

Ordinance No. 08-108

An ordinance adding the “Irrigation” Chapter to the Code of the City of Arlington, Texas, 1987, through the addition of Article I through VI; providing for a fine of up to \$500 for each offense in violation of the ordinance; providing this ordinance be cumulative; providing for severability; providing for governmental immunity; providing for injunctions; providing for publication and becoming effective on January 1, 2009

WHEREAS, the City Council of the City of Arlington, Texas has determined that water conservation and environmental protection are important issues and concerns affecting the city; and

WHEREAS, properly installed irrigation systems will conserve water, help avoid wasteful use, and improve the overall quality of life for the citizens of Arlington; and

WHEREAS, during the 2007 legislative session, the Texas Legislature adopted House Bill 1656; and

WHEREAS, House Bill 1656 amended Chapter 401 of the Texas Local Government Code to require a city with a population of 20,000 or more to regulate the installation of irrigation systems within the corporate limits of the city as well as the city’s extraterritorial jurisdiction; and

WHEREAS, the provisions herein are necessary to promote and protect the health, safety, and welfare of the public by creating an urban environment that is protective of the city’s water supply and provides an enhanced quality of life for the citizens of the City of Arlington; NOW THEREFORE

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ARLINGTON, TEXAS:

1.

That the “Irrigation” Chapter of the Code of the City of Arlington, Texas, 1987, is hereby adopted to read as follows:

ARTICLE I

GENERAL PROVISIONS

Section 1.01 Title

This Chapter of the Code of the City of Arlington is hereby designated and shall be known and referred to as the Irrigation Chapter of the City Code of Ordinances.

Section 1.02 Purpose

The purpose of this chapter is to protect the public health, safety and welfare of Arlington citizens by regulating the installation, maintenance, operation and repair of irrigation systems within the corporate limits of the City as well as the City's extraterritorial jurisdiction to conserve water, avoid wasteful use, and improve the overall quality of life for the citizens of Arlington. The provisions in this chapter are cumulative of all City ordinances. In the event of a conflict, the more stringent provision shall apply.

Section 1.03 Adoption of Texas Commission on Environmental Quality Chapter 344 Relating to Landscape Irrigation

Chapter 344 of Title 30 of the Texas Administrative Code, as amended, is hereby adopted as if set out word for word in this chapter. In the event of conflict or inconsistency in the wording of this chapter and Chapter 344 of Title 30 of the Texas Administrative Code, the more stringent provision shall apply.

Section 1.04 Applicability

The provisions of this chapter shall apply to the installation, alteration, repair, relocation, and replacement, in addition to, use or maintenance of irrigation systems within the City and the City's extraterritorial jurisdiction and this chapter shall regulate the installation of backflow prevention devices, control valves, irrigation controllers, control wiring, and water conservation practices required for proper design, installation and operation of irrigation systems. Exceptions to this chapter are:

1. a landscape irrigation system that is an on-site sewage disposal system, as defined by Section 366.002 of the Texas Health and Safety Code;
2. an irrigation system that is used on or by an agricultural operation as defined by Section 251.002 of the Texas Agriculture Code; and
3. an irrigation system that is connected to a groundwater well used by the property owner for domestic use.

ARTICLE II
DEFINITIONS

Section 2.01 Definitions

Unless otherwise expressly stated or clearly indicated by the context, the following terms shall, for the purpose of this chapter, have the meanings indicated in this section.

“Air gap” means a complete physical separation between the free flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel.

“Atmospheric Vacuum Breaker” means an assembly containing an air inlet valve, a check seat, and an air inlet port. The flow of water into the body causes the air inlet valve to close the air inlet port. When the flow of water stops the air inlet valve falls and forms a check against back-siphonage. At the same time it opens the air inlet port allowing air to enter and satisfy the vacuum. Atmospheric Vacuum Breaker is also known as an Atmospheric Vacuum Breaker Back-Siphonage Prevention Assembly.

“Automatic controller” means a solid state timer capable of operating valve stations to set the days, time of day, and length of time water is applied.

“Backflow prevention” means the mechanical prevention of reverse flow, or back siphonage, of nonpotable water from an irrigation system into the potable water source.

“Backflow prevention assembly” means any assembly used to prevent backflow into a potable water system. The type of assembly used is based on the existing or potential degree of health hazard and backflow condition.

“Building Official” means the Building Official or designated representative.

“City” means the City of Arlington, Texas.

“City Code” means the Code of Ordinances of the City of Arlington, Texas, 1987, as amended.

“Completion of irrigation system installation” means when the landscape irrigation system has been installed, all minimum standards met, all tests performed, and the irrigator is satisfied that the system is operating correctly.

“Consulting” means the act of providing advice, guidance, review or recommendations related to landscape irrigation systems.

“Cross-connection” means actual or potential connection between a potable water source and an irrigation system that may contain contaminants or pollutants or any source of water that has been treated to a lesser degree in the treatment process.

“Design” means the act of determining the various elements of a landscape irrigation system that will include, but not be limited to, elements such as collecting site specific information, defining the scope of the project, defining plant watering needs, selecting and laying out emission devices, locating system components, conducting hydraulics calculations, identifying any local regulatory requirements, or scheduling irrigation work at a site. Completion of the various components will result in an irrigation plan.

“Design pressure” means the pressure that is required for an emission device to operate properly. Design pressure is calculated by adding the operating pressure necessary at an emission device to the total of all pressure losses accumulated from an emission device to the water source.

“Double Check Valve” means an assembly that is composed of two independently acting, approved check valves, including tightly closed resilient seated shutoff valves attached at each end of the assembly and fitted with properly located resilient seated test cocks. Double Check Valve is also known as a Double Check Valve Backflow Prevention Assembly.

“Emission device” means any device that is contained within an irrigation system and that is used to apply water. Common emission devices in an irrigation system include, but are not limited to, spray and rotary sprinkler heads, and drip irrigation emitters.

