TOWN OF NEWMARKET, NH

ENVIRONMENTAL SERVICES DEPARTMENT: WATER DIVISION

WATER USE RULES, REGULATIONS AND CONSTRUCTION SPECIFICATIONS

October 2014

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CHAPTER 1

DEFINITIONS

1.1.1. **"Administrator"** shall mean the Town Administrator.

1.1.2. **"Air gap"** means an unobstructed vertical distance equal to twice the diameter of the supply pipe or supply faucet or one inch, whichever is greater, through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device and the flood level rim of the receptacle.

1.1.3. **"Approved backflow prevention device"** means a backflow prevention device that has been:

(1) Manufactured to allow for accurate testing and inspection so as to allow verification of performance; and

(2) Tested and certified by the University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research.

1.1.4. **"Approved source"** means a source of water used by a public water system for distribution to the public for consumptive purposes which has been approved by the department for said use.

1.1.5. **"Backflow"** means the flow of unwanted substances into the water distribution pipes of a potable supply of water.

1.1.6. **"Backflow prevention device"** means a device that is designed to, and which in practice does, prohibit unwanted substances from flowing into the water distribution pipes of a potable supply of water.

1.1.7. **"Backflow prevention device with intermediate atmospheric vent"** means a backflow prevention device having 2 independently-operating check valves separated by an intermediate chamber, with a means for automatically venting the intermediate chamber to the atmosphere.

1.1.8. **"Back pressure"** means pressure created by mechanical means or other means

causing water or other liquids or substances to flow or move in a direction opposite to what is intended.

1.1.9. **"Back-siphonage"** means a backflow resulting from negative or reduced pressure in the water distribution pipes of a potable water supply.

1.1.10. **"Barometric loop"** means a loop of pipe rising at least 35 feet at its topmost point above the highest fixture it supplies and which provides protection from back-siphonage only.

1.1.11. **"Certified backflow prevention device inspector"** means an individual who has proven his or her competency to inspect and test backflow prevention devices, by the possession of a valid backflow prevention device certification issued by the New England Water Works Association.

1.1.12. **"Check valve"** means a self-closing device which is designed to permit the flow of fluids in one direction and to close if there is a reversal of flow.

1.1.13. **"Contaminant"** means **"contaminant"** as defined in RSA 485:1-a, II, namely "any physical, chemical, biological or radiological substance or matter in the water".

1.1.14. **"Containment"** means that method and philosophy of backflow prevention which requires a backflow prevention device to be installed at the water service entrance.

1.1.15. **"Contractor" or "Developer"** shall be used interchangeably throughout these regulations.

1.1.16. **"Council"** shall mean the Town Council.

1.1.17. **"Cross-connection"** means any actual or potential physical connection or arrangement between 2 otherwise separate systems, one of which contains potable water and the other which contains water of unknown or questionable safety or steam, chemicals, gases, or other contaminants, whereby there may be a flow of unwanted substances into the potable water supply system.

1.1.18. **"Curb stop"** shall mean the valve located on the service line at or near the public right-of-way line and used to shut off the water service outside the premises being served.

1.1.19. **"Water Meter"** means a device used to measure water.

1.1.20. **"Master Meter"** means a meter that measures water to a private subdivision, mobile home park, or to other multiple dwelling water systems.

1.1.21. **"Deduct Meter"** means a measuring device, purchased and installed by the customer, and inspected and approved by the Water Department for the purpose of metering water used in such a manner that it does not enter the sewer collection system thereby meriting credit on sewer usage.

1.1.22. **"Customer"** shall mean any person, firm, corporation, body politic, or organization of any type taking water from the Town of Newmarket. Customer also means any person who has legal title to or license to operate or inhabit a property at which a cross-connection inspection is to be made or at which a cross-connection is present.

1.1.23. **"Division"** shall mean the Water Division of the Town of Newmarket

1.1.24. **"Department"** shall mean the Public Works Department of the Town of Newmarket.

1.1.25. **"Double check valve"** means a device incorporating 2 spring-loaded check valves within a single unit, having 2 shut-off valves and the necessary appurtenances for testing.

1.1.26. **"High degree of hazard"** means that if a backflow were to occur, the resulting effect on the potable water supply could cause illness or death if the water thus contaminated were consumed by humans. The unwanted substance may be toxic to humans either from a chemical, bacteriological, or radiological standpoint. The effects of the contaminants can result from short or long-term exposure.

1.1.27. **"Lien"** shall mean a statutory lien of the municipality as provided by RSA 38:32.

1.1.28. **"Low degree of hazard"** means that if backflow were to occur, the resulting effect on the potable water supply would be a change in its aesthetic qualities only and the unwanted substance is non-toxic to humans.

1.1.29. **"Main Pipe"** is the main water pipe so-called, from which service connections are made to supply water to customers.

1.1.30. **"Person" means "person"** as defined in RSA 485:1-a, XIII, namely "any individual, partnership, company, public or private corporation, political subdivision or agency of the state, department, agency or instrumentality of the United States or any other legal entity."

1.1.31. **"Potable water"** means water from a source which has been approved by the department for human consumption.

1.1.32. **"Pressure vacuum breaker"** means a device with an internally spring-loaded check valve and a spring-loaded air inlet valve, having 2 shut-off valves and the necessary appurtenances for testing, designed to operate under constant pressure but not back pressure.

1.1.33. **"Public water system"** means public water system as defined in RSA 485:1-a, XV.

1.1.34. **"Reduced pressure backflow device"** means a device incorporating 2 or more spring-loaded check valves and an automatically-operating relief valve located between the 2 check valves, with 2 shut-off valves and the necessary appurtenances for testing.

1.1.35. **"Residential dual check valve"** means a device, designed for backpressure and back-siphonage protection for residential dwellings, which incorporates 2 spring-loaded check valves in a single unit without shut-off valves or testing appurtenances in accordance with American Society of Sanitary Engineers (ASSE) Standard 1024.

1.1.36. **"Shut-off"** shall mean the valve located on the service pipe before the water meter.

1.1.37. **"Service Pipe"** is the pipe running from the main pipe to the meter, including all pipe, fittings and pipe necessary to make the connection, both domestic and fire.

