

# Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

**To:** Commissioners **Date:** May 16, 2008  
**Thru:** LaDonna Castañuela, Chief Clerk  
Glenn Shankle, Executive Director  
**From:** John Sadlier, Deputy Director  
Office of Compliance and Enforcement  
**Docket No.:** 2007-1285-RUL  
**Subject:** Commission Approval for Rulemaking Adoption  
Chapter 344, Landscape Irrigation  
Landscape Irrigation

## Scope of the rulemaking:

The adopted rules would implement standards to 30 Texas Administrative Code (TAC), Chapter 344 Rules for Landscape Irrigation. The adopted rules would implement changes for irrigation system design, installation, operation, water conservation and defines the duties and responsibilities of licensed irrigators. The adopted rules establish a threshold for requiring an irrigation plan prior to installation, which would mostly affect residential installed irrigation systems. The adopted rules would establish the roles and responsibilities of licensed irrigation technicians and licensed irrigation inspectors.

## Reasons for the rule package:

The rulemaking implements House Bill (HB) 1656, Senate Bill (SB) 3 and HB 4 80<sup>th</sup> Legislative Session authored by Representative Puente and sponsored by Senator Averitt.

HB 1656 mandates municipalities with population of 20,000 or more, and allows water districts, to implement a landscape irrigation permitting, inspection and enforcement program. The municipalities and water districts are required to adopt local ordinances or rules related to landscape irrigation that include minimum standards and specifications for designing, installing, and operating irrigation systems in accordance with Section 1903.053, Occupations Code, and any rules adopted by the TCEQ. HB 1656 requires a new type of license, an irrigation inspector.

HB 4 and SB 3 require the TCEQ to adopt by rule and enforce standards governing: the connection of irrigation systems to any water supply; the design, installation, and operation of irrigation systems; water conservation; and the duties and responsibilities of licensed irrigators. SB 3/HB 4 requires the TCEQ to adopt standards required by Section 1903.053, Occupation Code by June 1, 2008 to take effect January 1, 2009.

## Statutory Authority:

Texas Occupations Code, §1903.053, Standards  
Texas Water Code, § 5.013, General Jurisdiction of the Commission  
Texas Water Code, § 5.102, General Powers  
Texas Water Code, § 5.103, Rules  
Texas Water Code, § 5.105, General Policy

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Texas Water Code, § 37.002, Occupational Licensing and Registration

**Potentially controversial matters:**

- The requirement of any type of drawing design, or plan before or after the installation of an irrigation system will be controversial.
- The requirement to complete the Maintenance Checklist and conduct a walk through with irrigation systems owners to show how the system operates, to provide information about maintaining the irrigation system, and to seal a statement that the irrigation system has been installed in accordance with applicable requirements and adjusted for efficient operation will be controversial.
- The recordkeeping requirements will be controversial.
- The “irrigator-in-charge” provisions could be controversial.
- The provisions for an irrigation technician and the phase-out of the installer license may be controversial.
- Some irrigators do not want any rule changes.
- The requirement to have a licensed irrigator or irrigation technician on-site at all times beginning January 1, 2010 could be controversial.

**Public comment:**

- The proposed rules were published in the February 1, 2008 issue of the *Texas Register* (31 Tex Reg 899-921). A public hearing was held on February 26, 2008. The commission received comments from 78 individuals, groups, governmental entities, and businesses.
- An overriding concern is that a lack of an effective enforcement program against unlicensed individuals will place licensed irrigators that follow the rules at a competitive disadvantage because irrigation systems that do not meet the rules will be cheaper.
- There were numerous comments that the agency’s fiscal note was incorrect.
- Numerous comments were received supporting or opposing the requirement to have a drawing on-site showing the design of an irrigation system and to provide the irrigation system’s owner with a drawing of the actual installation of the irrigation system upon completion.
- Numerous comments were received supporting or opposing the requirement to conduct a walk through with irrigation system owners to show how the system operates, to provide information about maintaining the irrigation system, and to seal a statement that the irrigation system has been installed in accordance with applicable requirements and adjusted for efficient operation.
- Numerous comments were received that maintaining and providing records to regulatory authorities was onerous.
- Some comments were received requesting clarification of the “irrigator-in-charge” provisions.
- Numerous comments were received that another licensing approach was needed – an “apprentice” program, a multi-tiered or multi-level, and other variations were suggested.

**Significant changes from proposal:**

- In response to comments, changes were made to the definitions of design, design pressure, irrigator-in-charge, irrigation services, landscape irrigation, new installation, pass-through contract, records of landscape irrigation activities, and zone flow.

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- In response to comments, §344.51(b) was changed to allow the interconnection of a potable and non-potable water source with the use of a reduced pressure principle backflow prevention assembly or air gap.
- In response to comments, §344.61(a) was amended to require a plan only for those installations connecting an irrigation system to a water meter larger than five-eighths inch. However, a drawing showing the actual installation is required for all irrigation systems and must be provided to the irrigation system owner at the time of the walk through.
- In response to comments, §344.65 was changed to remove the prohibition of connecting an irrigation system using reclaimed water to a potable water supply.
- In response to comments §344.80 was changed to remove the prohibition of Irrigator Advisory Council members also serving as an officer, employee, paid consultant of a trade association or lobbyist for a trade or professional association in the irrigation industry.

