

**EXHIBIT "A"**

**CHAPTER 113: IRRIGATORS**

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## **GENERAL PROVISIONS**

### **§ 113.01                    DEFINITIONS.**

For the purpose of this chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning. Terms not defined shall be construed in accordance with customary language.

***AIR GAP.*** 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.*** 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. Also known as an Atmospheric Vacuum Breaker Back-Siphonage Prevention Assembly.

***BACKFLOW PREVENTION.*** The mechanical prevention of reverse flow, or backsiphonage, of nonpotable water from an Irrigation System into the potable water source.

***BACKFLOW PREVENTION ASSEMBLY.*** 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.

***BACK PRESSURE.*** Any pressure, regardless of its source, against the outlet side of the Backflow Prevention device that exceeds the supply pressure against the inlet side of the device.

***COMPLETION OF IRRIGATION SYSTEM INSTALLATION.*** 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.

***COMMISSION.*** The Texas Commission on Environmental Quality.

***CONSULTING.*** The act of providing advice, guidance, review or recommendation related to landscape irrigation systems.

***CROSS-CONNECTION.*** An 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.

***DIRECT SUPERVISION.*** The on-the-job oversight and direction of a Person performing irrigation work by a licensed Irrigator or licensed Installer who is fulfilling

his or her responsibility to the client and employer by ensuring that the irrigation materials for the job are properly prepared prior to assembly according to the material manufacturer's recommendations and the requirements of the Texas Commission on Environmental Quality and that the plumbing work for the job is properly installed to protect health and safety by meeting the requirements of the adopted plumbing code and all requirements of local ordinances and state regulations and laws.

**DESIGN.** 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.** 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.** 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. Also known as a Double Check Valve Backflow Prevention Assembly.

**EMISSION DEVICE.** 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.** Engaged or hired to provide consulting services or perform any activity related 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.

**EXECUTIVE DIRECTOR.** The Executive Director of the Texas Commission on Environmental Quality.

**HEAD-TO-HEAD SPACING.** The spacing of spray or rotary heads equal to the manufacturer's published radius of the head.

**HEALTH HAZARD.** 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.*** The science of dynamic and static water; the mathematical computation of determining pressure losses and pressure requirements of an irrigation system.

***INSPECTOR.*** A licensed plumbing inspector, water district operator, other governmental entity, or irrigation inspector who inspects irrigation systems and performs other enforcement duties for a municipality or water district as an employee or as a contractor.

***INSTALLER.*** 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 30 Texas Administrative Code Chapter 30 (relating to Occupational Licenses and Registrations).

***IRRIGATION INSPECTOR.*** A person who inspects irrigation systems and performs other enforcement for a municipality or water district as an employee or as a contractor and is required to be licensed under Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations).

***IRRIGATION PLAN.*** 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.*** Selling, designing, installing, maintaining, altering, repairing, servicing, permitting, providing consulting services regarding, or connecting an irrigation system to a water supply.

***IRRIGATION SYSTEM.*** An assembly of component parts permanently installed with and for the controlled distribution and conservation of water for the purpose of irrigating any type of landscape vegetation in any location or for the purpose of dust reduction or erosion control. The term does not include a system used on or by an agricultural operation as defined by Texas Agriculture Code § 251.002.

***IRRIGATION TECHNICIAN.*** A person who works under the direct 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.*** 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.*** A person who sells, designs, consults, installs, maintains, alters, repairs, or services an Irrigation System including the connection of such system in and to a private or public, raw or potable water supply system or any water supply, and who is licensed according to 30 TEXAS ADMINISTRATIVE CODE CHAPTER 30.

***IRRIGATOR-IN-CHARGE.*** 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, maintaining, altering, repairing, or servicing a landscape irrigation system.

***LANDSCAPE IRRIGATION.*** The science of applying the necessary amount of water to promote or sustain growth of plant material or turf.

***LICENSE.*** An occupational license that is issued by the Commission 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.*** A pipe within an irrigation system that delivers water from the water source to the individual zone valves.

***MAINTENANCE CHECKLIST.*** 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 plants or grass away from the 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 water purveyor, the name of the water purveyor, a suggested seasonal or monthly watering schedule based on current evapotranspiration data for the 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.*** Any activity that involves opening to the atmosphere the irrigation mainline 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 main supply pipe, replacing a zone control valve, or replacing a zone control valve, or repairing a zone control valve in a manner that opens the system to the atmosphere.

