City of Irving

2024 Water Management Plan

Drought Contingency Plan and Water Conservation Plan

Original Ordinance No. 7524
Adopted August 26, 1999

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2024 WATER MANAGEMENT PLAN OVERVIEW

In 1997, the Texas Legislature passed Senate Bill 1 to require most public water suppliers to prepare a Drought Contingency Plan and a Water Conservation Plan. The Texas Natural Resource Conservation Commission (TNRCC), now the Texas Commission on Environmental Quality (TCEQ), developed specific rules regarding development and submission of those plans (Title 30, Texas Administrative Code, Chapter 288). TCEQ has amended the rule requirements multiple times since their origin as information and technology expanded capabilities for addressing water shortages and the need for greater conservation efforts have grown. Irving’s first Water Conservation and Drought Contingency Plans were authorized by ordinance August 26, 1999 in order to meet the original September 1 deadline. Updates have been completed since that time which combine the two distinct components that are required by TCEQ into a comprehensive Water Management Plan. This 2019 City of Irving Water Management Plan meets the updated statutory requirements established by the Texas State Legislature. The portion of the Texas Administrative Code containing the TCEQ guidelines and requirements for both conservation and drought plans can be found in Appendix G.

Since 1999, the water management plan has been monitored in order to meet both State of Texas requirements and local needs. Each of the following updates accomplished specific purposes:

- April 2005 – to meet new statutory requirements
- June 2006 – to restrict irrigation watering from 10 a.m. to 6 p.m. as part of the city’s drought stages
- March 2007 – to add Stage 3 Plus
- December 2008 – to implement irrigation restrictions
- April 2009 – to meet statutory requirements
- June 2011 – to restrict irrigation from 10 a.m. to 6 p.m. from April 1 through October 31 as a water conservation methodology and continuously during every drought stage beyond Drought Stage 1 (Plan had 5 stages; Stage 1 was voluntary)
- December 2011 – to consolidate Stages 3 and 3 Plus, include additional restrictions, insert easy-to-read stage charts, and reformat the drought stage restrictions
- August 2014 – to meet State regulatory requirements, eliminate the voluntary drought stage, collapse the drought plan to 3 stages, add year-round twice weekly irrigation to the conservation plan for regional consistency, and complete a 5-year required update of data contained in the
drought contingency and water conservation plans (required submission deferred by TCEQ and TWDB from May 2014)

- April 2019 – to meet State regulatory requirements and reflect new water conservation strategies
- April 2024 – to meet State regulatory requirements and update water conservation strategies
DROUGHT CONTINGENCY PLAN

1.0 INTRODUCTION

This Drought Contingency Plan is consistent with the TCEQ guidelines and requirements for the development of Drought Contingency Plans by public drinking water suppliers contained in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.20 of the Texas Administrative Code. The provisions of Chapter 288 can be found in Appendix G and require the City of Irving to develop, submit, and implement a combination of strategies for supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies. The objectives of the drought contingency plan are:

- To conserve the available water supply in times of drought and emergency
- To maintain supplies for domestic water use, sanitation, and fire protection
- To protect and preserve public health, welfare, and safety
- To minimize the adverse impacts of water supply shortages

This document describes the City of Irving Drought Contingency Plan and includes updates to the previous plan as required by the Texas Commission on Environmental Quality (TCEQ).
2.0 DECLARATION OF POLICY, PURPOSE, AND INTENT

The drought contingency portion of the Water Management Plan has several important purposes. Water is critical to sanitation, fire protection, and the defense and preservation of public health as well as meeting basic life needs through domestic water use. The City of Irving hereby adopts the regulations and restrictions on the delivery and consumption of water that are contained in this document. The regulations and restrictions in this report are designed to ensure the available water supply and protect the integrity of the Irving water system, with particular regard for preserving public health, welfare, and safety. Additionally, the response actions contained herein are intended to minimize the adverse impacts of water supply shortages or other water supply emergency conditions.

It is vital that the City of Irving initiate this Drought Contingency Plan (the Plan) to manage available water resources and ensure that sufficient water is available to maintain water pressure and firefighting supply, as well as drinking and sanitation requirements. Furthermore, this Plan also establishes provisions for enforcement.

Water uses regulated or prohibited under this Plan are considered non-essential. The continuation of such uses during times of water shortage or other emergency water supply conditions is deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in Chapter 9.0.
3.0 PUBLIC INVOLVEMENT

The City of Irving provided several opportunities for public input into the preparation of the original Plan and subsequent revisions. The Drought Contingency Plan stages and requirements for the stages are streamlined and simplified in comparison to the Plan that was implemented in 1999.

The City provided opportunity for public input in the development of this and past Drought Contingency Plans by the following means:

• Presentation at City Council meetings in previous years
• Review of updates during multiple 2024 City Council meetings including:
  o A March 21, 2024 meeting of the City Council’s Transportation and Natural Resources Committee (TNR)
  o City Council Work Session on April 11, 2024
  o A regular meeting of the City Council on April 11, 2024
• Public meetings of the Green Advisory Board and Neighborhood Round Table in prior years.
• Continuous plan availability on the City’s web site, www.cityofirving.org
• Providing a plan and/or a presentation of plan features to any individual or group making a request for either
4.0 PUBLIC EDUCATION

The Irving Water Utilities Department will periodically provide the public with information about the Drought Contingency Plan, including information about the trigger conditions under which each set of drought stage responses is initiated or terminated and the specific water use restrictions to be implemented under each stage.

• Public education and information will be provided by various methods, including:
  o Publication in newspapers of general circulation in the city
  o Press releases to local and area news media
  o The City Spectrum newsletter
  o Educational seminars at local schools, professional and philanthropic associations, and homeowners’ groups
  o Announcements and discussions on the City’s cable access channel
  o Messages distributed through social media including Twitter, Facebook, Instagram, and Neighborhood Nextdoor
  o Utility bill messages, inserts and envelope advertising

• Updated information about the drought contingency plan is posted and maintained on the City’s web site, www.cityofirving.org.

• Water Utilities staff members maintain contact with local organizations, schools, and civic groups with the express purpose of providing information and support regarding water-related programs, including information on the Plan. Irving Water Utilities staff members are available to make presentations on the Drought Contingency Plan (usually in conjunction with presentations on water conservation programs).

Any time the Drought Contingency Plan is activated, or the drought stage changes, Irving will notify local media of the issues, the drought response stage, and the specific actions required of the public. The information will also be publicized on the Irving web-site, www.cityofirving.org. In addition, messages and inserts with the utility bill will be used as appropriate.

The Irving Water Utilities staff will ensure that the City Council is provided with status reports on conditions requiring drought response activation and water emergencies as well as the respective results of such situations.
5.0 COORDINATION WITH DALLAS WATER UTILITIES

In June 2003, Irving implemented the delivery of its water from Lake Jim Chapman to Dallas for treatment and delivery to Irving residents. However, Irving continued to purchase a reduced water supply that is provided under a wholesale treated water contract with the City of Dallas. Dallas Water Utilities (DWU) has implemented its own Drought Contingency Plan that includes water use restrictions that are applicable to its retail and wholesale customers.

The drought stages and triggering conditions in the City of Irving Drought Contingency Plan are similar to provisions established by DWU. The primary responsibility of DWU is to ensure sufficient supplies for its own retail customers. DWU has assured the City of Irving that it can meet its contractual wholesale obligations for delivery of water to Irving. However, DWU requires its wholesale customers to impose water use restrictions equal to or greater than those imposed in Dallas, or it may reduce its maximum contracted wholesale flow rate to the wholesale customer by five percent. In addition, the DWU drought regulations require wholesale customer cities to implement procedures similar to those established for DWU systems. Now that the stages established in Dallas and Irving are aligned, coordination is simplified. For example, if a Stage 2 restriction is implemented, the customer cities of DWU are expected to reduce their flow rate, as established by the wholesale contract, equivalent to that imposed on Dallas retail customers. Implementation of Stage 2 restrictions in Irving requires residents to limit irrigation to once per week. Likewise, Stage 2 in Dallas allows for only once-per-week watering.

To simplify the ability of the City of Irving to enact such restrictions, Irving has worked with the City of Dallas and other large regional water entities to establish drought restrictions that are consistent across the Dallas, Fort Worth region. Such consistency across water agencies will also greatly assist water customers in understanding restrictions because drought plans are now both simplified and similar, resulting in less confusion about the requirements of each stage. In the past, cities have varied in the naming and numbering of drought stages, as well as in the restrictions imposed at each successive level.

Irving Water Utilities staff met with Dallas Water Utilities staff on February 16, 2024, for a wholesale customer meeting which provided an overview of the City of Dallas Draft 2024 Drought Contingency Plan. Such meetings help ensure consistency and understanding of requirements given that Dallas is a wholesale provider of water to the City of Irving.
6.0 AUTHORIZATION

The Irving City Code, Article IV, Section 41-14 establishes the City’s policy in the event of shortages or delivery limitations in the City’s water system (See Appendix C to reference this code section.) Under the City Code, the Irving City Manager is authorized to implement measures prescribed in this Drought Contingency Plan. The Director, or his/her designee, is authorized to enforce the measures implemented and to promulgate regulations authorized by the Plan. The Director, upon determination that critical conditions exist, advises the City Manager who orders the implementation of the appropriate stage of this Drought Contingency Plan to protect public health, safety, and welfare.
7.0 APPLICATION

The provisions of this Plan shall apply to all persons, customers, and property utilizing water provided by the City of Irving Water Utilities. The terms “person” and “customer” as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

The water use restrictions imposed under this Plan do not apply to the use of water sources other than those provided by Irving Water Utilities. Customers using alternate water sources are required to provide proper signage indicating the source is not City of Irving Water.
8.0 DROUGHT RESPONSE STAGE CRITERIA AND WATER USE RESTRICTIONS

The Director, or his/her designee, shall monitor the water system and/or demand conditions and shall determine when those conditions warrant the initiation or termination of each stage of this Plan. Public notification of the initiation or termination of drought response stages shall be by means that may include, but are not limited to:

- Publication in newspapers of general circulation, Irving’s cable television access channel, direct mail to each customer, signs posted in public places, press releases to local and area news media, messages distributed through social media including Twitter and Facebook, and utility bill inserts.

- Notification of the Executive Director of the TCEQ within five business days regarding activation or termination of mandatory provisions of the Drought Contingency Plan.

The Irving City Code requires that for the initiation of this Plan to be effective, the order must be (1) made by public announcement; and (2) published in a newspaper of general circulation in the city as soon as practical after the public announcement. The order then becomes immediately effective upon publication.

The triggering criteria described herein for each response stage are based on historical analysis and recognized vulnerability of the water supply source and water distribution system during high water use demands and drought conditions.
8.1 DROUGHT STAGE TRIGGER CONDITIONS

The Director or his/her designee shall monitor water supply and/or demand conditions, at a minimum, on a weekly basis and shall determine when conditions warrant initiation or termination of each stage of the Drought Contingency Plan. The presence of conditions that warrant implementing a higher-level stage of the Drought Contingency Plan is considered to be a “trigger.” The Director reserves the authority to recommend that a Stage not be initiated based on the time of year, weather conditions, total water supply availability, anticipation of replenished water supplies, or anticipation that facilities will soon come online to increase water supply, treatment, or distribution capacity.

Upon recommendation of the Director, the City Manager may upgrade or downgrade a stage when the triggering conditions occur. Customer notification of the initiation or termination of drought response stages will be made by the Director or his/her designee by:

- Press releases.
- Public service announcements.
- Messages distributed through social media.
- Publication in a newspaper of general circulation to the city within 24 hours after the public announcement.

The Director or his/her designee shall notify directly, or cause to be notified directly by fax, mail, email or telephone, the following individuals and entities as appropriate to the respective drought stages:

- Mayor and members of the City Council
- City Emergency Management Coordinator
- Executive Director of the TCEQ (required within five (5) business days of the implementation of any mandatory restrictions)
- City of Irving department directors

The triggering criteria described below are based on the ability of the city to deliver treated water to its customers. To establish trigger conditions, city staff examined models showing diminished water supplies during a drought equal to the drought of record and assessed water demand and system delivery capacity. To determine when trigger conditions exist, water utility staff continually monitor water supply capability. Triggers are based on how much water supply or delivery capacity remains available relative to water demand for all or part of the system.
8.1.1 STAGE 1 TRIGGERS

- Stage 1 may be implemented when one or more of the following trigger conditions occur:
  - Condition 1: Pursuant to the requirements specified in the wholesale treated water purchase contract, notification is received from DWU requesting initiation of the Stage 1 restrictions.
  - Condition 2: Water demand exceeds eighty-five percent (85%) of the combined current maximum wholesale flow rate contracted with DWU and from Irving Lake Chapman water supply for four (4) consecutive days.
  - Condition 3: Irving’s combined water storage account in Jim Chapman Lake and Lewisville Lake is less than 65 percent (65%) of Irving’s total storage account capacity in Jim Chapman Lake.
  - Condition 4: Short-term deficiencies in the city’s distribution system limit supply capabilities.
  - Condition 5: Supply source becomes contaminated.
  - Condition 6: As determined by the Director due to drought or reduced water supply.