“Employed” means engaged or hired to provide consulting services or perform any activity relating to the sale, design, installation, maintenance, alteration, repair, or service to irrigation systems. A person is employed if that person is in an employer-employee relationship as defined by Internal Revenue Code, 26 United States Code Service, §3212(d) based on the behavioral control, financial control, and the type of relationship involved in performing employment related tasks.

“Head-to-head spacing” means the spacing of spray or rotary heads equal to the manufacturer's published radius of the head.

“Health hazard” means a cross-connection or potential cross-connection with an irrigation system that involves any substance that may, if introduced into the potable water supply, cause death or illness, spread disease, or have a high probability of causing such effects.

“Hydraulics” means the science of dynamic and static water; the mathematical computation of determining pressure losses and pressure requirements of an irrigation system.

“Inspector” means a licensed plumbing inspector, water district operator, other governmental entity, or irrigation inspector designated by the Regulatory Authority to inspect irrigation systems and perform other enforcement duties for the City as an employee or as a contractor.

“Installer” means a person who actually connects an irrigation system to a private or public raw or potable water supply system or any water supply, who is licensed according to Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations).

“Irrigation Inspector” means a person who has been designated by the Regulatory Authority to inspect irrigation systems and perform other enforcement duties for the City as an employee or as a contractor. Such person is required to be licensed under Chapter 30 of Title 30 of the Texas Administrative Code (relating to Occupational Licenses and Registrations).

“Irrigation plan” means a scaled drawing of a landscape irrigation system which lists required information, the scope of the project, and represents the changes made in the installation of the irrigation system.

“Irrigation services” mean selling, designing, installing, maintaining, altering, repairing, servicing, permitting, providing consulting services regarding, or connecting an irrigation system to a water supply.

“Irrigation system” means an assembly of component parts that is permanently installed for the controlled distribution and conservation of water to irrigate any type of landscape vegetation in any location, and/or to reduce dust or control erosion. This term does not include a system that is used on or by an agricultural operation as defined by Texas Agricultural Code, §251.002.

“Irrigation technician” means a person who works under the supervision of a licensed irrigator to install, maintain, alter, repair, service or supervise installation of an irrigation system, including the connection of such system in or to a private or public, raw or potable water supply system or any water supply, and who is required to be licensed under Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations).

“Irrigation zone” means a subdivision of an irrigation system with a matched precipitation rate based on plant material type (such as turf, shrubs, or trees), microclimate factors (such as sun/shade ratio), topographic features (such as slope) and soil conditions (such as sand, loam, clay, or combination) or for hydrological control.

“Irrigator” means a person who sells, designs, offers consultations regarding, installs, maintains, alters, repairs, services or supervises the installation of an irrigation system, including the connection of such system to a private or public, raw or potable water

supply system or any water supply, and who is required to be licensed under Title 30, Texas Administrative Code, Chapter 30.

“Irrigator-in-Charge” means the irrigator responsible for all irrigation work performed by an exempt business owner, including, but not limited to obtaining permits, developing design plans, supervising the work of other irrigators or irrigation technicians, and installing, selling, maintaining, altering, repairing, or servicing a landscape irrigation system.

“Isolation valve” means a valve that is installed between the water meter and the backflow prevention device.

“Landscape irrigation” means the science of applying the necessary amount of water to promote or sustain healthy growth of plant material or turf.

“License” means an occupational license that is issued by the Texas Commission on Environmental Quality under Title 30, Texas Administrative Code, Chapter 30, to an individual that authorizes the individual to engage in an activity that is covered by Title 30, Texas Administrative Code, Chapter 30.

“Mainline” means a pipe within an irrigation system that delivers water from the water source to the individual zone valves.

“Maintenance checklist” means a document made available to the irrigation system's owner or owner's representative that contains information regarding the operation and maintenance of the irrigation system, including, but not limited to: checking and repairing the irrigation system, setting the automatic controller, checking the rain or moisture sensor, cleaning filters, pruning grass and plants away from irrigation emitters, using and operating the irrigation system, the precipitation rates of each irrigation zone within the system, any water conservation measures currently in effect from the City of Arlington Water Utilities Department, a suggested seasonal or monthly watering schedule based on current evapotranspiration data for the North Central Texas geographic region, and the minimum water requirements for the plant material in each zone based on the soil type and plant material where the system is installed.

“Major maintenance, alteration, repair, or service” means any activity that involves opening to the atmosphere the irrigation main line at any point prior to the discharge side of any irrigation zone control valve. This includes, but is not limited to, repairing or connecting into a mainline, replacing a zone control valve, or repairing a zone control valve in a manner that opens the system to the atmosphere.

“Master valve” means a remote control valve located after the backflow prevention device that controls the flow of water to the irrigation system mainline.

“Matched precipitation rate” means the condition in which all sprinkler heads within an irrigation zone apply water at the same rate.

“New installation” means an irrigation system installed at a location where one did not previously exist.

“Non-health hazard” means a cross connection or potential cross connection from a landscape irrigation system that involves any substance that generally would not be a health hazard but would constitute a nuisance or be aesthetically objectionable if introduced into the potable water supply.

“Non-potable water” means water that is not suitable for human consumption. Non-potable water sources included, but are not limited to, irrigation systems, lakes, ponds, streams, gray water that is discharged from washing machines, dishwashers or other appliances, water vapor condensate from cooling towers, reclaimed water, and harvested rainwater.

“Pass-through contract” means a written contract between a contractor or builder and a licensed irrigator or exempt business owner to perform part or all of the irrigation services relating to an irrigation system.

“Person” means any natural Person, association of Persons, partnership, corporation, agent or officer, or other entity.

“Potable water” means water that is suitable for human consumption.

“Pressure Vacuum Breaker” means an assembly containing an independently operating internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve. Pressure Vacuum Breaker is also known as a Pressure Vacuum Breaker Back-siphonage Prevention Assembly.