***MASTER VALVE.*** A remote control valve located after the backflow prevention device that controls the flow of water to the irrigation system mainline.

***MATCHED PRECIPITATION RATE.*** The condition in which all sprinkler heads within an irrigation zone apply water at the same rate.

***NEW INSTALLATION.*** An irrigation system installed at a location where one did not previously exist.

***NON-TOXIC SUBSTANCE.*** Any substance, solid, liquid, or gaseous, which may make the water aesthetically unacceptable but, if ingested, will not cause illness or death and is not considered a health hazard.

***PASS-THROUGH CONTRACT.*** 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.

***POTABLE WATER.*** Water that is suitable for human consumption.

***PRESSURE VACUUM BREAKER.*** 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. Also known as a Pressure Vacuum Breaker Back-Siphonage Prevention Assembly.

***RECLAIMED WATER.*** Domestic or municipal wastewater which has been treated to a quality suitable for beneficial use, such as landscape irrigation.

***RECORDS OF LANDSCAPE IRRIGATION ACTIVITIES.*** 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.*** An assembly containing two independently acting approved check valves together with a hydraulically operating mechanically independent pressure differential relief valves located between the two check valves and below the first check valve.

***STATIC WATER PRESSURE.*** The pressure of water when it is not moving.

***SUPERVISION.*** 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. Also 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.

***TOXIC SUBSTANCE.*** Any substance, solid, liquid, or gaseous, which when introduced into the water supply system creates, or may create, a danger to the health and well-being of the consumer.

***WATER CONSERVATION.*** The design and installation of an Irrigation System which prevents the waste of water, promotes the most efficient use of water and applies the least amount of water required to maintain healthy individual plant material or turf.

**§ 113.02 PURPOSE AND INTENT.**

(A) The purpose of this ordinance is to promote and protect the public health, safety and welfare by regulating the installation and continued operation of Irrigation Systems.

~~(B) The city intends to ensure that irrigation and Irrigation Systems will not contribute to the decline of residential and business neighborhoods.~~

**§ 113.03 APPLICABILITY.**

Unless otherwise indicated, this chapter applies to the area within the limits of the City of Pflugerville and in the city's extraterritorial jurisdiction.

***OCCUPATIONAL LICENSING AND REGISTRATION***

**§ 113.20 VALID LICENSED REQUIRED.**

Any person who connects an irrigation system to the water supply within the city or the city's extraterritorial jurisdiction must hold a valid license, as defined by Title 30, Texas Administrative Code, Chapter 30, and required by Chapter 1903 of the Texas Occupations Code, or as defined by Chapter 365, Title 22 of the Texas Administrative Code and required by Chapter 1301 of the Texas Occupations Code.

**§ 113.21 EXEMPTIONS.**

(A) In this section, "property owners' association" has the meaning assigned by Texas Property Code § 202.001.

(B) The licensing requirements of this chapter do not apply to Person who is:

(1) Licensed by the Texas State Board of Plumbing Examiners; or

(2) 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.

(C) The licensing requirements of this chapter for this chapter do not apply to:

(1) Irrigation or yard sprinkler work performed by a property owner in a building or on premises owned or occupied by the Person at the Person's home. A home or property owner who installs an irrigation system must meet the standards contained in Title 30, Texas Administrative Code, Chapter 344 regarding spacing, water pressure, spraying water over impervious materials, rain or moisture shut-off devices or other technology, backflow prevention and isolation valves;

(2) Irrigation or yard sprinkler repair work, other than extension of an existing irrigation or yard sprinkler or installation of a replacement system, that is:

(a) Performed by a maintenance Person who does not act as an Irrigator or engage in yard sprinkler construction or maintenance for the public; and

(b) Incidental to and on premises owned by the business in which he Person is regularly employed or engaged;

(3) Irrigation or yard sprinkler work performed:

(a) By a regular employee of a railroad who does not act as an Irrigator or engage in yard sprinkler construction or maintenance or the public; and

(b) On the premises or equipment of the railroad;

(4) Irrigation or yard sprinkler work performed on public property by a Person who is regularly employed by a political subdivision of this state;

(5) Irrigation or yard sprinkler work performed on land owned by an agriculturist, agronomists, horticulturist, forester, gardener, contract gardener, professional garden or lawn caretaker, nurseryman, or professional grader or cultivator or land, and performed by such Person in accordance with accepted irrigation standards.