- Requirements for Termination: Stage 1 of the Plan may be rescinded when all the trigger conditions listed have ceased to exist as determined by the Director. Upon termination of Stage 1, no drought restrictions are in effect.

8.1.2 STAGE 2 TRIGGERS

- Stage 2 may be implemented when one or more of the following trigger conditions occur:
  - Condition 1: Pursuant to the requirements specified in the wholesale treated water purchase contract, notification is received from DWU requesting initiation of the Stage 2 restrictions.
  - Condition 2: Water use exceeds 100 percent (100%) of the combined current maximum wholesale flow rate contracted from DWU and Irving Lake Chapman water supply for five (5) consecutive days.
  - Condition 3: Irving’s combined water storage account in Jim Chapman Lake and Lewisville Lake is less than 45 percent (45%) of Irving’s total storage account capacity in Jim Chapman Lake.
  - Condition 4: Short-term deficiencies in the city’s distribution system limit supply capabilities, such as system outage due to the failure or damage of major water system components.
• Condition 5: Inability to maintain or replenish adequate volumes of water in storage to provide for public health and safety.

• Condition 6: Supply source becomes contaminated.

• Condition 7: As determined by Director due to drought or reduced water supply.

- Requirements for Termination: Stage 2 of the Plan may be rescinded when all the trigger conditions listed have ceased to exist as determined by the Director. Upon termination of Stage 2, Stage 1 drought restrictions will remain in effect.

8.1.3 STAGE 3 TRIGGERS

- Stage 3 may be implemented when one or more of the following conditions occur:
  
  o Condition 1: Pursuant to requirements specified in the wholesale water purchase contract, notification is received from DWU requesting initiation of Stage 3 of the Plan.

  o Condition 2: Irving’s combined water storage account in Jim Chapman Lake and Lewisville Lake is less than 20 percent (20%) of Irving’s total storage account capacity in Jim Chapman Lake.

  o Condition 3: Short-term deficiencies in the city’s distribution system limit supply capabilities, such as system outage due to the failure or damage of major water system components.

  o Condition 4: Inability to maintain or replenish adequate volumes of water in storage to provide for public health and safety.

  o Condition 5: Supply source becomes contaminated.

  o Condition 6: As determined by the Director due to drought or reduced water supply.

- Requirements for Termination: Stage 3 may be rescinded when the trigger conditions listed have ceased to exist as determined by the Director. Upon termination of Stage 3, a less restrictive stage will be designated.
8.2 DROUGHT STAGE REQUIREMENTS

8.2.1 Stage 1 Drought Response

Goal. Reduce the average daily water demand by three percent (3%) from the use that would have occurred in the absence of drought measures.

Water Use Restrictions. Under threat of penalty for violation, water use restrictions shall apply during a Stage 1 Drought Response. The following is a menu of possible actions. Specific actions taken during any drought situation will be determined by the Director.

The Director may also take other actions not listed, if deemed necessary.

A. Irrigation: Landscape watering is limited to mandatory maximum two-days-per-week based on the last digit of the service address.

1. Even-numbered addresses (ending in 0, 2, 4, 6, or 8) water Tuesdays and Saturdays only.

2. Odd-numbered addresses (ending in 1, 3, 5, 7, or 9) water Wednesdays and Sundays only.

3. Properties having multiple addresses will be identified by the lowest address number. If no number exists, the Director or his/her designee will assign one.

4. Unless using a hand-held hose with attached positive shutoff spray nozzle, landscape watering will not be permitted on Mondays, Thursdays, or Fridays. Watering is permitted on any day with a hand-held hose with an appropriate spray nozzle for up to one hour.

5. Recommend irrigation of landscaped areas by means of hand-held hose with attached positive shutoff spray nozzle, soaker hose, bucket, or drip irrigation system.

6. Watering only one-day-per-week is encouraged.

B. Vehicle Wash:

1. Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane, or other vehicle is prohibited, except on designated landscape watering days or at a commercial car wash facility.

2. Such washing, when done, shall be with a hose with a positive shutoff nozzle and/or buckets for hand washing.

3. Commercial car washing may continue any day.

4. Fund raiser car washes are prohibited unless held at a commercial car wash facility.

5. City staff will reduce car washing to the extent practical for business operations given the need for health, safety, and welfare considerations.
C. **Foundations:**

1. Foundations may be watered for up to two hours on the designated watering days as prescribed for Stage (1) irrigation. Watering of foundations should be accomplished by soaker hose, hand-held hose with positive shutoff, spray nozzle or drip systems.

D. **Golf Course and Athletic Field Irrigation:**

1. Maintenance personnel must use the twice weekly watering schedule prescribed in Stage 1 of this Plan for fairways and athletic fields.

2. Tee boxes and greens may be watered on Tuesday, Wednesday, Saturday, and Sunday though watering should be kept at a level that meets only minimum requirements.

E. **Filling Pools and Hot Tubs:** Filling pools and hot tubs is prohibited except for required maintenance and repair or new construction. Loss due to evaporation may be replaced.

F. **Cool Season Grass Overseeding:** Installation of cool season grasses for aesthetic purposes is prohibited. Overseeding of grasses for erosion control is permitted for up to 30 days only with a written variance from the Director (see Section 11.0).

G. **Non-essential Use:** The following uses of water are defined as non-essential and are prohibited in Stage 1 and all subsequent stages:

1. Washing sidewalks, walkways, driveways, parking lots, tennis courts or other hard-surfaced areas other than for human health and safety.

2. Washing buildings or structures for purposes other than immediate fire protection or in preparation for painting.

3. Use of water for dust control.

4. Flushing gutters or permitting water to run or accumulate in any gutter or street.

5. Operation of free-flowing hoses for any purpose.

6. Operation of any equipment or device that uses water for recreation purposes (e.g. slides, bounce houses, etc.)

7. Obvious water waste includes but is not limited to: water ponding in a parking lot or driveway, water ponding or running down the street, broken sprinkler equipment, unattended free flowing hoses or unrepaired leaks.

### 8.2.2 Stage 2 Drought Response

**Goal.** Reduce the average daily water demand by eight percent (8%) from the use that would have occurred in the absence of drought measures.
Water Use Restrictions. All requirements of Stage 1 Drought Response shall remain in effect during Stage 2. The following is a menu of possible actions. Specific actions taken during any drought situation will be determined by the Director and enforced under threat of penalty for violation. The Director may also take other actions not listed, if deemed necessary:

A. **Irrigation:** Landscape watering is limited to mandatory maximum one-day-per-week based on the last digit of the service address.

1. Industrial, commercial, and multi-family water customers with even-numbered addresses (ending in 0, 2, 4, 6, or 8) water Tuesdays only.

2. Residential water customers with even-numbered addresses (ending in 0, 2, 4, 6, or 8) water Saturdays only.

3. Industrial, commercial, and multi-family water customers with odd-numbered addresses (ending in 1, 3, 5, 7, or 9) water Wednesdays only.

4. Residential water customers with odd-numbered addresses (ending in 1, 3, 5, 7, or 9) water Sundays only.

5. It is strongly encouraged that automated irrigation systems be turned off at the controller when not in use and only set manually for use on the designated watering day.

6. Watering is allowed on any permitted watering day (Sunday, Tuesday, Wednesday, or Saturday) for up to one hour using a hand-held hose with attached positive shutoff spray nozzle.

B. **Vehicle Wash:**

1. All vehicle washing is prohibited, except on the once weekly designated irrigation day or at a commercial car wash facility.

2. Commercial car washing may continue any day.

3. City vehicle washing will be further reduced from the level used during Stage 1.

C. **Foundations:** Foundations may be watered for up to two hours on the designated watering day as prescribed in Stage 2 using only a soaker hose, a hand-held hose with positive shutoff spray nozzle or drip systems.

D. **Golf Course and Athletic Field Irrigation:**

1. Maintenance personnel must use the once-per-week watering schedule prescribed in Stage 2 of this Plan for fairways and athletic fields.

2. Tee boxes may be watered only twice per week on either Tues./Sat. or Wed./Sun.

3. Greens may be watered only three times per week (Tues. a.m., Wed. p.m. and Sat. a.m.)
E. **Filling Pools and Hot Tubs:** Same as Stage 1 restrictions.

F. **Cool Season Grass Overseeding:** Same as Stage 1 restrictions with a maximum of 15 days for a variance.

G. **High Demand Surcharge:** This surcharge must be approved by the City Council prior to implementation.

   1. Residential Customers – A rate increase of up to 25 percent (25%) for high water demand users (greater than 20,000 gallons per month per account) shall be initiated to discourage non-essential use.

   2. Apartment, Commercial and Industrial Customers – A rate increase of up to 25 percent (25%) for high water demand users (greater than 20,000 gallons per month and 1.4 times annual average monthly usage per account) shall be initiated to discourage non-essential use.

8.2.3 **Stage 3 Drought Response**

**Goal.** Reduce the average daily water demand by twenty percent (20%) from the use that would have occurred in the absence of drought measures.

**Water Use Restrictions.** All requirements of Stages 1 and 2 Drought Response shall remain in effect during Stage 3. The following is a menu of possible actions. Specific actions taken during any drought situation will be determined by the Director and enforced under threat of penalty for violation. The Director may also take other actions not listed, if deemed necessary

A. **Irrigation:** All landscape watering is prohibited.

B. **Vehicle Wash:** Vehicles may only be washed at a commercial vehicle wash site and such washing shall be limited for health, safety, and welfare of the public. Fund raiser car washes are prohibited.

C. **Foundation Watering:** Foundations may be watered for up to two hours on Saturday using only a soaker hose, a hand-held hose with positive shutoff spray nozzle or drip systems.

D. **Golf Course and Athletic Field Irrigation:** All irrigation is prohibited.

E. **Filling Pools and Hot Tubs:** Filling restrictions are the same as Stages 1 and 2. Construction of new pools is prohibited during Stage 3.

F. **Repair of Known Leaks:** Same as Water Conservation Plan with only one week allowed for repairing leaks.

G. **Cool Season Grass Overseeding:** Irrigation of cool season grasses is prohibited.
H. **High Demand Surcharge**: This surcharge must be approved by the City Council prior to implementation.

1. Residential Customers – A rate increase of up to 50 percent (50%) for high water demand users (greater than 20,000 gallons per month per account) shall be initiated to discourage non-essential use.

2. Apartment, Commercial and Industrial Customers – A rate increase of up to 50 percent (50%) for high water demand users (greater than 20,000 gallons per month and 1.4 times annual average monthly usage per account) shall be initiated to discourage non-essential use.

In the event that water shortage conditions threaten public health, safety, and welfare, the Director is hereby authorized to ration water. The Director may combine water rationing with any or all stages and/or individual water use restriction of this Drought Contingency Plan as necessary. A Water Rationing Plan will be developed to meet the critical water shortage condition. Water will be rationed according to a water allocation plan for different customer classifications. An example water rationing plan is included in Appendix E.
9.0 ENFORCEMENT

Violations of this plan may be observed by city staff or reported to city staff through telephone or email messages. Citations will be issued only when a violation is observed by City of Irving staff members. The Irving City Code, Article IV. Sec. 41-14. (f) through (k), shown in Appendix C, states the following:

(f) **Violation of section.** A person commits an offense if he or she knowingly makes, causes or permits the use of water supplied by the City, contrary to the measures implemented by the City Manager as prescribed in the Water Management Plan. For purposes of this subsection, it is presumed that a person has knowingly made, caused, or permitted a use of water supplied by the City, contrary to the measures implemented by the water management plan if the mandatory measures have been formally ordered consistent with the terms of subsection (d) and:

1. The manner of use has been prohibited by the water management plan; or
2. The amount of water used exceeds that allowed by the water management plan.

