

# **WATER and WASTEWATER POLICY**

## **INTRODUCTION**

This policy has been adopted by the Board of Public Works as a guide to obtaining water and wastewater service and to set forth the services available and conditions of service. The following policies will be a part of every contract made to supply water and/or wastewater service. The standards for materials and construction are necessary to safeguard all customers and to secure maximum utilization of Macon Municipal Utilities' (MMU) service and are the minimum under which MMU will supply service. All persons receiving such service shall be bound by the provisions of this policy.

### **CHAPTER I – WATER**

#### **A. APPLICATION FOR SERVICE**

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101. An application for service shall be required from each customer in accordance with the General Rules and Regulations.

102. MMU will supply water service only after the customer's application for service has been approved and MMU finds it practicable to render such service. MMU reserves the right to refuse or discontinue water service when piping or equipment on the premises does not comply with the plumbing codes of the International Code Council (ICC).

103. MMU reserves the right, at all times and without notice to customers, to shut off the water in a main for the purpose of making repairs or extensions or for any other necessary purpose. All persons having boilers or tanks within their premises depending on the pressure from the main to keep them filled are hereby cautioned against danger of collapse. It is the intention of MMU to notify its patrons of the necessity of shutting off the main supply, but an emergency may not permit taking the time to do so.

104. A separate service connection will be required for each dwelling, except in cases approved by the MMU inspector or their designee. Customers may, however, request one or more additional individually metered service connections to an existing water main for water distributed outside of a dwelling or structure when the discharge of the water from the additional individually metered service connection is directly to the environment. Each additional individually meter service connection request shall be approved by MMU. Any approved additional individually metered service connections shall not pass through or under a dwelling or structure. Additional individually metered service connections approved by MMU, shall not be connected or attached to an existing or future dwelling or structure. Only a frost-proof fixture (including sprinklers), which has been approved by MMU, shall be used for an additional individually metered service connection. The design and installation of a frost-proof fixture shall be approved by MMU. The water from an additional individually metered service connection shall not be directly or indirectly discharged to

the MMU Wastewater Collection System. All additional individually metered service connections approved by MMU, shall remain in service at all times and shall not be considered seasonal connections for monthly billing purposes. Cross-connections between two or more service connections shall be prohibited and shall be justification for MMU to immediately terminate all water service connections to the property. Where water is to be supplied to several parties in apartments, offices, or stores, all located in a single building and supplied through one service, there shall be a separate service valve at an accessible outside location approved by MMU for each meter. Individual meters are to be located outside unless approved by MMU inspector.

## **B. SERVICE LINES**

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105. The customer assumes all responsibility for, and costs associated with the installation of the water service which must be type K copper from the corporation stop at the main unless two inches or larger, and for the entire service, pipes, apparatus and plumbing used in connection therewith. Inside water meter installations are prohibited except for circumstances approved by MMU inspector. Upon completion of the service installation, and an inspection performed by a MMU representative. Ownership of the water service line from and including the corporation stop at the main to the property line will be assumed by MMU. The outside service valve, or meter yoke if located at the property line will be maintained by MMU.

Costs associated with service replacements.

In the event there is a leak on the service located between the main and property line MMU will bear the costs associated with repairs/replacements up to the property line.

106. Customers must take necessary precautions to prevent pipes and meters from freezing. Regarding meters, at the May 20, 2019 Board of Public Works meeting policy was updated to state that MMU will replace frozen water meters upon the first occurrence at an address and customers will be responsible for expenses relating to subsequent occurrences. The meter shall be kept accessible at all times and not obstructed with flowers, shrubbery, etc. The customer's service line must have placed thereon an approved service valve ahead of the meter and located at the property line or other accessible outside location approved by MMU. The outside service valve for services with the meter located inside shall be a stop and waste valve. Any newly installed or replacement valve riser box for such an outside shutoff valve shall be an adjustable service box and lid designed for this purpose. All meter yokes shall have an accessible valve upstream of the yoke and a check valve or stop valve downstream of the yoke.

