

ORDINANCE NUMBER 2018-1100.59

**AN ORDINANCE OF THE BROWNSVILLE CITY COMISSION
AMENDING THE CODE OF ORDINANCES, CHAPTER 344-
VEGETATION, BY ADDING THE NEW ARTICLE V.- LANDSCAPE
IRRIGATION ORDINANCE, SECTIONS 344-300 THROUGH 344-500;
AND DEALING WITH RELATED MATTERS**

WHEREAS, standards for irrigation systems are necessary for consumer protection, water conservation, and the protection of municipal and underground water supplies; and

WHEREAS, the Texas Legislature adopted House Bill 1656 during the 80th legislative session, ultimately amending Chapter 551 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; and

WHEREAS, such regulation will assure that irrigation systems are installed so that water is used efficiently in irrigating landscapes; and

WHEREAS, the City Commission of the City of Brownsville finds that 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 that provides an enhanced quality of life for its citizens;

NOW THEREFORE, BE IT ORDAINED by the City of Brownsville:

PART 1. That Chapter 344 -Vegetation is hereby amended by adding the new Article V.- "Landscape Irrigation", section 344-300 through 344-500, to read as follows:

ARTICLE V.- LANDSCAPE IRRIGATION

Sec. 344-300. – Purpose.

(a) It has been found:

- (1) That the waters of the City of Brownsville ("the City") are a valuable resource of limited supply and are subject to ever increasing demands.
- (2) That it is in the best interests of the City to promote the conservation and efficient use of water and to prevent the waste of this valuable resource.
- (3) That landscapes are essential to the quality of life by providing areas for active and passive recreation, an enhancement to the environment by cooling and mitigating heat-island effect, cleaning air and water, preventing or mitigating erosion, offering areas of respite and protection, assisting with flood control, and providing habitat for wildlife; and

- (4) That the right to use water is limited to the amount reasonably required for the beneficial use of maintaining a healthy landscape.

(b) Consistent with these findings, the purpose of this landscape irrigation ordinance is to:

- (1) Complement the values and benefits of landscaping practices that integrate the conservation and efficient use of water to maximize the benefits of managed landscapes;
- (2) Establish a structure for planning, designing, installing, maintaining and managing a water efficient irrigation system in new construction or renovated projects;
- (3) Establish provisions for water management practices and water waste prevention for existing irrigation systems;
- (4) Work in conjunction with established landscape provisions and requirements locally and statewide that are in character with the values of the community;

Sec. 344-301. – Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

1. *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.

2. *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 backsiphonage. 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 Backsiphonage Prevention Assembly.

3. *Backflow prevention* – The mechanical prevention of reverse flow, or the backsiphonage, of non-potable water from an irrigation system into the potable water source.

4. *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.

5. *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.

6. *Consulting* – The act of providing advice, guidance, review or recommendations related to landscape irrigations systems.

7. *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.

8. *Design* – The act of determining the various elements of a landscape irrigation system that will include but not limited to elements such as collection 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.

9. *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.

10. *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.

11. *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.

12. *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.

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

14. *Health hazard* – A cross connection or potential cross-connection with an irrigation system that involved 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.

15. *Hose Bib* – An outdoor water faucet with a nozzle that is bent downward and has hose threads on the spout.

16. *Hydraulics* – The science of dynamic and static water, the mathematical computation of determining pressure losses and pressure requirements of an irrigation system.

17. *Hydrozone* – means a portion of the landscaped area having plants with similar water needs and rooting depth, soil type, and exposure. A hydrozone may be irrigated or non-irrigated.

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

19. *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).

20. *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 required to be licensed under Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations).

21. *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.

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

23. *Irrigation system* – 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.

24. *Irrigation technician* – 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).

25. *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.

26. *Irrigator* – A person who sells, designs, consults, 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.

27. *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, selling, maintaining, altering, repairing, or servicing a landscape irrigation system.

28. *Landscape irrigation* – The science of applying the necessary amount of water to promote or sustain healthy growth of plant material or turf.

29. *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, or under any other applicable law.

30. *Mainline* – A pipe within an irrigation system that delivers water from the water source to the individual zone valves.

31. *Maintenance checklist* – A document made available to the irrigation systems 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.

32. *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, replacement of the system controller, and/or repairing a zone control valve in a manner that opens the system to the atmosphere.