(g) **Penalty.** A person who commits an offense under this section is guilty of a misdemeanor, punishable by a fine of not less than one dollar ($1.00) and not more than two thousand dollars ($2,000). Each day that one or more of the provisions of this section is violated constitutes a separate offense.

(h) **Rebuttable presumption.** Any person, including a person classified as a water customer of the city, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the offense occurred on the person’s property shall constitute a rebuttable presumption that the person in apparent control of the property committed the offense, but any such person shall have the right to show that he/she did not commit the offense. Parents shall be presumed to be responsible for offenses committed by their minor children and proof that an offense committed by a minor child, occurred on property within their parents’ control shall constitute a rebuttable presumption that the parent committed the violation, but any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of the Water Management Plan and that the parent could not have reasonably known of the offense.

(i) **Discontinuation of services.** If a person is convicted of three (3) or more offenses under this section, the Water Utilities Director shall, upon due notice to the customer, be authorized to discontinue water service to the premises where the offenses occur. Services discontinued under this subsection shall be restored only upon payment of a current connection charge, and any other costs incurred by the city.
in discontinuing service and upon adequate assurances being provided to the Water Utilities Director that the offense will not reoccur while a drought stage under the Water Management Plan is in effect.

(j) **Authority under other laws.** Nothing in this section limits the authority of the mayor, the city council, and the city manager to seek emergency relief under the provisions of any state or federal disaster relief act.

(k) **Civil remedies.** Nothing in this section shall be construed as limiting the city’s ability to pursue any other civil remedies to enforce a provision of this section as available under applicable law, including seeking injunctive relief and civil penalties for a violation of this section.
10.0 SPECIAL PERMITS

Special Permits for use of water at fire hydrants for dust control, erosion control and other construction related purposes may be obtained from Valley View Municipal Complex located at 333 Valley View Lane, Irving, TX 75061. Special Permits may be required for Stages 1, 2, and 3 of this plan. The granting of permits will be based on requirements established by the City of Irving and a completed application which meets all applicable criteria.
11.0 VARIANCES

The Director, or his/her designee may, in writing, grant a temporary variance for existing water uses otherwise prohibited under this Plan. A variance is permissible if it is determined that failure to grant such variance would cause undue hardship, or an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance. In addition, one or more of the following conditions may apply:

- Compliance with this Plan cannot be technically accomplished for the duration of the water supply shortage or other condition for which the Plan is in effect.
- Alternative methods can be implemented which will achieve the same level of reduction in water use.

Persons requesting an exemption from the provisions of this Plan shall submit a request for a variance to the Irving Water Utilities Department. All variance petitions shall be reviewed by the Director, or his/her designee, and shall include the following:

- Name of the petitioner(s)
- Address of the property for which the variance is requested
- Contact phone number
- Contact e-mail address
- Purpose of water use
- Specific provision(s) of the Plan from which the petitioner is requesting relief
- Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Plan
- Description of the relief requested
- Period of time for which the variance is sought
- Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date
- A map of the property
- Other pertinent information.
Variances granted by Irving Water Utilities shall be subject to the following conditions, unless waived or modified by the Director or his/her designee:

- Variances granted shall include a timetable for compliance.
- Landscape irrigation from 10 a.m. to 6 p.m. will not be allowed for any reason.
- Upon the variance completion date, the irrigation controller will be re-set and the city’s Irrigation and Leak Technician will review the settings to ensure compliance.
- Variances granted shall expire when the Plan is no longer in effect.

No variance shall be retroactive or otherwise justify any violation of this Plan occurring prior to the issuance of the variance. Variances will not be granted for cool season grass installation in a turf area that has already been established.
12.0 COORDINATION WITH REGIONAL WATER PLANNING GROUP

The City of Irving is located within the Region C water planning area and Irving is a wholesale customer of Dallas Water Utilities. Appendix F includes copies of a letter sent to the Chair of the Region C Water Planning Group (RCWPG) and the Director of Dallas Water Utilities with this amended Drought Contingency Plan and Water Conservation Plan.
13.0 REVIEW AND UPDATE OF DROUGHT CONTINGENCY PLAN

As required by TCEQ rules, Irving reviews this Drought Contingency Plan every five years. Since the plan was developed in 1999, it has undergone revisions in 2005, 2006, 2007, 2009 (required 5-year update), twice in 2011 and required 5-year updates in 2014, 2019 and 2024. The April 2009 update of the Water Management Plan was the first comprehensive five-year review required by the State since the Plan was revised in 2005. The August 2014 update of the plan met State requirements and helped establish regional consistency while the 2019 and 2024 updates resulted in no substantive changes to the triggering conditions nor the required responses within the Drought Contingency Plan. The Plan will be examined and revised on an ongoing basis, as appropriate, based on new or updated information. As the plan is reviewed and subsequently updated, a copy of the revised Water Management Plan, including both the Drought Contingency Plan and the Water Conservation Plan, will be submitted to the TCEQ and the RCWPG for their records.
WATER CONSERVATION PLAN

1.0 INTRODUCTION

The Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing development of water conservation plans for public water suppliers. The TCEQ rules governing the water conservation plans are contained in Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas Administrative Code. The provisions of Chapter 288 require the City of Irving to develop, submit, and implement a formal Water Conservation Plan to minimize municipal water use through implementation of efficient water use practices. The TCEQ guidelines and requirements for water suppliers are included in Appendix G.

The objectives of the Water Conservation Plan are:

• To reduce water consumption
• To reduce the loss and waste of water
• To improve efficiency in the use of water
• To encourage efficient outdoor water use
• To extend the life of current water supplies by reducing the rate of growth in demand
• To delay the need to develop expensive future water supplies
• To enable the City of Irving to continue to meet water use reduction goals

This document describes the City of Irving’s Water Conservation Plan and includes updates to the original plan as required by the TCEQ.
2.0 CITY OF IRVING WATER UTILITY PROFILE

Profile data for the City of Irving water utility is provided in Appendix B. Appendix B includes data on existing and projected service populations, number of connections, historical metered water sales and water production, and general utility system information. Table 2.1 summarizes key facts from the Water Utility Profile.

<table>
<thead>
<tr>
<th>Table 2.1. Summary of Water Utility Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population</strong></td>
</tr>
<tr>
<td>Current Population (2023) = 263,720</td>
</tr>
<tr>
<td>Projected 2040 Population (Source:) = 301,541 – City of Irving Planning &amp; Zoning Department</td>
</tr>
<tr>
<td>Build-out Population = 301,541</td>
</tr>
<tr>
<td><strong>Connections</strong></td>
</tr>
<tr>
<td>Current Connections = 112,399</td>
</tr>
<tr>
<td>Total New Connections in Last 5 Years = 6,942</td>
</tr>
<tr>
<td><strong>Information on Water Use for the Last Five Years</strong></td>
</tr>
<tr>
<td>Year</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>2020</td>
</tr>
<tr>
<td>2021</td>
</tr>
<tr>
<td>2022</td>
</tr>
<tr>
<td>2023</td>
</tr>
</tbody>
</table>

**Water Supply Sources**
Jim Chapman (Cooper) Lake and City of Dallas

**Water Treatment**
Water treatment provided by City of Dallas

**Water Distribution**
Four pump stations
Elevated Storage = 15.5 million gallons
Ground Storage = 57 million gallons

**Wastewater Treatment**
Wastewater treatment provided by Trinity River Authority (TRA)
3.0 WATER CONSERVATION GOALS

Total gallons per capita per day is defined by the TCEQ as "The total amount of water diverted and/or pumped for potable use divided by the total permanent population divided by the days of the year. Diversion volumes of reuse as defined in this chapter shall be credited against total diversion volumes for the purposes of calculating GPCD for targets and goals." Examination of the trend in residential water use will be most useful to provide an indication of the effectiveness of the city’s water conservation program.

Total per capita water use in Irving is expected to increase in the future. This is because residential growth and related water use in Irving is expected to increase substantially less than the amount of non-residential growth and its related water use. The Imagine Irving Plan shows a land use breakdown of 12.6% residential, 28.4% mixed use and 59% commercial for future development in Irving. This projection is similar to the 2016 Comprehensive Plan which was referenced in the 2019 Water Management Plan. Given these consistent projections, new growth will involve a larger amount of commercial development compared to residential development. Such growth has the potential to expand Total Per Capita Use more than Residential Per Capita Use.

The shift from historically heavier residential development toward commercial and industrial water uses in future development is expected to increase water use for business purposes more than residential and apartment water uses. This will cause total per capita water usage to increase. As a result, it is anticipated that total per capita water use may not reflect the long-term effectiveness of the City’s water conservation efforts and the total GPCD is not expected to decrease at the same rate as it has in the past. Based on this, GPCD goals for the 2024 Water Management Plan are not aggressive but are focused more on maintenance as shown in the chart below. However, efforts to decrease industrial, commercial, and institutional use outlined in this Plan could have some impact on reducing total GPCD.

In keeping with this line of thought, Irving residential water use could be a better barometer than total municipal use to gauge future water use changes on a per capita basis. Over the past five years, residential per capita water use (including apartments) has ranged from 84 gallons per capita per day (GPCD) to 88 GPCD. The average residential per capita use during these five years has been 86 GPCD. The goal is to generally maintain this decreased residential water use through the next two water management plan cycles as shown in Table 3-1.
### Table 3.1. Water Use Goals and Projected Per Capita Use

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>2009 to 2013 Average</th>
<th>2014 to 2018 Average</th>
<th>2019 to 2023 Average</th>
<th>5-Year Goal 2024-2028</th>
<th>10-Year Goal 2029-2033</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Per Capita Use</strong>a</td>
<td>GPCD</td>
<td>170.4</td>
<td>159.0</td>
<td>153.4</td>
<td>163</td>
<td>160</td>
</tr>
<tr>
<td><strong>Residential Per Capita Use</strong>b</td>
<td>GPCD</td>
<td>99.6</td>
<td>89.6</td>
<td>85.6</td>
<td>87</td>
<td>86</td>
</tr>
<tr>
<td><strong>Water Loss Per Capita</strong>c</td>
<td>GPCD</td>
<td>12.6</td>
<td>14.0</td>
<td>14.6</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td><strong>Water Loss Percentage</strong>d</td>
<td>%</td>
<td>7.0</td>
<td>8.7</td>
<td>9.4</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

a. Total GPCD = (Total Gallons in System ÷ Permanent Population) ÷ 365
b. Residential GPCD = (Gallons Used for Residential Use ÷ Residential Population) ÷ 365
c. Water Loss GPCD = (Total Water Loss ÷ Permanent Population) ÷ 365
d. Water Loss Percentage = (Total Water Loss ÷ Total Gallons in System) X 100; or (Water Loss GPCD ÷ Total GPCD) X 100

The Conservation Plan goal for average total GPCD in 2013 was 202, and the goals have been decreased each 5-year reporting period to 168 in 2018 and 166 in 2024. Each 5-year plan period resulted in a decrease beyond the established goals indicating that water conservation measures implemented in Irving are having a positive impact on water use city-wide. The 5- and 10-year goals for the upcoming water management cycles are set at 163 and 160 respectively. This conservative approach is in response to the expected increase in commercial development.

Previous goals for average residential per capita were 112 GPCD in 2013, 92 in 2018, and 88 in 2023. While several factors have influenced the city’s ability to exceed its targeted GPCD goals, the water conservation plan elements detailed in the remainder of this plan have been the basis for that achievement. The future 5-year and 10-year goals have been set at a steady, less aggressive rate, slightly decreased from the previous 5-year plan cycle. With consistent public education, communication efforts, continuous leak detection and the expansion of the Irrigation Assistance Program, Water Utilities staff plan to maintain reduced water use in Irving.

The overall expectation for decreases in per capita use is more conservative than in past years. As noted above, the role water plays in our daily lives precludes substantial continuous decreases such as that experienced since the focus began in 1999. Though large decreases are not sustainable, it is clear at this 25-year anniversary for water conservation in Texas, future incremental reductions in water use are meaningful and the focus continues.