1.1.38. **"Supplier"** means any person who controls, owns, or generally manages a public water supply system.

1.1.39. **"Water and Sewer Division"** shall mean the Water and Sewer Division of the Town of Newmarket.

1.1.40. **"Unwanted substances"** means water or other liquids, gases, mixtures, or other

substances from any source(s) other than the approved source(s) of water.

CHAPTER 2

RULES AND REGULATIONS

Section 1: Water Use and Payment

2.1.1. The following regulations shall be considered a part of the contract with every person who uses water, and every such person taking water shall be considered to express the assent to be bound thereby.

2.1.2. In case of violation by a customer of any regulation established by the Newmarket Town Council, or on non-payment of rates or accounts due, his supply shall be cut off pursuant to the procedure set forth in these regulations. The water will not be turned on again until all cause and complaints are removed and dues paid.

2.1.3. Where two or more customers take through one service pipe, the provision in regard to cutting off the supply shall be applicable to all customers.

2.1.4. All customers must adhere to the Town of Newmarket Water Management Program as presented in the attached Appendix.

Section 2: Water Services

2.2.1. All applications for the use of water must be made at the Public Works Office in form prescribed and signed by the owner or the owner's properly authorized agent. A permit fee as determined by the Newmarket Town Council shall be charged for each residential or commercial unit added to the Newmarket Water System.

2.2.2. The Water Division may, unless financial responsibility is established, require a deposit covering the cost of the installation before same is installed.

2.2.3. A separate service and connection to the water distribution main shall be required for any new property which is to be used as a dwelling or a place of business.

2.2.4. No water permit shall be issued for additional units to any building which does not have its own individual water service from curb to meter.

2.2.5. No customer shall install or use water consumption apparatus which will affect the pressure or operation conditions so as to interfere with the service of another customer.

2.2.6. Every free-standing building used for residential purposes requiring water shall have a separate water service line from the curb stop to the meter and shall have a separate curb stop located outside the building and accessible to the Water Division at all times. No building shall be fed water through another building unless both buildings shall be owned by the same party and the outbuilding being serviced contains no residential units.

2.2.7. Unless approved by the Superintendent of the Water Division, in a building containing more than one residential or commercial unit, and where each of these units may have a different owner, every unit shall have its own water meter, its own water service line from the curb to the meter and its own curb stop located outside the building and accessible by the Water Division at all times.

Section 3: Ownership of Services

2.3.1. All new service pipe and fittings will be laid from the main to the meter at the water-takers expenses. Said service piping will be inspected by the Superintendent of Water or his authorized representative before any back filling is accomplished. That portion of the water service between the curb stop and the meter will be maintained by the user, except the meter which is installed and owned by the Water Division. Replacement of the water service from the main to the curb shall be the responsibility of the Water Division.

Section 4: Tapping of Main

2.4.1. No person, except an employee or authorized agent of the Water Division, shall tap any water main or connect any service pipe therewith; nor shall any person turn on or shut off water from any water main, when the stop gate is not located on his own premises.

Section 5: Fire Protection Devices and Fountain Use

2.5.1. No person or fireman, except for the legitimate purposes of extinguishing fires, shall open any hydrant without the consent of the Water Superintendent or designated authorized agent.

2.5.2. No person shall carry or take away water from any hydrant without the consent of the Water Superintendent, or after such consent has been withdrawn.

2.5.3. Private fire protection service request shall be submitted to the Public Works Department, or his designees, for approval and must be accompanied by a plan of the proposing piping system, together with a statement telling for what other purposes the system might be used.

2.5.4. The Water Division does not promise to furnish proper quantities of water through any public or private fire service, nor does it promise to undertake any activity relative to that service.

Section 6: Water Meters

2.6.1. All services connected to the Town system shall be metered. The sizes, types, and requirements for meters shall be determined by the Water Division. No person, except a duly authorized agent of the Water Division, shall set, take off, or repair a water meter.

2.6.2. The customer shall supply a dry, easily accessible place so the meter can be worked on, read, and inspected. Meters shall be set, as nearly as possible, at the point of entrance of the service pipe.

2.6.3. When the customer fails or neglects to furnish a suitable location for a meter inside the building, or when, for other reasons, it is necessary or expedient to locate the meter in an underground box or vault, the customer will bear the expense of all costs associated with the installation of said meter.

2.6.4. A water meter up to ¾" will be supplied by the Water Division on all services at no cost to the water taker. The customer will pay the entire cost for meters over ¾" and their accessories. All meters shall be property of the Town of Newmarket.

2.6.5. For services up to ¾" in size, meter repairs or replacements necessitated by ordinary wear will be paid for by the Water Division. Those repairs necessitated by freezing, hot water, willful damage, or fault of the customer will be charged by the customer.

2.6.6. Access to Meters: The customer, upon connection of service, shall be deemed to have granted permission for the reading, inspection, and installation of meters, including the installation of remote readers for meters.

2.6.7. The agents of the Water Division must be allowed to enter the premises of any water taker supplied with Town water at all reasonable times and hours for the purpose of reading, testing, removing, inspecting, installing meters, or to examine the water pipes and fixtures, the manner of use. The agents of the Water Division may reject any water pipes and fixtures if said agent determines that the water pipes or fixtures are unsuitable for the purpose of providing water.

2.6.8. When water passes through a meter, it may be used for any and all purposes except as limited by Chapter 5. Only one meter will be set by the Water Division on any one service, except a duplex house with two owners, and the owners of the premises

shall be held to pay the rates for the entire amount used upon such premises, irrespective of under leases or individual consumers.

2.6.9. When water passing through a single meter is used to serve more than one dwelling, the owner of the premises of which the meter is located, irrespective of under leases or individual consumers, shall be held to pay the full rate or any balance of the rate thereof for the entire amount of water passing through said meter (called the "Master Meter") per the schedule below;

a. Any individual dwelling meter shall first be read, recorded and billed to the dwelling; and paid for by the dwelling.

b. Any Master Meter shall be read, recorded and compared to the sum of the individual dwelling meters. Any positive discrepancy between the individual meter and Master Meter shall be billed and paid for by the premise owner, as indicated above.