“Reclaimed water” means domestic or municipal wastewater which has been treated to a quality suitable for beneficial use, such as landscape irrigation.

“Records of landscape irrigation activities” means the irrigation plans, contracts, warranty information, invoices, copies of permits, and other documents that relate to the installation, maintenance, alteration, repair, or service of a landscape irrigation system.

“Reduced Pressure Principle Backflow Prevention Assembly” means an assembly containing two independently acting approved check valves together with a hydraulically operating mechanically independent pressure differential relief valve located between the two check valves and below the first check valve.

“Regulatory Authority” means the Building Official or designated representative.

“Static water pressure” means the pressure of water when it is not moving.

“Supervision” means the on-the-job oversight and direction by a licensed irrigator who is fulfilling his or her professional responsibility to the client and/or employer in compliance with local or state requirements. Supervision also means a licensed installer working under the direction of a licensed irrigator or beginning January 1, 2009, an irrigation technician who is working under the direction of a licensed irrigator to install, maintain, alter, repair or service an irrigation system.

“Turfgrass” means grass that, when regularly mowed, forms a dense growth of leaf blades and roots.

“Water conservation” means the design, installation, service, and operation of an irrigation system in a manner that prevents the waste of water, promotes the most efficient use of water, and applies the least amount of water that is required to maintain healthy individual plant material or turf, reduce dust, and control erosion.

“Zone flow” means a measurement, in gallons per minute or gallons per hour, of the actual flow of water through a zone valve, calculated by individually opening each zone valve and obtaining a valid reading after the pressure has stabilized. For design purposes, the zone flow is the total flow of all nozzles in the zone at a specific pressure.

“Zone valve” means an automatic valve that controls a single zone of a landscape irrigation system.

ARTICLE III

LICENSE, PERMIT, INSPECTIONS AND FEES

Section 3.01. License Required

- A. No person shall connect an irrigation system to the water supply within the City or the City’s extraterritorial jurisdiction unless that person holds a valid license, as defined by Chapter 30 of Title 30 of the Texas Administrative Code and required by Chapter 1903 of the Texas Occupations Code or as defined by Chapter 365 of Title 22 of the Texas Administrative Code and required by Chapter 1301 of the Texas Occupations Code except for the below stated exemptions.
- B. A property owner is exempt from this chapter’s requirement to be licensed if he or she is performing irrigation work in a building or on a premises owned or occupied by the person as the person’s home. This exemption is only from this chapter’s license requirement and is not an exemption from the other provisions in this chapter.
- C. In accordance with Section 1903.002 of the Texas Occupation Code, a person who is licensed by the Texas State Board of Plumbing is exempt from this

chapter's requirement to be licensed. This exemption is only from this chapter's license requirement and is not an exemption from the other provisions in this chapter.

- D. In accordance with Section 1903.002 of the Texas Occupation Code, a person who is a licensed engineer, registered architect, or registered landscape architect to the extent the person's acts are incidental to the pursuit of the person's profession is exempt from this chapter's requirement to be licensed. This exemption is only from this chapter's license requirement and is not an exemption from the other provisions in this chapter.

Section 3.02 Permit and Registration Required

- A. **Permit Required.** No person shall install a new irrigation system or add zones and/or heads to an existing irrigation system within the territorial limits or extraterritorial jurisdiction of the City without obtaining a permit from the City.
- B. **Permit Application.** A person shall submit an application for a permit on a form prescribed by the Regulatory Authority, the irrigation plan, and the permit fee to the Regulatory Authority. If the permit fee is paid and the irrigation plan complies with the requirements of this chapter, the Regulatory Authority shall issue a permit. Otherwise, the Regulatory Authority shall deny the application.
- C. **Registration Required.** It shall be unlawful for any person, business, firm, or corporation to perform, or cause to be performed, any work described in this Code as requiring a permit unless such person, firm or corporation is the holder of a valid registration with the City to perform such work. Such person, firm or corporation shall be herein termed Registrant. In extending the rights and privileges of such registration, the City makes no statement of the technical competency of those so registered, and no manner of license is proffered.
- D. **Information to be Provided.** An applicant for registration under this section shall provide to the Building Official the following information:
 - 1. The complete name, complete mailing address and telephone number of the firm or corporation.
 - 2. The name and private mailing address of a principal of the firm or corporation who is a person authorized to bind the firm or corporation in legal agreements.
 - 3. The name and license identification of the licensed individual through whom the person, firm or corporation is to be represented in all activities before the Building Official.

4. Other pertinent information deemed necessary by the Building Official.
- E. Every Registrant doing work in any City rights-of-way shall carry Contractor's Public Liability Insurance with a combined single limit of not less than \$500,000 per occurrence, with an aggregate of not less than \$500,000.
- The Registrant shall make the City of Arlington a Certificate Holder and present proof of insurance at the time of registration and all subsequent renewals. Notice of policy cancellations or failure to renew coverage shall be cause for revocation of registration, denial of inspections or cancellation of permits.
- F. Transfer of Registration Prohibited. No Registrant under this Section shall allow his registration, by name or other identification, to be transferred or assigned to, or in any manner directly or indirectly used by, any person, firm or corporation other than the one to whom issued by the Building Official, for any purpose.
- G. Exemption for Homeowner. These registration requirements shall not apply to work to be performed on a residential structure when the person performing the work is the owner of the structure, and has his legal residence there, and is not assisted by any other person for remuneration. The homeowner shall be automatically considered a Registrant for the purposes of such a project. Notwithstanding such relief from registration, all requirements for permits for the work shall remain in force.
- H. Business Registration Fee. For a Business Registration, each prospective registrant shall pay a fee in the amount as established by resolution of City Council.
- I. Expiration and Renewal of Business Registration. Registration shall expire annually and shall be routinely reactivated by payment of a renewal fee if application information remains accurate. A registration may be renewed, as herein provided, at any time from sixty (60) days preceding the date of expiration. A registration not renewed for ninety (90) days beyond the date of expiration shall require a new registration.
- J. Registration Suspended. The Regulatory Authority shall have the authority to suspend any registration issued under this Code for the following reasons:
1. Forfeiting an appeal of a Stop Order by allowing work to continue on a project after the issuance of said Stop Order.
 2. Forfeiting an appeal from the Regulatory Authority by initiating work or allowing another to initiate work in violation of the Regulatory Authority's decision or prior to the Regulatory Authority's decision.

