

Rules and Regulations

Winchester Water Department

Winchester NH 03470

Board of Selectmen

Roberta Fraser, Chairman

Herbert Stephens

Jack Marsh

Theresa Sepe

Date

Water Department

Richard Meleski, Superintendent

Rules and Regulations

Winchester Water Department

Winchester NH 03470

General Rules

1.0 General

- A.** No person shall connect any service pipe to the mains or any distribution piping of the Town of Winchester except by approval of the Winchester Water Department and the Board of Selectmen.
- B.** All locations where system apparatus is installed must be accessible at all reasonable times to the Water Department for inspection.
- C.** No alterations shall be made to water services, between the water main and water meter without the prior knowledge and approval of the Water Department. These alterations will be required to meet current rules and regulations of the Winchester Water Department.
- D.** The Town of Winchester shall not, in any way or under any circumstances, be held liable or responsible for any loss or damage from any excess or deficiency in the pressure of the system. The Water Department will undertake to use all reasonable care and diligence to avoid interruptions of service but cannot and does not guarantee that such may not occur.
- E.** The Water Department shall not be responsible for damages caused by dirty water resulting from the opening or closing of any gate valves, water main breaks, repairs or maintenance to the system, use of hydrants for routine or emergency use.
- F.** The Water Department shall, when conditions allow, attempt to notify consumers, in areas to be affected, of any work or disruptions of service. Emergencies cannot be anticipated and therefore notice may not always be given.
- G.** The Water Department reserves the right to shut off water for the purpose of making alterations, additions or repairs.
- H.** A water service will be shut off from any user for non-compliance with Water Department rules and regulations or for non-payment of bills and related debts.
- I.** When water has been shut off because of disregard of the rules or non-payment of fees, it will not be turned on until the Water Department is satisfied that there will be no further cause of complaint and after payment of all applicable fees.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- J.** The Fire Department shall have control of hydrants during a working fire and shall immediately notify the Water Department of hydrant use. In no other case will any person be allowed to operate hydrants or other water system apparatus without the prior permission of the Water Department.
- K.** To eliminate the possibility of cross connection, service pipes or fixtures of any description that are to be connected to the mains of the Water Department shall not, under any circumstances, be connected with any other source of water.
- L.** All water services and sprinkler lines will have an approved backflow device installed.
- M.** No non-emergency water construction shall be commenced between October 31st and May 1st. Emergency construction may be permitted with approval of the Water Department.
- N.** Any person, corporation or other entity that damages any part of the water system will be held liable for all costs incurred to repair said damage.
- O.** No person shall park a vehicle, place or caused to be placed, any building materials, trash, landscaping materials, earth, snow or other obstructions which restricts, reduces, delays or denies use of a hydrant by the Water Department or Fire Department.
- P.** If any water customer permits another who is not a patron of the Water Department to obtain a supply of water, the customer in violation will be charged triple the regular rate for a full quarter or longer if said violation persists.
- Q.** No person shall turn on or off or otherwise tamper or operate any curb stop or gate valve without consent of the Water Department.
- R.** No person shall fill a swimming pool, skating rink, or pond from a fire hydrant unless authorized and supervised by the Water Department.
- S.** It is the belief of the Town of Winchester that these regulations comply with current State of New Hampshire Department of Environmental Services guidelines for public water systems. However, should there be any conflict between D.E.S. guidelines and these regulations, the more stringent regulation must be followed.

2.0 Meters

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- A.** The property owner shall provide a suitable location for water meter installation. This location shall provide for ready access to the water meter for installation and servicing. In structures where a suitable indoor location for the water meter is unobtainable, a meter pit shall be installed at the owner's expense. When manufactured housing or any other structure without a basement, is located on a site that is or will be connected to the Winchester Water System, a meter pit will be required. When an existing structure is replaced with said type of structure, a meter pit will be installed prior to having water turned on to the new structure.
- B.** Water meters shall be sized by the Water Department. All 5/8 x 3/4 inch meters and accessories will be provided by the Water Department. If a meter larger than 5/8 x 3/4 inch is required, the expense of purchasing the appropriate sized meter, backflow, and accessories will be with the property owner.
- C.** All 5/8 x 3/4 inch water meters, backflows, and accessory equipment are the property of the Water Department.
- D.** It shall be the responsibility of every owner of property where on water meter is installed to take all necessary precautions to prevent damage to such meter, including freezing and theft. Before closing and draining off the water from any building wherein a water meter is installed, the owner shall give five days notice to the Water Department, and arrange to have the water meter removed. The owner shall be liable for all damage to water meters and associated equipment provided by the Water Department resulting from neglect or failure to give notice.

3.0 Service Connections

- A.** Each application for water is to be considered on its own merits. The Winchester Water Department reserves the right to deny any application for the use that they determine may jeopardize the safety or health of current water users, or will create an unsafe demand on the water system, or have negative impact on the volume or quality or pressure on existing customers.
- B.** The Water Department shall be responsible for the water main tap and water service construction between the water main and property line including curb stop. The Winchester Water Department will make 3/4" and 1" taps for water services, for services larger than 1" the owner shall hire a qualified contractor to make the tap and to install the service to the curb stop. This work shall be done under the direct supervision of the Water Department. The property owner shall be responsible for the excavation, backfilling, road replacement, and permits and police details associated with installing the water service. Water services longer than 300 feet shall be required to be 1" or larger and have an approved water meter pit at the property line. No direct taps will be allowed except into ductile