2.6.10. Seasonal Meters: Meters will be removed, stored and reinstalled when the customer requires such because of the nature of the business or the likelihood of freezing. Such installations will be subject to normal turn-on/turn-off fees.

2.6.11. Deduct Meters: are only authorized for use in monitoring outside water usage for purposes of establishing credits on sewer bills.

a. Deduct meters shall be of a standard type as specified by the Water Department.
b. Deduct meters are to be installed with a backflow preventer and isolation valves. The customer shall be responsible for the purchase, maintenance and installation by a licensed plumber.
c. As a courtesy, the deduct meters will be read at the same time as the domestic water meters. The deduct meter readings will be relayed to the finance office with the domestic water meter readings.

2.6.12. Defective Meters: Upon a written request of a customer, the Water and Sewer Division shall test a meter to determine its accuracy, removing it, if necessary, from the premises of the customer. If the meter is found to be defective to the extent of a variance of more than two percent, no charge shall be made for the test and an adjustment shall be made on the water bill to the extent of the variance from the period beginning with the last scheduled reading to the date of discovery of the variance. If the meter is found to be less than two percent variance, the customer

shall pay for the test. By request, the customer may be present when the testing is done.

2.6.13. Meter Seal: All meters will have a suitable seal affixed there-to, in such a manner that the adjustment of registration of the meter cannot be tampered with without breaking the seal. Disruption of seal will result in a fine and cause for discontinuance of service in accordance with the procedure set forth in these regulations.

2.6.14. No ground wires from any source whatsoever shall be attached to any pipe inside the building at any point of entrance to the premises. A point on the service pipe on the street side of the shut-off is the only allowable place for all ground connections.

2.6.15. For newly constructed buildings to be supplied with water by the Newmarket Water Division, the owner or general contractor shall be responsible for the installation, at the time of construction, for all wiring required for the use of remote indicating water meters of the type in use by the Newmarket Water Division. Such wiring shall comply with the requirements set forth by the Superintendent of Water.

2.6.16. Parties using meters must measure all the water supplied to the premises on which they are set, and will be charged for all water that passes through the meter, whether used or wasted.

Section 7: Billing and Payment

2.7.1. Meter rates shall be determined by the Town Council from time to time in amounts that will adequately cover the costs of operation, maintenance, and repair of existing infrastructure, and for also for reasonable extensions to existing mains, and toward acquisition of future water supply, plant and equipment.

2.7.2. The Town Council has the discretion to adjust meter rates, if charged, so as to ensure that said rates will be fairly apportioned amongst customers.

2.7.3. Customers shall be charged for services and water consumption in accordance with the prevailing rates established by the Town Council and published in the Town of Newmarket Fee and Charges Schedule.

2.7.4. In the event a meter stops because of mechanical failure, the customer will be billed for the average consumption for the previous twelve months.

2.7.5. All charges are due and payable upon presentation of the bill and are considered past due thirty days after the date of the bill. Failure of a customer to receive water bills does not relieve the customer of the responsibility of making prompt payment upon notification.

2.7.6. The Town may require a deposit to cover the estimated costs of installation and other future obligations of the customer up to one year from the time service commences.

2.7.7. Amounts not paid within thirty (30) days shall be subject to a late payment charge of one percent (1%) per month on the unpaid balance (equivalent to a 12% annual rate). Each late payment charge shall compound monthly, and all subsequent late payment charges shall be calculated on the entire amount past due for the entire delinquent period, including all compounded interest.

2.7.8. The Town shall assess a delinquency charge sufficient to cover the cost of collecting the delinquent bill, which is in arrears for one full quarter or more. In no event shall the Town assess a charge less than the amount shown in the fee and charges schedule.

2.7.9. The Town shall accept partial payments of no less than one-third (1/3) of unpaid arrears as a precondition to restoring discontinued services. In such event, the delinquent customer shall satisfy the entire balance within ten (10) working days. In the event, the delinquent customer does not satisfy the entire balance within working days the Town may immediately discontinue service.

2.7.10. The failure of the owner or his agent to receive his bill for this water does not relieve him of the responsibility for making payment promptly.

Section 8: Procedures in Non-payment

2.8.1. Liens: Under the provision of New Hampshire RSA 38:22 (c), all charges for water services shall constitute a lien in favor of the Town of Newmarket upon the real estate where the services were furnished and the lien shall continue for eighteen (18) months date of the last paid bill, unless the Town records in the Rockingham County Registry of Deeds a notice of lien, in which case the lien shall continue for six (6) years from the date of the last unpaid bill. The lien may be enforced in a suit by the Town against the owner of such real estate. In such a suit, the Town shall have the right to a judgment per year charges, entered at a rate of twelve (12) percent, and subject to change, from the date of the last unpaid bill to date of judgment, and costs. The records in the Water and Sewer Division shall be sufficient notice to maintain suit upon the lien against subsequent purchases or attaching creditors or real estate.

2.8.2. The execution and recording of a lien pursuant to this section shall in addition to, and shall not be exclusive of, other remedies available to the Town at law or equity, including but not limited to, discontinuation of service pursuant to Section 9. The Town shall have the sole discretion to determine which procedure to utilize in the event that an owner or customer fails to pay claims for service or charges.

Section 9: Violation and Enforcement

2.9.1. Disconnection : Service may be shut off for any of the following reasons; if the Superintendent of the Water Division or his authorized agents, determines that there has been:

a. Use of water for purposes other than described in the application;

b. Misrepresentation in the application;

c. Willful waste;

d. Tampering with Utility Property;

e. Vacancy;

f. Cross-connecting the Utilities service pipe with any other supply source;

g. Refusal of reasonable access property;

h. Violation of any water bans; or

i. Installation of illicit flow restriction and/or pressure fluctuating devices.

2.9.2. Any violations of the provisions of these rules and regulations, or failure on the part of any customer utilizing the water to promptly and pay all claims for service or other charges of the Water Division, shall be sufficient cause for shutting off the water supply of such customer and such supply shall not be turned on again until all such cause of complaint have been removed, including any additional work costs incurred for turning on and off the water.