3. Causing or permitting the unauthorized or prohibited use of a valid registration, by Registrant or another, such as to allow the rights and privileges of registration to be applied to one not duly registered.
4. Convictions of two (2) violations of any of the provisions of this Code or of Section 14 of Article 6243-101, V.T.C.S., committed within a period of twelve (12) consecutive months (except that remedy of the violation within twenty (20) days of notice of violation shall cause the waiver of such conviction for the purpose of this subsection).
5. Providing false information on business registration and/or permit applications.
6. Failure to request inspections as required by this Chapter.

K. Permit Application Expiration and Renewals.

1. After issuing a permit, the Regulatory Authority shall remain empowered to require the correction of errors in plans and specifications; and prevent the commencement or continuation of construction operations conducted under such plans and specifications when such operations are in violation of this Chapter or other ordinance.
2. Every permit issued under this Chapter shall expire by limitation and become null and void if the work is suspended or abandoned for a period of one hundred eighty (180) days.
3. Any permittee holding an unexpired permit may apply in writing for an extension of the time within which work may commence under that permit. The Building Official may extend the time for action by the permittee for a period not exceeding one hundred eighty (180) days. The permittee shall pay a fee for the extension of the unexpired permit. No permit shall be extended more than once.
4. When a permit expires under this subsection, work may be recommenced only upon the issuance of a new permit.
5. An application for which no permit is issued within one hundred eighty (180) days following the date of the application shall be voided due to limitation of time and plans submitted for review may thereafter be returned to the applicant or destroyed by the Building Official. The Building Official may extend the time for action on the application for an additional one hundred eighty (180) days upon a request in writing submitted to the Building Official and payment of the extension fee. No application shall be extended more than once. An expired application may only be reactivated by filing of a new application including plans and fees.

Right of Entry. Whenever it is necessary to make an inspection to enforce the provisions of this chapter, or whenever the Regulatory Authority has reasonable cause to believe that there exists in any building or upon any premises any conditions or violations of this chapter that make the building or premises unsafe, unsanitary, dangerous or hazardous, the Regulatory Authority shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the Regulatory Authority by this chapter. If such building or premises is occupied, the Regulatory Authority shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the Regulatory Authority shall first make a reasonable effort to locate the owner or other person having charge or control of the building or premises and request entry. If entry is refused, the Regulatory Authority shall have recourse to every remedy provided by law to secure entry.

When the Regulatory Authority shall have first obtained a proper inspection warrant pursuant to the "Municipal Court" Chapter of the Code of the City of Arlington no owner or occupant or person having charge, care or control of any building or premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the Regulatory Authority.

- M. Stop Work Orders. Upon notice from the Regulatory Authority, work on any irrigation system that is being done contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the Regulatory Authority shall not be required to give a written notice prior to stopping the work. No person shall continue any work in or about the structure after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition.

Section 3.03 Required Inspections

- A. The regulatory authority, upon notification from the permit holder or the permit holder's authorized agent, shall make the following inspection and such other inspections as necessary, and shall either release that portion of the construction or shall notify the permit holder or an agent of any violations that must be corrected. The holder of the permit shall be responsible for the scheduling of the inspections:
1. Underground inspection shall be made after trenches or ditches are excavated, piping and control wiring installed and before any backfill is put in place.

2. Final inspection shall be made after the installation is complete and operational and the installation is ready for use.
3. Where any work does not pass any initial inspection, the necessary corrections shall be made to comply with this chapter. The corrected work shall then be rescheduled for inspection.

Section 3.04 Inspector's Responsibility

- A. An Irrigation Inspector shall enforce this chapter.
- B. An Irrigation Inspector or licensed plumbing inspector, who has been designated by the Regulatory Authority, shall be responsible for:
 1. verifying that the appropriate permits have been obtained for an irrigation system and that the irrigator and installer or irrigation technician, if applicable, are licensed;
 2. inspecting the irrigation system;
 3. determining that the irrigation system complies with the requirements of this chapter;
 4. determining that the appropriate backflow prevention device was installed, tested, and test results provided to the Regulatory Authority;
 5. investigating complaints related to irrigation system installation, maintenance, alteration, repairs, or service of an irrigation system and advertisement of irrigation services; and
 6. maintaining records according to this chapter.
- C. An Inspector shall maintain a log of all irrigation systems inspected that includes, but is not limited to the system location, property owner, irrigator responsible for installation, permit status, problems noted during the inspection, and date of inspection. The log must be kept for three years. The log shall be available for review within two business days of the request by the authorized representatives of the Texas Commission on Environmental Quality or any regulatory authority with jurisdiction over landscape issues in the area the Inspector is employed to inspect.
- D. An Inspector may not inspect the following:
 1. a landscape irrigation system that is an on-site sewage disposal system, as defined by Section 366.002 of the Texas Health and Safety Code;

2. an irrigation system that is used on or by an agricultural operation as defined by Section 251.002 of the Texas Agriculture Code; or
3. an irrigation system that is connected to a groundwater well used by the property owner for domestic use.