Figure 3-1 summarizes the per capita data.
The city’s water conservation goals include the following:

- Maintain average residential per capita use at 86 GPCD through 2034.
- Maintain an average total per capita use at 160 GPCD or less through 2034.
- Continue the meter replacement program as discussed in Section 5.2.
- Maintain level of water loss at or below 10 percent (16-17 GPCD) as discussed in Section 5.3.
- Maintain the existing leak detection program and surveys of the water distribution system to include a comprehensive plan for system review every seven years as detailed in Section 5.7.
- Persist in the use of designated conservation program staffing to sustain a comprehensive conservation program including the components discussed in this report as well as others deemed appropriate.
- Encourage and promote replacement of plumbing fixtures with water conserving fixtures and appliances.
- Emphasize the use of water conserving landscaping and responsible irrigation of such landscaping by educating the public, continuing enforcement of ordinances regarding irrigation, and
promoting informed and planned use of water for irrigation through watermyyard.org which uses data from the Irving weather stations.

• Continue and promote the Irrigation Assistance Program (IAP) which provides consultation with the Irrigation and Leak Technician to achieve better irrigation results with reduced outdoor water use as profiled in Section 5.20.

• Conduct annual irrigation workshops to equip residents in assessing irrigation system performance, making basic necessary repairs, and using the system in a water-efficient manner.

• Continue efforts to raise public awareness of water conservation and encourage responsible public behavior through a public education and information program as discussed in Section 5.4.

• Continue to upgrade the leak detection program to include state-of-the-art equipment to identify and locate leaks and the use of satellite leak detection to review a large area for leak identification approximately once every 2-3 years.
4.0  COORDINATION WITH REGION C WATER PLANNING GROUP

The City of Irving staff has met with the consultant retained by the Region C Water Planning Group to coordinate with the Region C planning efforts and to discuss population, water demand projections and future water resource requirements. Appendix F includes a copy of letters sent to the Chair of the Region C Water Planning Group and the Director of Dallas Water Utilities with this amended Water Conservation Plan.
5.0 CONSERVATION PLAN ELEMENTS

A comprehensive conservation plan incorporates features that address all aspects of water distribution and involves active participation from both the supplier and the customer. The following components comprise a multi-faceted approach to water conservation that ensures some level of responsibility and accountability for the City of Irving and all those who receive city water.

5.1 Water Source Metering

Most of Irving’s water is supplied through its water rights in Jim Chapman Lake located in northeast Texas. This water is pumped from Jim Chapman Lake to Lake Lewisville and the Elm Fork Trinity River where it is eventually treated by the City of Dallas under provisions of a Water Treatment Services Contract. The City of Irving also purchases some of its water supply from the City of Dallas through a Wholesale Services Contract. All water received from Dallas, either through the Water Treatment Contract or the Wholesale Services Contract, is master metered prior to delivery to Irving’s ground storage reservoirs located at the Hackberry, Northgate and MacArthur Pumping Stations. The two master meters are typically tested for accuracy by an independent firm about two times per year. Venturi meters are used at each location and should have an accuracy of plus or minus 2%.

The water delivered to the Hackberry, Northgate and MacArthur Pumping Stations is metered again by the City of Irving prior to discharge to the water distribution system. These meters are also tested for accuracy two times per year. These meters provide a second independent method to determine the quantity of water that is pumped to the distribution system.

5.2 Universal Metering and Meter Testing/Replacement

Metering is widely recognized as an essential requirement for any water utility's efforts to measure and monitor water demand. All water users in Irving, including public and municipal facilities, are metered. Section 41-10 of the City Code stipulates that "it is unlawful for any person to receive and use water from the city water system if that water is not metered by a city-authorized water meter." This requirement for universal metering of water users will be continued. The only unmetered water is for uses such as firefighting and main flushing, which by nature do not accommodate a permanent meter location. Water flushed from the distribution system is measured with meters and water used for maintenance of the system is estimated with the use of Pitot gauge measurements or other temporary metering units.
All meters three inches and larger are tested every one to three years by an independent meter testing firm or by city staff. The City will continue frequent testing of large meters using this approach to reduce water loss.

The City typically replaces small residential or business meters (5/8” to 2”) based on abnormally high or low registered water usage, feedback from Utilities Technicians, and when the meter register appears broken or scratched. From 2004 through 2018, Water Utilities Department personnel replaced 45,470 meters, and another 5,430 since 2018, which is approximately 100% of all meters. Additionally in 2005, the City began using the Automated Meter Reading (AMR) program to improve meter reading efficiency and accuracy and is currently implementing Advanced Metering Infrastructure (AMI) that will provide detailed water usage data.

The City maintains a meter repair and testing shop where meters are brought in from the field when a problem is suspected or a customer complaint is made. The meters are tested and replaced as necessary.

### 5.3 Determination and Control of Water Loss

Based on available data, the amount of water loss during the past five years has averaged less than 10 percent (see Appendix B). This is considered a reasonable level of water loss and indicates that the City does not currently experience a major problem in water source metering, customer metering, or distribution system losses.

In the future, the City intends to continue to maintain the water loss at a level below 10 percent. The City collects all data needed to make annual comparisons between the amount of water discharged to the distribution system and the volume of metered water sales. If the amount of water loss significantly increases in the future, the City is prepared to take appropriate actions. The actions could include an accelerated meter replacement/repair program, recalibration of the meters which measure the amount of water discharged to the distribution system, expansion of the leak detection program, an upgraded flushing program and/or a comprehensive water audit to help determine the causes of increased water loss.
5.4 Public Education and Information

The primary elements and activities of the City's public education program include the following:

- Promote the city’s water conservation efforts through continuous activities and programming.
- Partner with EPA WaterSense to raise awareness about the importance of water efficiency, ensure water efficient product performance, and help consumers differentiate among products and programs that use less water and that support state and local water efficiency efforts.
- Maintain and update the city’s Water Utility Department website to provide detailed information regarding water conservation initiatives, and related events that promote public education about water conservation.
- Develop video instruction, advertising and news stories intended to assist Irving residents with water conservation efforts.
- Prepare water conservation messaging for distribution through social media including Twitter and Facebook.
- Distribute promotional material and items that reinforce water conservation concepts and provide tools to measure water conservation efforts.
- Deliver presentations to schools and other interested community groups promoting water conservation and water quality issues. The goal is to make 24 or more presentations during a typical year. Such events will include Frost Fest, Arbor Day, Fusion Fest, and Independence Day, as well as school career days, summer camps at city recreation centers and other events based on public requests.
- Develop messaging on municipal services bills and the outside envelopes which are mailed to all customers regarding water conservation issues.
- Recognize and promote Water Week, Fix-a-Leak Week, Smart Irrigation Month, Imagine a Day Without Water and other seasonal promotional opportunities to raise conservation awareness. These education programs include various events and media coverage to encourage public participation. Events may include periodic festivals and seminars to heighten increased awareness and involvement in conservation efforts.
- Continue involvement in regional groups that develop standards and promote water conservation. Such work includes sharing promotional ideas and resources with other conservation representatives, hosting conservation-focused meetings and attending training offered by other public agencies to assess for potential use in Irving.
• Make water conservation materials available at the Water Utilities Department and at City Hall. At least twice each year, assemble a water conservation kiosk with timely information about the full scope of conservation programming in Irving.

• Advertise and promote the watermyyard.org website providing individualized watering recommendations to customers.

• Encourage the public to review and use the City of Irving Parks and Recreation Department publications, “Irving’s Tree Guide” and “A Guide to Using Native Texas Plants.” Include links to the publications on the Water Utilities website and find various opportunities to share this and other related information about trees and native, adaptive and drought tolerant plants. Make publications available at public events.

• Oversee enforcement related to the city’s irrigation ordinance to include verbal advisories of improper watering, issuing notices of violation (NOV) and writing citations in order to achieve compliance.

• Conduct regular irrigation patrols of residential housing and provide educational materials including magnets with irrigation schedules, door tag irrigation advisories and irrigation assistance program stickers with a QR code for easy program registration.

• Conduct regular irrigation patrols of residential housing and provide educational materials, including magnets, door tags, and irrigation assistance program stickers with QR codes for easy registration for hands-on assistance from an irrigator.

• Schedule multiple irrigation training sessions for residents.

5.5 Conservation Water Rate Structure

The City’s current water rate structure is an increasing block type (increased cost with increased usage) and includes a slightly higher unit rate for increased use during summer months. A similar type of rate structure that encourages water conservation will continue in the future. The current water rate structure is illustrated in Appendix B.
5.6 Implementation and Enforcement

A copy of the most recent ordinance indicating official adoption of this amended Water Conservation Plan by the Irving City Council is provided in Appendix D. Water Utilities staff will be responsible for the implementation and administration of the Water Conservation Plan. Staff will:

- Oversee the execution and administration of all Plan elements.
- Supervise the keeping of records for program verification and assess program effectiveness.
- Make recommendations for changes in the Water Conservation Plan components.

Elements of this Water Conservation Plan which require enforcement (such as the universal metering requirement) are generally handled by incorporation into City codes or ordinances. Enforcement activities include issuing Door Tag Advisories, Notices of Violation and Citations for private leaks, theft of water and irrigation violations. The portions which require enforcement and the associated code/ordinance have been discussed within each applicable Plan Element.

5.7 Leak Detection and Repair

The City's current leak detection efforts will be continued. Major elements of the leak detection program include a citywide survey utilizing acoustic leak sensors (loggers) which continuously monitor the water distribution system for known and unknown water leaks; a "leak correlator" device that the city uses to pinpoint suspected leaks reported by customers and identified leaks reported by utility system field personnel; and the T-10 leak surveyor that helps identify and pinpoint the location of detected leaks. In a typical year, the various leak detection devices used have surveyed approximately 550,000 linear feet of pipeline to identify and pinpoint suspected leak locations.

Other efforts to minimize leaks include the following:

- Expanded use of logging devices at different locations throughout the City to monitor a larger portion of the water distribution system for potential leaks.
- Visual observations by Irving Water system employees, and customers who keep watch for abnormal conditions which may indicate a leak.
- Availability of an adequate and responsive staff with appropriate equipment to respond 24 hours per day to repair any public leaks that are identified, including additional leak detection staff assigned to support weekly manual leak surveys.
During the 2018-19 Fiscal Year, Irving Water Utilities contracted for satellite leak detection with Asterra. On a single satellite pass, 96 possible leaks were identified in 500 miles of contiguous water line. A ground team conducted follow-up work to confirm and locate 38 actual leaks and schedule appropriate repairs. Irving experienced a 40% success rate with this project. This approach has been incorporated into the city’s leak detection program.

In 2020, the city used satellite surveillance over the entire 700+ miles of distribution lines. During two passes, 546 points of interest (POI) were identified with the proprietary algorithm for leak evaluation. Using traditional acoustic equipment, crew members visited all POIs and found 133 leaks, 76 of which were Non-Revenue Water (NRW) resulting in an estimated savings of $112,420 after repairs. A subsequent project completed in 2022 identified 582 POIs. After review, 109 leaks were confirmed, of which 66 were NRW with an estimated savings of $92,134. Irving Water has a new contract for 2024.

5.8 **Water Use Record Management**

As discussed under Section 5.1, all water delivered and pumped to the distribution system is metered. The current billing system recognizes the following user categories: residential, apartment, commercial and industrial. Public water uses (such as municipally owned parks and buildings) are included in the commercial use category. Institutional water uses (such as hospitals and schools) are also included in the commercial use category. The current user categories will be continued and should be adequate to provide appropriate desegregation of water sales and to determine the amount of water loss.

5.9 **Wholesale Water Supply Contracts**

The City of Irving does not currently have any wholesale water supply contracts. If the City enters into a future contract to supply water to another political subdivision, the City will require by contract that the other entity either (1) adopt the provisions of the Irving Water Conservation Plan or (2) develop and adopt a plan that has been approved by the TCEQ.

5.10 **Water Reuse/Recycling**

Las Colinas is a 12,000-acre, master-planned development located within the City of Irving. The development includes four golf courses, luxury hotels, office buildings, and exclusive residential areas. A major feature of the Las Colinas development includes extensive waterways, lakes, and landscaped areas.
The Dallas County Utility and Reclamation District (DCURD) provides non-potable water to the Las Colinas development. This non-potable water is used for irrigation of the four golf courses, offices, street medians and open spaces; and evaporation make-up water for various lakes and waterways within the development.

The non-potable water supplied by DCURD is a combination of surface water from the Elm Fork of the Trinity River and reclaimed wastewater purchased from the Trinity River Authority's Central Regional Wastewater Treatment Plant. DCURD has a contract with TRA to purchase up to 8,000 acre-feet per year (7.14 million gallons per day) of treated wastewater effluent. During the past five years, the amount of reclaimed wastewater used by DCURD for non-potable purposes was an average of 56,980,480 gallons per year or 4.75 million gallons each month. It is anticipated that future development within parts of Las Colinas will continue to use reclaimed wastewater for irrigation and evaporation make-up water.