2.9.3. Notwithstanding any regulation to the contrary, the Town shall not discontinue service without notice to a customer if any part of the service provided benefits one or more parties known to the Town to be a residential tenant. In such instance, the Town shall provide notice compliant with RSA 38:31, as amended, unless (1) the discontinuance of service is ordered by the Chief of Police, Fire Chief, Building Inspector, or other public health officer and (2) the discontinuance of service is necessary to avoid damage or injury to life or property.

The discontinuation of service pursuant to this Section shall be in addition to, and shall not be exclusive of, other remedies available to the Town at law or equity, including but not limited to, the execution and recording of a lien pursuant to section 8 for failure to pay all claims for service or other changes. The Town shall have the sole discretion to determine which procedure to utilize in the event of a violation of these regulations.

Section 10: Damage and Liability

2.10.1. The Water Division reserves the right to discontinue service temporarily whenever necessary to make extensions, alterations or repairs or to curtail the use of water. The Water Division shall provide notice of such temporary discontinuance for repairs to water mains or service pipes when practicable.

2.10.2. The Water Division will not be responsible for any damages disruptions in service resulting from the delivery, installation or removal of meters, or resulting from repairs, construction, or general maintenance of said mains and service pipes. The Water and Sewer Division will not be liable for any damages from leakage or water escaping from the customer's system.

2.10.3. Notice of shutoff will be given when practicable, however, nothing in this rule shall be construed as requiring the Water Division to provide such notice.

2.10.4. All customers having direct pressure hot water tanks or appliances must place proper automatic vacuum and relief valves in the pipe system to prevent any damage to such tanks or appliances in the event that the Town shuts off water to the street main(s) or service pipe(s). Water service will be provided to such direct pressure installations only at the customers risk and in no case shall the Water Division be liable for any damage occasioned thereby.

Section 11: Contractor Water Usage

2.11.1. All water used by private contractors shall be charged for and collected at regular scheduled rates for the same and for any additional expense the Water Division may incur in providing such service. The Water Division may require, if financial responsibility is not established, a deposit in advance to guarantee payment for service. Bills for labor and material shall be due on completion of the work for which the bills cover; and water will not be turned on until such bills are paid in full.

Section 12: Fees and Charges Schedule

2.12.1. The following rates, fees, fines and penalties have been established by the Water Division.

a. Water service shall be at:

i. $4.25 per hundred cubic feet of water metered; and

ii. $6.00 per unit for each billing per quarter.

b. Water Service Activation: $25.00. The customer shall provide 24 hours notice for said service.

c. Water Service Disconnection/Discontinuance: $25.00. The customer shall provide 24 hours' notice for said service.

d. Final Bills: $25.00. The customer shall provide 24 hours' notice for said service.

e. Cost of collecting a delinquent charge: No less than $5.00.

f. Frozen Meter (less than 1 ½-inch): The customer shall be responsible for the cost of the meter.

g. Frozen Meter (greater than 1 ½-inch): The customer shall be responsible for the cost of meter and all necessary labor.

h. Meter Testing for meters ¾-inch and 1-inch: $50.00.

i. Emergency Callout: The customer shall be responsible for a minimum of 3 hours at a rate of $40.00 per hour.

j. Backflow Prevention Device Inspection: The customer is responsible for the cost for the backflow prevention device inspection and testing,

k. Water Service Taps: $125.00 per tap

l. Tie in Fee: $1,000.00 per unit

m. After Hour Inspections: The customer shall be responsible for a minimum of 3 hours at a rate of $40.00 per hour.

n. Broken Seal, Meter Tampering, and Water Ban Violations:

   i. First violation: $50.00;

   ii. Second violation: $100.00,

   iii. Third violation: $200.00

o. Denying access to authorized personnel: Discontinuation of water service

p. Non-payment of fines within 90 days of receipt: Discontinuation of water service

q. Greater than 3 broken seals within 3 years: Discontinuation of water service

r. Negligent or frequent damage to water meters: Discontinuation of water service

Section 13: Abatements

2.13.1. A customer may request an abatement from the Superintendent for any fee assessed. Said request shall be provided in writing within thirty (30) days of the receipt of a fee imposed upon the customer.

2.13.2. The Superintendant shall grant a request for an abatement if any of the following conditions are met:

a. The fee imposed is exceeds the customer's actual usage due to an error in the meter readings;

b. The fee imposed exceeds the customer's actual usage due to a meter malfunction; or

c. The fee imposed exceeds the customer's actual usage due to an error in the calculation of the fee.

2.13.3. Abatements will only be retroactive for one (1) billing period

2.13.4. Abatement requests that are denied by the Superintendent of Water/Sewer may be appealed by the owner to the Town Administrator. An appeal to the Town Administrator must be submitted in writing.

Section 14: Repeal of Inconsistent Charter

2.14.1. All provisions, rules, regulations and rates inconsistent herein, are hereby repealed.

Section 15: Additions and Amendments

2.15.1. The foregoing Rules and Regulations are subject to amendment at a duly convened public meeting of the Town Council in accordance with RSA chapter 91-A.

CHAPTER 3

PROVISIONS FOR MAIN PIPE EXTENSION

Section 1: Main Pipe Extensions

3.1.1. No person shall uncover, repair, connect, make any opening into or use, alter or disturb in any manner any part of the Water system without first executing an application from the Public Works Department and paying all applicable fees. All work must be performed and completed in accordance with all applicable regulations by persons who are either:

a. Certified holders of a valid "Utility Pipe Installers" license, or

b. Residential building owners, conducting work on their own residence, provided said owner has obtained special permission from the Public Works Director.

3.1.2. The Public Works Department shall receive and consider all peitions for extension of water main pipe signed by abutting property owners. At the discretion of the Public Works Director, the Water Division may assist in the extension of a water main. The petition shall provide the Public Works Director with the Petitioner's share of the total cost of the extension fifteen (15) calendar days prior to the start of the extension's construction. Said funds shall be placed in an escrow account.

Section 2: Review and Approval Process for Developers and Contractors

3.2.1. Extension of water services (i.e. to new subdivisions) will be made only after a study of the proposed plan has been completed by Public Works Department.