107. The customer shall keep the service pipes and apparatus free from leaks at all times. Where a leak appears in a customer's installation, allowing water to escape, MMU may give the customer written notice thereof and the customer shall immediately proceed to repair such service. Should same not be repaired within the timeline identified in the written notice MMU may discontinue the service by shutting off the water; if necessary by excavating and closing the corporation stop. The cost of excavating and shutting off such service shall be borne by the customer, or by the owner of the property, before service will be restored. If, in the judgment of MMU, any leak on the customer's installation is of such nature as to endanger public safety or constitute a nuisance or is the source of the waste of any considerable amount of water, MMU may cut off or discontinue

such service without previous notice to the customer and shall not restore service until such leak is repaired and costs paid.

108. The service line from the main must be installed in accordance with MMU' regulations. No service line shall have an inside diameter less than 3/4 inches. All service pipes of two inches or less in diameter shall be of U.S. Government specification Type K copper tubing from the water main to the property line, and type K copper, C160 or better polyethylene, between the shutoff valve and the meter. Those lines over two inches in diameter or larger may be of C160 or better slip joint PVC, or ductile iron. Except as provided below, a water service shall be replaced from the main to the property line with Type K copper when the following conditions are met:

- a. The service line is in need of repair,
- b. An excavation is made or would have to be made in a hard surface street to make repairs,  
and
- c. The service is of a material other than copper.

The General Manager or Manager for Gas, Water, and Wastewater may grant a waiver of this requirement for replacement when, in their opinion, compliance therewith would not serve the public interest.

All service pipes shall be placed at least three and one half feet below the finished grade. Meter tiles, where used, shall be of concrete, clay, or solid wall polyethylene of no less than 18 inches in diameter. The meter box opening (lid) shall be no less than 12 inches in diameter. Flanged meters, when used, shall be installed in vaults approved by MMU inspector. Such vaults shall have a 24 inch opening for access.

108.1. The Missouri Department of Natural Resources has issued a regulation that prohibits the use of lead in any new construction or modification of water systems after January 1, 1989. No modified or newly constructed water system will pass City inspection that does not meet this Department of Natural Resources regulation.

109. In situations where continuous water service is critical for customer needs, the water system may be installed with a full size meter bypass equipped with a wheel operated gate valve or ball valve.

110. Water lines shall not be installed in the same trench with sewers or any other utility line including telephone and cable television. Service pipes should be at least 10 feet horizontally from and at a higher elevation than a parallel wastewater line. Whenever a water line crosses a wastewater line, no water joint or fitting shall be closer than six feet horizontally to any wastewater joint. Where compliance with these rules cannot be followed, MMU must be consulted.

111. In no case shall a customer extend his service pipes or plumbing across a street or alley or to an adjacent property or residence in order to furnish service to such adjacent property or residence even though such adjacent property be owned by the same party.

112. In case a service connection to the main should be abandoned, MMU will abandon the service. An abandonment will not occur if a building permit is obtained and the service connection is returned to use within a reasonable period of time, not to exceed two years.

### **C. TAPPING THE MAIN**

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113. The copper service pipe, corporation stop, meter yoke, complete meter tile, and stop box, all furnished by the customer, must be installed and approved before the main will be tapped by MMU. The main must be exposed at the tapping point, and the tap excavation must be of sufficient size to allow MMU to attach and operate the tapping machine, and must be free from mud and water. The tap excavation shall be properly terraced and/or adequate shoring shall be used as necessary to ensure safe working conditions. It should be so located that the corporation stop can be inserted at a point in the pipe approximately 45 degrees from the top of the pipe on the side nearest to the premises to be supplied. If MMU inspector finds the main not ready when called to make the tap, MMU must be notified again of readiness before MMU inspector will return. The service trench shall not be backfilled until after the tap has been completed and the installation has been approved and mapped by MMU. MMU shall be given at least 24 hours notice or as much notice as possible in advance of the time a tap is to be made.