In 2018, the City of Irving implemented its own application of reuse water at the Irving Golf Club, formerly the Twin Wells Golf Course. The city is using its permit, which allows for reuse of up to 31,600 acre-feet per year of the Jim Chapman Lake water supply, and a contract with the Trinity River Authority to purchase up to 25 million gallons per day of this water as treated effluent from the Central Regional Wastewater Treatment Plant. This project began in February 2015 when the city received the permit to divert 486 of the available 31,600 acre-feet per year for irrigation at the golf club.

The reuse water generated locally means that 70 million gallons of water does not have to be pumped 80 miles from Chapman Lake to Lewisville Lake, treated by the City of Dallas at the Elm Fork Water Treatment Plant, pumped to Irving and then further pumped through the Irving distribution system to the Irving Golf Club. The city was able to conserve this water and eliminate the treatment and transportation costs. The City of Irving has set a goal to fully incorporate available reuse water into our existing supplies to meet future system demands as the city continues to grow.
5.11 Water Conserving Landscaping

The City’s landscape ordinance (Zoning Ordinance No. 1144, Section 52-35a) that was updated and approved by the City Council on February 15, 2018, established updated minimum standards for landscaping that apply to all land developed within the city limits. Furthermore, it strengthened the requirements and incentives for preserving existing trees thus minimizing new paving. Specifically, the following provisions are included:

- All trees and shrubs shall be from a list of approved trees and shrubs that is reviewed annually and updated if necessary to recognize the development of new species or emerging concerns such as diseases in previously recommended species.
- New specific requirements for tree planting to ensure sustainability, including minimum soil depth and soil area at time of planting.
- Tree “topping” is prohibited.
- New provisions to encourage the preservation of existing trees when property is being developed or redeveloped establish a sliding scale based on the size and desirability of the existing trees.
- Requirements for tree replacement when property is being developed or redeveloped and desirable trees are removed.
- Provisions that allow a developer to transplant existing trees to another site or pay into a tree mitigation fund if desirable protected trees must be removed.

This ordinance accepts xeriscape landscaping as an acceptable way to meet the minimum landscape standard, which provides developers an option to minimize irrigation water requirements for new development. The ordinance specifically states that "a xeriscape landscape plan which reflects a variety of rock, stone, gravel, and other unpaved materials shall also qualify" to comply with the minimum landscape standards. Additionally, the Parks and Recreation Department has developed a booklet called “A Guide to Using Native Texas Plants – Irving’s Top 50 Plants to Support our Environment.” This publication encourages the use of plants that thrive in typical conditions found in the Metroplex region.

In addition to the requirement for landscaping that promotes water conservation, the city recently adopted a local landscape irrigation ordinance intended to promote water conservation by eliminating wasteful watering practices. During its 2007 session, the Texas State Legislature passed House Bill 1656 which focused on the responsible use of irrigation systems and professional system installation techniques. Full compliance with the ordinance was phased in during 2009 and 2010 to allow businesses and residents ample time to plan for and implement the necessary changes.
As of January 1, 2009, it is now necessary for new irrigation systems to be installed by licensed irrigators. All aspects of the design and installation work must be overseen by a professional with these credentials. Homeowners may still install their own systems, but they must comply with the state regulations, just as a licensed irrigator does. In all cases, the installation of a new system requires a permit and payment of the associated fee. Because of the new plan review and inspection requirements placed on the city, the fee has been adjusted to $100 for residential systems and $150 for commercial systems. The city’s design specifications require that irrigation systems not do the following:

- Spray onto structures like fences, retaining walls or building foundations.
- Locate spray heads within four inches of impervious surfaces such as sidewalks or buildings.
- Spray water where landscaping is less than four feet in width (drip irrigation or bubblers are required).

To conserve water, it is necessary to ensure that irrigation systems are used responsibly. The new irrigation ordinance prohibits irrigating under the following circumstances:

- While any precipitation is falling (i.e. rain, snow, etc.)
- In such a way that a substantial amount of water falls upon impervious areas instead of a lawn or landscape such that a constant stream overflows from the lawn or landscape onto a street or drainage area.
- When the irrigation system has a broken or missing sprinkler head.

Another important conservation and safety feature of the ordinance involves the required installation of rain and freeze sensors. All new systems are required to install a rain and freeze sensor effective January 1, 2009. Existing commercial systems were required to have rain/freeze sensors by January 1, 2010, while existing residential systems had an additional year for the installation which must have been completed by January 1, 2011.

### 5.12 Water Conserving Plumbing Fixtures

The City of Irving plumbing code standards incorporate the 1.28-gallon toilet requirement of the Texas Health and Safety Code, Title 5, Subtitle B, Chapter 372 effective January 1, 2014. This code encourages water conservation through the requirement that all toilets sold, offered for sale, or distributed must be a dual flush toilet that may not exceed 1.28 gallons per flush on average or for one full flush.
5.13 Water Conservation Program Staffing

The City has a full-time Water Conservation Coordinator that is involved with implementing conservation programs and enforcing drought restrictions daily. In addition, there is a full-time position dedicated to the city’s leak detection function and that person receives supplemental support from environmental compliance staff. Most recently, the Water Utility Department added an Irrigation and Leak Technician with primary responsibility for reducing water used for landscape irrigation as well as additional leak detection support. Furthermore, a Water Programs Specialist also has specific conservation, public education, and leak detection responsibilities in support of city conservation initiatives. The dedicated conservation staffing provided by the city supports the goals and objectives suggested by the Texas Water Development Board’s Water Conservation Implementation Task Force on Best Management Practices. Specifically, the water conservation coordinator position is responsible for implementing the Water Conservation Plan and is assigned the following duties:

- Taking the lead role in implementing all Water Conservation Plan components
- Documenting the results of program elements in accordance with state requirements
- Developing public outreach and marketing strategies for water efficiency
- Participating in regional water conservation planning and drought contingency initiatives
- Leading enforcement actions for conservation and drought-related plan violations

The water conservation function is overseen by a Senior Utilities Compliance Manager with additional conservation-related duties and responsibilities including full oversight of all conservation initiatives and budget development/implementation, coordination of regional cooperation and planning, and compliance with legislative directives.

5.14 Reservoir System Operating Plan

The City of Irving has water rights which authorize the diversion of 54,000 acre-feet per year of raw water from Jim Chapman Lake. Irving does not currently have water rights in any other lake, but a Lake Chapman operating plan has been developed and adopted by all Lake Chapman water right holders including Irving, the North Texas Municipal Water District, the Sulphur River Municipal Water District (SRMWD), and the Upper Trinity Regional Water District (UTRWD). The UTRWD has contracted with the SRMWD for water in Jim Chapman Lake.
5.15 **Free-Flowing Hoses**

Unattended free-flowing hoses (without a hose end sprinkler or positive shut-off spray nozzle) should not be used for any purpose at any time. Such a watering device creates a potential for overflow from the turf or landscaped area, particularly if forgotten. Any overflow from the turf or landscaped area that is flowing into the street or ponding in a parking lot is prohibited. Any use of water from hoses for irrigation purposes, vehicle washing, filling pools or any other reason must be attended to by the resident or property manager and be equipped with a sprinkler or positive shut-off nozzle.

5.16 **Enforcement of Private Property Leak Repairs**

Water Utilities staff are charged with identifying and resolving leaks throughout the water distribution system. When the leaks identified are public, city crews are dispatched to make the appropriate repairs. When a leak is private, staff shall use the following protocol.

1. To minimize water loss, residents are asked to repair identified leaks on private property within two weeks.
2. As Irving Water staff discover such leaks, a written notice of violation (NOV) is provided along with notification of a two-week time-period for completion of the repair.
3. City staff will follow up to ensure the leak has been repaired.
4.Leaks that are not repaired by the NOV deadline will be issued a citation. Each additional day the leak is in disrepair after the first citation is issued, is considered a separate offense for which an additional citation may be issued.

5.17 **Time-of-Day Irrigation Restrictions**

The city prohibits irrigation between the hours of 10:00 a.m. and 6:00 p.m. on any day during the period from April 1 through October 31. Mid-day is the least effective time during the day to apply irrigation water due to atmospheric conditions including high temperatures and wind. Avoiding this time of day increases the likelihood that irrigation effectiveness will be maximized.

5.18 **Year-Round Efficient Irrigation Measures**

The City of Irving, in conjunction with other regional DFW cities, has implemented year-round irrigation conservation measures. Because the highest use of water for domestic purposes is for irrigation, that category may allow for the greatest savings through conservation. January 1 through December 31 of each year, the city will limit watering to no more than two times per week according to the odd/even
schedule described below. If the city is already under a more restrictive stage of the Plan, the higher-level restrictions shall prevail.

A. **Irrigation**: Landscape watering is limited to mandatory maximum **two-days-per-week** based on the last digit of the service address.

1. Even-numbered addresses (ending in 0, 2, 4, 6, or 8) water Tuesdays and Saturdays only.
2. Odd-numbered addresses (ending in 1, 3, 5, 7, or 9) water Wednesdays and Sundays only.
3. Properties having multiple addresses will be identified by the lowest address number. If no number exists, the Director or his/her designee will assign one.
4. Landscape watering will not be permitted on Mondays, Thursdays, or Fridays.
5. Recommend irrigation of landscaped areas by means of hand-held hose with attached positive shutoff nozzle, soaker hose, bucket, or drip irrigation system.
6. Encourage reduction of water use through voluntary maximum one-day-per-week irrigation.

This approach to limiting irrigation to preserve existing water supplies is consistent with the restrictions implemented by DWU in 2012. This is an important measure within the Water Conservation Plan because Irving purchases a portion of its water from DWU.

### 5.19 Weather Station Program

The City of Irving has partnered with Texas A&M AgriLife Extension Service by installing a system of weather stations to provide landscape watering recommendations through watermyyard.org. Customers can sign up to receive weekly customized e-mails with landscape watering recommendations based on weather conditions during the previous week. This program began in the Spring of 2014. City staff work continuously to educate the public about the program, providing information on the website regarding watering recommendations and encouraging customers to register for e-mail notifications. WaterMyYard.org is also available through an app that can be loaded on any mobile device for easy access. At the end of 2023, 1,652 persons were registered for weekly irrigation notifications originating from Irving weather stations. Watermyyard.org is also available through an app that can be loaded on any mobile device for easy access.
5.20 Irrigation Assistance Program

Irving has a full irrigation oversight program which is led by a licensed irrigator and includes the following:

- Free residential irrigation check-ups with report card type lists for needed maintenance and repairs
- New system inspections
- Winter workshops delivering basic irrigation system maintenance and repair training accompanied by a follow-up survey to assess/encourage application of the training
- Regular patrol/enforcement throughout Irving
- Public relations regarding use of the weather station data
- Variance administration with site-visits at conclusion
- Irrigation system demonstration boards at all public events for hands-on guidance
- A wrapped KUV truck which is deployed in the field daily, advertising good irrigation habits as well as a giant QR code for direct access to the program irrigator (New in 2023)

This program was added as a new initiative in January 2019 and has been expanding in impact since then.

5.21 Industrial/Commercial/Institutional Program Exploration

As water conservation programming in Texas reaches its 25th anniversary, Irving Water will investigate potential benefits of ICI conservation, better known as an Industrial/Commercial/Institutional Program. Utilities staff have met with consultants to review anticipated features, results, and ROI for a formal program. Current plans include consideration of a pilot program during the upcoming regulatory timeframe for a more in-depth understanding of how ICI can reduce water loss and better manage water use among the largest water customers in Irving.
APPENDIX A

DEFINITIONS
DEFINITIONS

The following definitions shall apply to the Drought Contingency Plan and the Water Conservation Plan:

**Aesthetic water use**: water use for ornamental or decorative purposes such as fountains reflecting pools, and water gardens.

**Commercial and institutional water use**: water which is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

**Conservation**: those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water or increase the recycling and reuse of water so that a supply is conserved and made available for future or alternative uses.

**Customer**: any person, company, or organization using water supplied by Irving Water Utilities.

**Director**: means the director of the department designated by the City Manager of the City to enforce and administer the Drought Contingency Plan and the Water Conservation Plan, or the director’s designated representative.