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- iron pipe. All other makes of pipe will have an approved tapping sleeve or saddle. The Water Department will witness and inspect all services prior to backfilling.
- C.** The applicant/owner shall be responsible for and bear all costs associated with connecting and maintaining the water service from curb stop to the facility served.
 - D.** Prior to water service construction the applicant shall complete a water service application, pay to the Water Department all applicable fees, submit plans/drawings of planned construction, consult with the Water Department staff to coordinate all details pertaining to water service construction. A minimum of one weeks' notice is required prior to commencing construction.
 - E.** Water service piping must be installed with a minimum of 5-foot depth of cover at least 10 feet from and 18 inches above subsurface sewage disposal systems. If a 5-foot depth of bury cannot be achieved, then approved methods for insulating the service must be installed. It is highly recommended that all new services, and those being upgraded, where they cross under a roadway shall be insulated with a minimum of 2" of rigid foam insulation. Services longer than 300 feet will be required to install a meter pit at a location approved by the Water Department.
 - F.** Whenever water service piping must cross sewer lines, both pipes shall be constructed of class 150 minimum pressure pipes and be tested to assure water tightness. Sleeving of both water and sewer lines maybe done but only if the ends of the sleeving extends a minimum of 10 feet from where the lines cross. All efforts shall be made to minimize the number of pipe connections within this area.
 - G.** Water service piping shall not be backfilled until inspected and approved by the Water Department. This includes all work done from the street to the structure being served.
 - H.** A service connection shall consist of a tapping sleeve or saddle, corporation stop, curb stop, curb box, copper or CTS tubing, meter and backflow device. The corporation stop and curb stop shall have a full diameter port, with Teflon seat, bronze or stainless ball, and quarter turn open close control. Curb stop valves shall not have drains and will open left.
 - I.** Corporation stops shall be all bronze, or all brass construction with lapped bronze or stainless ball and ground key. Outlet connections shall be compression type suitable for copper tubing service. All stops shall be ball valves.
 - J.** The curb box shall be of the telescoping type, designed so that vehicle loads are not transmitted to the curb stop. The box shall be tar-based enamel coated inside and out. A 2 ½" Buffalo style curb box or equivalent shall be used.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- K.** Service piping shall be type K annealed copper tubing or 200-psi CTS (copper tube size) plastic tubing suitable for underground and drinking water use. Service lines between the water main and the curb stop will be copper. All new services shall be a minimum of 1” diameter. Repairs to existing services not of 1” diameter will be allowed without the need to upgrade the service to 1” diameter piping/tubing.
- L.** A 4-foot minimum horizontal separation shall be maintained between water service piping and all underground utilities. Water service lines shall be kept a minimum of 10 feet away from any septic leach field.
- M.** To eliminate the possibility of cross-connections, water service piping or fixtures of any description that are connected to the Winchester Water Department distribution system shall not, under any circumstances, be connected with any other source of water supply.
- N.** Water shall not be left running to prevent freezing without prior authorization of the Water Department. Services that have a history of reoccurring freezing shall be repaired/replaced/relocated to prevent freezing. Service lines on the house side of the curb stop are the responsibility of the property owner; service lines on the street side of the curb stop are the responsibility of the Winchester Water Department.
- O.** Booster pumps are not permitted on any water service without an approved backflow located before the pump. A certified backflow tester shall test this backflow device twice per year.
- P.** Each individual dwelling, business, condo, and apartment house must have a separate connection and curb stop to the main. Services will not be shared with another property or water user.
- Q.** Each sprinkler system must have a separate line from domestic use and shall have an appropriate backflow device installed. Each sprinkler line shall have a separate service line directly to the water main. Each sprinkler line shall have its own curb stop valve allowing the potable water source to be disconnected without losing fire protection. No sprinkler system shall be installed to any domestic service line.

4.0 Distribution System Main Extensions

- A.** Water main diameter. The minimum size of water main for providing fire protection, consumption for both domestic and commercial use shall be 8 inches in diameter. Larger size mains shall be provided where necessary to allow the withdrawal of the required fire flow while maintaining the minimum residual

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- pressure of 20 PSI at ground level at all points in the distribution system under all conditions of flow.
- B.** Dead ends shall be minimized by looping of all mains whenever practical. Dead end mains in excess of 600 feet shall not be allowed.
 - C.** Small mains. Any departure from minimum pipe size requirements must be justified by hydraulic analysis, future water use, and be considered only in special circumstances with the approval of the Water Department.
 - D.** Cross connections and interconnections. There shall be no connections between a public water supply and any non-potable water source unless the public water system is protected by a method meeting the requirements of the Town of Winchester's Water Department's Cross Connection Control Program, starting on page 2.
 - E.** Separation of Water Mains and Underground Utilities. Other utilities crossing water mains shall cross at or near a perpendicular. There shall be an 8 inch minimum clear vertical dimension and a 4 foot minimum clear horizontal dimension each side between water mains and any other utility pipe, conduit or wire.
 - F.** Valve Locations and Spacing. Sufficient valves shall be provided on water mains so that sanitary hazards will be minimized during repairs. Main valves shall be located at not more than 700-foot intervals. Water main intersections shall have a valve installed at each point of intersection allowing for repairs to be isolated while controlling the risks of potential sanitary hazards.
 - G.** Hydrant Location and Spacing. Hydrants shall be provided at each street intersection and at intermediate points between intersections. Hydrant interval shall not be greater than 700 feet. Hydrants shall be located so that no structure is situated more than 500 feet from a hydrant as measured along the street and driveway. The hydrant lead shall be a minimum of 6 inches in diameter. Auxiliary valves shall be installed in all hydrant leads 4 feet from the hydrant. New hydrants shall be placed a minimum of 6 feet but not more than 10' from the edge of the road surface. These dimensions may be adjusted with prior approval of the Water Department.
 - H.** Where dead-end mains occur, there shall be a fire hydrant, or another approved flushing device, if the flow and pressure are sufficient. No flushing device shall be directly connected to any sewer. No water service shall be connected past the hydrant or other approved flushing device.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- I. Air Relief Valves.** At high points in the water mains where air can accumulate, provision shall be made to remove the air by means of hydrants or air relief valves. Automatic air relief valves shall not be used in situations where flooding of the manhole or chamber may occur.

- J. Surface Water Crossing.** Surface water crossings, whether over or under water, present special problems.
 - 1. **Above Water Crossing:** The pipe shall be adequately supported and anchored, protected from damage and freezing, and accessible for repair or replacement.

 - 2. **Underwater Crossing.** A minimum earth cover of 4 feet shall be provided over the pipe. When crossing watercourses that are greater than 15 feet in width, the following shall be provided. The pipe shall be of special construction, ductile, cement lined, with flexible watertight joints. Pipe shall have restraints at all underwater connections. Valves shall be provided at both ends of the water crossing to allow that section of main to be isolated for testing or repair. The valves shall be easily accessible, and not subject to flooding. Sample/pressure test taps shall be installed near the main valves for testing of the underwater crossing.