3.2.2. Plans must be submitted to the Public Works Department a minimum of thirty (30) days prior to the date of approval.

a. Plans shall be drafted on 24" X 34" plan and profile sheets with a horizontal scale of 1" = 20' or 1" = 40'. Detail sheets need not be on plan - profile sheets.

b. Specifications shall be type written on standard 8 ½" x 11" sheets.

3.2.3. It shall be the responsibility of all parties proposing additions to the Newmarket Water System to submit plans to the New Hampshire Department of Environmental Services (NHDES) prior to the start of construction. No plan will be given approval by the Public Works Department until it has been approved by NHDES. Approval by

NHDES does not constitute final acceptance by the Newmarket Public Works Department.

3.2.4. Upon notification by the Public Works Director all preliminary approvals and approval of construction plans as defined by the Newmarket Planning Board, shall be submitted to the Public Works Department by the contractor, developer or his representative for review and renewal of approval.

3.2.5. All developers or contractors shall apply for, and acquire, all necessary permits and approvals from the Town of Newmarket Planning Board. Upon receipt of all necessary permits and approvals from the Planning Board, the developer or contractor shall petition for, and obtain, all necessary approvals, permits, and authorizations from the Town Council. Upon the issuance of all necessary permits, approvals, and/or authorizations from the Town Council, said permits, approvals, and authorizations shall be signed by the Town Administrator. Copies of each permit or approval shall be provided to the Public Work's Department.

3.2.6. Water mains in new subdivisions to be served by the Town of Newmarket shall be installed by the developer or contractor at his expense according to specifications established by the Town of Newmarket and the supervision of the Water Division. The developer, contractor, or other party will be responsible for defects in materials and workmanship in any water system for one year after the acceptance of that water system improvements by the Town of Newmarket.

3.2.7. The Developer or contractor shall, as a condition of any approval, save and hold the Town harmless against any and all claims arising out of the extension or construction of the water main.

3.2.8. Upon completion of the water system or parts thereof, the developers or contractors shall obtain a written certification from the Superintendent of the Water Division that said system has been constructed strictly to these regulations. Said certification shall be required prior to the acceptance of said water system, or parts thereof, by the Town of Newmarket. A letter of approval signed by the Public Works Director, delivered to the Developer, Contractor or other party, shall be sufficient evidence that the Town of Newmarket has in fact accepted the Water System or parts thereof.

3.2.9. Whenever a Developer, Contractor or other party is found in violation of any of these regulations, the Superintendent of the Water Division may cause any and all installation or construction activity to cease until such violations have ceased and have been corrected. Any decision to stop the installation of a Water System, or parts

thereof, by the Superintendent of the Water Division may be be appealed to the Town Administrator in writing.

3.2.10. If a developer or contractor or other party is found to be in violation of the Provisions of Chapter 4 of these regulations, the Superintendent of the Water Division may appoint a representative to inspect the work on a full-time basis. The salary or salaries paid for said representative(s) shall be borne by the developer or contractor, until such time as the Superintendent is reasonably satisfied that the contractor, developer, or other party shall follow these regulations. Such decisions may be appealed to the Town Administrator pursuant to Section 3.2.8 of these regulations.

CHAPTER 4

REQUIREMENTS FOR WATER MAIN AND SERVICES

Section 1: General Specifications

4.1.1. No water service line installed at an elevation above 190 feet above sea level shall be supplied by gravity from the Newmarket Water System. All water systems above 190 foot level shall be supplied by a booster station approved by the Newmarket Water Division and the NHDES and be capable of maintaining a minimum pressure of twenty (20) pounds per square inch at the first floor level of the building served by the water service at all times.

4.1.2. No water service may be connected from the curb to the unit served until the water main supplying such service line has been accepted as part of the Newmarket Water System and a permit secured for such water line.

4.1.3. In new subdivisions, stub water service lines from main to curb shall be installed during construction of the water main and prior to testing and sterilization of the main.

4.1.4. All pipe installations shall be installed at a minimum of five (5') feet below finish grade.

4.1.5. The Superintendent of the Water Division or his representative shall inspect and approve all water installations. Ninety (90) degree bends in any piping system shall be avoided whenever possible. In the event that a ninety (90) degree bend is unavoidable, a mechanical joint ductile iron retainer gland and tie rods will be preferred to the use of thrust blocks and tie rod.

Section 2: Construction Materials

4.2.1. Water Mains: Pipe shall be a minimum of eight (8") inches in diameter or as determined by the Water Division, and shall conform to ANSI Standards for ductile iron pipe, in all categories, including but not limited to, lining, protective coatings and laying length. The minimum pipe thickness shall be class 52.

a. Ductile iron pipe shall have push-on joints with rubber gaskets, except where pipe is to be joined with special fittings or valves, in which case pipe shall be furnished with mechanical joints.

b. Marking Pipe: Each ductile iron pipe shall have conspicuously painted on the exterior the pressure, class, and weight of the pipe.

c. Linings and Coatings: The outside surface of all pipes shall be factory coated with bituminous coating of either coal tar or asphalt base approximately one (1) millimeter thick. The inside surface of all pipe shall be a double cement mortar lining and bituminous seal coat in strict accordance with ANSI Standard A2.4/AWWA C104-LR for "Cement-Mortar Lining for Cast-iron pipe with Fittings for Water".

d. Manufacturer's Affidavit of Factory Inspection and Testing: Upon request, the developer shall supply a sworn affidavit of compliance that all Hydrostatic and Physical properties tests have been made and that the results of the same comply with the American Standard's Association (ASA) requirements.

e. Developers Responsibility for Material: The developer is responsible for all materials during all stages of development, including but not limited to, the procurement of materials, handling and storage of said materials, and installation. The interior of the pipe shall be kept free of dirt and foreign matter at all times. The developer shall exercise due care over said material, and the developer shall not use materials that have been dropped, bumped, or whose structural integrity or effectiveness has otherwise been called into question due to damage. Detrimental abrasions to coatings shall be repaired by the contractor or be cause for pipe replacement.

f. Ductile Iron Pipe Fittings: Fittings for ductile iron water pipe shall be ductile or cast iron and meet the requirements of AWWA C110. The outside surface of all fittings shall be coated by hot coal tar dip method before lining. Inside cement lining shall be in accordance with AWWA C104. The minimum pressure rating for all fittings shall be 250 pounds per square inch (psi) unless a higher pressure class is required for the specific installation. Unless otherwise required for joint restraint, joints on fittings shall be mechanical in accordance to AWWA C111.

