of manhole drops shall conform to NH Standard Class A, having a minimum of 3000 psi.
 - (iii) Cement: 60 bags/C.Y.
 - (iv) Water: 5.57 gallons/bag cement

- (v) Aggregate: 1-1/2" maximum
- (vi) Formwork shall be left in place with no backfilling before concrete has taken initial set (seven-hour minimum). Backfilling to be brought up evenly on all sides.

(h) **Sand Backfill**

- (i) Sand backfill for pipe shall consist of clean sand free from organic matter and graded within the following limits:

(ii) <u>Sieve Size:</u>	<u>% Passing by Weight:</u>
1"	100%
No. 4	85-100%
No. 2	0-5%

(i) **Backfill**

- (i) Upper trench backfill shall be excavated material which can be readily spread and compacted; and consists of mineral soil, substantially free of organic material, loam, rubbish or other perishable substances.
- (ii) If excavated material is deemed unsuitable, gravel consisting of a mixture of stones or rock fragments and particles with 95% to 100% passing the 3-inch sieve and 25% to 70% passing the No. 4 sieve may be used with the approval of the Town Inspector.

Section XII – CONSTRUCTION METHODS – SEWER SYSTEM

(a) **Excavating**

- (i) Excavation shall conform to the dimensions, elevations and details indicated on the drawings or as necessary to complete the work.
- (ii) Excavation shall be unclassified and shall include the satisfactory removal of all materials of whatever substance encountered within the indicated limits. If blasting is required, it will be done in strict accordance with all federal, state and local regulations and only by persons experienced and skilled in such work.
- (iii) Elevations of pipes shown on the drawings are invert elevations unless specifically designated otherwise. Trenches shall be excavated to a depth of six (6) inches below the invert elevations.
- (iv) The maximum width of the trench to a plane twelve (12) inches above the pipe shall be thirty-six (36) inches. The width above this level may be as wide as necessary for safe and proper performance of the work.
- (v) The contractor shall provide temporary drains and ditches as required to maintain the site of work and adjacent areas in a well-drained condition. All water pumped or drained from the work shall be disposed of so as not to endanger public health, property or any portion of the work under construction or completed in a manner consistent with federal, state and

local regulations governing such disposal. SEWERS SHALL NOT BE USED TO CARRY GROUNDWATER FROM EXCAVATIONS.

(vi) The contractor shall provide shoring, sheeting and bracing as may be required to maintain excavations and trenches secure and safe from collapse and to protect adjacent structures, property and utilities. Temporary sheeting and bracing may be removed or cut off below grade as approved by the Town Inspector.

(vii) Unless specifically designated otherwise, excavations shall be open cut.

(viii) If through his error improper protection of the work, the excavation is carried beyond the depths and dimensions indicated on the drawings, the contractor shall, at his own expense, furnish and install approved structural backfill as directed by the Town Inspector.

(ix) Excavated material suitable for backfilling shall be stockpiled a safe distance from the trench. Excess material unsuitable for backfill shall be disposed of in areas approved by the Town.

(x) Should construction operations reveal or express a water line (main of service) running approximately parallel and less than ten feet (10') horizontally from the proposed sewer installation and where it is not practicable to relocate the sewer the following methods of protection must be employed:

1. If the water line can be kept at least eighteen inches (18") above and three (3) feet to one side of the sewer and supported on a bench of original soil, no other protection is required.
2. If the above separation cannot be achieved, the sewer shall be encased in concrete or else ductile iron pipe of the same size shall be utilized. Appropriate manufactured fittings shall be employed to adapt the iron pipe to the sewer pipe.
3. Should the water line cross over the new sewer line with less than eighteen inches (18") separation, the sewer for a distance of ten feet (10') on each side of the water line shall be encased in concrete or else ductile iron pipe shall be utilized. Appropriate manufactured fittings shall be employed to adapt iron pipe to the sewer pipe. As an alternative, the water line may be raised, if feasible, to achieve the required separation.
4. Should the water line in either situation be at or below the sewer elevation, the water line or the sewer must be relocated to achieve ten feet (10') separation or the water line raised.