In addition, all plastic services from the meter to the building entrance must have a trace wire and brought to ground level.

114. Taps for services two inches in diameter and smaller will be made by MMU. Taps for services larger than two inches in diameter may be made, by a qualified plumber on behalf of the customer. Unless specifically authorized by MMU, water mains will not be shut off to make a tap.

115. Taps will not be made for vacant lots, or in advance of building requirements. Plans and specifications must accompany application for a tap when requested by MMU.

116. Plumbers are not allowed to turn water off or on upstream of the meter, except to make repairs and test their work, after which they will leave it off or on as they found it. All other parties are forbidden to turn the water on or off. Plumbers shall notify MMU whenever it is necessary to break any seal attached to a water meter or water service. Unauthorized persons shall not tamper with any seal attached to a water meter or water service, nor shall such persons connect, disconnect, disassemble, or in any manner change or cause to be changed or interfere with the action, regulation, or registration of a water meter. Any meter so tampered with will be removed for test and repaired at the expense of the consumer or property owner. Water shall not be turned on to any premises except by an employee of MMU. In no case shall anyone but MMU employees operate any distribution system valves, air reliefs, pressure regulators, or any device related to the distribution system.

### **D. CROSS CONNECTIONS**

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117. Cross Connection Control

117.1 General:

117.1.1 The purpose of this policy is to:

- a. Protect the public potable water supply from contamination or pollution by containing within the consumer's internal distribution system or private water system contaminants or pollutants that could backflow through the service connection into the public potable water supply system, and to
- b. Promote the elimination, containment, isolation, or control of existing cross connections, actual or potential, between systems, plumbing fixtures, and industrial process systems.

117.1.2. This policy shall apply to all premises served by the public potable water system of the City of Macon.

117.1.3. This policy will be reasonably interpreted by the Board of Public Works. It is the Board's intent to recognize the varying degrees of hazard and to apply the principle that the degree of protection shall be commensurate with the degree of hazard. The Board shall comply with the Missouri Department of Natural Resources rules and regulations, 10CSR60-11.010, Prevention of Backflow. These regulations are to be a part of this policy. If cross connection protection is required by such regulations, the consumer shall comply by providing the required protection at his expense. Failure, refusal, or inability on the part to the consumer to provide such protection shall constitute grounds for discontinuing water service to the premises until such protection has been provided.

117.2. No water service connection shall be installed or maintained to any premises where actual or potential cross connections to the public potable water system may exist unless such actual or potential cross connections are abated or controlled as required by the regulations of the Missouri Department of Natural Resources.

117.3. Survey and Investigations

117.3.1. The consumer's premises shall be open at all reasonable times to MMU for surveys and investigations of water use practices within the consumer's premises to determine whether there is an actual or potential cross connection through which contaminants or pollutants could backflow into the public potable water system.

117.3.2. On request by MMU, the consumer shall furnish information on water use practices within the customer's premises.

117.3.3. It shall be the responsibility of the water consumer to conduct periodic surveys of water use practices on his premises to determine whether there are actual or potential cross connections through which contaminants or pollutants could backflow into the public potable water system.

117.4. Type of Protection Required

117.4.1. An approved backflow prevention device shall be installed on each service line to a consumer's water system serving premises where, in the judgment of MMU or Missouri

Department of Natural Resources, actual or potential hazards to the public potable water system exist.

117.4.2. The type of protection required shall depend on the degree of hazard that exists, as follows:

- a. An approved air gap separation shall be installed where the public potable water system may be contaminated with substances that could cause a severe health hazard.
- b. An approved air gap separation or an approved reduced pressure principle backflow prevention device shall be installed where the public potable water system may be contaminated with a substance that could cause a system or health hazard.
- c. An approved air gap separation or an approved reduced pressure principle backflow prevention device or an approved double check valve assembly shall be installed where the public potable water system may be polluted with a substance that could cause a pollution hazard not dangerous to health.