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

34. *Matched precipitation rate* – The condition in which all sprinkler heads within an irrigation zone apply water at the same rate.

35. *Multifamily residential* – Any site occupied by three or more families living independently of each other.

36. *New installation* – An irrigation system installed at a location where one did not previously exist.

37. *Non-health hazard* – A cross connection or potential cross connection from a landscape irrigation system that involved 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.

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

39. *Pass-through contract* – A written contract between a contractor or builder and a licensed irrigator or exempt business owner to perform part of all of the irrigation services in relation to an irrigation system.

40. *Potable water* – Water that is suitable for human consumption.

41. *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.

42. *Reclaimed water* – Domestic or municipal wastewater which has been treated to a quality suitable for beneficial uses, such as landscape irrigation.

43. *Records of landscape irrigation activities* – The irrigation plans, contract, warranty information, invoices, copies of permits, and other documents that relate to the installation, maintenance, alteration, repair, or service of a landscape irrigation system.

44. *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 valve located between the two check valves and below the first check valve.

45. *Residential* – property that is zoned to a dwelling/retail G classification or zoned to a more restrictive classification.

46. *Static water pressure* – The pressure of water when it is not moving.

47. *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.

48. *Water conservation*- 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.

49. *Zone flow* – 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 flow zone is the total flow of all nozzles in the zone at a specific pressure.

50. *Zone valve* – An automatic valve that controls a single zone of a landscape irrigation system.

Sec. 344-302. - Valid License Required.

(a) Any person who designs, provides consultation services, installs, maintains, alters, repairs, services, or connects an irrigation system to the City's water supply within the city must hold a valid license, as defined by Chapter 30, Title 30 of the Texas Administrative Code as amended pursuant to 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, as amended.

(b) Exceptions

(1) A Property owner is not required to be licensed in accordance with the Texas Occupations Code, Title 12, §1903.002(c)(1) if the owner is performing irrigation work in a building or on a premises owned or occupied by the person as the person's homestead. The Planning and Development Services Department shall rely on the official county records in determining property ownership, if necessary.

Sec. 344-303. – Permitting.

(a) Any person installing, altering, repairing, removing, or performing work on an irrigation system that connects to the City's water supply as outlined within this article is required to obtain the necessary permits from the Planning and Development Services Department.

(b) Requirements

(1) Any and all new irrigation installations shall be required to provide the following in order to obtain a permit:

- a. Submit a signed application as provided by the Planning and Development Services Department for:
 1. Irrigation system and
 2. Vacuum breaker backflow;
- b. An irrigation design plan that meets the minimum requirements as referenced in Sec. 344-307;
- c. A design and installation plan that meets the minimum requirements as referenced in Sec. 344-308;

- d. Name, address, and contact information for proposed system installer;
- e. Name, address, and contact information of property owner;
- f. Payment of the appropriate permit fee as indicated in Sec. 344-314;
- g. Submit sealed as-built plans prior to final inspection; and
- h. Submit a set of proposed plans, as-built plans, permit copy, and completed checklist (if required) to water service provider.

Sec. 344-304. - Backflow Prevention Methods and Devices.

- (a) Any irrigation system that is connected to the potable water supply must be connected through a backflow prevention method approved by the Texas Commission on Environmental Quality (TCEQ). The backflow prevention must be approved by the American Society of Sanitary Engineers; or the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California; or the Uniform Plumbing Code, or the 2015 International Plumbing Code, or the most current International Plumbing Code, or any other laboratory that has equivalent capabilities for both the 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.
- (b) In accordance with regulations based on the Texas Plumbing License Law (8 TAC 1301). Installation of irrigation systems can only be done by the following:
 - (1) A licensed plumber working under a master plumber's license and the assembly is not on a fire-suppression system.
 - (2) A licensed irrigator, and the assembly is on an irrigation system.
 - (3) A water operator, and the assembly is on the water-distribution system and not on an irrigation system.
 - (4) A licensed plumber working for a fire line-contracting company insured and regulated by Texas State Board of Insurance, and the assembly is on a fire line.
 - (5) A licensed water-treatment specialist and the assembly is on equipment for water treatment.
 - (6) A homeowner, the assembly is on your homestead, and you have obtained a permit that meets the exceptions as referenced in Sec.344-302(b).
- (c) 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 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 the 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.
- (d) Backflow prevention devices used in applications designated as both health hazards and non-health hazards must be tested upon installation and annually thereafter for commercial and industrial use properties. For non-health hazard residential use, a timed testing frequency of every three (3) years is required. It is the property owner's responsibility to hire a licensed inspector and to adhere to the regulations within this Article.
- (e) 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 was tested upon installation and:
 - (1) Backpressure caused by an elevation of pressure in the discharge piping by pump or elevation of piping above the supply pressure which could cause a reversal of the normal flow of water or backsiphonage conditions caused by a reduced or negative pressure in the irrigation system exist; and
 - (2) Test cocks are used for testing only.