(b) **Backfilling**

- (i) All material shall be placed and compacted to conform to the lines, elevations and cross sections indicated on the drawings. Backfill shall not be placed on a surface of frozen material, nor shall snow, frozen earth, rubbish, or debris be incorporated in the backfill. All materials shall be approved by the Town Inspector before use.
- (ii) Stone bedding shall be placed and compacted to provide a minimum thickness of six (6) inches beneath the pipe. The bedding shall be shaped to fit the lower portion of the pipe so that the lower quadrant will be firmly supported for the entire length. Additional bedding shall be placed and compacted on either side of the pipe to its mid-line.
- (iii) Sand backfill shall be placed to a minimum of one foot (1') over the pipe.
- (iv) The remainder of the upper trench backfill shall be suitable excavated materials, compacted and placed in lifts not exceeding two feet (2') in depth. Suitable material shall be free of stones or rock fragments greater than eight inches (8") in maximum dimension and shall be such as earth, loam, sandy clay, and gravel, etc.
- (v) Compaction shall be by rolling or mechanical tamping. "Puddling" or settling with water will NOT be permitted.
- (vi) Any trenches improperly backfilled, or where settlement occurs, shall be reopened as required and refilled and compacted with the surface restored to proper grade and condition.

(c) **Pipe Laying – Sewer**

- (i) All pipes shall be handled, placed and coupled in accordance with the manufacturer's recommendations.
- (ii) All pipes shall be carefully bedded as previously specified and shall be laid up-grade starting from a manhole location approved by the Town.
- (iii) Interior of pipe shall be wiped clean of dirt before placing. The contractor shall provide appropriate plugs to prevent dirt, debris and water from entering the pipe place.
- (iv) Pipe cutting shall be done in accordance with manufacturer's recommendations, but only with the approval of the Town Inspector.
- (v) If possible, laterals shall go directly to the nearest manhole, if not wye branches for individual services shall be sized and located as indicated on the drawings or as otherwise directed by the Town. Each such wye shall be protected by a cast-in-place concrete arch which shall be allowed to achieve initial set before backfilling.
- (vi) Wye locations shall be accurately recorded by the contractor before backfilling. This information shall be given to the Town Inspector for inclusion in the permanent project records.

- (vii) Leakage tests for piping shall be by low-pressure air or hydrostatic pressure. The air test will consist of a minimum of 4-pound pressure for ten (10) minutes with no drop in pressure. The hydrostatic test must provide a minimum of 4-pound pressure at the highest point in the pipe line and not show any drop. Ten (10) % of all PVC pipe must pass a five (5) % deflection test according to ASTM 2412.

(d) **Service Connection – Sewer**

- (i) Pipe for services shall be laid from the wye at a continuous and constant grade (minimum slope 1/8 inch per foot) within ten feet (10') of building foundations.
- (ii) Service pipe shall be bedded and covered as previously specified.
- (iii) The ends of service pipes shall be capped and the end marked with the length of strapping as indicated on the drawings.

(e) **Manholes**

- (i) Precast manholes shall be constructed at the locations indicated on the drawings.
- (ii) Prior to construction inverts and points of joints, manhole must pass a leakage test.
- (iii) Testing of Manholes:
1. Testing shall consist of filling the manhole with water before backfilling. The exterior shall be observed for a period of fifteen (15) minutes, and any visible leakage shall be unsatisfactory and cause for rejection. The manhole must then stand overnight and will be allowed a drop in water level at a maximum of .072 feet per vertical foot of manhole. Any more drop than this will not be allowed and will be rejected. OR
 2. After each manhole has been set in place (but before backfilling) all inlet and outlet pipes connected, joints and openings sealed and otherwise ready to be backfilled, the contractor shall perform a vacuum test of each manhole in the presence of the Town Inspector.
 3. Set the testing equipment on the top section of the manhole and inflate the compression band to affect a seal between the structure and the vacuum base.
 4. Connect the vacuum pump to the outlet port, open the valve and draw a vacuum of 10" Hg (Mercury).
 5. Close the valve and monitor the vacuum gauge.
 6. The manhole shall pass this test if the vacuum holds at 10" Hg or drops no lower than 9" Hg within the following times:

a.	<u>Depth of 4' or 5'</u>	<u>Diameter M.H.</u>	<u>Min.</u>	<u>Sec.</u>
		0' – 10'	2	0
		11' – 15'	2	30