 - 3. **HDPE (water main grade plastic pipe)** may be directionally bored under a body of water. Installation of valves shall be the same specifications as applied to ductile iron pipe.

- K. Cover.** All water mains shall have a minimum of 5 feet of cover as measured from the top of the pipe.

- L. Easements.** Water main easements shall have a minimum permanent width of 20 feet. There shall also be work easements of an additional 20-foot width.

5.0 Design

A. Pipe for Water Mains.

- 1. All proposed water main and water service piping plans must be approved by the Water Department prior to construction.

- 2. The Water Department will be notified at least 1 week prior to commencing construction.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

3. The contractor shall furnish, lay, join, test and disinfect all pressure pipes, fittings, and appurtenant materials and equipment, all as indicated on the drawings and as herein specified.
 4. All joints on bends, gates and castings shall be mechanical joint. All mechanical joints shall use approved retaining system, IE: Mega-Lug, Grip Ring, or equivalent.
 5. Pipe shall be ductile iron super bell-titer joint, Class 52, double cement lined, bituminous coated, 18-20 foot lengths.
 6. Unless otherwise indicated or specified, ductile iron pipe shall be at least Class 52 thickness for pipe 12 inches in diameter and smaller and at least Class 50 thicknesses for pipe larger than 12 inches in diameter.
 7. Pipe for use with sleeve type couplings shall be as specified above except that the ends shall be plain (without bells or beads). The ends shall be cast or machined at right angles to the axis.
 8. All pipe and fittings shall be tested at the foundry as required by the standard specifications to which material is manufactured. The contractor shall furnish upon request to the Water Department sworn certificates of such tests.
- B. Valves.** Gate valves open left. Gate valves for pipe up to and including 12-inch diameter shall be resilient seat type valve designed for underground use. Each buried valve shall be provided with a valve box. Valve boxes shall be of rough, even-grained cast iron and of the adjustable, slip, heavy-pattern type. They shall be designed and constructed to prevent the direct transmission of traffic loads to the pipe or valve. The upper or sliding section of the box shall be provided with a flange having sufficient bearing area to prevent undue settlement. The lower section of the box shall be designed to enclose the operating nut and stuffing box of the valve and shall be adjustable through at least 6 inches vertically without reduction of the lap between the sections to less than 4 inches.
- C. Fire Hydrants.** Hydrants open left.
1. Hydrants shall meet or exceed all aspects of AWWA C-502 for dry barrel fire hydrants in its latest revision.
 2. Hydrant shall open left, with open direction arrow on bonnet.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

3. Minimum hydrant bury shall be 5 1/2 feet.
 4. Hydrant paint and color shall be Rustoleum Industrial Enamel Regal Red or equivalent.
 5. Main valve shall be 5 1/4 inches minimum
 6. Hydrant shall have two 2 1/2 inch hose nozzles 180 degrees apart and one 4 1/2 inch steamer nozzle all national standard thread. Operating nut shall be of the pentagon type.
 7. Hydrant shall be traffic type connected at ground line by frangible cast coupling. Breakable bolts are not acceptable.
 8. Hydrant shall have 2 drains 180 degrees apart and shall be bronzed bushed.
 9. Elbow shall have 6-inch mechanical joint with accessories.
 10. Hydrant extensions shall be able to be installed without need for excavation.
 11. A set of disassembly tools shall be supplied by the manufacturer at no cost to the Town of Winchester, with the acceptance of any hydrant that is not currently in the system.
- D. Fittings.** Shall be compact, ductile iron, mechanical joint, cement lined or epoxy coated where applicable. Mechanical joint nuts and bolts shall be high strength, low alloy steel or equivalent.
- E. Couplings.** Shall be made from ductile iron or high quality gray iron. Gaskets shall be designed for use in water applications.
- F. Tapping Sleeve and Valve.** Tapping sleeves shall be a mechanical joint with outlet flange. Must be of cast, ductile iron or a full bodied stainless steel and must include a test plug so that valve and sleeve may be pressure tested before a tap is made. Rated working pressure for tapping sleeves up to and including 12 inch shall be 200 PSI, larger than 12 inches to be rated at 150 PSI.

7.0 Construction Methods

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- A. Trenches shall be excavated to the necessary width and depth for proper installation of pipe and shall have vertical sides. Minimum widths of trenches shall provide at least 12-inch clearance between the sides of the trench and the outside face of the pipe. The depth of trench shall be 6 inches below the bottom of the pipe barrel.
- B. If the existing soil below the bottom of the pipe barrel bedding depth is found to be unsuitable, the Water Department may order extra excavation below the bedding grade.
- C. Whenever unstable soil that is incapable of properly supporting the pipe or structure is encountered below the bottom of a structure, as determined by the Water Department, such soil shall be removed to the full width of the trench and refilled with bank run gravel containing no stone over 4 inches in diameter, placed in 12 inch lifts and thoroughly compacted. Crushed rock or screened gravel may also be used to replace unstable soils. No excavation shall be made below the limits of the excavation called for on the plans or herein specified without prior approval by the Water Department.
- D. Pipe and fittings shall be laid accurately to the lines and grades indicated on the drawings. The deflection of alignment at a joint shall not exceed the appropriate permissible deflection as specified in the following tabulation:

Pipe Deflection Allowances
Maximum permissible deflection for full-length pipe*

* Maximum permissible deflection for 18-foot length, maximum permissible deflections for other lengths shall be in proportion to their length as compared to 18-foot long pipe.