4.2.2. Gate Valves: Gate valves should be iron body bronze mounted, resilient seat, mechanical joint, with stainless steel nuts and bolts for underground use, wrench operated, non-rising stem, and "O-ring" seal in accordance with AWWA C509. All valves shall be "OPEN LEFT", and shall have the makers' initials, pressure rating, and year of manufacturer cast on the body. Valves twelve (12") inches and smaller shall be suitable and designed by the manufacturer for water working pressure of two hundred (200) psi and valves larger than twelve (12") inches shall have a working pressure of one hundred and fifty (150) psi. Gate valves shall have a two (2") inch square nut for wrench operation and the operating nut shall have an arrow cast in metal indicating the direction of opening. Gate valves shall be Mueller 2360 series or approved equal.

4.2.3. Valve Boxes: Valve boxes shall be heavy pattern cast or ductile iron, cast in two (2) or three (3) telescoping sections of sliding construction and at such lengths as will provide,

without full extension, the required cover. The lower section shall be five and one quarter (5 ¼") inch inside diameter and shall be valved and domed at the bottom to fit over the valve nut. The upper section shall fit over the lower section, unless otherwise infeasible. Covers shall:

a. be at least six (6") inches in diameter;
b. fit flush with the top surface;
c. shall be slotted for easy removal; and
d. have the words "water" and "open" and a direction arrow plainly cast in relief on the top surface.

Valve boxes shall be free of defects in material and workmanship, and shall be coated with coal tar pitch enamel or other approved coatings.

4.2.4. Hydrants:

a. All hydrants shall be post fire hydrants shall have a minimum five and one-half (5 ½) inch opening, six (6) inch hub inlet, two two-and-one-half (2 ½) inch hoses, and one four-and-one-half (4 ½) inch pumper nozzles with National Standard Threads.

b. The opening nut shall open by turning to the LEFT. Said nut shall be five sided, one-and-one-half point to flat.

c. Hydrant shall conform to the latest revision of AWWA Standard for Fire Hydrants for Ordinary Water Works Service, serial designation C502-LR. Hydrants shall be fitted with stainless steel nuts and bolts. Hydrants shall be Mueller Super Centurion 250 or approved equal.

d. In areas of installation where the ground water table is higher than that of dry barrel hydrant drains, the drains shall be plugged. Information pertaining to the location of plugged hydrants shall be sent to the Newmarket Fire Department.

4.2.5. Corporate Stops: Corporation stops shall be three-quarters (3/4) of an inch, unless otherwise required, and shall be ball type compression. INLET: AWWA taper CC thread; OUTLET: Conductive compression connection for copper tubing sizing (C.T.S) outside diameter (O.D.) Corporation stops shall be Mueller 300 series, Ford F Series or approved equal.

4.2.6. Copper Water Tube: Copper water tube shall be three-quarters (¾) of an inch, unless otherwise required, and shall be soft temper, type "K," and conform to ASTM B-88. No splices will be allowed from the corporation stop to the curb box stop.

4.2.7. Curb Stops: Curb stops shall be three-quarters (¾) of an inch, unless otherwise required, and shall be ball type compression with conductive compression connections for copper tubing sizing (C.T.S) and outside diameter (O.D.) on both ends. Curb stops shall be Mueller 300 series, Ford Z series or approved equal.

4.2.8. Curb Boxes: Curb boxes shall conform to the specification for valve boxes. Curb stops need not conform to the specifications for valve boxes when for curb stops two (2) inches and smaller, which in such case shall have a one-piece cast or ductile iron arch base, a steel pipe extension upper section, cast iron lid, and thread bronze plug with pentagon hex nut (rope thread). A stationary five-eights (5/8) inch minimum diameter by twenty-four (24) to thirty (30) inches minimum stainless steel long rod shall be installed at the curb box. Curb boxes shall be set plumb and flush with final grade. In addition, no obstruction shall be placed to obstruct use of shut-off valve wrench within a four (4) foot circumference from the center of the curb box.

4.2.9. Backfill:

a. Common fill mineral soil substantially free from organic materials, loam, wood, trash, and other objectionable materials which may be compressible or which cannot be properly compacted. Common fill should contain no stones larger than 6 inches in diameter. Common fill shall have properties such that it can be readily spread and compacted. Snow, ice, and frozen material shall not be permitted.

b. Screened gravel shall be well graded in size from one-quarter (¼) inch to three-quarter (¾) inch and shall consist of clean, hard, and durable particles or fragments. Screen gravel shall be free from dirt, vegetable, or other objectionable matter, and shall not be comprised of an excess of soft, thin elongated, laminated, or disintegrated pieces. The grading should conform to the following requirements:

Square Opening	1-inch	¾-inch	3/8-inch	No. 4	No. 8
% Passing by Weight	100	96-100	20-55	0-10	0-5

c. Granular fill consist of hard, durable stone and course sand, free from frost, frozen lumps loam and clay, well graded, and containing no stones having and dimension greater than 1 inch. The grading of the sizes and material shall be such that the gravel

may be thoroughly consolidated. The grading shall conform to the following requirements:

Square Opening	¾-inch	No. 4	No. 40	No. 200
% Passing by Weight	100	96-100	20-55	0-10

4.2.10. Pavement: Provide all materials in accordance with the applicable sections of the latest edition of the Standard Specification for Highways and Bridges of the New Hampshire Department of Transportation (NHDOT).