**Domestic water use**: water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

**Drought Contingency Plan**: a strategy or combination of strategies for temporary supply management and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies. A Drought Contingency Plan may be a separate document identified as such or may be contained within another water management document(s).

**Even-numbered address**: street addresses, box numbers, or rural postal route numbers ending in 0, 2, 4, 6, or 8 and locations without addresses.

**Hand-held hose**: a typical gardening hose or any flexible tube of plastic, rubber, etc., for conveying water and other fluids that can be transported and utilized by an individual.

**Industrial water use**: the use of water in processes designed to convert materials of lower value into forms having greater usability and value.
Irrigation use: the use of water for the irrigation of crops, trees, and pastureland, including, but not limited to, golf courses and parks which do not receive water through a municipal distribution system.

Landscape irrigation use: water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and rights-of-way and medians.

Total per capita water use: the sum of water diverted into a water supply system for residential, commercial, and public and institutional uses divided by actual population served.

Municipal use: the use of potable water within or outside a municipality and its environs whether supplied by a person, privately owned utility, political subdivision, or other entity as well as the use of sewage effluent for certain purposes, including the use of treated water for domestic purposes, fighting fires, sprinkling landscaped medians, flushing sewers and drains, watering parks and parkways, and recreational purposes, including public and private swimming pools, the use of potable water in industrial and commercial enterprises supplied by a municipal distribution system without special construction to meet its demands, and for the watering of lawns and family gardens.

Non-essential water use: water uses that are not essential nor required for the protection of public, health, safety, and welfare, including:

(a) irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;
(b) use of water to wash any motor vehicle, motorbike, boat, trailer, airplane, or other vehicle;
(c) use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
(d) use of water to wash down buildings or structures for purposes other than immediate fire protection or preparation for painting or maintenance;
(e) flushing gutters or permitting water to run or accumulate in any gutter or street;
(f) use of water to fill, refill, or add any indoor or outdoor swimming pools or Jacuzzi type pools;
(g) use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
(h) failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
(i) use of water from hydrants for construction purposes or any other purposes other than fire fighting.

Non-Potable Water: water that is not intended or suitable for drinking and has not been approved for human consumption.
**Odd-numbered address:** street addresses, box numbers, or rural postal route numbers ending in 1, 3, 5, 7, or 9.

**Pollution:** the alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

**Potable Water:** water that is suitable for drinking and the supply has been investigated and approved.

**Public water supplier:** an individual or entity that supplies water to the public for human consumption.

**Regional water planning group:** A group established by the Texas Water Development Board to prepare a regional water plan pursuant to Texas Water Code §16.053.

**Retail public water supplier:** an individual or entity that for compensation supplies water to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others.

**Reuse:** the authorized use of water that remains unconsumed after the water’s use for its original purpose, for one or more beneficial purposes and before that water is either disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

**Soaker hose:** a hose typically made of rubber or plastic that allows water to pass through pores of the hose and drip from the hose, not spray from the hose.

**Water Conservation Plan:** a strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document(s).

**Wholesale public water supplier:** an individual or entity that for compensation supplies water to another for resale to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others. (The Dallas Water Utilities is the current wholesale public water supplier to the City of Irving.)
APPENDIX B

WATER UTILITY PROFILE DATA
## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### CONTACT INFORMATION

<table>
<thead>
<tr>
<th>Name of Utility:</th>
<th>CITY OF IRVING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Water Supply Identification Number (PWS ID):</td>
<td>TX0570050</td>
</tr>
<tr>
<td>Certificate of Convenience and Necessity (CCN) Number:</td>
<td>12299</td>
</tr>
<tr>
<td>Surface Water Right ID Number:</td>
<td>4799-D, 12878</td>
</tr>
<tr>
<td>Wastewater ID Number:</td>
<td>20719</td>
</tr>
<tr>
<td>Contact:</td>
<td>firstname: Donna  lastname: Starling</td>
</tr>
<tr>
<td>Title:</td>
<td>Water Programs Manager</td>
</tr>
<tr>
<td>Address:</td>
<td>333 Valley View Lane  City: Irving  State: TX</td>
</tr>
<tr>
<td>Zip Code:</td>
<td>75061  Zip+4: 6024</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:dstarling@cityofirving.org">dstarling@cityofirving.org</a></td>
</tr>
<tr>
<td>Telephone Number:</td>
<td>9727212281  Date:</td>
</tr>
</tbody>
</table>

Is this person the designated Conservation Coordinator?  ○ Yes  ○ No

Regional Water Planning Group:  C
Groundwater Conservation District:  

Our records indicate that you:

- [ ] Received financial assistance of $500,000 or more from TWDB
- [✓] Have 3,300 or more retail connections
- [✓] Have a surface water right with TCEQ

### A. Population and Service Area Data

1. Current service area size in square miles: 58

<table>
<thead>
<tr>
<th>Attached file(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Name</td>
</tr>
<tr>
<td>COI_WaterServiceArea (002).pdf</td>
</tr>
</tbody>
</table>
# Utility Profile for Retail Water Supplier

2. Historical service area population for the previous five years, starting with the most current year.

<table>
<thead>
<tr>
<th>Year</th>
<th>Historical Population Served By Retail Water Service</th>
<th>Historical Population Served By Wholesale Water Service</th>
<th>Historical Population Served By Wastewater Water Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>263,720</td>
<td>0</td>
<td>263,720</td>
</tr>
<tr>
<td>2022</td>
<td>261,350</td>
<td>0</td>
<td>261,350</td>
</tr>
<tr>
<td>2021</td>
<td>245,690</td>
<td>0</td>
<td>245,690</td>
</tr>
<tr>
<td>2020</td>
<td>242,410</td>
<td>0</td>
<td>242,410</td>
</tr>
<tr>
<td>2019</td>
<td>240,420</td>
<td>0</td>
<td>240,420</td>
</tr>
</tbody>
</table>

3. Projected service area population for the following decades.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2030</td>
<td>282,300</td>
<td>0</td>
<td>282,300</td>
</tr>
<tr>
<td>2040</td>
<td>302,931</td>
<td>0</td>
<td>302,931</td>
</tr>
<tr>
<td>2050</td>
<td>322,211</td>
<td>0</td>
<td>322,211</td>
</tr>
<tr>
<td>2060</td>
<td>346,711</td>
<td>0</td>
<td>346,711</td>
</tr>
<tr>
<td>2070</td>
<td>377,300</td>
<td>0</td>
<td>377,300</td>
</tr>
</tbody>
</table>

4. Described source(s)/method(s) for estimating current and projected populations.

Physical buildout is projected to occur in 2040. The information for this section comes from the Planning and Zoning Department in the City of Irving.

Attached file(s):

<table>
<thead>
<tr>
<th>File Name</th>
<th>File Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Irving Population Projections.pdf</td>
<td></td>
</tr>
</tbody>
</table>
B. System Input

System input data for the previous five years.
Total System Input = Self-supplied + Imported – Exported

<table>
<thead>
<tr>
<th>Year</th>
<th>Water Produced in Gallons</th>
<th>Purchased/Imported Water in Gallons</th>
<th>Exported Water in Gallons</th>
<th>Total System Input</th>
<th>Total GPCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>10,600,925,169</td>
<td>3,856,290,831</td>
<td>0</td>
<td>14,457,216,000</td>
<td>150</td>
</tr>
<tr>
<td>2022</td>
<td>10,005,750,287</td>
<td>4,806,094,713</td>
<td>0</td>
<td>14,811,845,000</td>
<td>155</td>
</tr>
<tr>
<td>2021</td>
<td>7,492,977,982</td>
<td>6,020,357,066</td>
<td>0</td>
<td>13,513,335,048</td>
<td>151</td>
</tr>
<tr>
<td>2020</td>
<td>7,951,111,817</td>
<td>5,775,114,183</td>
<td>0</td>
<td>13,726,226,000</td>
<td>155</td>
</tr>
<tr>
<td>2019</td>
<td>5,899,922,109</td>
<td>7,785,327,891</td>
<td>0</td>
<td>13,684,250,000</td>
<td>156</td>
</tr>
<tr>
<td>Historic Average</td>
<td>8,389,937,473</td>
<td>5,646,636,937</td>
<td>0</td>
<td>14,038,574,410</td>
<td>153</td>
</tr>
</tbody>
</table>

C. Water Supply System

1. Designed daily capacity of system in gallons 199,800,000

2. Storage Capacity
   2a. Elevated storage in gallons: 15,500,000
   2b. Ground storage in gallons: 57,000,000
UTILITY PROFILE FOR RETAIL WATER SUPPLIER

D. Projected Demands

1. The estimated water supply requirements for the next ten years using population trends, historical water use, economic growth, etc.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Water Demand (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2025</td>
<td>268,488</td>
<td>15,728,401,150</td>
</tr>
<tr>
<td>2026</td>
<td>270,904</td>
<td>15,897,983,800</td>
</tr>
<tr>
<td>2027</td>
<td>273,342</td>
<td>16,068,931,550</td>
</tr>
<tr>
<td>2028</td>
<td>275,803</td>
<td>16,286,781,220</td>
</tr>
<tr>
<td>2029</td>
<td>278,285</td>
<td>16,415,002,650</td>
</tr>
<tr>
<td>2030</td>
<td>279,113</td>
<td>1,652,541,767</td>
</tr>
<tr>
<td>2031</td>
<td>282,851</td>
<td>16,635,800,884</td>
</tr>
<tr>
<td>2032</td>
<td>286,589</td>
<td>16,746,200,000</td>
</tr>
<tr>
<td>2033</td>
<td>290,327</td>
<td>16,856,599,118</td>
</tr>
<tr>
<td>2034</td>
<td>294,065</td>
<td>16,966,998,235</td>
</tr>
</tbody>
</table>

2. Description of source data and how projected water demands were determined.

Population projections were provided by the City of Irving Planning and Zoning Department. The water demand projections were based on these population and employment projections along with gallons per capita estimates used in the City Irving’s update to the Water Distribution Master Plan.

E. High Volume Customers

1. The annual water use for the five highest volume RETAIL customers.

<table>
<thead>
<tr>
<th>Customer</th>
<th>Water Use Category</th>
<th>Annual Water Use</th>
<th>Treated or Raw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keurig Dr. Pepper</td>
<td>Industrial</td>
<td>313,854,000</td>
<td>Treated</td>
</tr>
<tr>
<td>Irving Plant</td>
<td>Industrial</td>
<td>268,356,000</td>
<td>Treated</td>
</tr>
<tr>
<td>America’s Beverage Company</td>
<td>Industrial</td>
<td>181,168,000</td>
<td>Treated</td>
</tr>
<tr>
<td>Quality Technology Services</td>
<td>Industrial</td>
<td>80,309,000</td>
<td>Treated</td>
</tr>
<tr>
<td>Trinity Valley Foods</td>
<td>Industrial</td>
<td>66,094,000</td>
<td>Treated</td>
</tr>
</tbody>
</table>

2. The annual water use for the five highest volume WHOLESALE customers.

<table>
<thead>
<tr>
<th>Customer</th>
<th>Water Use Category</th>
<th>Annual Water Use</th>
<th>Treated or Raw</th>
</tr>
</thead>
</table>
UTILITY PROFILE FOR RETAIL WATER SUPPLIER

F. Utility Data Comment Section

Additional comments about utility data.

Section II: System Data

A. Retail Water Supplier Connections

1. List of active retail connections by major water use category.

<table>
<thead>
<tr>
<th>Water Use Category Type</th>
<th>Total Retail Connections (Active + Inactive)</th>
<th>Percent of Total Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential - Single Family</td>
<td>42,614</td>
<td>37.91 %</td>
</tr>
<tr>
<td>Residential - Multi-Family</td>
<td>61,131</td>
<td>54.39 %</td>
</tr>
<tr>
<td>Industrial</td>
<td>47</td>
<td>0.04 %</td>
</tr>
<tr>
<td>Commercial</td>
<td>8,032</td>
<td>7.15 %</td>
</tr>
<tr>
<td>Institutional</td>
<td>575</td>
<td>0.51 %</td>
</tr>
<tr>
<td>Agricultural</td>
<td>0</td>
<td>0.00 %</td>
</tr>
<tr>
<td>Total</td>
<td>112,399</td>
<td>100.00 %</td>
</tr>
</tbody>
</table>

2. Net number of new retail connections by water use category for the previous five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Residential - Single Family</th>
<th>Residential - Multi-Family</th>
<th>Industrial</th>
<th>Commercial</th>
<th>Institutional</th>
<th>Agricultural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>0</td>
<td>2,540</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td>2,540</td>
</tr>
<tr>
<td>2022</td>
<td>0</td>
<td>185</td>
<td>0</td>
<td>1,575</td>
<td>6</td>
<td></td>
<td>1,766</td>
</tr>
<tr>
<td>2021</td>
<td>356</td>
<td>365</td>
<td>1</td>
<td>726</td>
<td></td>
<td></td>
<td>1,448</td>
</tr>
<tr>
<td>2020</td>
<td>974</td>
<td>2,957</td>
<td>29</td>
<td>1,947</td>
<td>327</td>
<td></td>
<td>6,234</td>
</tr>
<tr>
<td>2019</td>
<td>413</td>
<td>384</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>797</td>
</tr>
</tbody>
</table>
UTILITY PROFILE FOR RETAIL WATER SUPPLIER

B. Accounting Data

The previous five years' gallons of RETAIL water provided in each major water use category.