#### 117.5. Backflow Prevention Devices

117.5.1. Any backflow prevention device required by this policy shall be of a model or construction meeting the following requirements:

- a. Air gap separation shall be at least twice the diameter of the supply pipe, measured vertically above the top rim of the vessel, but in no case less than one inch.
- b. A double check valve assembly or a reduced pressure principle backflow prevention device shall be approved by MMU, and shall appear on the current “list of approved backflow prevention devices” established by the Missouri Department of Natural Resources. (AWWA spec C506-78)

117.5.2. Existing, properly maintained backflow prevention devices approved at the time of installation by MMU shall, except for inspection and maintenance requirements, be excluded from the requirements of this policy so long as MMU is assured that such devices will satisfactorily protect the water system. Whenever any such existing device is moved from its present location, or requires more than minimum maintenance, or when MMU finds that the maintenance constitutes a hazard to health, the unit shall be replaced by a backflow prevention device meeting the requirements of this policy.

117.6. Backflow prevention devices required by this policy shall be installed at a location and in a manner approved by MMU and shall be installed at the expense of the water consumer. Backflow prevention devices shall be located so as to be readily accessible for maintenance and testing, protected from freezing, and where no part of the device will be submerged or subject to flooding by any fluid.

#### 117.7. Inspection and Maintenance

117.7.1. It shall be the responsibility of the consumer to have inspections, tests, and repairs made in accordance with the following schedule or more often where inspections indicate a need.

- a. Air gaps shall be inspected each year by a date that is no later than thirty days past the anniversary of the original inspection test date.
- b. Reduced pressure principle backflow prevention assemblies shall be tested each year by a date that is no later than thirty days past the anniversary of the original inspection test date to ensure that:
  1. The pressure differential relief valve operates to maintain the zone between the two check valves at least two psi less than the supply pressure.
  2. The #2 check valve is leak tight against reverse flow under all pressure differentials, and
  3. The static pressure drop across the #1 check valve is at least three psi greater than the pressure differential between the supply pressure in the zone required to open the pressure differential relief valve.
- c. Double check valve assemblies shall be tested each year by a date that is no later than thirty days past the anniversary of the original inspection test date to ensure that both the #1 and #2 check valves are leak tight against reverse flow under all pressure differentials.

117.7.2. Inspections and tests of backflow prevention devices shall be made at the expense of the water consumer and shall be performed by a State of Missouri Certified Backflow Prevention Assembly Tester.

117.7.3. Whenever backflow prevention devices are found to be defective, they shall be repaired or replaced at the expense of the consumer without delay.

117.7.4. The water consumer must report to MMU the results of all tests conducted in compliance with this section. Reports of tests shall contain the signature of the Certified Backflow Prevention Assembly Tester, attesting to the compliance of the assembly with operational requirements established above. Reports shall be submitted within thirty days after making the inspection or test.

117.7.5. Backflow prevention devices shall not be bypassed, made inoperative, removed or otherwise made ineffective without specific authorization by MMU.

117.8. MMU shall deny or discontinue, after reasonable to the occupants thereof, the water service to any premises wherein any backflow prevention device required by this policy is not installed, tested, or maintained in a manner acceptable to MMU, or if it is found that the backflow prevention device has been removed or by-passed or if an unprotected cross connection exists on the premises. Water service to such premises shall not be restored until the consumer has corrected or eliminated such conditions or defects in conformance with this policy to the satisfaction of MMU.

## 117.9. Implementation

117.9.1. This policy shall be followed for all new construction, and when:

- a. Modifications are made to the customer's water system at an existing facility. If an addition or modification requiring a separate customer service line is made to an existing facility, the new service line as well as the existing customer service line shall be equipped with Department of Natural Resources approved backflow prevention assemblies.
- b. A new customer service line connection is made to a facility.

c. A backflow incident occurs that introduces a contaminant into the public or customer water system.