- (f) 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 (pea gravel to a depth of one inch) and the bottom of the double valve to allow for space for testing and repair; and
 - (5) There must be space on the side of the double check valve to test and repair or replace the double check valve.
- (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 assembly.
- (h) The licensed installer shall ensure the backflow prevention device is tested 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.

Sec. 344-305. - 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 principal 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 through a reduced-pressure principle backflow 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 designed system is designed or installed on a property that is served by an on-site sewage facility, as defined in Chapter 285 of Title 30, Texas Administrative Code, 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 Texas Administrative Code, Title 30, 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 Texas Administrative Code, Title 30, Section 344.50; and
- (e) 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.

Sec. 344-306. - Water Conservation.

- (a) All irrigation systems shall be designed, installed, maintained, altered, repaired, serviced, and operated in a manner that will promote water conservation as defined in Sec. 344-301. – Definitions. The following practices must be implemented to achieve and promote water conservation:
 - (1) Each remote control valve shall irrigate a hydrozone with similar microclimate, soil conditions, slope, and plant materials with similar water demands.
 - (2) Drip irrigation is encouraged instead of pop up sprinkler heads in areas surrounding, bordering, or with impervious surfaces to minimize excess water runoff.

Sec. 344-307. - Irrigation Plan Design: Minimum Standards.

- (a) An irrigator shall prepare an irrigation design plan for each site where a new irrigation system will be installed. A paper copy of the irrigation plan must be on the job site at all times during the installation of the irrigation system. A drawing showing the actual installation of the system is due to each irrigation system owner after all the 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 licensed irrigators 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. Automatic controller; and
 - b. Sensor, including, but not limited to, rain, moisture, wind, flow, or freeze.
- (7) Location, type and size of each:
 - a. Water source, including, 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.
- (10) Any further information required by the Planning and Development Services Department.

Sec. 344-308. - Design and Installation: Minimum Requirements.

- (a) No irrigation design plan or installation shall require the use of any component, including the water meter, in a way which exceeds the manufacture'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 48 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. 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.
- (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, streets, etc.
- (h) *Master valve.* When provided, a master valve shall be installed on the discharge side of the backflow prevention device on all new installations.
- (i) *Check Valves.* Check valves are required where elevation differences result in low head drainage. Check valves may be located at the sprinkler head(s) or on the lateral line.
- (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 Uniform Plumbing Code (Section 316) or the International Plumbing Code (Section 605).
- (k) *Automatic controllers.* All new irrigation systems must include an automatic controller capable of the following features:
- (1) Multiple programs; and
 - (2) Limiting the irrigation frequency to once every 7 days.

- (l) Operational rain 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 rain or freezing weather. Rain and freeze 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 rain and freeze.
- (m) Isolation valve with lock-out capability. 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 top soil. 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 back fill 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, including, but not limited to, filling swimming pools or decorative fountains, shall be connected to an irrigation system. If a hose bib 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) A licensed irrigator, a licensed plumber, 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.

Sec. 344-309. - Completion of Irrigation System Installation.

- (a) Upon completion of the irrigation system installation, a final inspection for both the backflow assembly and the irrigation system must be completed by a licensed plumbing or irrigation inspector.
- (b) Upon completion of the irrigation system, the irrigator or irrigation technician who provided supervision for the on-site installation shall be required to complete:
- (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 to 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 and provided to the irrigation inspector at the time of inspection. The items on the maintenance check list 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 rain fall estimates, plant landscape coefficient factors, and site factors;
- d. A list of components, including, but not limited to 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 must be provided to the irrigation systems owner or owner representative and the irrigation inspector.

Sec. 344-310. - Maintenance, Alteration, or Removal of Irrigation Systems.

- (a) The 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 original 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 fitting 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).
- (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.
- (e) Removal of full residential irrigation system is allowed and must follow the same process as installation in regards to permitting, proper licensing, and project completion.
- (f) Commercial and Industrial irrigation systems must be kept up to code even when not in use.