<table>
<thead>
<tr>
<th>Year</th>
<th>Residential - Single Family</th>
<th>Residential - Multi-Family</th>
<th>Industrial</th>
<th>Commercial</th>
<th>Institutional</th>
<th>Agricultural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>4,348,410,000</td>
<td>3,709,685,000</td>
<td>968,637,000</td>
<td>3,691,810,000</td>
<td>299,485,000</td>
<td>0</td>
<td>13,018,027,000</td>
</tr>
<tr>
<td>2022</td>
<td>4,420,458,000</td>
<td>3,850,620,000</td>
<td>972,387,000</td>
<td>3,701,408,000</td>
<td>292,841,000</td>
<td>0</td>
<td>13,237,714,000</td>
</tr>
<tr>
<td>2021</td>
<td>3,951,553,000</td>
<td>3,580,208,000</td>
<td>902,850,000</td>
<td>3,098,449,000</td>
<td>285,929,000</td>
<td>0</td>
<td>11,818,989,000</td>
</tr>
<tr>
<td>2020</td>
<td>4,200,588,000</td>
<td>3,564,948,000</td>
<td>810,947,000</td>
<td>3,313,532,000</td>
<td>277,567,000</td>
<td>0</td>
<td>12,167,582,000</td>
</tr>
<tr>
<td>2019</td>
<td>3,967,783,000</td>
<td>3,509,556,000</td>
<td>768,646,000</td>
<td>3,897,535,000</td>
<td>150,847,000</td>
<td>0</td>
<td>12,294,367,000</td>
</tr>
</tbody>
</table>

C. Residential Water Use

The previous five years residential GPCD for single family and multi-family units.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Residential GPCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>84</td>
</tr>
<tr>
<td>2022</td>
<td>87</td>
</tr>
<tr>
<td>2021</td>
<td>84</td>
</tr>
<tr>
<td>2020</td>
<td>88</td>
</tr>
<tr>
<td>2019</td>
<td>85</td>
</tr>
<tr>
<td>Historic Average</td>
<td>86</td>
</tr>
</tbody>
</table>
D. Annual and Seasonal Water Use

1. The previous five years’ gallons of treated water provided to RETAIL customers.

<table>
<thead>
<tr>
<th>Month</th>
<th>2023</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>926,163,000</td>
<td>914,066,000</td>
<td>897,104,400</td>
<td>909,724,000</td>
<td>873,399,000</td>
</tr>
<tr>
<td>February</td>
<td>821,012,000</td>
<td>829,612,000</td>
<td>891,793,000</td>
<td>834,755,000</td>
<td>786,149,000</td>
</tr>
<tr>
<td>March</td>
<td>918,308,000</td>
<td>958,920,000</td>
<td>928,160,000</td>
<td>876,800,000</td>
<td>890,730,000</td>
</tr>
<tr>
<td>April</td>
<td>1,015,760,000</td>
<td>1,024,159,000</td>
<td>956,220,000</td>
<td>904,300,000</td>
<td>956,439,000</td>
</tr>
<tr>
<td>May</td>
<td>1,096,420,000</td>
<td>1,201,700,000</td>
<td>993,250,000</td>
<td>1,131,810,000</td>
<td>1,002,670,000</td>
</tr>
<tr>
<td>June</td>
<td>1,238,158,000</td>
<td>1,431,981,000</td>
<td>1,130,210,000</td>
<td>1,353,284,000</td>
<td>1,102,556,000</td>
</tr>
<tr>
<td>July</td>
<td>1,602,997,000</td>
<td>1,892,944,000</td>
<td>1,407,824,000</td>
<td>1,496,293,000</td>
<td>1,432,200,000</td>
</tr>
<tr>
<td>August</td>
<td>1,863,678,000</td>
<td>1,751,653,000</td>
<td>1,446,985,000</td>
<td>1,674,094,000</td>
<td>1,684,716,000</td>
</tr>
<tr>
<td>September</td>
<td>1,585,380,000</td>
<td>1,446,780,000</td>
<td>1,449,920,000</td>
<td>1,238,760,000</td>
<td>1,607,680,000</td>
</tr>
<tr>
<td>October</td>
<td>1,350,604,000</td>
<td>1,393,010,000</td>
<td>1,306,260,000</td>
<td>1,290,125,000</td>
<td>1,427,250,000</td>
</tr>
<tr>
<td>November</td>
<td>1,066,284,000</td>
<td>1,010,980,000</td>
<td>1,073,440,000</td>
<td>1,069,670,000</td>
<td>967,320,000</td>
</tr>
<tr>
<td>December</td>
<td>972,452,000</td>
<td>956,040,000</td>
<td>997,649,000</td>
<td>946,611,000</td>
<td>953,141,000</td>
</tr>
</tbody>
</table>

| Total   | 14,457,216,000 | 14,811,845,000 | 13,478,815,400 | 13,726,226,00 | 13,684,250,00 |

Page 7 of 12
# Utility Profile for Retail Water Supplier

2. The previous five years' gallons of raw water provided to RETAIL customers.

<table>
<thead>
<tr>
<th>Month</th>
<th>2023</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>February</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>March</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>July</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>August</td>
<td></td>
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</tr>
<tr>
<td>September</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>October</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>November</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Summary of seasonal and annual water use.

<table>
<thead>
<tr>
<th>Year</th>
<th>Summer RETAIL (Treated + Raw)</th>
<th>Total RETAIL (Treated + Raw)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>4,704,833,000</td>
<td>14,457,216,000</td>
</tr>
<tr>
<td>2022</td>
<td>5,076,578,000</td>
<td>14,811,845,000</td>
</tr>
<tr>
<td>2021</td>
<td>3,985,019,000</td>
<td>13,478,815,400</td>
</tr>
<tr>
<td>2020</td>
<td>4,523,671,000</td>
<td>13,726,226,000</td>
</tr>
<tr>
<td>2019</td>
<td>4,219,472,000</td>
<td>13,684,250,000</td>
</tr>
<tr>
<td>Average in Gallons</td>
<td>4,501,914,600.00</td>
<td>14,031,670,480.00</td>
</tr>
</tbody>
</table>
**UTILITY PROFILE FOR RETAIL WATER SUPPLIER**

**E. Water Loss**

Water Loss data for the **previous five years**.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Water Loss in Gallons</th>
<th>Water Loss in GPCD</th>
<th>Water Loss as a Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>1,217,347,540</td>
<td>13</td>
<td>8.42 %</td>
</tr>
<tr>
<td>2022</td>
<td>1,319,680,709</td>
<td>14</td>
<td>8.91 %</td>
</tr>
<tr>
<td>2021</td>
<td>1,396,543,954</td>
<td>16</td>
<td>10.33 %</td>
</tr>
<tr>
<td>2020</td>
<td>1,386,378,251</td>
<td>16</td>
<td>10.10 %</td>
</tr>
<tr>
<td>2019</td>
<td>1,251,152,616</td>
<td>14</td>
<td>9.14 %</td>
</tr>
<tr>
<td>Average</td>
<td>1,314,220,614</td>
<td>15</td>
<td>9.38 %</td>
</tr>
</tbody>
</table>

**F. Peak Day Use**

Average Daily Water Use and Peak Day Water Use for the **previous five years**.

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Daily Use (gal)</th>
<th>Peak Day Use (gal)</th>
<th>Ratio (peak/avg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>39,608,810</td>
<td>51139489</td>
<td>1.2911</td>
</tr>
<tr>
<td>2022</td>
<td>40,580,397</td>
<td>55180195</td>
<td>1.3590</td>
</tr>
<tr>
<td>2021</td>
<td>36,928,261</td>
<td>43315423</td>
<td>1.1730</td>
</tr>
<tr>
<td>2020</td>
<td>37,606,098</td>
<td>49170336</td>
<td>1.3075</td>
</tr>
<tr>
<td>2019</td>
<td>37,491,095</td>
<td>45863826</td>
<td>1.2233</td>
</tr>
</tbody>
</table>

**G. Summary of Historic Water Use**

<table>
<thead>
<tr>
<th>Water Use Category</th>
<th>Historic Average</th>
<th>Percent of Connections</th>
<th>Percent of Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential - Single Family</td>
<td>4,177,758,400</td>
<td>37.91 %</td>
<td>33.40 %</td>
</tr>
<tr>
<td>Residential - Multi-Family</td>
<td>3,643,003,400</td>
<td>54.39 %</td>
<td>29.13 %</td>
</tr>
<tr>
<td>Industrial</td>
<td>884,693,400</td>
<td>0.04 %</td>
<td>7.07 %</td>
</tr>
<tr>
<td>Commercial</td>
<td>3,540,546,800</td>
<td>7.15 %</td>
<td>28.31 %</td>
</tr>
<tr>
<td>Institutional</td>
<td>261,333,800</td>
<td>0.51 %</td>
<td>2.09 %</td>
</tr>
<tr>
<td>Agricultural</td>
<td>0</td>
<td>0.00 %</td>
<td>0.00 %</td>
</tr>
</tbody>
</table>
### UTILITY PROFILE FOR RETAIL WATER SUPPLIER

**H. System Data Comment Section**

- Chart A-2 in Section II: System Data will not accept negative values for decreases in retail connections.
- Table F. Peak Day Use is incorrect; City of Irving historical data shows different values for peak day use.

### Section III: Wastewater System Data

#### A. Wastewater System Data

1. Design capacity of wastewater treatment plant(s) in gallons per day: __________

2. List of active wastewater connections by major water use category:

<table>
<thead>
<tr>
<th>Water Use Category</th>
<th>Metered</th>
<th>Unmetered</th>
<th>Total Connections</th>
<th>Percent of Total Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal</td>
<td>42,614</td>
<td></td>
<td>42,614</td>
<td>37.91 %</td>
</tr>
<tr>
<td>Industrial</td>
<td>61,131</td>
<td></td>
<td>61,131</td>
<td>54.39 %</td>
</tr>
<tr>
<td>Commercial</td>
<td>47</td>
<td></td>
<td>47</td>
<td>0.04 %</td>
</tr>
<tr>
<td>Institutional</td>
<td>8,032</td>
<td></td>
<td>8,032</td>
<td>7.15 %</td>
</tr>
<tr>
<td>Agricultural</td>
<td>575</td>
<td></td>
<td>575</td>
<td>0.51 %</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>112,399</td>
<td></td>
<td>112,399</td>
<td>100.00 %</td>
</tr>
</tbody>
</table>