Size of pipe	Push-on Joint	Mechanical Joint
4 inches	10 inches	16 inches
6 inches	10 inches	14 inches
8 inches	10 inches	10 inches
10 inches	10 inches	10 inches
12 inches	10 inches	10 inches
16 inches	7 inches	8 inches

NOTE: The above-tabulated allowances are more stringent than those allowed by pipe manufactures and are the values recommended by the AWWA.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- E.** At all times when pipe laying is not actually in progress, the opened ends of the pipe shall be closed by temporary watertight plugs or by other approved means. If water is in the trench when work is resumed, the plug shall not be removed until all danger of water entering the pipe has been eliminated.
- F.** Push-on joints shall be made up by first inserting the gasket into the groove of the bell, then apply a thin film of special non-toxic gasket lubricant over the inner surface of the gasket that will be in contact with the spigot end of the pipe. The chamfered end of the plain pipe shall be inserted into the gasket and then forced past it until it seats against the bottom of the socket.
- G.** With mechanical joints, surfaces against which the gasket will come in contact shall be thoroughly cleaned prior to assembly. Tightening of the bolts shall be done in a diametrical opposite pattern to ensure equal pressure has been applied to the fitting and mechanical joint.
- H.** Prior to installation of sleeve-type coupling the pipe ends shall be cleaned thoroughly for a distance of 8 inches. A follower and gasket in that order shall be slipped over each pipe to a distance of about 6 inches from the end, and the middle ring shall be placed on the already laid pipe end until it is properly centered over the joint. The other pipe end shall be inserted into the middle ring and brought to proper position in relation to the pipe already laid. The gaskets and followers shall then be pressed evenly and firmly into the middle ring flares. After the bolts have been inserted and all nuts have been made up finger tight, diametrically opposite nuts shall be progressively and uniformly tightened all around the joint.
- I.** If effective sealing of the joint is not attained, disassembly of the joint is required and thoroughly cleaned and reassembled. Bolts shall not be over stressed to tighten a leaky joint or fitting.
- J.** All valves, fittings and appurtenances shall be set and jointed as indicated on the drawings. Where indicated or necessary to prevent joints or sleeve couplings from pulling apart under pressure, suitable socket pipe clamps, tie rods, and bridles shall be provided. Bridles and tie rods shall be at least 3/4 inch in diameter except where they replace flange bolts of smaller size in which case they shall be fitted with a nut on each side of the pair of flanges.
- K.** The Contractor shall furnish and install all support necessary to hold the piping and appurtenances in a firm substantial manner at the lines and grades indicated on the drawings.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- A.** All fittings shall be backed up with concrete thrust blocks as indicated on the standard details. Where adequate backing cannot be obtained, suitable joint restraint shall be used. Mega lugs or equivalent restraints shall be used on all new mains where pipe meets fittings.
- B.** Processed sand or 1/2 inch stone shall be used for bedding pipes and fittings. A depth of 6 inches of sand is required below pipes in a ledge or rock zone. Processed sand or stone bedding shall be placed to the full width of the trench and continue to an elevation of 12 inches above the top of the water main and fittings. Above this point backfill shall be suitable material from excavation, or if directed by the Water Department, it may be required to use bank run gravel containing no stones over 4 inches. This material shall be thoroughly compacted in 12-inch lifts to the top of the trench.
- C.** Minimum cover over water mains shall be 5 feet, maximum cover will be 7 feet unless approved or directed by the Water Department. All depth measurements shall be from the top of the piping being installed to the finished grade.
- D.** Except where otherwise directed, 2 feet minimum horizontal and vertical clearance shall be provided between the exterior of the water mains and other structures. Where a new main passes under or over utilities, it shall cross without use of bends.

8.0 Drawings

- A.** Prior to preparation of drawings pertaining to water main construction, a pre-design conference with the Water Department, Engineer, Contractor, and other interested parties is strongly recommended.
- B.** A copy of design drawings shall be provided to the Water Department for review and approval prior to commencement of construction.
- C.** Drawings shall show:
 - 1. Location within the street layout, easement lines and or property lines.
 - 2. Piping, fittings, gate valves, hydrants, thrust blocking, corporations and curb stops
 - 3. Location of all other existing or proposed utilities.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

4. Elevations and topographical data
 5. Detail cuts of both typical and unusual situations
 6. Materials of construction
- D.** As-built drawings. Upon completion of water main construction a Mylar and paper blueprint shall be prepared and provided to the Water Department. In addition to the data required to be shown, the drawing shall also show 3 tie dimensions to all gate valves and curb stops.

9.0 Pressure and Leakage Test

- A.** This test shall be performed in accordance with AWWA most recent recommended procedure. Water Department personnel must witness such testing. All services and mains larger than 2" shall be tested.
- B.** The pressure and leakage test shall consist of first raising the water pressure to a pressure equal to the rating of the pipe or 150psi whichever is highest. While maintaining this pressure, the Contractor shall make a leakage test by metering the flow of water into the pipe. Current AWWA recommended procedures should be followed.
- C.** If the section fails to pass the pressure and leakage test, the Contractor shall do everything necessary to locate, uncover, and repair or replace the defective pipe, fitting or joint, all at his own expense and without extension of time for completion of the work. Additional tests and repairs shall be made until the section passes the specified test.
- D.** If, in the judgment of the Water Department, it is impracticable to follow the foregoing procedure exactly for any reason, modifications in the procedure shall be made as required and approved, but in any event the Contractor shall be responsible for the ultimate tightness of the line within the above leakage and pressure requirements.

10.0 Disinfection of Mains

- A.** The Contractor shall disinfect all lines carrying potable water.
- B.** The Contractor shall furnish all equipment and materials necessary to do the work of disinfecting, and shall perform the work in accordance with the procedure outlined in the AWWA Standard for Disinfecting Water Mains.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- C.** The dosage shall be not less than 10 ppm after a contact period of not less than 24 hours. Calculation of the required dosage shall be submitted for approval to the Water Department prior to chlorine injection. Injected chlorine shall remain in the mains less than 72 hours.
- D.** After treatment, the main shall be flushed with clean water until the residual chlorine content does not exceed 0.2 ppm.
- E.** During the disinfection period, care shall be exercised to prevent contamination of water in the existing mains. No valves shall be operated without the knowledge and permission of the Water Department.
- F.** The Contractor shall dispose of the water used in disinfecting and flushing in an approved manner.
- G.** The Contractor shall provide, as an affidavit of compliance, bacteriological test results certifying the water sampled from the water main to be free from coli form.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