(6) Irrigation or yard sprinkler work performed by a member of a property owners' association on real property owned by the association or in common by the association's members if the irrigation or yard sprinkler system waters real property that:

(a) Is less than one-half acre in size; and

(b) Is used for aesthetic or recreational purposes;

(7) Irrigation or yard sprinkler work performed by a Person using a garden hose, hose sprinkler, hose-end product, or agriculture Irrigation System;

(8) Activities involving a commercial agricultural Irrigation System;

(9) A Person who assists in the installation, maintenance, alteration, repair or service of an Irrigation System under the Direct Supervision of an individual described by §113.01 of this chapter who is licensed under Texas Water Code Chapter 37; or

(10) An owner of a business that employs an individual described by § 113.01 of this chapter who is licensed under Texas Water Code Chapter 37, to supervise the business's sale, design, consultation, installation, maintenance, alteration, repair, and service of Irrigation Systems.

(D) A Person who is exempt from the licensing requirements of this chapter shall comply with the standards established by this chapter and the rules adopted under this chapter.

**§ 113.22 DISPLAY OF LICENSE.**

Every Person holding a License must display it at the Person's place of business or employment and be prepared to substantiate the annual renewal for the current year. When a Person is engaging in any of the activities identified in § 113.20, he or she must carry his or her pocket card License on their person and be prepared to present it.

***STANDARDS FOR LANDSCAPE IRRIGATION***

**§ 113.30 LOCAL REGULATION.**

(A) All licensed Irrigators and licensed Installers, or any Person(s) engaging in irrigation activities must comply with this chapter.

(B) Any provision not covered by this chapter shall be governed by the Texas Occupations Code, the Texas Water Code, Title 30 of the Texas Administrative Code, and any other applicable state statute of Texas Commission on Environmental Quality rule.

**§ 113.31 PERMIT REQUIRED**

Any person installing an irrigation system within the territorial limits or extraterritorial jurisdiction of the city is required to obtain a permit from the city. Any plan approved for a permit must be in compliance with the requirements of this chapter.

(A) Exemptions

(1) An irrigation system that is an on-site sewage disposal system, as defined by Section 355.002, Health and Safety Code; or

(2) An irrigation system used on or by an agricultural operation as defined by Section 251.002, Agriculture Code: or

(3) An irrigation system connected to a groundwater well used by the property owner for domestic use.

**§ 113.32 WATER CONSERVATION.**

All Irrigation Systems shall be designed, installed, maintained, repaired, and serviced, and operated in a manner that will promote Water Conservation as defined in the Definitions section of this ordinance.

**§ 113.33 BACKFLOW PREVENTION METHODS AND DEVICES.**

All Irrigation Systems connected to a public or private potable water supply must be properly connected through a backflow prevention method approved by the Texas Commission on Environmental Quality (TCEQ). The backflow prevention device must be approved by the American Society of Sanitary Engineers; the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California; or any other laboratory that has equivalent capabilities for both laboratory and field evaluation of backflow prevention assemblies. 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.

(A) *Atmospheric Vacuum Breakers.* Atmospheric vacuum breakers are designed to prevent only siphonage. Therefore, atmospheric vacuum breakers must not be used in any Irrigation Systems where back-pressure may occur. There cannot be any shutoff valves downstream from an atmospheric vacuum breaker. Where atmospheric vacuum breakers may be used, they must be installed at least six inches above any downstream piping and the highest downstream opening. In addition, continuous pressure on the supply of an atmospheric vacuum breaker is prohibited. Where atmospheric vacuum breakers are used in an Irrigation System, a separate atmospheric vacuum breaker must be installed in the discharge side of each water control valve, between the valve and all of the sprinkler heads that the valve controls.

(A) *Pressure-type Vacuum Breakers.* Pressure-type vacuum breakers are designed to prevent back siphonage and can operate under continuous pressure. Pressure vacuum breakers must be installed at least 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.