- 950 16' – 20' 3 0
- 951 21' – 25' 3 30
- 952 iv) If the vacuum drop exceeds 1" Hg during the specified time periods, the
- 953 manhole shall be released and steps a-d above repeated until the vacuum
- 954 holds for the specified time.
- 955 v) After the manhole passes the vacuum test, it shall be backfilled carefully so
- 956 that no leaks are created. If the manhole is disturbed in any way during
- 957 backfill, it shall again be vacuum tested according to steps a-d above. If the
- 958 manhole fails the vacuum test, the contractor shall test the manhole using the
- 959 manhole exfiltration test.
- 960 vi) The contractor shall provide the Town Inspector with a written log of each
- 961 manhole leakage test result.
- 962 vii) Manholes shall be tested and accepted prior to building manhole inverts.
- 963 viii) Interior and exterior joints shall be pointed with non-shrinking mortar upon
- 964 completion of a leakage test with acceptance by the
- 965 Town Inspector.
- 966 f) **Inverts and Shelves**
- 967 i) Brick inverts and shelves shall be constructed after acceptance by the Town.
- 968 ii) The invert shall be constructed to conform to the size of the pipe, having a
- 969 rounded cross section formed by laying bricks on edge as indicated on the
- 970 drawings. No filler material shall be allowed.
- 971 iii) At changes in direction, the inverts shall be laid out in curves of the longest
- 972 radius possible tangent to the center of the pipes.
- 973 iv) Shelves shall be constructed to the elevation of the crown of the highest pipe
- 974 and shall slope to drain into the flow channel.
- 975 g) **Frames and Covers**
- 976 i) The contractor shall, at all times, conduct his operations so as to prevent the
- 977 passage of dirt, silt or other debris into new or existing sewers.
- 978 ii) If ordered by the Town Inspector, the sewers and manholes shall be cleaned
- 979 and flushed to remove foreign material resulting from construction activities.
- 980 h) **Connection to Existing Sewer**
- 981 i) Connection to the existing manhole shall be made by core drilling and
- 982 installing a flexible sleeve of the "Kor-N-Seal" type.
- 983 ii) Work on the manhole masonry must not damage or impair the water
- 984 tightness of the concrete shell.
- 985 iii) The contractor must provide and maintain a tight seal on existing sewer prior
- 986 to and during construction work. This seal shall not be removed until all new
- 987 construction has been cleaned and flushed.
- 988
- 989

Section XIII – INSPECTION OF CONSTRUCTION

- (a) All work performed in installing water and/or sewer mains, service connections, fitting, and accessories shall be subject to inspection and approval by an authorized agent of the department.
- (b) The department shall reserve the right to reject any defective or unspecified materials, improper workmanship and faulty installation.
- (c) Duly authorized inspectors for the Town shall have the right and the duty to enter onto any property for the purpose of inspecting the installation of the water or sewer lines and all parts thereof for the purpose of ensuring compliance with existing state and town regulations.
- (d) The Board of Selectmen or its agents have the authority to issue change orders, cease-and-desist orders and to take whatever legal steps may be necessary to effect compliance with all department rules and regulations.

Section XIV – SUBMISSION OF RECORD DRAWINGS FOR UTILITIES

- (a) Record drawings of all utilities, public and private, will be submitted with certifications by the developer and/or contractor printed thereon that all installations are as shown. These record drawings will show true locations of sewer and drain manholes, culverts, headers, underground utility (telephone, electric and TV cable) locations and depths, water mains, shut-off and entrances, and any other pertinent information.
- (b) The above information may be posted to the approved plat. Two copies of which must be submitted within seven (7) days of the testing of the utilities.

Section XV – PENALTIES

- (a) Any person who allows a violation of Departmental Regulations to continue after the date specified in the cease and desist order, shall upon conviction be guilty of a misdemeanor and shall be fined two hundred dollars (\$200.00) for each offense.
- (b) For the purpose of this section, each day that the violation is not corrected shall be deemed to be a separate offense.
- (c) Upon conviction under this section, the guilty person shall also be liable to the Town of all costs incurred by the Town in the prosecution of the case.

Section XVI – OWNERSHIP

- (a) All water and/or sewer mains and appurtenances within the rights-of-way of Town-owned streets and in easements, established for water and/or sewer mains shall become the property of the Town upon acceptance of the work of the department in accordance with this section.
- (b) Transfer of ownership shall be evidenced in writing.
- (c) Notwithstanding transfer of ownership upon acceptance, the installer shall be responsible for remedial work and any potential liability, directly or indirectly attributable to the Town,

arising from such installations for a period of not less than eighteen (18) months after acceptance. The installer shall agree in writing to the guarantee and hold harmless provisions of this Section upon application to the Town for the installation.