RATES, BILLING, ABATEMENTS AND DISCONNECTION

1. Water usage is billed at a rate of \$1.70 per 100 cubic feet (748 gallons) and water user fees (base rate) are applied quarterly per living unit in any one dwelling. All water passed through a meter is billable, whether used, wasted or lost by leakage and will be charged to the customer's account. Wastewater usage is based on water meter readings. Wastewater usage is billed at a rate of \$4.75 per 100 cubic water and sewer user fees (base rate) are applied quarterly per living unit.
2. User fees are charged by the quarter. The current rate for user fees is \$30.00 for water service per living unit and \$55.00 for sewer service per living unit. The Winchester Water Department does not have a monthly user fee. Accounts disconnected mid quarter cycle will be charged for the entire quarter. The quarterly bill cycle is as follows: Quarter 1 (due in March) bill will include usage for the month of November to January, Quarter 2 (due in June) bill will include usage from the months February to April, Quarter 3 (due in September) bill will include usage from the months of May to July and the Quarter 4 (due in December) bill will include usage from the months of August to October.
3. All meter invoices shall be due and payable quarterly; payable to the Town of Winchester at Winchester's Tax Collection Office and on the dates due specified on the water bill issued.
4. All water and waste water invoices will be billed to the owner of record or the property location. The property owner is responsible for all water and wastewater invoices to the account.
5. Before the closing of purchasing new property, a final water meter reading needs to be done to insure proper billing. The buyer's attorney or closing agent must contact the water department to schedule the final meter reading prior to closing.
6. Customers, homeowner on record, can request a disconnect of water service in the event of a property sale, for residential repair requiring water service to be shut off or if property is considered "seasonal" for vacationing purposes. The account will be charged \$15.00 for each water disconnection. Disconnection of service will eliminate the \$30.00 quarterly fees but the account will continue to be charged \$55.00 for the sewer connection if the property is connected to municipal sewer. Other than for emergencies identified by the Winchester Water Department, no disconnection of service will take place between October 31 and April 1. Customers, homeowner of record, can request water service be restored. The account will be charged \$15.00 for a turn on fee for restoring the service.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

7. Customers have the right to contest their water/wastewater bills through the abatement process. Customers may be eligible for a waste water abatement if water that enters a home or building does not enter the Town of Winchester's sewer system (for example, leakage, pool filling). All abatement requests must be filed within 30 days of receipt of the invoice. An abatement application explaining the problem must be submitted to the Water Department at 1 Richmond Rd. and are subject to the approval of the Superintendent. Following the receipt of a denied request customers have the right to request a hearing of appeal with the Board of Selectman within seven business days. Appeal hearings must be scheduled with the Selectman's office.
8. Customers may be eligible for a wastewater pool filling abatement by prior to the pool fill the customer calls the department Monday-Thursday to schedule a meter read and again when the customer has finished filling the pool. The customer cannot request more than the difference of the two meter readings. No pool filling abatement request will be honored unless the department has read the meter prior and immediately after a filling. Only one pool abatement per customer per year will be accepted.
9. All bills shall be payable upon receipt or by the due date. After 30 days interest will accrue at a rate of 12%. Failure to pay water/wastewater invoices can result in a disconnection of water services. The Winchester Water and Wastewater Treatment Facility reserve the right to lien property (at the owner of records expense) for any unpaid outstanding balances. The interest rate for lien is determined by the Board of Selectman.
10. Service shall be disconnected to any customer who fails to pay an undisputed bill within 30 days of the postmark date of the bill or by the first day of the first April following issuance of the bill; or fails to abide by the terms of a written agreement, with time being of the essence; or unreasonably refuses access to premises for necessary inspection of the utility property---all in accordance with the provisions herein.
11. In the event a customer disputed the reason for disconnection set forth in the notice, he or she may request a meeting with the selectman to seek to resolve any dispute and no disconnection shall take place until after the meeting is held. The request for a meeting is held. The request for a meeting with the selectman shall be in writing, and shall be submitted prior to the date on which the disconnection is to take place. A minimum of three selectmen shall be present in any such meeting.
12. Notwithstanding anything to the contrary, service may be disconnected without notice if there exists unauthorized or fraudulent use or procurement of water

Rules and Regulations

Winchester Water Department

Winchester NH 03470

service; tampering with connections or other equipment of the Water Department; or conditions dangerous to the health of others; a clear and present danger to the life, health and physical property or the Department's ability to serve other customers; the customer clearly has abandoned the premises; or by court order.

- 13.** Disconnection of service for nonpayment shall take place only between 7:30am to 3:00pm, Monday through Thursday. No disconnection for nonpayment shall take place on a holiday or any day prior to which the Water Department will not be open to reconnect service if full payment is made.
- 14.** The Water and Wastewater Superintendent is authorized to use discretion when posting multifamily units or apartment complexes for intent to disconnection due to non payment on account 30 days past due.
- 15.** If the customer tenders payment in full of the outstanding bill, plus the sum of \$15.00 at the time the Water Department's employee appears for the purpose of disconnecting service, the employee, without disconnecting, shall direct the customer to go immediately to the office which receives payment of water bills and tender payment there. As long as said employee receives confirmation that the bill is paid in full within an hour, no disconnection shall take place. Otherwise, the disconnection shall proceed.
- 16.** In the event an employee appears at the customer's premises for the purpose of disconnecting service under these regulations, the charge of \$15.00 shall be added to all the other amounts outstanding, and this sum either shall be paid in addition to all the other amounts owing in order to prevent disconnection of service as set forth above, or paid in advance as a condition of restoration of service.
- 17.** All disconnected service shall be restored as promptly as possible upon the customer's payment in cash of the full outstanding bill and other applicable charges, including any overtime costs to the Water Department if service is restored outside regular business hours. Notwithstanding anything to the contrary, the Water Department shall not restore service outside of regular business hours unless:
 - A.** The customer requests it; and
 - B.** The department has employees willing and able to provide the service; and
 - C.** All costs are paid in advance as set forth herein.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