117.9.2. This policy shall also be implemented and followed whenever MMU determines that protection from an actual or potential backflow hazard is required at any premise.

## **E. REPLACEMENT OF METERS**

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118. If a customer requests that his water meter be replaced and the meter has been in service over 60 months, the meter may be replaced at no charge.

## **F. WATER MAIN EXTENSION**

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119. General:

119.1. Water mains will be extended as determined necessary by the Board of Public Works to provide better service or to make service available to a subdivision tract. The cost of such extensions shall be borne by MMU. Such extensions shall not be designed to provide service into and through a subdivision, except incidentally.

119.2. MMU may provide plans and specifications for new mains. MMU will have full authority to determine the size of the main, accessories needed to serve the area adequately, and all other matters related to the distribution systems. MMU decision is final. Water main construction is regulated by the State of Missouri. Engineering plans must be approved by the Missouri Department of Natural Resources, and a water main construction permit must be issued before installing any water main.

119.3. MMU will provide and install, at its cost, all fire hydrants and hydrant fittings as MMU deems necessary.

120. Applicant Requests

120.1. When requested to serve one or more individual customers:

120.2. When an applicant requests the construction of an unproductive main to benefit his property or subdivision, the applicant must, at the option of MMU, either deposit, before construction, the entire estimated cost of such unproductive main including all materials, labor, and equipment, or cause the construction of the main in lieu of depositing the cost. The installation shall be in accordance with plans and specifications approved by MMU.

120.2.1. If the City calls for bids for installation of an unproductive main, the applicant shall have the opportunity to be present at the bid opening and to recommend rejection of any or all bids.



120.2.2. MMU will determine the actual construction cost and if the actual cost is less than the deposit, the difference will be refunded to the applicant. If the actual cost is greater than the deposit the applicant will pay the difference.

120.2.3. Money deposited with MMU will not bear interest.

120.2.4. MMU will make refund to the applicant or his authorized agent for each permanent customer directly attached to the water main at any time during the first seventeen years. The 17 years of possible refund time starts from the date the water installation is complete and ready for consumer use. The refund will be based on the actual construction cost.

**Example.** Ten potential customers are to be served by 1,000 feet of main at a cost of \$20,000. Dividing the cost by ten yields \$2,000 refund for the connected users.

120.2.5. After seven years all refunds to the applicant will be figured at a 10 percent reduction per calendar year.

- 8th year – less 10% from \$2,000
- 9th year – less 20% from \$2,000
- 10th year – less 30% from \$2,000
- 11th year – less 40% from \$2,000
- 12th year – less 50% from \$2,000
- 13th year – less 60% from \$2,000
- 14th year – less 70% from \$2,000
- 15th year – less 80% from \$2,000
- 16th year – less 90% from \$2,000
- 17th year – less 100% from \$2,000

## 121. Water Service Out of the City Limits.

121.1. MMU may serve water to premises outside the city limits provided the applicant documents water service is not available from the Macon County Public Water Supply District #1 and subject to the rules and regulations of MMU for such service including the following specific limitations:

121.1.1. The applicant shall bear the entire cost of installing any mains, services, and other appurtenances. MMU will install fire hydrants and associated facilities.

121.1.2. Water mains shall be six inches or larger in diameter. MMU will, upon satisfactory completion of construction, accept ownership of such main and shall maintain, repair, and replace it as necessary. MMU shall also, to the reasonable limit of its ability to do so, provide water as necessary for fire protection. The applicant, upon annexation of the area served by such main, shall be eligible for reimbursement of the cost of constructing the main according to the standard reimbursement policies of the Board of Public Works. For reimbursement purposes the date of annexation shall be considered the date of connection for all existing customers.

## 130. Inspection and Acceptance of Mains:

130.1. MMU shall have full authority of inspection of the material used and the work performed in extending the water mains. All costs of inspection will be borne by MMU.