(C) *Double Check Valve Assembly Backflow Preventers.* Double check valve assembly backflow preventers are designed to prevent Back Pressure and back siphonage of water not containing any Toxic Substance. They may be used where water supply pressure and Back Pressure on the Backflow Prevention device may continuously exist. If a double check valve assembly is installed below grade, there must remain adequate

space for testing and repair for the device. Test cock plugs must be of non-ferrous material. Test cocks shall not be used as supply connections and must be plugged except when being tested. A y-type strainer must be installed on the inlet side of the double check valve.

(D) *Reduced Pressure Principal Backflow Prevention Assemblies.* Reduced pressure principal assemblies are designed for water containing Toxic or Non-toxic Substances and for Back Pressure and back siphonage. They must be installed 12 inches above grade in a location so as to insure that the device will not be submerged. In addition, adequate provisions must be made for any water which may be discharged through the assembly relief valve.

(E) *Air Gap.* An air gap, when used must be installed with an unobstructed physical separation and 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.

#### **§ 113.34 SPECIFIC CONDITIONS AND BACKFLOW PREVENTION DEVICES.**

(A) An Irrigation System that does not have associated with it any type of injection devices and that is connected or capable of being connected only to a single source of water prevents a low potential for contamination of the water supply and is, therefore, considered to be a “low hazard” installation. Such an Irrigation System must be connected to the water supply through an industry-approved Backflow Prevention device, such as a double check valve assembly, air gap separation, reduced pressure principle assembly, pressure type vacuum breaker, or atmospheric vacuum breaker.

(B) An Irrigation System which adds any chemical is considered to be a “high health hazard”. Such an Irrigation System must not be connected to any potable water supply except through a reduced pressure principle Backflow Prevention assembly. The Backflow Prevention assembly must be tested upon installation and at least annually, thereafter, in accordance with 30 TEXAS ADMINISTRATIVE CODE § 290.44(H) (4).

(C) If an Irrigation System had more than one water supply source, with one or more supplies being potable water and the other supply or supplies being nonpotable water, the Irrigation System must be connected to each water supply only through and industry-approved “high health hazard” Backflow Prevention device. The device must be tested upon installation and, at least annually thereafter, in accordance with 30 TEXAS ADMINISTRATIVE CODE § 290.44(h)(4).

(D) If an existing irrigation system without a backflow-prevention assembly 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.

(E) If an irrigation system is connected to the 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.

(F) The irrigator shall ensure the backflow prevention device is tested by a licensed Backflow Prevention Assembly Tester prior to being placed in service and the test results provided to the city and the irrigation system's owner or owner's representative within 10 business days of testing of the backflow prevention device.

### § 113.35 MINIMUM STANDARDS FOR IRRIGATION PLAN DESIGN

An irrigator shall prepare an irrigation plan for each site where a new irrigation system will be installed. A paper or electronic copy of the irrigation plan must be submitted to the City for approval and kept on the job site at all times during the installation of the irrigation system. If changes are made during installation, an as-built drawing of the system must be provided to each irrigation system owner and submitted to the City after all new irrigation system installations.

(A) *Deviations from approved plans.* During 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 requirement of this ordinance; or
- (3) Go unnoted in red on the irrigation plan.

(B) *Coverage.* 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) *Plan information requirements.* All irrigation plans used for construction must be drawn to scale. The plans 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) The location and type of each controller and sensor;
- (7) The 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) valves, 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.

**§ 113.36 MINIMUM STANDARDS FOR INSTALLATION OF IRRIGATION SYSTEMS.**

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.

(A) *Spacing.*

(1) The maximum spacing between emission devices must not exceed the manufacturer's published radius or spacing of the device(s).

(2) New irrigation systems shall not utilize above-ground spray emission devices in landscapes that are less than 48 inches not including the impervious cover in either length or width and which contain impervious pedestrian or vehicular traffic surfaces along two or more perimeters. If pop-up sprays or rotary sprinkler heads are used in a new irrigation system, the sprinkler heads must direct flow away from any such 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 may be exempted from this requirement if the runoff drains into a landscaped area.

(B) *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 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.

(C) *Piping.*

(1) 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.

(2) 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 International Plumbing Code (section 605).