18. The Board of Selectman reserve the right to enter into payment arrangements on past due accounts.

WATER METER REGULATIONS

1. It is the purpose of the Town of Winchester to provide each municipal water customer with proper metering equipment. Provision of metering equipment is subject to the conditions set forth in these regulations.
2. In all cases the Town will have the option to meter according to the situation, type of service and requirements of the water department and selectm~~ea~~n. In cases where meter costs and/or costs of installation exceed typical costs of a standard residential meter/installation, excessive costs will be assumed by the applicant. In such cases, the applicant will be responsible for the costs in excess of the standard costs of the meter and installation. Typical cases will be handled on an individual basis.
3. Title to the water meter, outside meter reader or inside radio remote reader, and all accessory parts shall remain in the Town and shall not pass to the owner of any structure where such property is installed.
4. The customer's installation authorities having jurisdiction over the municipal water system (The Winchester Board of Selectm~~ea~~n).
5. The water department shall, at all reasonable times, and with authorization of the customer, have the right of entry to the customer's premises for the purpose of erecting, inspecting, connecting, disconnecting, reading, repairing, replacing or removing any or all of its apparatus used in connection with the supply of water, and for said purpose the customer shall authorize the water department to enter said premises.
6. The Town shall not be held liable for any loss, cost, damage or expense to any person and/or property resulting from the use or presence of water from the service upon the customer's premises and resulting from negligence or misuse on the part of the customer.
7. The customer shall provide for safe keeping of the meter and equipment of the Town and shall not permit interference with exception of authorized employees of the department or licensed plumbers who've been granted written permission from the water department.
8. In case a meter fails to register the full amount of water consumed, or for any reason cannot be read during a quarter, the amount of the quarterly bill be

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- estimated by the water department, based upon the average quarterly use recorded during the previous four quarters.
9. The customer service from the Town shut off to the meter shall be a kind, type and size pipe approved by the water department.
 10. There will be a charge for moving meters in the following cases:
 - a) Where a meter is moved at the request of the customer from one permanent location to another on the same premises.
 - b) Where a meter is taken out temporarily at the request of or for the convenience of the customer.
 11. No intent for permission ~~to permission to re-enter to re meter~~ or resell water ~~or~~ by re-metering is given or implied to any person or persons.
 12. The Town may turn off the water supply to any premise if a person:
 - a) Fails to pay any sum due the Town whether for installation, repair of damage, or water consumption.
 - b) Fails to provide access to the meter and accessory equipment at reasonable times to the water department.
 - c) Intentionally damages a water meter and/or accessory equipment.
 - d) Attempts to tamper with the equipment of the Town.
 - e) Fails to comply with any other section of these regulations.
 13. Upon installation of a majority of residential water meters, the Town may begin assessing charges based on consumption to the user. Commercial, industrial and agricultural users will be charged according to consumption upon installation of the meter.
 14. A water meter must be installed according to the Winchester Water Regulations. The meter will be installed at the expense of the applicant. In the case of a structure in which a meter may not be installed (i.e. no basement) an approved water meter pit will installed at the expense of the applicant. The meter pit shall be installed in a location approved by the water department. The meter pit shall be installed so that the top of the cover will be level but no more than one inch below the finished grade.
 15. These regulations will be reviewed periodically and are subject to change after proper notification to the public.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

CROSS CONNECTION CONTROL REGULATIONS

I. Purpose

Cross-Connections between water supplies and non-potable sources of contamination are significant threats to health in the water supply industry. This ordinance is designed to maintain the safety and potability of the water in the Winchester Public Water System by establishing rules and procedures to prevent the contamination of public drinking water by the backflow of water or other fluids.

A. The purpose of this regulation is:

- 1.** To protect the public water supply of the Winchester Public Water System from the possibility of contamination by isolating contaminants which could backflow or back-siphon into the public water system within its customers' internal distribution system(s)
- 2.** To promote the elimination or control of cross-connections, actual or potential, between its customers' in-plant drinking water system(s) and anything that could contaminate or pollute it; and
- 3.** To provide for the maintenance of a cross-connection control program to effectively prevent the contamination or pollution of all drinking water systems.

This document is intended to supplement the rules listed in section II below. Changes to this document in the future must be approved by the New Hampshire Department of Environmental Services (NHDES).

Rules and Regulations

Winchester Water Department

Winchester NH 03470

II. Authority

- A. New Hampshire Administrative Rule Env-Dw 505, or subsequent rules, *Backflow Prevention*.
- B. The Winchester Public Water System rules and regulations, adopted by the Town of Winchester Board of Selectmen.

III. Requirements

The water superintendent shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow or back-siphonage of contaminants or pollution through the water service connection. If, in the judgment of the water superintendent, an approved backflow prevention device is required at the Winchester's water service connection to any customer's premises for the safety of the water system, the water superintendent or his designated agent shall give notice, in writing, to said customer to install an approved backflow prevention device at each service connection to his premises. The customer shall, within 90 days, install approved device or devices at his own expense. Failure, refusal, or inability on the part of the customer to install said device or devices within 90 days shall constitute grounds for discontinuing water service to the premises until such device or devices have been properly installed.

IV. Definitions

- A. Approved Backflow Prevention Device – 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 approved by the University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research. Data can be found at <http://www.usc.edu/dept/fccchr/approval.html>

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- B.** Auxiliary Water Supply – Any water supply on or available to the premises other than the purveyor’s approved public potable water supply.
- C.** Backflow – The flow of water or other fluids, mixtures or substances into the distribution pipes of a potable water system from any source other than the intended approved source of supply.
- D.** Backflow Preventer – A device or means designed to prevent backflow or back-siphonage.
- 1.** Air Gap – A physical separation sufficient to prevent backflow between the free-flowing discharge end of the potable water system and any other system. Physically defined as a vertical distance equal to twice the diameter of the supply pipe but not less than one inch.
 - 2.** Atmospheric Vacuum Breaker – A device which prevents back-siphonage by creating an atmospheric vent when there is either a negative pressure or sub-atmospheric pressure in a water system.
 - 3.** Barometric Loop – A fabricated piping arrangement rising at least 35 feet at its topmost point above the highest fixture it supplies. It is utilized in water systems to protect against back-siphonage.
 - 4.** Double Check Valve Assembly – An assembly of two independently operating spring loaded check valves with tightly closing shut-off valves on each side of the double check valve, plus properly located test cocks for the testing of each check valve.
 - 5.** Dual Check Valve with Intermediate Atmospheric Vent – A device having two independently operating spring loaded check valves separated by an atmospheric vent chamber.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- 6.** Hose Bib Vacuum Breaker – A device which is connected to a hose bib and which acts as an atmospheric vacuum breaker. Not to be used under constant pressure.
 - 7.** Pressure Vacuum Breaker – A device containing one or two independently operated spring loaded check valves and an independently operated spring loaded air inlet valve located on the discharge side of the check valve(s). The device includes tightly closing shut-off valves on each side of the check valve(s) and properly located test cocks for the testing of the assembly.
 - 8.** Reduced Pressure Principle Backflow Preventer – An assembly consisting of two independently operating spring loaded check valves with an automatically operating differential relief valve located between the two check valves, tightly closing shut-off valves on each side of the check valves plus properly located test cocks for the testing of the check valves and the relief valve.
 - 9.** Residential Dual Check – An assembly of two spring loaded independently operating check valves. Generally employed immediately downstream of the water meter to act as a containment device in a single or two family residence.
- E.** Backpressure – A condition in which the owner’s system pressure is greater than the supplier’s system pressure.
- F.** Back-Siphonage – The flow of water or other fluids, mixtures or substances into the distribution pipes of a potable water system from any source other than its intended source caused by the sudden reduction of pressure in the public water system.
- G.** Containment – A method of backflow prevention which requires a backflow prevention device at the water service entrance.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- H.** Contaminant – A substance that may impair the quality of the water creating a potential health hazard to the public.
- I.** Cross-Connection – Any actual or potential connection between the public water system and any source of contamination or unapproved water source.
- J.** Fixture Isolation – A method of backflow prevention in which a backflow preventer, such as a hose bib or an atmospheric vacuum breaker, is located to correct a cross-connection at an in-plant location rather than at a water service entrance. This protects the drinking water in the building.
- K.** Owner – Any person who has legal title to, or license to operate or inhabit in, a property upon which a cross-connection inspection is to be made or upon which a cross-connection may be present.
- L.** Person – 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.
- M.** Water Service Entrance – That point in the owner’s water system beyond the sanitary control of the water supplier; generally considered to be the outlet end of the water meter or where the water service first enters the building.
- N.** Water Superintendent – The official, or his delegated representative, in charge of the Winchester Public Water System who is invested with the authority and responsibility for the implementation of an effective cross-connection control program and for the enforcement of the provisions of this ordinance.
- O.** Water Supplier – The public water supply system.