Sec. 344-311. - Duties and Responsibilities of Irrigation Inspectors.

- (a) The licensed inspector shall enforce the ordinance of the City, and 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 testing results provided to the city;
 - (5) Investigating complaints related to irrigation system installation, maintenance, alteration, repairs, or service of an irrigation system and advertisement or irrigation services; and
 - (6) Maintaining records according to this chapter.
- (b) Registration
 - (1) All approved and licensed irrigation inspectors and licensed plumbing inspectors must register with the city.

Sec. 344-312. – Advertisement.

- (a) All vehicles used in the performance of irrigation installation, maintenance, alteration, repair, or service must display the irrigator's license number in tile form of "LI _____" in a large visible manner on both sides of the vehicle.
- (b) All forms of written and electronic advertisement, including business cards, and estimates which displays 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 Texas Commission on Environmental Quality local regional office must be prominently displayed on a legible sign and displayed in plain view for the purpose of the addressing complaints at the permanent structure where irrigation business is primarily conducted and irrigation records kept.
- (d) Prominent signage with irrigator's license number, name, company name, and irrigation construction permit number must be displayed at any and all landscape irrigation construction sites until project completion.

Sec. 344-313. – 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 this chapter shall, upon conviction, be fined a sum not exceeding \$2,000.00. Each day that a provision of this chapter is violated shall constitute a separate offense. An offense under this chapter is considered a Class C misdemeanor, punishable by a fine of up to \$2,000.00.
- (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 violated the ordinance or to require specific conduct that is necessary for compliance with the ordinance; and
 - (2) Other available relief

Sec. 344-314. - Fees

- (a) Planning and Development Services Department staff shall create a schedule of fees for reviewing plans, on-site inspections, and obtaining a permit. A schedule of fees shall be approved by the City Commission and implemented by this ordinance.

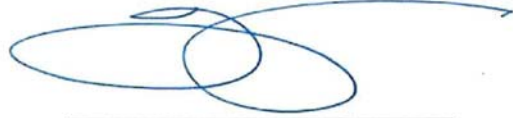
Sec. 344-315. - Items not covered by this ordinance.

- (a) Any item not covered by this ordinance and required by law 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 or TCEQ rule.
- (b) The City may, at any point, adopt more stringent requirements for a home or property owner who installs an irrigation system.

Secs. 344-3. - 344-500. - RESERVED

PART 2. Because this ordinance has a penalty for violation, it shall become effective upon its publication as required by the city charter, which date is expected to be September 18, 2018.

INTRODUCED at a public hearing on September 4, 2018. Passed at First Reading on September 4, 2018. Passed at Second and Final Reading, and ADOPTED, APPROVED, and ENACTED on September 18, 2018.



Antonio Martinez, Mayor

Attest:



Griselda Rosas, City Secretary



Approved as to form and legality:



CONTRACT REVIEW CHECKLIST

TASK ORDER #: PZ-20-0818

CONTRACT/AGREEMENT INFORMATION

SUBMITTING DEPARTMENT: Planning & Services Division

STAFF NAME: Connie Miner

TYPE: ☐ Interlocal ☐ Construction ☐ MOU ☐ Services ☐ Event ☐ Real Estate ☒ Other

DESCRIPTION: Legal review on Landscape Irrigation Ordinance No. 1100.59

RECEIVED BY: Esmi Veraza

DATE/TIME: 08/21/2018

LEGAL REVIEW

RECEIVED BY: Allison Bastian

DATE/TIME: 8/29/2018 9:21 a.m. (2nd review)

ASSIGNED ATTORNEY: Allison Bastian

REVIEW DATE: 8/29/2018

☒ APPROVED ☐ NOT APPROVED

RATIONALE: Approved with two minor additional changes to section 344.314 (no need to spell out what the fee is for. It must be no more than necessary to administrate the program, which is state law), and strike 344.316 as we have this becoming effective upon approval and publication, on the same day. (September 18).

ACTION TAKEN BY SUBMITTING DEPARTMENT

CITY POINT OF CONTACT (P.O.C.)

RECEIVED BY: _____ DATE/TIME: _____

VERIFIED BY: _____ DATE/TIME: _____

☐ COMPLETE _____
(initials)

☐ SCANNED _____
(initials)