(D) *Irrigation Zones.* Irrigation systems shall have separate zones based on plant material type, microclimate factors, topographic features, soil conditions, and hydrological requirements.

(E) *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.

(F) *Depth Coverage of Piping.* Irrigation Systems using spray or rotary heads must be designed and/or installed according to the manufacturer recommended specifications for depth coverage of piping, unless one of the following circumstances is encountered.

(1) If the manufacturer has not published specifications for depth coverage of piping, the Irrigation System must be designed and/or installed to provide a minimum of six inches of coverage over piping. 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 utilities, structures, or tree roots are encountered, the Irrigation System must be designed and/or installed to provide a minimum of two inches of coverage over piping.

(3) All trenches and holes created during installation of an irrigation system must be backfilled and compacted to the original grade.

(F) *Wiring Irrigation Systems.*

(1) The wiring used in an Irrigation System that connects section valves to controllers must, be Underwriters Laboratories listed for direct underground burial.

(2) The wiring used in an Irrigation System that connects section valves to controllers must be sized according to the manufacturer's recommendation.

(3) Direct burial wire splices used in an Irrigation System must be waterproof as per manufacturer recommendation.

(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.

(G) *Rain or moisture shut-off devices or other technology.* All new automatically controlled irrigation systems must include sensors or other technology designed to inhibit or interrupt operation of the irrigation system during periods of moisture or rainfall. Rain or moisture shut-off technology must be installed according to the manufacturer's published recommendations. Repairs to existing automatic irrigation systems that require replacement of an existing controller must include a sensor or other technology designed to inhibit or interrupt operation of the irrigation system during periods of moisture or rainfall.

(H) *Master Valve.* When provided, a master valve shall be provided on the discharge side of the backflow prevention device on all new installations.

(I) *Isolation Valve.* All new irrigation systems must include an isolation valve between the water meter and the tee off from the water service line.

(J) *Prohibited Connections to Irrigation System.* 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 bibb (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 bibb 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 bibb must be labeled "non-potable, not safe for drinking". An isolation valve must be installed upstream of a quick coupler connecting a hose bibb to an irrigation system.

(K) *Direct Supervision.*

(1) An individual who performs the functions of an Installer by connecting an Irrigation System to any water supply, or represents that they can perform this function, must hold an installer license issued according to Title 30, Texas Administrative Code, Chapter 30. An Installer must work under the Direct Supervision of a licensed Irrigator and comply with the applicable provision of Title 30, Texas Administrative Code, Chapter 344 when performing this function.

(2) 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.

### **§ 133.37 INSTALLATION FINAL REQUIREMENTS**

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

(A) A final “walk through” with the irrigation system’s owner or the owner’s representative to explain the operation of the system;

(B) The Maintenance Checklist on which the irrigator or irrigator technician shall obtain the signature of the irrigation system’s owner or owner’s representative and shall sign, seal, and date the checklist. A copy of this checklist shall be submitted to the City along with the backflow device test report within ten days of the installation. 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:

(1) The manufacturer’s manual for the automatic controller, if the system is automatic;

(2) 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;

(3) 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

(4) 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”.

(C) 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 irrigator technician. If the irrigation system is manual, the sticker shall be affixed to the original maintenance checklist. The information contained on the sticker must be printed in waterproof ink.

(D) The irrigation plan indicating the actual installation of the system must be provided to the irrigation system’s owner or owner’s representative.

**§ 113.38 MAINTENANCE, ALTERATION, REPAIR, OR SERVICE**

(A) The licensed irrigator is responsible for all work that the irrigator performed during the maintenance, alteration, repair, or service of an irrigation system during the warranty period. The irrigator or business owner is not responsible for the professional negligence of any other irrigator who subsequently conducts any irrigation service on the same irrigation system.

(B) 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.

(C) 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 International Plumbing Code (Section 605).

(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 shall be installed, if an isolation valve is not present.

***STANDARDS OF CONDUCT FOR LICENSED IRRIGATORS AND INSTALLERS***

**§ 113.40 ADVERTISEMENT.**

(A) All vehicles used in the performance of irrigation installation, maintenance, alteration, repair, or service must display the irrigator’s license number in the form of “LI\_\_\_\_\_” in a contrasting color of block letters at least two inches high, on both sides of the vehicle.