V. Administration

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- A. The Winchester Public Water System will operate an approved cross-connection control ordinance, including the keeping of necessary records to fulfill the requirements of NHDES's Backflow Rules, Regulations, and related laws.

- B. The owner shall allow the Winchester Public Water System to inspect his property for possible cross-connections and shall follow the provisions of the Winchester Public Water System's ordinance and their rules.

- C. If the Winchester Public Water System requires that the public supply be protected by containment, the owner shall be responsible for the water quality beyond the outlet end of the containment device and should utilize the appropriate device approved for that purpose.

VI. Responsibilities

A. Winchester Public Water System

- 1. On new installations, the Winchester Public Water System will provide an on-site evaluation and/or inspection and review of plans in order to determine the type of backflow preventer, if any, that will be required.

- 2. On new installations, the Winchester Public Water System will issue a permit and perform inspection and testing.

- 3. For premises existing prior to the start of this program, the Winchester Public Water System will:

Rules and Regulations

Winchester Water Department

Winchester NH 03470

- a. Perform an assessment of the function of the premise and determine if it poses a cross-connection risk. If a risk is present, assess the risk as high hazard or low hazard.
 - b. Inform the owner in writing of any corrective action deemed necessary, the method of achieving the correction, and the time allowed for the correction to be made. Ordinarily, 30 days will be allowed. However, this time period may be shortened depending upon the degree of hazard involved and the history of the device(s) in question.
4. The Winchester Public Water System will not allow any cross-connection to remain unless it is isolated by an approved backflow prevention assembly, commensurate with the degree of hazard, for which a permit has been issued and which will be regularly inspected/tested to ensure satisfactory operation.
5. The Winchester Public Water System shall inform the owner in writing of any failure to comply and the time allowed for the correction to be made. If upon re-inspection the owner has not complied, the Winchester Public Water System may allow an additional 15 days for the correction. In the event the owner fails to comply with the necessary correction by the time of the second re-inspection, the Winchester Public Water System will inform the owner, by certified letter, that the water service to the owner's premises will be terminated within a period not to exceed five days. In the event that the owner informs the Winchester Public Water System of extenuating circumstances as to why the correction has not been made, a time extension may be granted by the Winchester Public Water System.
6. If the Winchester Public Water System determines at any time that a serious threat to the public health exists, the water service shall be terminated immediately.
7. The Winchester Public Water System shall begin inspections to determine the nature of existing hazards and corrections to be made, following approval of the program by NHDES. Initial focus will be on high hazard water use.
8. Certified backflow prevention device inspectors must be certified through the NEWWA Certified Backflow Prevention Device Inspectors/Testers Program. A list

Rules and Regulations

Winchester Water Department

Winchester NH 03470

of certified inspectors can be found by using the link

<http://newwa.org/CertificationInfo/CrossConnectionBackflowInfo.aspx>

9. The Winchester Public Water System shall also develop installation standards and specifications for each type of backflow preventer to ensure they are installed in a manner in which they have been evaluated and approved and to allow for periodic testing and maintenance.

B. Owner

1. The owner shall be responsible for the elimination or isolation with the proper installation of an approved backflow prevention device commensurate with the degree of hazard, for all cross-connections on his premises.
2. The owner, after having been informed by a letter from the Winchester Public Water System, shall, at his expense, install, maintain, and inspect or have inspected (as determined by the Winchester Public Water System), all backflow preventers on his premises.
3. The owner shall correct any deficiency of a backflow preventer which is revealed by inspection or testing. This shall include the replacement of parts or the replacement of the backflow preventer, if deemed necessary by the Winchester Public Water System.
4. The owner shall inform the Winchester Public Water System of any proposed or modified cross-connections and also existing cross-connections of which the owner is aware but has not been found by the Winchester Public Water System.
5. The owner shall not install a by-pass around any backflow preventer unless there is a backflow preventer of the same type on the by-pass. Owners who cannot shut down operations for inspecting of the device(s) must supply additional devices necessary to allow inspecting to take place.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

6. The owner shall install backflow preventers in a manner and location approved by the Winchester Public Water System.
7. The owner shall only install an ‘approved backflow prevention device’.
8. Any owner having a private well or other private water source must:
 - a. Have a permit if the well or source is cross-connected to the Winchester Public Water System’s system. Permission to cross-connect may be denied by the Winchester Public Water System. The owner may be required to install a backflow preventer at the service entrance if a private water source is maintained, even if it is not cross-connected to the Winchester Public Water System’s system.
 - b. In the event the owner installs plumbing to provide drinking water for domestic purposes which is on the Winchester Public Water System’s side of the backflow preventer, such plumbing must have its own backflow preventer installed.
9. The owner shall be responsible for the payment of all fees for permits, annual or semi-annual device inspections, re-testing in the case that the device fails to operate correctly, and re-inspections for non-compliance with the Winchester Public Water System or NHDES requirements.