**Key points in adoption rulemaking schedule:**

***Texas Register* proposal publication date:** February 1, 2008  
**Six-month *Texas Register* filing deadline:** August 1, 2008  
**Anticipated *Texas Register* publication date:** June 20, 2008  
**Anticipated effective date:** January 1, 2009

**Agency contacts:**

Candy Garrett, Rule Project Manager, 239-1451, Compliance Support Division  
Alicia Lee, Staff Attorney, 239-0133  
Kristin Smith, Texas Register Coordinator, 239-0177

**Attachments**

cc: Chief Clerk, 5 copies  
Executive Director's Office  
David C. Schanbacher, P.E.  
Ashley K. Wadick  
Daniel Womack  
Zak Covar  
Office of General Counsel  
Candy Garrett  
John Gaete

**HB1656 Subcommittee Model Ordinance**

ORDINANCE NO. \_\_\_\_\_

**AN ORDINANCE CREATING \_\_\_\_\_ OF THE \_\_\_\_\_ CITY  
CODE IN ORDER TO ESTABLISH THE MINIMUM STANDARDS FOR  
INSTALLATION OF IRRIGATION SYSTEMS WITHIN THE CORPORATE LIMITS  
OF THE CITY AND THE EXTRATERRITORIAL JURISDICTION; AND PROVIDING  
FOR A CRIMINAL PENALTY, CLASS C MISDEMEANOR NOT TO EXCEED TWO  
THOUSAND DOLLARS (\$2,000.00) FOR VIOLATION OF THE CODE.**

**WHEREAS**, the City Council of the City of \_\_\_\_\_ 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 \_\_\_\_\_; 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 \_\_\_\_\_.

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF \_\_\_\_\_:**

**PART 1.** That the city code of ordinances shall be and hereby is amended by [*adding / amending*] Chapter \_\_\_\_ to read as follows:

**Definitions**

(10) **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.

(11) **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.

(12) **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.

(13) **Employed**--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.

(14) **Head-to-head spacing**--The spacing of spray or rotary heads equal to the manufacturer's published radius of the head.

(15) **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.

(16) **Hydraulics**--The science of dynamic and static water; the mathematical computation of determining pressure losses and pressure requirements of an irrigation system.

(17) **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.

(18) **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 Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations).

(19) **Irrigation inspector**--A person who inspects irrigation systems and performs other enforcement duties for a municipality or water district as an employee or as a contractor and is

(28) **License**--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.

(29) **Mainline**--A pipe within an irrigation system that delivers water from the water source to the individual zone valves.

(30) **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 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 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.

(31) **Major maintenance, alteration, repair, or service**--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 main supply pipe, replacing a zone control valve, or repairing a zone control valve in a manner that opens the system to the atmosphere.

(32) **Master valve**--A remote control valve located after the backflow prevention device that controls the flow of water to the irrigation system mainline.

(33) **Matched precipitation rate**--The condition in which all sprinkler heads within an irrigation zone apply water at the same rate.

(34) **New installation**--An irrigation system installed at a location where one did not previously exist .

(35) **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.

(36) **Potable water**--Water that is suitable for human consumption.

Any person who connects an irrigation system to the water supply within the city or the city's extraterritorial jurisdiction, commonly referred to as the ETJ, 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.

#### *Exemptions*

A property owner is not required to be licensed in accordance with Texas Occupations Code, Title 12, §1903.002(c)(1) 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. A home or property owner who installs an irrigation system must meet the standards contained in (Reference that property owners must also meet the standards of this ordinance.) 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. The city may, at any point, adopt more stringent requirements for a home or property owner who installs an irrigation system. See Texas Occupations Code §1903.002 for other exemptions to the licensing requirement.

#### **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. An irrigation plan must be submitted to the "Building Official" in conjunction with the permit application. Any plan approved for a permit must be in compliance with the requirements of this chapter. *(Each city should include provisions regarding the appropriate department and process for obtaining a permit.)*

#### *Exemptions*

- (1) An irrigation system that is an on-site sewage disposal system, as defined by Section 366.002, 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.*

#### **Backflow Prevention Methods and Devices**

*(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.*

*(d/f) 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/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.*

*(f/h) 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 local water purveyor and the irrigation system's owner or owner's representative within ten business days of testing of the backflow prevention device*

### **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:

- (5) the zone flow measurement for each zone;
- (6) location and type of each:
  - (A) automatic 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.

### **Design and Installation: Minimum 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.

- (2) Limiting the irrigation frequency to once every 7 days and once every 14 days
- (3) Water budgeting feature

(n) 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. Repairs to existing automatic irrigation systems that require replacement of an existing controller must include 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.