Section 3.05 Regulations and Standards for Fees

- A. No permit required by this chapter shall be issued prior to payment of all applicable fees.
- B. If a permit fee is paid by check, such payment shall be considered contingent upon payment by the drawee. If the drawee returns the check marked account closed, or insufficient funds, the permit shall be considered invalid.
- C. Fees including the permit, registration, reinspection and appeal fees shall be charged in accordance with the amount as established by resolution of the City Council.
- D. If work requiring a permit is commenced prior to the issuance of a permit, and a permit is subsequently issued, the fee shall be twice the applicable amount as stated in the fee schedules except that this provision shall not apply to emergency work when it shall be proved to the satisfaction of the Regulatory Authority that such work was done out of urgent necessity and it was not practicable to obtain a permit prior to commencing the work. In all such cases, a permit must be obtained as soon as is practicable. If there is an unreasonable delay in obtaining such permit, a double fee as herein provided shall be charged.
- E. No full refund shall be made of any fee paid unless a written request is submitted by the original permittee no later than sixty (60) days after the date of the fee payment, and:
 1. the permit has been issued, and no part of the work was commenced; or
 2. the permit has been issued through error on the part of the City, and it is found that the work applied for cannot be allowed.
- F. Refund of a fee paid for any administrative action other than an irrigation permit shall operate pursuant to the "Construction" Chapter of the Code of the City of Arlington.
- G. When it is determined after a permit has been issued that the scope of work is to be significantly changed, the Regulatory Authority may authorize and require that appropriate adjustments be made to the permit fee. Any increase in the permit fee

shall be paid prior to performing any part of such increased scope of work. Any decrease in the permit fee which is based on previously approved work which will not be performed shall be refunded in the amount of fifty percent (50%) of the fee related to the work not to be performed, as determined by the Regulatory Authority. No refund shall be made, unless a written request is submitted by the original permittee not later than sixty (60) days following approval of the permittee's change in scope of work.

- H. If, after a permit is issued, it is determined that the scope of the work is to be significantly changed, the Regulatory Authority may authorize and require that appropriate adjustments be made to the permit fee. Any resulting increase in permit fee shall be paid prior to performing any part of such increase scope of work. Any resulting decrease in permit fee shall be refunded based on the following equation: (Percentage of work not to be performed multiplied by permit fee paid).
 - 1. The determination of such refund shall be made by the Regulatory Authority.
 - 2. The permittee shall make a written request for the refund.
- I. The Regulatory Authority shall make such refund to the permittee no later than sixty (60) days following approval of permittee's written request.

ARTICLE IV

STANDARDS FOR DESIGNING, INSTALLING, AND MAINTAINING IRRIGATION SYSTEMS

Section 4.01 Water Conservation

All irrigation systems shall be designed, installed, maintained, altered, repaired, serviced, and operated in a manner that will promote water conservation as defined in this chapter.

Section 4.02 Minimum Standards for Irrigation Plan Design

- A. An irrigator shall prepare an irrigation plan for each site where a new irrigation system will be installed. An approved paper copy of the irrigation plan must be on the job site at all times during the installation and inspection of the irrigation system. A drawing showing the actual installation of the system is due to each irrigation system owner after all new irrigation system installations. During the

installation of the irrigation system, variances from the original plan may be authorized by the licensed irrigator if the variance from the plan does not:

1. diminish the operational integrity of the irrigation system;
 2. violate any requirements of this ordinance; and
 3. go unnoted in red on the irrigation plan.
- B. The irrigation plan must include complete coverage of the area to be irrigated. If a system does not provide complete coverage of the area to be irrigated, it must be noted on the irrigation plan.
- C. All irrigation plans used for construction must be drawn to scale. The plan must include, at a minimum, the following information:
1. the irrigator's seal, signature, and date of signing;
 2. all major physical features and the boundaries of the areas to be watered;
 3. a North arrow;
 4. a legend;
 5. **the zone flow measurement for each zone;**
 6. location and type of each:
 - a. controller; and
 - b. sensor (for example, but not limited to, rain, moisture, wind, flow, or freeze);
 7. location, type, and size of each:
 - a. water source, such as, but not limited to a water meter and point(s) of connection;
 - b. backflow prevention device;
 - c. water emission device, including, but not limited to, spray heads, rotary sprinkler heads, quick-couplers, bubblers, drip, or micro-sprays;
 - d. valve, including but not limited to, zone valves, master valves, and isolation valves;

- e. pressure regulation component; and
 - f. main line and lateral piping.
8. the scale used; and
9. the design pressure.

Section 4.03 Minimum Design and Installation Requirements

- A. No irrigation design or installation shall require the use of any component, including the water meter, in a way which exceeds the manufacturer's published performance limitations for the component.
- B. Spacing.
- 1. The maximum spacing between emission devices must not exceed the manufacturer's published radius or spacing of the device(s). The radius or spacing is determined by referring to the manufacturer's published specifications for a specific emission device at a specific operating pressure.
 - 2. New irrigation systems shall not utilize above-ground spray emission devices in landscapes that are less than 60 inches not including the impervious surfaces in either length or width and which contain impervious pedestrian or vehicular traffic surfaces along two or more perimeters. Qualifying areas less than 60 inches may be irrigated utilizing subsurface or drip irrigation, pressure compensating tubing, or be designed without irrigation. If pop-up sprays or rotary sprinkler heads are used in a new irrigation system, the sprinkler heads must direct flow away from any adjacent surface and shall not be installed closer than four inches from a hardscape, such as, but not limited to, a building foundation, fence, concrete, asphalt, pavers, or stones set with mortar.
 - 3. Narrow paved walkways, jogging paths, golf cart paths or other small areas located in cemeteries, parks, golf courses or other public areas may be exempted from this requirement if the runoff drains into a landscaped area.
- C. Water Pressure. Emission devices must be installed to operate at the minimum and not above the maximum sprinkler head pressure as published by the manufacturer for the nozzle and head spacing that is used. Methods to achieve the water pressure requirements include, but are not limited to, flow control valves, a pressure regulator, or pressure compensating spray heads.