VII. Degree of Hazard

The Winchester Public Water System recognizes the threat to the public water system arising from cross-connections. All threats will be classified by degree of hazard and will require the installation of approved backflow prevention devices for high and low hazards.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

A. Low Degree of Hazard

If backflow were to occur, the resulting effect on the water supply would be a change in its aesthetic qualities. The foreign substance must be non-toxic to humans.

B. High Degree of Hazard

If backflow were to occur, the resulting effect on the water supply could cause illness or death if consumed by humans. The foreign substance may be toxic to humans from either a chemical, bacteriological or radiological standpoint. The effects of the contaminants may result from short or long term exposure.

Only the following types of backflow prevention devices may be used for the containment of on-site contaminants for high and low hazard situations respectively:

C. High Hazard:

1. Air gap (AG)
2. Reduced pressure principal backflow preventer (RPZ)
3. Combination of the above

D. Low Hazard:

1. Air gap (AG)

Rules and Regulations

Winchester Water Department

Winchester NH 03470

2. Pressure vacuum breaker (PVB)
3. Double check valve assembly (DCVA)
4. Reduced pressure principal backflow preventer (RPZ)
5. Combination of the above

VIII. Permits

The Winchester Public Water System shall not permit a cross-connection within the public water system unless it is considered necessary and cannot be eliminated.

- A. Cross-connection permits that are required for each backflow prevention device are obtained from the Winchester Public Water System.
- B. Cross-connection permits shall be renewed every five years and are non-transferable. Permits are subject to revocation and become immediately revoked if the owner should so change the type of cross-connection or degree of hazard associated with the service type of device, replacement of device with a new device, or change of ownership.
- C. A permit is not required when containment for a connection evaluated as neither a low nor high-degree of hazard is achieved with the utilization of residential dual checks.

IX. Existing in-use Backflow Devices

Rules and Regulations

Winchester Water Department

Winchester NH 03470

Any existing backflow preventer shall be allowed by the Winchester Public Water System to continue in service unless the degree of hazard is such as to supercede the effectiveness of the present backflow preventer, or unless an unreasonable risk to the public health results.

X. Periodic Testing

- A. Backflow prevention devices shall be inspected and tested at least semi-annually.

- B. Periodic inspections and testing shall be performed by an inspector certified through the NEWWA Backflow Prevention Device Inspectors/Testers Program. The inspections will be done at the owner's expense. A list of certified inspectors can be found by using the link <http://newwa.org/CertificationInfo/CrossConnectionBackflowInfo.aspx>. Any backflow preventer which fails the inspection test during a periodic inspection will be repaired or replaced. When repairs are necessary, upon completion of the repair the device will be inspected a second time at the owner's expense to ensure correct operation. High hazard situations will not be allowed to continue unprotected, if the backflow preventer fails the inspection and cannot be repaired immediately. In other situations, a compliance date of not more than 30 days after the inspection date will be established. The owner is responsible for spare parts, repair tools, and/or a replacement device. Parallel installation of two devices is an effective means of the owner ensuring that uninterrupted water service is provided during inspections or repair of devices and is strongly recommended when the owner desires such continuity.

- C. These devices shall be repaired or replaced at the expense of the owner whenever said devices are found to be defective. Tests and repairs shall be recorded on forms approved by the water superintendent, and copies shall be distributed to the owner and water superintendent within 30 days of the actual test.

- D. Backflow prevention devices may be inspected more frequently than specified in section A above; in cases where there is a history of test failures and the Winchester Public Water System feels that due to the degree of hazard involved, additional inspections are warranted. Cost of the additional inspections will be borne by the owner.

XI. Records and Reports

Rules and Regulations

Winchester Water Department

Winchester NH 03470

A. Records – The Winchester Public Water System will initiate and maintain the following for a minimum of five years:

1. Master files on customer cross-connection inspections and/or tests.
2. Master files on cross-connection permits.
3. Copies of permits and permit applications.

B. Reports – Each year, by April 1, the Winchester Public Water System will submit an inspection report to NHDES which describes testing conducted during the previous calendar year and including the following:

(1) The total number of permitted cross connections that existed at the water system at the end of the year for which the report is being filed; and

(2) The following information for each backflow prevention device:

- a. The permit number of the backflow prevention device;
- b. The name of the owner of the backflow prevention device;
- c. The location of the backflow prevention device;
- d. The date of each inspection and test performed during the year of reporting;
- e. The name, certifying organization, and certification number of the certified backflow prevention device inspector who performed the inspection and test on the device;
- f. The result of each inspection and test; and
- g. If the inspection or test result is unsatisfactory, the date at which the backflow prevention device was found to be satisfactory following a subsequent inspection and test in that calendar year period.

Rules and Regulations

Winchester Water Department

Winchester NH 03470

Addendum

I. Residential Dual Check

- A.** Effective the date of acceptance of this Cross-Connection Control Ordinance for the Winchester Public Water System all new residential buildings will be required to install a residential dual check valve device immediately downstream of the water meter. Installation of this residential dual check valve device on a retrofit basis on existing service lines will be instituted at a time and at a potential cost to the homeowner as deemed necessary by the Winchester Public Water System.

- B.** The owner should be aware that installation of a residential dual check valve results in a closed plumbing system with the residence. As such, provisions may have to be made by the owner to provide for thermal expansion within the closed loop system, i.e., the installation of thermal expansion tanks and/or pressure relief valves.

II. Strainers

- A.** The Winchester Public Water System strongly recommends that all new retrofit installations of reduced pressure principle devices and double check valve backflow preventers include the installation of strainers located immediately upstream of the device to prevent fouling of backflow devices due to unforeseen circumstances occurring to the water system such as water main repairs, water main breaks, fires, periodic cleaning and flushing of mains, etc. These occurrences may 'stir up' debris within the water main that will cause fouling of backflow devices installed without the benefit of strainers.