(B) All forms of written and electronic advertisements for irrigation services must display the irrigator's license number in the form of "LI\_\_\_\_\_". Any form of advertisement, including business cards, and estimates which display an entity's or individual's name other than that of the licensed irrigator must also display the name of the licensed irrigator and the licensed irrigator's license number. Trailers that advertise irrigation services must display the irrigator's license number.

(C) The name, mailing address, and telephone number of the commission must be prominently displayed on a legible sign and displayed in plain view for the purpose of addressing complaints at the permanent structure where irrigation business is primarily conducted and irrigation records are kept.

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**§ 113.41 CONTRACTS.**

(A) All contracts to install an irrigation system must be in writing and signed by each party and must specify the irrigator's name, license number, business address, current business telephone number(s), the date that each party signed the agreement, the total agreed price, and must contain the statement: "Irrigation in Texas is regulated by the Texas Commission on Environmental Quality (TCEQ), MC-178, P.O.Box 13087, Austin, Texas, 78711-3087. TCEQ's website is: [www.tceq.state.tx.us](http://www.tceq.state.tx.us)." All contracts must include the irrigator's seal, signature, and date.

(B) All written estimates, proposals, bids, and invoices relating to the installation or repair of an irrigation system(s) must include the irrigator's name, license number, business address, current business telephone number(s), and the statement: "Irrigation in Texas is regulated by the Texas Commission on Environmental Quality (TCEQ), MC-178, P.O.Box 13087, Austin, Texas, 78711-3087. TCEQ's website is: [www.tceq.state.tx.us](http://www.tceq.state.tx.us)."

(C) An individual who agrees by contract to provide irrigation services as defined in Title 30, Texas Administrative Code, Section 344.30 (relating to License Required) shall hold an irrigator license issued under Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations) unless the contract is a pass-through contract as defined in Title 30, Texas Administrative Code, Section 344.1(36) (relating to Definitions). If a pass-through contract includes irrigation services, then the irrigation portion of the contract can only be performed by a licensed irrigator. If an irrigator installs a system pursuant to a pass-through contract, the irrigator shall be responsible for providing the irrigation system's owner or owner's representative a copy of the warranty and all other documents required under this chapter. A pass-through contract must identify by name and license number the irrigator that will perform the work and must provide a mechanism for contacting the irrigator for irrigation system warranty work.

**§ 113.43 WARRANTIES.**

(A) On all installations of new Irrigation Systems, an irrigator shall present the irrigation system's owner or owner's representative with a written warranty covering materials and labor furnished in the new installation of the irrigation system. The irrigator shall be responsible for adhering to terms of the warranty. If the irrigator's warranty is less than the manufacturer's warranty for the system components, then the irrigator shall provide the irrigation system's owner or owner's representative with applicable information regarding the manufacturer's warranty period. The warranty must include the irrigator's seal, signature, and date. If the warranty is part of the irrigator's contract, a separate warranty document is not required.

(B) An irrigator's written warranty on new irrigation systems must specify the irrigator's name, business address, and business telephone number(s), must contain the signature of the system's owner or owner's representative confirming receipt of the warranty and must include the statement: "Irrigation in Texas is regulated by the Texas Commission on Environmental Quality (TCEQ), MC-178, P.O.Box 130897, Austin, Texas 78711-3087. TCEQ's website is: [www.tceq.state.tx.us](http://www.tceq.state.tx.us)."

(C) On all maintenance, alterations, repairs, or service to existing irrigation systems, an irrigator shall present the irrigation system's owner or owner's representative a written document that identifies the materials furnished in the maintenance, alteration, repair, or service. If a warranty is provided, the irrigator shall provide by the terms. The warranty document must include the irrigator's name and business contact information.

#### **§ 113.44 VIOLATIONS.**

(A) Any person who violates a provision of this chapter or does not comply with the requirements of this chapter shall be guilty of a misdemeanor and upon conviction shall be subject to a fine not to exceed \$2,000 for violation of a city ordinance, as set forth in § 10.99. Each day of such violation shall constitute a separate offense. Such penalty shall be cumulative and not exclusive of any other rights or remedies the city may have.

(B) Nothing herein contained shall prevent the city or its duly authorized designees from taking other lawful action as is necessary to prevent or remedy any violation of this chapter.