- D. Piping. Piping in irrigation systems must be designed and installed so that the flow of water in the pipe will not exceed a velocity of five feet per second for polyvinyl chloride (PVC) pipe.
- E. Irrigation Zones. Irrigation systems shall have separate zones based on plant material type, microclimate factors, topographic features, soil conditions, and hydrological requirements. All non-turf landscape areas shall be designed with subsurface irrigation, drip irrigation, and/or pressure compensating tubing.
- F. Matched Precipitation Rate. Zones must be designed and installed so that all of the emission devices in that zone irrigate at the same precipitation rate.
- G. Irrigation systems shall not spray water over surfaces made of concrete, asphalt, brick, wood, stones set with mortar, or any other impervious material, such as, but not limited to, walls, fences, sidewalks, and streets.
- H. Master Valve. A flow control master valve shall be installed on the discharge side of the backflow prevention device on all new installations.
- I. Pop-up Heads. Pop-up heads shall be installed at grade level and operated to extend above all landscape turfgrass.
- J. PVC Pipe Primer Solvent. All new irrigation systems that are installed using PVC pipe and fittings shall be primed with a colored primer prior to applying the PVC cement in accordance with the Plumbing Chapter or the Construction Chapter of the City Code.
- K. Automatic Controllers. All new irrigation systems must include an automatic controller capable of providing all of the following features:
 - 1. multiple irrigation programs with at least three start times per program;
 - 2. limiting the irrigation frequency to once every 7 days and once every 14 days; and,
 - 3. water budgeting feature.
- L. Operational Rain or Moisture and Freeze Shut-off Devices or Other Technology. All new automatically controlled irrigation systems must include operational sensors or other technology designed to inhibit or interrupt operation of the irrigation system during periods of freezing weather and moisture or rainfall. Freeze and rain or moisture shut-off technology must be installed according to the manufacturer's published recommendations. Rain or moisture and freeze shut-off devices installed must be of a type established and published by the Regulatory Authority.

- M. Isolation Valve. All new irrigation systems must include an isolation valve between the water meter and the backflow prevention device.
- N. Depth Coverage of Piping. Piping in all irrigation systems must be installed according to the manufacturer's published specifications for depth coverage of piping.
1. If the manufacturer has not published specifications for depth coverage of piping, the piping must be installed to provide minimum depth coverage of six inches of select backfill, between the top of the pipe and the natural grade of the topsoil. All portions of the irrigation system that fail to meet this standard must be noted on the irrigation plan. If the area being irrigated has rock at a depth of six inches or less, select backfill may be mounded over the pipe. Mounding must be noted on the irrigation plan and discussed with the irrigation system owner or owner's representative to address any safety issues.
 2. If a utility, man-made structure or roots create an unavoidable obstacle, which makes the six-inch depth coverage requirement impractical, the piping shall be installed to provide a minimum of two inches of select backfill between the top of the pipe and the natural grade of the topsoil.
 3. All trenches and holes created during installation of an irrigation system must be backfilled and compacted to the original grade.
- O. Wiring Irrigation Systems.
1. Underground electrical wiring used to connect an automatic controller to any electrical component of the irrigation system must be listed by Underwriters Laboratories as acceptable for burial underground.
 2. Electrical wiring that connects any electrical components of an irrigation system must be sized according to the manufacturer's recommendation.
 3. Electrical wire splices which may be exposed to moisture must be waterproof as certified by the wire splice manufacturer.
 4. Underground electrical wiring that connects an automatic controller to any electrical component of the irrigation system must be buried with a minimum of six inches of select backfill.
- P. Water contained within the piping of an irrigation system is deemed to be non-potable. No drinking or domestic water usage, such as, but not limited to, filling swimming pools or decorative fountains, shall be connected to an irrigation system. If a hose bib (an outdoor water faucet that has hose threads on the spout)

is connected to an irrigation system for the purpose of providing supplemental water to an area, the hose bib must be installed using a quick coupler key on a quick coupler installed in a covered purple valve box and the hose bib and any hoses connected to the bib must be labeled "non potable, not safe for drinking." An isolation valve must be installed upstream of a quick coupler connecting a hose bib to an irrigation system.

- Q. Beginning January 1, 2010, either a licensed irrigator or a licensed irrigation technician shall be on-site at all times while the landscape irrigation system is being installed. When an irrigator is not onsite, the irrigator shall be responsible for ensuring that a licensed irrigation technician is on-site to supervise the installation of the irrigation system.

Section 4.04 Backflow Prevention Methods and Devices

- A. Any irrigation system that is connected to the potable water supply must be connected in accordance with the Plumbing Chapter, Texas Commission on Environmental Quality rules, this chapter, and other relevant law. All backflow prevention assemblies shall be of a type and model approved by the Regulatory Authority. The backflow prevention device must be installed in accordance with the laboratory approval standards or if the approval does not include specific installation information, the manufacturer's current published recommendations.
- B. If conditions that present a health hazard exist, one of the following methods must be used to prevent backflow;
1. An air gap may be used if:
 - a. there is an unobstructed physical separation; and
 - b. the distance from the lowest point of the water supply outlet to the flood rim of the fixture or assembly into which the outlet discharges is at least one inch or twice the diameter of the water supply outlet, whichever is greater.
 2. Reduced pressure principle backflow prevention assemblies may be used if:
 - a. the device is installed at a minimum of 12 inches above ground in a location that will ensure that the assembly will not be submerged; and
 - b. drainage is provided for any water that may be discharged through the assembly relief valve.

