



## Landscape Irrigation Guidelines

These guidelines are for information purposes only.  
The contractor is obligated to comply with all adopted codes and ordinances.

### **BUILDING INSPECTIONS**

**1400 Main St., Ste. 250 – Southlake, Texas 76092**

**(817) 748-8237 or -8236**

**RESIDENTIAL:** Submit online for application, payment, and permit issuance; after completion, upload as-built plans and Owner checklist online to the city and request that inspection, submit the backflow test online to VEPO and then request online the Final Inspection.

**COMMERCIAL:** Submit online for application, upload site plan and plans. Submittal will be reviewed to meet codes and ordinances. When approved, pay online. Install the system and then upload to the permit the owner checklist and as-built plans. Submit the backflow test to VEPO and then request online the Final Inspection.

### **Background:**

The Texas Legislature adopted House Bill 1656 requiring the Texas Commission on Environmental Quality (TCEQ) to adopt rules for Landscape irrigators for the purpose of conserving water. The TCEQ subsequently revised chapter 344 of the TEXAS ADMINISTRATIVE CODE and now requires all new landscape irrigation systems and certain altered systems to comply with the new rules. The complete Chapter 344 is available at:

[http://www.tceq.state.tx.us/assets/public/compliance/compliance\\_support/regulatory/irrigation/forms li/rulesforregguid\\_063008.pdf](http://www.tceq.state.tx.us/assets/public/compliance/compliance_support/regulatory/irrigation/forms/li/rulesforregguid_063008.pdf)

Cities over 20,000 population, including Southlake, are required to enforce the minimum standards and specifications for designing, installing and operating irrigation systems in accordance with section 1903.53, Occupations Code, and any rules adopted by the TCEQ under that section.

## **IRRIGATION PERMITS AND INSPECTIONS**

1. A permit is required before installation of a new irrigation system. Ordinary repairs such as replacing a head or minor section of piping shall be done according to the code, but a permit is not required. The submittal of plans and plan review is not required for obtaining a residential irrigation permit but **is required for commercial irrigation**. A permit can be obtained online through cityofsouthlake.com.
2. As-built plans with the licensed professional's seal affixed shall be uploaded upon completion of

the work in accordance with Section 344.61 of the TCEQ Rules. The plan must be submitted in pdf. The city will review plans prior to final inspection. Ordinance 895-A requires rain and freeze sensors.

3. Properties with an alternative water source (well water) have the potential for a cross connection of the municipal water supply. Any alternative water supply not regulated by the TCEQ is considered a high health hazard. The water department is obligated to protect the municipal water system and the customer from any health hazards due to cross connections. Thus, the water department shall require any water customer with an alternative water source to create two physical separations from the alternative water sources, where appropriate. The two acceptable physical separations are either a reduced pressure principal assembly (RPZ) or an air gap. When adding a RPZ, a closed loop plumbing system is created. At that time, an expansion tank will be required to be added to all water heaters on site. This is not required for tankless water heaters. A separate permit will be required for adding a RPZ and for any expansion tanks.
4. Prior to final inspection of the system, the following must be submitted and an inspection requested for each item:
  - (a.) Backflow test report submitted online with VEPO [www.vepollc.com](http://www.vepollc.com)
  - (b.) The final “walk through” check list signed by irrigator and the owner uploaded to the permit.
  - (c.) As-built plans shall be uploaded for review. Allow 72 hours after submittal to allow ample time for review.
5. Final inspection (Residential Systems) Upon receipt and approval of the above items, the permit holder is eligible to request an irrigation final via the online permit software. The inspector will check the installation of the backflow protection, wye-strainer, isolation valve, rain/freeze sensor, and visual inspection of head placement. The licensed irrigator or other representative does not need to be present for the final inspection.
6. Final Inspection (Commercial Systems), In addition to the Residential requirements, Commercial systems will be inspected by the Landscape Administrator or the Landscape/ Zoning Official for compliance with the Landscape and Zoning requirements.
7. The permit holder is responsible to obtain final inspections and approvals. Failure to maintain records can result in city permit suspension and/or a formal complaint to be filed with TCEQ.
8. Replacement of a backflow device and/or an isolation valve on an existing irrigation system requires a *Plumbing Permit*.

# **Irrigation Submittal Requirements For Commercial systems**

## **Irrigation Plan Requirements per Texas standards for designing, installing, and maintaining landscape irrigation systems, Section 344.61 Texas Administrative Code:**

1. 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.
2. All irrigation plans used for construction must be drawn to scale. The plan must include, at a minimum, the following information:
  - (1) The irrigator's seal, signature, and date of signing;
  - (2) All major physical features and the boundaries of the areas to be watered;
  - (3) A North arrow;
  - (4) A legend;
  - (5) The zone flow measurement for each zone;
  - (6) Location and type of each:
    - (A.) Controller;
    - (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.



## Homeowner Checklist

### Irrigation System

- Winterization
- Return to normal service

### Sprinkler Heads

- Heads missing
- Heads broken
- Heads clogged
- Heads spray pattern appropriate
- Heads leaking
- Heads spraying in a fine mist
- Uniform coverage of the irrigated area
- Spray pattern blocked or misdirected
- System spraying onto sidewalks, decks, buildings, driveways or the street

### Controller

- Cabinet is clean and dry
- System wiring is secured at terminations.
- Wiring jacket is not cut or worn
- Battery replacement as needed
- Day and time displayed is correct
- Wiring for rain/freeze sensor (or other technology) is properly connected
- Controller programmed for the appropriate season
- Controller programmed for any water conservation measures that may be in affect from your water purveyor

### Valves

- Inspect valve covers and valve boxes
- Inspect valve electrical connections

### Back Flow Prevention Device

- Tested, as needed or required

### Drip/Micro Irrigation

- Emitters connected to flex line
- Flex line connected to riser
- Micro adjustment nozzle connected to flex line and nozzle intact
- Service filter strainer periodically
- Ensure proper operation of automatic flush valve
- Confirm operational pressures



# IRRIGATION SYSTEM CHECKLIST

Installation Completion Date: \_\_\_\_\_

Address: \_\_\_\_\_

The following items have been provided and explained to the irrigation system owner or system owner's representative.

- Manufacturer's manual for the controller
- Seasonal watering schedule
- List of components that require maintenance and the recommended frequency of maintenance is attached
- Permanent sticker has been attached to the controller indicating the warranty period for the irrigation system and contact information
- As-built plans indicating the actual installation and components of the system
- Location and operation of the isolation valve

\_\_\_\_\_  
Irrigation system owner/representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

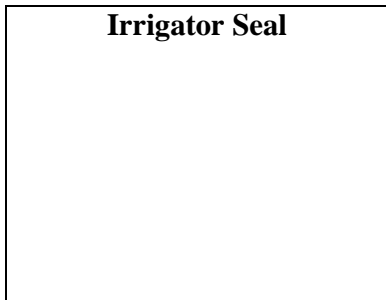
This irrigation system has been installed in accordance with all applicable state and local laws, ordinances, rules, regulations or orders. I have tested the system and determined that it has been installed according to the Irrigation Plan and is properly adjusted for the most efficient application of water at this time.

\_\_\_\_\_  
Irrigator

\_\_\_\_\_  
Date

\_\_\_\_\_  
Irrigation Technician

\_\_\_\_\_  
Date



*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).*