Section 3: Construction Methods

4.3.1. Trench excavation: the contractor shall be responsible to excavate trench/trenches in a manner consistent with all safety requirements provided by State, federal, and local law and regulations for the soil types involved. The contractor is required to do all dewatering of the trench which may be necessary to insure the trench bottom is firm and dry. If, in the opinion of the Water Division, unsatisfactory soil conditions exist at the required trench grade, the contractor may be required to excavate below normal trench grade until suitable foundation material is encountered. The excavation shall then be backfilled with screened gravel in six in layers. Each layer shall be properly tamped and compacted until normal trench grade is obtained. The contractor shall make such additional excavations as may be necessary to provide for proper placement of concrete thrust blocks, valves, hydrants, services and other appurtenances as shown on plans or as required by the Water Division.

4.3.2. Cover: All water main trenches shall be such that a minimum cover of five (5) to six (6) feet is provided over the pipe, where possible, except at gate valves whereupon a minimum of three (3) feet of cover shall be provided at the top of the valve bonnet. The maximum depth of cover shall be seven (7) feet unless otherwise approved by the Water Division.

4.3.3. Bedding the Pipe and Fittings: All pipe and fittings shall be placed on a layer of bedding material consisting of compacted screened gravel or granular fill. The depth of bedding shall be six (6) inches minimum or equal to one half the diameter of the pipe, whichever is greater. Any voids under the pipe shall be filled and thoroughly tamped.

4.3.4. Laying the Pipe and Fittings: The pipe shall be placed in the trench in accordance with the manufacturer's recommendations or by an approved method in such a manner so as to insure that the pipe is not damaged. All pipes shall be thoroughly sound, dry and clean before laying, and the utmost care shall be taken to insure that the pipes condition are not altered when placed on the bed. Water tight plugs shall be installed once the pipes are in place to keep out water and dirt. All work associated with laying the pipes shall conform to AWWA Standard Specification C600 wherever said specifications are applicable and not in conflict with the provisions contained in these regulations. When the pipe is in place, screened gravel or granular fill, whichever is suitable under the circumstances, shall be placed in the trench and thoroughly compacted in six (6) inch lifts to twelve (12) inches above the top of the pipe.

a. Valves: Gate valves shall be installed to permit isolation of sections of the water mains for the purposes of flushing and to facilitate future repairs on the water mains. The location of gate valves shall be approved by the Water Division. Valves shall be installed as close as possible to plumb and in accordance with the manufacturer's recommendations. Valve boxes shall be installed at every valve location. Valve boxes shall be adjusted to the proper finish grade and shall be set plumb and centered over the operating nut of the valve. After installation is completed, all valves shall be operated and then left in the closed position. Valves and tee's shall be roded together.

b. Tapping Sleeves and Valves: Tapping sleeves and valves shall be installed with the outlet flange set vertically and the sleeve squarely centered on the main. Concrete or granite blocking shall be placed beneath the sleeve and valve to provide support. Concrete thrust blocking shall be placed behind and under the sleeve and valve after the tap is completed. The valve shall be flushed after completion of the taps to ensure that the valve seat is clean. Bituminous coating shall be applied to the nuts and bolts holding the sleeve together.

c. Hydrants: Hydrants will be installed along all mains at a maximum separation of one thousand (1,000') feet. Notwithstanding this provision, hydrants will be installed no further than six-hundred (600) feet from any structure. The Town of Newmarket Fire Department may, in its discretion, require shorter distances based on required fire flow. The hydrant shall be set plumb and at the proper elevation with respect to the final finished grade. The breakaway flange shall be set two inches above finish grade. The hydrant base shall be set on fine material. The hydrant branch valve shall be adequately anchored together by mechanical means (anchor tee or threaded rod) and by concrete thrust blocks. The final location of hydrants shall be approved by the Water Division. Prior to any hydrant being tested under pressure, all hydrants, laterals, and mains shall be flushed to remove dirt, rocks, and foreign matter. Each nozzle and pumper outlet

shall be at least eighteen (18") inches above grade on the installed hydrant. All steamer connection shall face the travel way. Each hydrant shall be provided with an approved gate valve located three (3) feet from the hydrant, but not located within the travel way. The Hydrant and tee shall be roded together. Hydrants shall be painted to meet the Newmarket Water Division requirements for color.

4.3.5. Thrust Restraint: Concrete thrust blocks and joint restraints shall be installed at all bends, fittings, dead ends and hydrants as directed by the Water Division. Thrust blocks shall be pre-cast. Trench formed thrust blocks will not be acceptable. The bearing area of the thrust blocks shall be determined for each installation based on soil type and system design pressure. In the event that local conditions prohibit the use of thrust blocks, the contractor shall furnish and install additional mechanical thrust resisting devices, upon the approval of such devices by the water division.

4.3.6. Service Connections: Service shall be constructed in accordance with the most recent revision of the BOCA, CABO, and International Plumbing Codes. Service pipe connections will be made only from the street where is the legal address of the premises served is located.

a. Corporation Stops: The contractor shall furnish and install all corporation stops at locations as directed by the Water Division. A tapping machine shall be used which will permit tapping of water mains under pressure. The tapping machine shall be rigidly fastened to the pipe and the tap shall be made in the upper one-half (1/2) of the pipe. The length of travel of the tap shall be so established that when the stop is inserted and tightened with a fourteen inch wrench, not more than one to three threads will be exposed on the outside. Taps shall be at least eighteen (18) inches apart at a minimum.

b. Copper Tubing: The contractor shall furnish and install copper tubing at locations as directed by the Water Division. Excavation for services shall be to a minimum depth of five (5) feet, and the contractor shall exercise special care to insure that the bottom is free from sharp rocks or ledge outcroppings. In placing the service in the trench, the contractor shall ensure that the copper tubing has no kinks or sharp bends and that the screened gravel (or granular fill) is placed to the depth of six inches over. The contractor shall also ensure that the area around the service is free from large or sharp stones which may come in contact with the service.

c. Temporary Service Connection: Temporary service connections shall be at the customer's expense and shall include, but shall not be limited to, connections to buildings or trailers mounted onoundations, gardens, or any other connections made for a temporary use.

Section 4: Electrical Power and Telephone Lines

4.4.1. Underground electric and telephone lines, cables, or conduit shall NOT be installed in the same trench as the water main.

4.4.2. Wherever possible, the electric and telephone lines shall be installed on the opposite side of the street from the water main. However, if it is necessary to install underground power and telephone lines on the same side of the street as the water main, the approval of the Superintendent of the Water Division shall be required.