3. Pressure vacuum breakers may be used if:
 - a. no back-pressure condition will occur; and
 - b. the device is installed at a minimum of 12 inches above any downstream piping and the highest downstream opening. Pop-up sprinklers are measured from the retracted position from the top of the sprinkler.
4. Atmospheric vacuum breakers may be used if:
 - a. no back-pressure will be present;
 - b. there are no shutoff valves downstream from the atmospheric vacuum breaker;
 - c. the device is installed at a minimum of six inches above any downstream piping and the highest downstream opening. Pop-up sprinklers are measured from the retracted position from the top of the sprinkler;
 - d. there is no continuous pressure on the supply side of the atmospheric vacuum breaker for more than 12 hours in any 24-hour period; and
 - e. a separate atmospheric vacuum breaker is installed on the discharge side of each irrigation control valve, between the valve and all the emission devices that the valve controls.
- C. Backflow prevention devices used in applications designated as health hazards must be tested upon installation and annually thereafter.
- D. If there are no conditions that present a health hazard, double check valve backflow prevention assemblies may be used to prevent backflow if the device is tested upon installation and test cocks are used for testing only.
- E. If a double check valve is installed below ground:
 1. test cocks must be plugged, except when the double check valve is being tested;
 2. test cock plugs must be threaded, water-tight, and made of non-ferrous material;
 3. a y-type strainer is installed on the inlet side of the double check valve;

4. there must be a clearance between any fill material and the bottom of the double check valve to allow space for testing and repair; and
 5. there must be space on the side of the double check valve to test and repair the double check valve.
- F. If an irrigation system is connected to a potable water supply and requires major maintenance, alteration, repair, or service, the system must be connected to the potable water supply through an approved, properly installed backflow prevention method before any major maintenance, alteration, repair, or service is performed.
- G. If an irrigation system is connected to a potable water supply through a double check valve, pressure vacuum breaker, or reduced pressure principle backflow assembly and includes an automatic master valve on the system, the automatic master valve must be installed on the discharge side of the backflow prevention assembly.
- H. The irrigator shall ensure the backflow prevention device is tested by a licensed Backflow Prevention Assembly Tester that is registered with the City of Arlington prior to being placed in service and the test results shall be provided to the Regulatory Authority and to the irrigation system's owner or owner's representative within ten (10) business days of testing of the backflow prevention device.

Section 4.05 Specific Conditions and Cross-Connection Control

- A. Before any chemical is added to an irrigation system connected to the potable water supply, the irrigation system must be connected through a reduced pressure principle backflow prevention assembly or air gap.
- B. Connection of any additional water source to an irrigation system that is connected to the potable water supply can only be done if the irrigation system is connected to the potable water supply through a reduced-pressure principle backflow prevention assembly or an air gap.
- C. Irrigation system components with chemical additives induced by aspiration, injection, or emission system connected to any potable water supply must be connected through a reduced pressure principle backflow device.
- D. If an irrigation system is designed or installed on a property that is served by an on-site sewage facility, as defined in Title 30, Texas Administrative Code, Chapter 285, then:

1. all irrigation piping and valves must meet the separation distances from the On-Site Sewage Facilities system as required for a private water line in Title 30, Texas Administrative Code, Section 285.91(10);
2. any connections using a private or public potable water source that is not the city's potable water system must be connected to the water source through a reduced pressure principle backflow prevention assembly as defined in Title 30, Texas Administrative Code, Section 344.50; and
3. any water from the irrigation system that is applied to the surface of the area utilized by the On-Site Sewage Facility system must be controlled on a separate irrigation zone or zones so as to allow complete control of any irrigation to that area so that there will not be excess water that would prevent the On-Site Sewage Facilities system from operating effectively.

Section 4.06 Completion of Irrigation System Installation

Upon completion of the irrigation system, the irrigator or irrigation technician who provided supervision for the on-site installation shall be required to complete four items:

1. a final "walk through" with the irrigation system's owner or the owner's representative to explain the operation of the system.
2. The maintenance checklist on which the irrigator or irrigation technician shall obtain the signature of the irrigation system's owner or owner's representative and shall sign, date, and seal the checklist. If the irrigation system's owner or owner's representative is unwilling or unable to sign the maintenance checklist, the irrigator shall note the time and date of the refusal on the irrigation system's owner or owner's representative's signature line. The irrigation system owner or owner's representative will be given the original maintenance checklist and a duplicate copy of the maintenance checklist shall be maintained by the irrigator. The items on the maintenance checklist shall include but are not limited to:
 - a. irrigator's name, license number, company name, telephone number, and the dates of the warranty period;
 - b. the manufacturer's manual for the automatic controller;
 - c. a seasonal (spring, summer, fall, winter) watering schedule based on either current/real time evapotranspiration or monthly historical reference evapotranspiration (historical ET) data, monthly effective rainfall estimates, plant landscape coefficient factors, and site factors;

- d. a list of components, such as the nozzle, or pump filters, and other such components; that require maintenance and the recommended frequency for the service; and
- e. the statement, "This irrigation system has been installed in accordance with all applicable state and local laws, ordinances, rules, regulations or orders. I have tested the system and determined that it has been installed according to the Irrigation Plan and is properly adjusted for the most efficient application of water at this time."

A permanent sticker which contains the irrigator's name, license number, company name, telephone number and the dates of the warranty period shall be affixed to each automatic controller installed by the irrigator or irrigation technician. The information contained on the sticker must be printed with waterproof ink.

- 4. The irrigation plan indicating the actual installation of the system must be provided to the irrigation system's owner or owner representative.

Section 4.07 Maintenance, Alteration, Repair, or Service of Irrigation Systems

- A. All trenches and holes created during the maintenance, alteration, repair, or service of an irrigation system must be returned to the original grade with compacted select backfill.
- B. Colored PVC pipe primer solvent must be used on all pipes and fittings used in the maintenance, alteration, repair, or service of an irrigation system in accordance with the Uniform Plumbing Code (Section 316) or the International Plumbing Code (Section 605).
- C. Repairs to existing automatic irrigation systems that require replacement of an existing controller must include the installation of an operational sensor or other technology designed to inhibit or interrupt operation of the irrigation system during periods of freezing weather and moisture or rainfall. Rain or moisture and freeze shut-off devices installed must be of a type established and published by the Regulatory Authority.
- D. When maintenance, alteration, repair or service of an irrigation system involves excavation work at the water meter or backflow prevention device, an isolation valve and or an operational rain and freeze sensor shall be installed, if an isolation valve and or operational rain and freeze sensor is not present.