Section XVII – GUARANTEE

- (a) The installer shall guarantee all work performed for a period of not less than eighteen (18) months after acceptance. This period may be extended if warranted by existing conditions. The installer shall remedy any defects in work or materials and pay for any damage to other work resulting during the guarantee period.
- (b) The department shall provide prompt notice of observed defects.
- (c) The department may perform such remedial work as it deems necessary upon failure of the installer, after notice, to do so. All costs thereof shall be paid by the installer. When deemed necessary, the installer may be required to provide adequate surety in such form as the Board may require.
- (d) The installer shall agree to hold the Town harmless from any liability for damages arising from the installation. The installer shall possess and present evidence of adequate insurance coverage for this purpose.
- (e) Any installer undertaking to perform such work in the Town shall sign an application form for the installation which shall include an assent to the conditions of this Section.

Section XVIII – MUNICIPAL SERVICES – RATES AND CHARGES

- (a) Any owner of improved property who applies to the Department of Municipal Services to connect to either the Town's water system or the Town's sewer system may be liable for the following costs:
 - (i) Connection Charges shall be based upon the actual out-of-pocket expenses incurred by the Town in making the physical connection.
 - (ii) Tap Fees shall be an initial, one-time fee that entitles the user to tap into the Town water and/or sewer systems. Tap fees are based upon a point/unit system that is explained subsequently in this section of these rules and regulations.
 - (iii) Usage Charges shall be billed quarterly for subsequent usage of the water and/or sewer systems. Usage charges are computed according to two methods:
 - 1. For private dwellings and condominiums, a point/unit system is used which is the same as that used to compute tap fees.
 - 2. In commercial establishments water charges are based on metered consumption and the sewer charges are proportional to the water charges.

(b) **Point/Unit System**

- (i) The following point/unit system is used to compute tap fees for all properties and usage charges for commercial properties:
 1. Ten points compromise one water or sewer unit, and there is a minimum of one water/sewer unit per living unit.
 2. The point system will be used for commercial buildings insofar as applicable, and units will be assigned for special situations such as service stations, sauna, etc. on the most practical basis possible
 3. Lodges will be assessed 4.00 points for each room and bath. The public areas shall be assessed in accordance with the point schedule.
 4. Restaurants, Bars and Lounges shall be assessed on seating capacity. The maximum number of seats shall be divided by four and then multiplied by 2.50 points.
 5. Convention Centers, with banquet and dining facilities, shall be assessed by estimating the capacity to be served, and multiplying by 1.0 points for each person served. Facilities such as cafeterias and dining rooms serving meals on a daily or seasonal basis shall not qualify for the convention center assessment.
 6. Lounges and Bars shall be assessed by estimating the number of persons to be served and divided by four which is the average number of persons served by the average kitchen.
 7. Laundry Facilities shall be classified as either residential or commercial
 8. Residential laundry facilities shall be assessed 3.50 points per washer.
 9. Commercial laundry facilities shall be assessed 2.50 points per washer and shall be defined simply as nonresidential facilities whose use is intended for more than one family; or one which is coin-operated, or one with laundry facilities for linens for lodges, motels, etc., or designed for public use.
 10. Transient Toilet Facilities shall be assessed by estimating the number of transients to be served and by multiplying by 0.25 of a point.
 11. Bar Sink/Wash Bowls shall be assessed 0.75 points and shall include all washbowls which are not counted in the full bath or half bath categories. Examples of locations where wash bowls shall be assessed at 0.25 points, but not limited to are:
 - a. In bedrooms of both residential and commercial establishments.
 - b. In bars of both residential and commercial establishments.
 - c. In barbershops and beauty salons.
 - d. In offices and shops.
 - e. In maid service areas which would not come under the Laundry Facility classification.

- f. Simply water outlets inside residential and commercial establishments.
12. Outside Water Facilities shall be assessed 1.00 for each water spigot. All residential or commercial establishments shall be charged for at least one outside water facility even though there may be none present on the outside of the building.
13. Baths
- a. Full Baths shall be assessed 3.00 points when they include a regular tub or shower, a basin and a toilet.
- b. Full Baths shall be assessed 4.50 points when they include a whirlpool tub or shower, a basin and a toilet.
- c. Half Baths shall be assessed 1.50 points and shall include a basin and a toilet.
- d. Full Bath shall be assessed when a basin is located in a room directly adjacent to a shower or tub and toilet.
- e. Extra Basin in a half bath or a full bath area shall be assessed an additional .75 points.
- f. Extra Toilet, urinal or bidet in a half bath area shall be assessed an additional .75 points.
- g. Extra Shower in a full bath area shall be assessed an additional 1.50 points.
14. Any area that is ever used as sleeping facilities shall be assessed 1.00 points. Examples of such areas, but not limited to, are:
- a. Bedrooms
- b. Living Rooms
- c. Lofts
- d. Recreation Rooms
15. Living Room area with full bath accommodations adjacent shall be assessed 1.00 points; i.e. condominiums with 3 full baths, 2 bedrooms and living room which may also serve as a sleeping facility shall be assessed for 3 full baths and 3 bedrooms.
16. Studio and Efficiency Apartments or Apartments Shall be assessed as a separate dwelling on its own Tap Fee Assessment Sheet.
17. Water and Ice Makers in the refrigerator door or freezer shall be assessed .50 points.
18. Fountains shall be assessed 0.25 points.
19. Saunas shall be assessed 0.25 points, whether or not water facilities are located inside the sauna.
20. Spas and Whirlpools (Jacuzzi) shall be assessed 3.00 points.