(o) Isolation valve. All new irrigation systems must include an isolation valve between the water meter and the backflow prevention device.

(p) 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.

(q) 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.

(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."

(3) 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 and the associated seasonal watering schedule must be provided to the irrigation system's owner or owner representative and to the "Building Official".

(5) In the event that the irrigation system owner or owner representative is a residential home builder and the new residential home with the associated irrigation system will be sold for the first time to a new homeowner, a copy of the irrigation plan indicating the actual installation of the system and corresponding maintenance checklist must be placed within or attached to the automatic controller. A copy of the irrigation plan and corresponding maintenance checklist must be transferred to the new owner or the new owner's representative in the event that the irrigation system or the responsibility of management of the irrigation system is sold or transferred. A signed statement from the new owner, or the new owner's representative, of the irrigation system and the residential home builder, or builder's representative, stating they have received and transferred, respectively, a copy of the irrigation plan and maintenance checklist must be provided to the "Building Official" within 30 days of the receipt of the irrigation system by the new owner.

### **Maintenance, Alteration, Repair, or Service of Irrigation Systems**

(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'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.

### **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 numbers, 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 web site 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 still be responsible for providing the irrigation system's owner or through contract, the irrigator shall still 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.

(d) The contract must include the dates that the warranty is valid.

### **Warranties for Systems**

(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

permits, including, but not limited to, staff time and other overhead costs. This schedule [*will be kept at the city offices/may be found in Appendix A/etc*].

**Enforcement**

(a) The city shall have the power to administer and enforce the provisions of this chapter as may be required by governing law. Any person, firm, corporation or agent who shall violate a provision of this code, or fails to comply therewith, or with any of the requirements thereof, is subject to suit for injunctive relief as well as prosecution for criminal violations. Any violation of the ordinance codified in this chapter is declared to be a nuisance.

(b) Any person violating any provision of chapter shall, upon conviction, be fined a sum not exceeding \$2000.00. Each day that a provision of this chapter is violated shall constitute a separate offense. An offense under this chapter is a Class C misdemeanor, punishable by a fine of up to \$2000.00.

(c) Nothing in this chapter shall be construed as a waiver of the city’s right to bring a civil action to enforce the provisions of this chapter and to seek remedies as allowed by law, including, but not limited to the following:

- (1) Injunctive relief to prevent specific conduct that violates the ordinance or to require specific conduct that is necessary for compliance with the ordinance; and
- (2) Other available relief.

**PART 2:** That if any provision or any section of this ordinance shall be held to be void or unconstitutional, such holding shall in no way affect the validity of the remaining provisions or sections of this ordinance, which shall remain in full force and effect.

**PART 3.** Because this ordinance has a penalty for violation, it shall become effective upon its [*publication in the newspaper as provided by Texas Local Government Code §52.011 (Type A) / publication in the newspaper or public posting as provided by Texas Local Government Code §52.012 (Type B) / publication as required by the city charter (home rule)*], which date is expected to be \_\_\_\_\_.

**PASSED AND APPROVED** this \_\_\_th day of \_\_\_\_\_, 2008.

## HB1656 SUBCOMMITTEE

### ORDINANCE RECOMMENDATIONS ABOVE THE MINIMUM REQUIREMENTS

1. Require property owners that install their own irrigation system to also comply with the adopted city ordinance.
2. Require the irrigation plan be submitted in conjunction with the permit application to the applicable city official/department.
3. Require all new irrigation systems to include an automatic controller.
4. Require all new irrigation systems to not utilize above-ground spray in landscapes that are less than 60 inches in either length or width and which contain impervious pedestrian or vehicular traffic surfaces along two or more perimeters. The use of subsurface or drip irrigation and pressure compensating tubing is permitted if the qualifying area is to be irrigated.
5. Require all non-turf landscape areas included in the irrigation plan to be designed with subsurface irrigation, drip irrigation, and/or pressure compensating tubing.
6. If the irrigation plan includes a foundation watering system, require a separate station be dedicated for drip irrigation for the purpose of watering a structure's foundation.
7. Require a flow control master valve to be installed on the discharge side of the backflow prevention device on all new installations.
8. Require check valves where elevation differences may result in low head drainage. Check valves may be located at the sprinkler head(s) or on the lateral line.
9. Require that pop-up heads shall be installed at grade level and operated to extend above all landscape turfgrass.
10. Require that all new irrigation systems must include an automatic controller capable of providing 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
  - (3) Water budgeting feature
11. Require an "operational" rain and freeze sensor.
12. Require additional information and description for the required "walk through."
13. Require the signed maintenance checklist be submitted to the applicable city official/department.
14. Require the irrigator's name, license number, company name, telephone number, and the dates of the warranty period to be on the maintenance checklist.
15. Require the irrigation plan indicating the actual installation of the system and the associated seasonal watering schedule be submitted to the applicable city official/department.
16. Require the irrigation plan and maintenance checklist be transferred from the new home builder to the first home buyer with documentation confirming the transaction provided to the applicable city official/department.