Section 4.08 Reclaimed Water

Reclaimed water may be utilized in landscape irrigation systems if:

1. there is no direct contact with edible crops;
2. the irrigation system does not spray water across property lines that do not belong to the irrigation system's owner;
3. the irrigation system is installed using purple components;
4. a minimum of an eight inch by eight inch sign, in English and Spanish, is prominently posted on/in the area that is being irrigated, that reads, "RECLAIMED WATER – DO NOT DRINK" and "AGUA DE RECUPERACIÓN – NO BEBER";
5. backflow prevention on the reclaimed water supply line shall be in accordance with the regulations of the City; and
6. all permit applications and plans for a landscape irrigation system that uses reclaimed water must be so stated on the plans and the applications.

ARTICLE V

APPEAL

Section 5.01 Appeal

Any person aggrieved by a decision of the Regulatory Authority in accordance with this Chapter may appeal said decision or action to the Mechanical and Plumbing Board of Appeals as set forth in Article II of the "Mechanical" Chapter of the Code of the City of Arlington, which shall have authority relative to appeals of decisions of the Regulatory Authority and revocation and suspension of registration under this Chapter. Any person may register an appeal with the Secretary of the Mechanical and Plumbing Board of Appeals for the review of any decision of the Regulatory Authority made pursuant to the terms of this Code. Such appeal shall be made in writing and presented to the Office of the Secretary of the Board. An administrative fee set by resolution approved by City Council, shall accompany such notice of appeal, which shall be made on forms provided by the Regulatory Authority.

Section 5.02 Board Decisions & Procedure

- A. The Board, when appealed to, shall conduct a hearing, and after such hearing issue a decision regarding the appeal.
- B. Every decision of the Board shall be final, subject however, to such remedy as any aggrieved party might have at law or in equity. The decision shall be in writing and shall indicate the vote upon the decision. Every decision shall be promptly filed in the office of the Regulatory Authority and shall be open to the public for inspection. A true and correct copy of the decision shall be sent by mail or otherwise to the appellant and a copy shall be publicly posted in the office of the Regulatory Authority for two (2) weeks after the filing thereof.
- C. The Board shall in every case reach a decision without unreasonable or unnecessary delay making specific effort to reach a decision not later than thirty (30) days (excluding Saturdays, Sundays, and holidays) from the date of registering of appeal with the Secretary of the Board.
- D. If a decision of the Board reverses or modifies a refusal, order, or disallowance of the Regulatory Authority, the Regulatory Authority shall immediately take action in accordance with such decision.
- E. Any person, firm or corporation aggrieved by any decision of the Board may present to a court of record a petition, duly verified, setting forth that such decision is illegal, in whole or in part, specifying the grounds of the illegality. Unless such petition (appeal) shall be presented to the court within ten (10) days of the decision of the Board, the decision of the Board shall become final.

ARTICLE VI

ENFORCEMENT AND PENALTY

Section 6.01 Enforcement and Penalty

- A. The Regulatory Authority shall administer and enforce the provisions of this chapter.
- B. Any person violating any provision of this chapter, upon conviction, is guilty of a Class C misdemeanor and punishable by a fine not to exceed \$500.00. Each day that a provision of this chapter is violated shall constitute a separate offense.
- C. The remedies provided by this chapter shall be in addition to all other criminal and civil remedies, which the City is entitled under the authority of statutes, ordinances or in equity to pursue.

2.

Any person, firm, corporation, agent or employee thereof who violates any of the provisions of this ordinance shall be guilty of a misdemeanor and upon conviction thereof shall be fined an amount not to exceed Five Hundred and No/100 Dollars (\$500) for each offense. Each day that a violation is permitted to exist shall constitute a separate offense.

3.

This ordinance shall be and is hereby declared to be cumulative of all other ordinances of the City of Arlington, and this ordinance shall not operate to repeal or affect any of such other ordinances except insofar as the provisions thereof might be inconsistent or in conflict with the provisions of this ordinance, in which event such conflicting provisions, if any, in such other ordinance or ordinances are hereby repealed.

4.

If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be unconstitutional, such holding shall not affect the validity of the remaining portions of this ordinance.

5.

All of the regulations provided in this ordinance are hereby declared to be governmental and for the health, safety and welfare of the general public. Any member of the City Council or any City official or employee charged with the enforcement of this ordinance, acting for the City of Arlington in the discharge of his/her duties, shall not thereby render himself/herself personally liable; and he/she is hereby relieved from all personal liability for any damage that might accrue to persons or property as a result of any act required or permitted in the discharge of his/her said duties.

6.

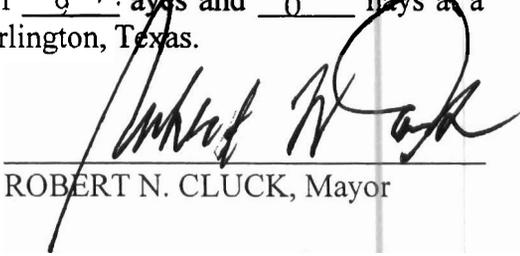
Any violation of this ordinance can be enjoined by a suit filed in the name of the City of Arlington in a court of competent jurisdiction, and this remedy shall be in addition to any penal provision in this ordinance or in the Code of the City of Arlington.

7

The caption and penalty clause of this ordinance shall be published in a newspaper of general circulation in the City of Arlington, in compliance with the provisions of Article VII, Section 15, of the City Charter. Further, this ordinance may be published in pamphlet form and shall be admissible in such form in any court, as provided by law.

This ordinance shall become effective on January 1, 2009.

PRESENTED AND GIVEN FIRST READING on the 18th day of November, 2008, at a regular meeting of the City Council of the City of Arlington, Texas; and GIVEN SECOND READING, passed and approved on the 2nd day of December, 2008, by a vote of 9 ayes and 0 nays at a regular meeting of the City Council of the City of Arlington, Texas.


ROBERT N. CLUCK, Mayor

ATTEST:


KAREN BARLAR, City Secretary

APPROVED AS TO FORM:
JAY DOEGEY, City Attorney

BY 