- 1150 21. Spigots shall be assessed 1.00 point on all units.
1151 22. Swimming Pools shall be connected to a water meter and shall be
1152 assessed the standard commercial service charge for water.
1153 23. Service Stations shall be assessed 30.00 points regardless of size or the
1154 station, the number of restroom facilities or the number of car washing
1155 machines.
1156

1157 **Section XIX - INSPECTION**

- 1158 (a) Following the completion of construction of all residential and commercial structures, the
1159 Town shall perform a physical inspection of all premises to determine the number of
1160 points to be assessed according to the **POINT/UNIT SYSTEM**. The total points
1161 determined by this inspection shall be used in levying both the Tap Fee and the quarterly
1162 usage fee.
1163 (a) No Certificate of Occupancy will be issued until arrangements have been made with the
1164 Town for payment of the Tap Fee.
1165 (b) From time to time, the Town may direct its employees to perform physical inspections of
1166 residential and/or commercial structures to determine if the assessment based on the point
1167 system is correct or requires adjustment. The owner of the improved property shall be
1168 responsible for paying any additional tap fee which may result from the inspection of the
1169 premises. The owner's quarterly water/sewer usage charge shall be adjusted to reflect the
1170 actual number of points assess by the recent inspection. Should the use of a residential or
1171 commercial structure be altered, thereby causing a reduction in the number of original
1172 points assessed, the Town shall not refund any Tap Fee; however, the quarterly usage
1173 charge shall be adjusted to reflect the correct number of points assessed by the recent
1174 inspection.
1175

1176 **Section XX – PENALTIES AND REMEDIES FOR NONPAYMENT OF**
1177 **WATER/SEWER CHARGES**

- 1178 (a) All department usage bills will be rendered quarterly by the Town.
1179 (b) Interest at the rate of 12% per year, computed daily, will be charged on all unpaid accounts
1180 30 days from the date of billing. There will be a minimum interest charge of .50¢.
1181 (c) When any account is 90 days in arrears, a collection notice shall be mailed to the customer,
1182 at the address on file in the department's office, giving the customer 30 days in which to
1183 pay the account in full. This notice will be sent by certified mail. At the end of the 30-day
1184 period the Town reserves the right to disconnect the water service and to turn the sewer
1185 portion of the account over to legal counsel for appropriate collection action.
1186 (d) All unpaid charges for water shall be liable for a lien on the property in accordance with
1187 applicable state statute.
1188 (e) Reconnection of the water service shall not be made until all previous charges for usage
1189 plus a \$50.00 reconnection fee has been paid in full.

- 1190 (f) If a commercial water meter is tampered with in any manner the property owner may be
 1191 liable for a lump sum penalty of \$200.00 and reconnection fee of \$50.00 in additional to
 1192 the quarterly water and sewer charges based on the previous year's quarterly bill for the
 1193 same time period.
 1194

Section XXI – RATE SCHEDULE (effective January 1, 2006)

1195	(a) Permit Application Fee (Water)	\$50.00
1196	(b) Permit Application Fee (Sewer)	\$50.00
1197	(c) Tap Fee (per Water Unit)	\$395.00
1198	(d) Tap Fee (per Sewer Unit)	\$682.00
1199	(e) Water Usage (per Water Unit per Month)	\$11.05
1200	(f) Sewer Usage (per Sewer Unit per Month)	\$15.52
1201	(g) Water Usage (Commercial Metered per 1,000 Gallons)	\$2.40
1202	(h) Sewer Usage (Commercial)	130%/Water Charge
1203	(i) Sewer Usage (Commercial, single user)	\$9,450.00
1204	(j) Turn On/Turn Off Charge (Water)	\$50.00
1205		