130.2. Upon satisfactory completion, MMU will accept ownership of the water main extension, whose property it shall be and remain, in consideration of its perpetual upkeep and maintenance. However, in the event of any irregularity in construction or legal title, MMU has the option of postponing or refusing acceptance of the main, provided that MMU gives the applicant written notice of the decision to postpone or refuse acceptance of the extension within thirty days of the date of completion. If the main is not accepted by MMU, MMU shall not be required to supply water to the main and no connections to the main shall be allowed.

## **G. FIRE PROTECTION FACILITIES**

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131. No unauthorized person shall open any fire hydrant except for the legitimate purpose of extinguishing a fire.

132. If it is requested of MMU to open a fire hydrant for any purpose other than to extinguish a fire or for routine flushing, it will be necessary for MMU to bill the customer making such request at the rate established by the Board of Public Works per thousand gallons for the water so used. MMU has a fire hydrant-mounted meter that may be used in such cases. The charge for the use of this meter shall be as determined by the Board of Public Works.

133. Unmetered fire protection services shall be installed in such a manner that all outlets subject to sealings will be exposed and easily accessible for inspecting of seals at any time. No connections for any other purpose whatever will be permitted to unmetered fire services.

## **CHAPTER II – WASTEWATER SERVICE**

### **A. WASTEWATER SERVICE LINES**

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200. MMU will accept wastewater only after the customer's application for service has been approved by MMU and MMU finds it practicable to render such service. MMU reserves the right to refuse or discontinue wastewater service when the customer's piping does not comply with the ICC and the specifications of MMU.

201. A separate service connection will be required for each dwelling. The service connection will be made with a tapping insert-a-tee type fitting that is of the proper radius to fit the existing main, and the hole will be drilled into the main to accept the fitting and service pipe. The service pipe shall not extend past the inside of the main.

### **B. CUSTOMER'S RESPONSIBILITY**

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202. The customer assumes all responsibility for the wastewater service from the wastewater main including the tap, and for the service pipes, apparatus, and plumbing used in connection therewith.

It is recommended that wastewater service lines be installed with a double cleanout immediately outside of the building and additional cleanouts at no more than 90 foot intervals. Trace wire is required from the wastewater collection main to the building are brought up to ground level at each cleanout.

203. Wastewater lines shall not be installed in the same trench with water lines or any other utility line. In no case shall a customer extend his service pipes or plumbing across a street or alley or to an adjacent property in order to furnish service to such adjacent property even though such adjacent property be owned by the same party.

204. Whenever all improvements served by a wastewater service on a property to be abandoned, the service connection shall be abandoned by plugging the service line at the main. The abandonment is to take place prior to a structure remodel or demolition.

205. An inspection permit shall be obtained prior to tapping the main and the installation shall be inspected and mapped by MMU before the service line trench is backfilled.

### **C. WASTEWATER MAIN EXTENSION**

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206. Wastewater main extensions will be constructed and paid for in full by the property owner, with the exception noted below, in accordance with the plans and specifications prepared or approved by MMU.

207. Wastewater main construction is regulated by the State of Missouri. Engineering plans must be approved by the Missouri Department of Natural Resources, and a wastewater main construction permit must be issued prior to installing any wastewater main. MMU may prepare these necessary plans.

### **D. INSPECTION AND ACCEPTANCE OF MAINS**

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209. MMU shall have full authority of inspection of the material used and work performed in extending the wastewater mains. Upon completion of the extension, MMU will test the main.

210. Upon satisfactory testing and processing of an operating permit, MMU automatically accepts ownership of the wastewater main extension, whose property it shall be and remain, in consideration of its perpetual upkeep and maintenance. However, in the event of any irregularity in construction or legal title, MMU has the option of postponing or refusing acceptance of the main, provided MMU gives the petitioner written notice of the decision to postpone or refuse acceptance of the extension within 30 days of the date of completion. No connections to the main shall be allowed until the main is accepted.