4.4.3. Wherever the electric or telephone lines must cross either mains or service branches, the installation shall be in conduit encased in concrete. The concrete shall extend laterally for a minimum distance of five (5) feet from each side of the water installation.

4.4.4. If the lines are laid parallel to mains or service branches, including those between the street shut-off and the house service, there must be a minimum of six (6) feet of lateral separation.

4.4.5. There shall be no installation of any electric or telephone line within ten (10) feet of a hydrant or house service street shut-off.

a. Warning Tape - All water, electric, cable, and telephone lines must be marked with underground warning tape located a minimum of one (1) foot to six (6) inches above the utility or as otherwise required by state or federal law or regulation.

Private Fire Protection - There shall be a separate pipe, gated on Municipal property, for private fire protection. In no case shall the fire service pipe be used for anything other than fire protection.

Section 5: Pressure and Leakage Testing (24 hour notice is required)

4.5.1. The Contractor shall furnish the necessary equipment and labor for carrying out a pressure and leakage test, as specified in AWWA C600, on the completed pipes. The pressure and leakage test shall be conducted concurrently. The mains shall be flushed to remove dirt and foreign substances prior to testing. For leakage test (refer to ANSI/AWWA C600-LR) all air in the pipeline to be tested shall be expelled.

4.5.2. The newly laid pipe shall be tested in valved or plugged sections as determined in the field by the Water Division. Water shall be slowly introduced by means of an approved power-driven pump. The pressure shall be raised to 150 psi measured at the lowest point of the section being tested as determined by the Water Superintendent or his authorized agent, if practical testing at such section is practical. Upon reaching 150 psi, the test shall be considered to commence.

4.5.3. The duration of the leakage test shall be two hours, and during the test water will be introduced into the main by pumps. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe to maintain pressure within five (5) psi of the test pressure.

4.5.4. Approved pressure and flow meters shall be installed to indicate pressure in-line and the amount of water introduced into the pipe line. Gauges must have been calibrated within one year of testing.

4.5.5. No pipe installation shall be accepted if the leakage is greater than that determined by the following formula found in ANSI/AWWA C600 Section 4:

$$L = \frac{SD\sqrt{P}}{133{,}200}$$

L = allowable leakage, in gallons per hour

S= length of pipe tested, in feet

D= nominal diameter of pipe, in inches

P= average test pressure during the leakage test, in pounds per square inch (gauge)

4.5.1. At the end of the test period, if the amount of water added to the main is less than the allowable leakage, and if no visible leaks or other failures, the Superintendent, or designated agent, shall approve the portion of the main tested. If any test of the pipe laid discloses leakage greater than that specified, the contractor shall, at his own expense, locate and repair the defective material until the leakage is within a permissible range under these regulations.

Section 6: Disinfection (24 hour required)

4.6.1. Following a satisfactory pressure and leakage test, a newly installed main shall be disinfected by the contractor, under the direction of the Water Superintendent or authorized agent. A modified slug method (ANSI/AWWA C651-LR) shall be employed to disinfect the main. The contractor shall use liquid sodium hypochlorite to disinfect the main. Common household bleach containing five percent (5%) sodium hypochlorite (volume %) or industrial bleach containing fifteen percent (15%) sodium hypochlorite (volume %) may be used. A concentration of approximately fifty (50) mg/L free chlorine shall be achieved throughout the main, at which time the main will be sealed for a period of twenty-four (24) hours. At the end of the retention period, sufficient residual chlorine

of approximately 10 mg/L, or as otherwise determined by the Water Superintendent or authorized agent, shall be present at the furthest point in the test line.

Note: The modification of the "slug" method (lower concentration hypochlorite, longer retention time) assures disinfection while reducing the amount of free chlorine to the environment.

Section 7: Flushing and Sampling (24 hour notice required)

4.7.2. Following disinfection the chlorinated water shall be flushed until the replacement water throughout the system is equal to the quality of Newmarket Water Division water as determined by the Water Superintendent or authorized agent. Said flushing shall be initiated within 24 hours of satisfactory disinfection because since prolonged exposure to highly chlorinated water might damage the asphalt seal coating of the pipe.

4.7.3. It shall be the contractors' responsibility to insure that the discharged water (flushed chlorinated water) from the water main cause no damage to the environment.

4.7.4. All new hydrants shall be flow tested and flushed.

4.7.5. After satisfactory flushing, two consecutive samples taken 24 hours apart from each 1,200 feet of new main shall be taken; a chain of custody form filled out and submitted to a qualified laboratory for coliform testing.

4.7.6. Results of all tests shall be reviewed by the Newmarket Water Division. If a failing result is produced then the contractor, at his own expense, shall take all actions necessary to remedy the condition(s) causing the failing result, and all testing will be repeated until a satisfactory result is produced.

4.7.7. Upon a satisfactory result of testing, all treated water must be thoroughly flushed from the main.

Section 8: Cross-connections and Backflow Prevention

4.8.1. No cross connection between the public water system and any non potable supply will be allowed unless protected by a system specifically designed for this purpose, and the connection is approved by the Town of Newmarket and NHDES. No connection capable of causing back-flow between the public water supply system and any plumbing fixture, device, or appliance or between any waste outlet or pipe having direct connection to waste drains will be permitted. If the Water Division discovers such a connection, service will be discontinued immediately.

4.8.2. All customer service shall be protected with a device commensurate with the degree of

potential hazard. All such devices shall be located at the service entrance and all water consumption within the premises shall pass through the protective device. All owners of backflow prevention devices must have a valid permit issued by the Town for each device.

4.8.3. An approved backflow prevention device shall be required on all commercial and industrial enterprises using municipal water and shall be provided in accordance with all State regulations. Said device shall be purchased and maintained by the owner of the enterprise. Said device shall be inspected by the Town of Newmarket Water Division or its agents as follow, unless more frequent testing is suggested by the device's manufacturer: High hazard should be tested every six (6) months; Low hazard should be tested every twelve (12) months; or more frequent as required by the supplier. The cost of said inspection will be billed to the owner.