3. Percentage of water serviced by the wastewater system: 100.00 %
UTILITY PROFILE FOR RETAIL WATER SUPPLIER

4. Number of gallons of wastewater that was treated by the utility for the previous five years.

<table>
<thead>
<tr>
<th>Month</th>
<th>2023</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>722,007</td>
<td>706,540</td>
<td>715,768</td>
<td>865,630</td>
<td>813,994</td>
</tr>
<tr>
<td>February</td>
<td>753,799</td>
<td>679,979</td>
<td>681,691</td>
<td>776,859</td>
<td>693,494</td>
</tr>
<tr>
<td>March</td>
<td>783,137</td>
<td>739,562</td>
<td>748,979</td>
<td>980,199</td>
<td>788,653</td>
</tr>
<tr>
<td>April</td>
<td>718,646</td>
<td>736,608</td>
<td>740,977</td>
<td>726,006</td>
<td>1,029,351</td>
</tr>
<tr>
<td>May</td>
<td>745,619</td>
<td>723,143</td>
<td>873,909</td>
<td>890,308</td>
<td>1,136,337</td>
</tr>
<tr>
<td>June</td>
<td>713,903</td>
<td>687,498</td>
<td>796,179</td>
<td>847,805</td>
<td>900,739</td>
</tr>
<tr>
<td>July</td>
<td>696,560</td>
<td>697,334</td>
<td>764,078</td>
<td>751,270</td>
<td>742,692</td>
</tr>
<tr>
<td>August</td>
<td>699,633</td>
<td>792,146</td>
<td>767,027</td>
<td>758,072</td>
<td>764,164</td>
</tr>
<tr>
<td>September</td>
<td>685,182</td>
<td>709,555</td>
<td>696,845</td>
<td>790,892</td>
<td>682,090</td>
</tr>
<tr>
<td>October</td>
<td>794,067</td>
<td>738,779</td>
<td>751,798</td>
<td>723,949</td>
<td>835,714</td>
</tr>
<tr>
<td>November</td>
<td>687,353</td>
<td>753,733</td>
<td>739,550</td>
<td>680,239</td>
<td>726,476</td>
</tr>
<tr>
<td>December</td>
<td>756,932</td>
<td>783,341</td>
<td>708,299</td>
<td>771,147</td>
<td>726,260</td>
</tr>
<tr>
<td>Total</td>
<td>8,756,838</td>
<td>8,748,218</td>
<td>8,987,100</td>
<td>9,563,176</td>
<td>9,839,964</td>
</tr>
</tbody>
</table>

5. Could treated wastewater be substituted for potable water?

- Yes
- No

B. Reuse Data

1. Data by type of recycling and reuse activities implemented during the current reporting period.

<table>
<thead>
<tr>
<th>Type of Reuse</th>
<th>Total Annual Volume (in gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-site Irrigation</td>
<td>659,104,000</td>
</tr>
<tr>
<td>Plant wash down</td>
<td></td>
</tr>
<tr>
<td>Chlorination/de-chlorination</td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td>314,375</td>
</tr>
<tr>
<td>Landscape irrigation (park, golf courses)</td>
<td>74,263,000</td>
</tr>
<tr>
<td>Agricultural</td>
<td></td>
</tr>
<tr>
<td>Discharge to surface water</td>
<td></td>
</tr>
<tr>
<td>Evaporation Pond</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>733,681,375</td>
</tr>
</tbody>
</table>
UTILITY PROFILE FOR RETAIL WATER SUPPLIER

C. Wastewater System Data Comment

Additional comments and files to support or explain wastewater system data listed below.

- Type of Reuse: On-site irrigation is DCURD; Industrial is Fire Department Training Facility; Landscape irrigation is the Irving Golf Club.
The current water rate structure is as follows:

**Monthly Service Charge**

<table>
<thead>
<tr>
<th>First 3,000 gallons of water usage</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot; and 3/4&quot; Meter</td>
<td>$11.67</td>
</tr>
<tr>
<td>1&quot; Meter</td>
<td>$14.14</td>
</tr>
<tr>
<td>1 1/2&quot; Meter</td>
<td>$19.82</td>
</tr>
<tr>
<td>2&quot; Meter</td>
<td>$27.97</td>
</tr>
<tr>
<td>3&quot; Meter</td>
<td>$45.02</td>
</tr>
<tr>
<td>4&quot; Meter</td>
<td>$63.01</td>
</tr>
<tr>
<td>6&quot; Meter</td>
<td>$110.18</td>
</tr>
<tr>
<td>8&quot; Meter</td>
<td>$139.16</td>
</tr>
<tr>
<td>10&quot; Meter</td>
<td>$202.27</td>
</tr>
<tr>
<td>12&quot; Meter</td>
<td>$301.19</td>
</tr>
</tbody>
</table>

**Residential, Multifamily and Commercial Water Rates:**

| Next 7,000 gallons                 | $4.72/1,000 gal. |
| Next 10,000 gallons                | $5.09/1,000 gal. |

**More than 20,000 gallons:**

Residential Winter Rates

| October-May consumption            | $5.44/1,000 gal. |

Residential Summer Rates

| June-September consumption         | $5.98/1,000 gal. |

Multifamily, Commercial, Industrial, and Private Fire Line

| $5.98/1,000 gal. |

Large Industrial and Fire Hydrant Meter

| $4.46/1,000 gal. |
APPENDIX C

IRVING CITY CODE – CHAPTER 41, ARTICLE IV, SECTION 41-14
Sec. 41-13. - Control of and access to water systems; interference with access generally.

(a) *Water system as city property.* All parts of the city water system are the property of the city. The director shall maintain and control each system and keep detailed records concerning all aspects of department operations.

(b) *Access to system.* Only a person who is authorized by the director will have access to the water system for operation, construction, maintenance, repair, and other service-related purposes.

(c) *Obstruction of authorized persons.* A person commits an offense if he or she knowingly obstructs a person authorized by the director from:

   (1) Gaining access to a part of the water system for purposes of operation, inspection, construction, maintenance or repair; or

   (2) Performing actual operation, inspection, construction, maintenance, or repair of a part of the water system.

(Ord. No. 8140, § 1, 3-20-03)
Sec. 41-14. - Authority under drought conditions.

(a) Purpose and scope. The purpose of this section is to establish the city's policy in the event of shortages or delivery limitations in the city's water supply. This section applies to:

(1) All persons and premises within the city using water from the water system; and

(2) All retail customers who live in incorporated areas within another city's jurisdiction and are served by the city water system.

(b) Water management plan. The director shall promulgate and submit a water management plan to the city council for approval and when it has been approved by the city council it is incorporated by reference in this chapter as if fully set forth in it and it is enforceable as part of this article, the guidelines of which should include:

(1) The conditions under which a particular drought stage will be implemented or terminated; and

(2) Provisions defining specific events that will trigger a drought stage implementation.

(c) Authority. The city manager is authorized to implement measures prescribed in the water management plan when required by this section and by the water management plan approved by the city council. The director is authorized to enforce the measures implemented and to promulgate regulations, to the extent authorized by the water management plan, not in conflict with this section or state and federal laws, in aid of enforcement.

(d) Implementation of drought response. The director, upon determination that the conditions of a drought exist, shall advise the city manager. The city manager may order that the appropriate stage of drought response, as detailed in the water management plan, be implemented. To be effective, the order must be:

(1) Made by public announcement; and

(2) Published in a newspaper of general circulation in the city within twenty-four (24) hours after the public announcement, which order becomes immediately effective upon publication.

(e)
Duration of order; change; extension. Upon recommendation of the director, the city manager may upgrade or downgrade the drought stage when the conditions triggering that stage occur. Any change in the order must be made in the same manner prescribed in subsection (d) for implementing a drought response. The city manager shall terminate the drought stage in the manner prescribed in subsection (d) for implementing a drought response when the director determines that the conditions creating the drought no longer exist. Each stage of drought response shall remain in effect until upgraded, downgraded, or terminated by the city manager.

(f) Violation of section. A person commits an offense if he or she knowingly makes, causes or permits a use of water supplied by the city, contrary to the measures implemented by the city manager as prescribed in the water management plan. For purposes of this section, it is presumed that a person has knowingly made, caused or permitted a use of water supplied by the city, contrary to the measures implemented by the water management plan if the mandatory measures have been formally ordered consistent with the terms of subsection (d) and:

(1) The manner of use has been prohibited by the water management plan; or

(2) The amount of water used exceeds that allowed by the water management plan.

(g) Penalty. A person who commits an offense under this section is guilty of a misdemeanor, punishable by a fine of not less than one dollar ($1.00) and not more than two thousand dollars ($2,000.00). Each day that one (1) or more of the provisions of this section is violated constitutes a separate offense.

(h) Rebuttable presumption. Any person, including a person classified as a water customer of the city, in apparent control of the property where a violation occurs or originates shall be presumed to the violator, and proof that the offense occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the offense, but any such person shall have the right to show that he/she did not commit the offense. Parents shall be presumed to be responsible for offenses committed by their minor children and proof that an offense committed by a minor child occurred on property within their parents' control shall constitute a rebuttable presumption that the parent committed the violation, but any such parent may be excused if
he/she proves that he/she had previously directed the child not to use the water as it was used in violation of the water management plan and that the parent could not have reasonably known of the offense.

(i) Discontinuation of services. If a person is convicted of three (3) or more offenses under this section, the water utilities director shall, upon due notice to the customer, be authorized to discontinue water service to the premises where the offenses occur. Services discontinued under this subsection shall be restored only upon payment of a current connection charge, and any other costs incurred by the city in discontinuing service and upon adequate assurances being provided to the water utilities director that the offense will not reoccur while a drought stage under the water management plan is in effect.

(j) Authority under other laws. Nothing in this section limits the authority of the mayor, the city council, and the city manager to seek emergency relief under the provisions of any state or federal disaster relief act.

(k) Civil remedies. Nothing in this section shall be construed as limiting the city's ability to pursue any other civil remedies to enforce a provision of this section as available under applicable law, including seeking injunctive relief and civil penalties for a violation of this section.

(Ord. No. 8140, § 1, 3-20-03; Ord. No. 8767, § 2, 3-22-07; Ord. No. 2014-9603, § 2, 8-7-14)
Sec. 41-14.1. - Water management regulations.

(a) **Lawn and landscape irrigation restrictions.**

(1) A person commits an offense if the person knowingly or recklessly irrigates, waters or causes or permits the irrigation or watering of a lawn or landscape located on premises owned, leased, or managed by the person in a manner that causes:

a. A substantial amount of water to fall or pond upon impervious areas instead of a lawn or landscaped area, such that a constant stream of water overflows from the lawn or landscaped area onto a street, driveway, parking area, or other drainage area; or

b. An irrigation system or other lawn or landscape watering device to operate during any form of precipitation.

(2) A person commits an offense if, on premises owned, leased or managed by that person, the person operates an irrigation system or other lawn or landscape watering device that:

a. Has any broken or missing sprinkler head; or

b. Has not been properly maintained in a manner that prevents the waste of water.

(3) A person commits an offense if, during the period from April 1 through October 31 of any year and between the hours of 10:00 a.m. and 6:00 p.m. on any day during that period, the person knowingly or recklessly irrigates, waters, or causes or permits the irrigation or watering of any lawn or landscaped area by any means, including use of a hand-held hose or soaker hose, on premises owned, leased, or managed by the person, unless the person is irrigating or watering plants, flowers, grass, or other lawn or landscaping materials at a commercial business which sells those goods to the public.

(4) Except for watering by use of a hand-held hose, a person commits an offense if the person knowingly or recklessly irrigates, waters, or causes or permits irrigation of any lawn or landscaped area on premises owned, leased, or managed by the person more than twice per week or on a different day than allowed by the following schedule:

a. 

about:blank
For even-numbered addresses (ending in 0, 2, 4, 6 or 8), irrigation and watering of lawn or landscaped areas is permitted only on Tuesdays and Saturdays.

b. For odd-numbered addresses (ending in 1, 3, 5, 7, or 9), irrigation and watering of lawn or landscaped areas is permitted only on Wednesdays and Sundays.

c. For a property with multiple addresses, it will follow the schedule determined by using the property's lowest address number.

d. Lawn and landscape watering is prohibited on Mondays, Thursdays and Fridays.

(5) The provisions of section 41-14.1(a)(4) do not apply if the city is under a more restrictive stage of its water management plan, in which case the applicable drought stage restrictions of the water management plan shall apply.

(b) Free-flowing, unattended hoses prohibited. A person commits an offense if the person uses a hose that is not equipped with a positive shut-off nozzle for irrigation purposes, vehicle washing, filling pools or any other use without the person being physically present while the hose is in use.

(c) Water waste prohibited. A person commits an offense if the person knowingly or recklessly permits, allows, or fails to abate the ponding, pooling, leaking, or flowing of water on the person's private property or allows water from the person's private property to enter upon adjacent property owned by another person, public right-of-way, streets, or other public property.

(d) Water service disconnection. The city shall have the authority to terminate water service to make repairs and/or modifications necessary to protect the integrity of the water system or to abate a condition dangerous to the public health, safety or welfare or to abate a violation of this chapter.

(e) Affirmative defense. It shall be an affirmative defense to prosecution of an offense under section 41-14.1(a)(4) that the person is irrigating or watering for the purpose of establishing new plantings, trees or grass that has been installed on the property within the past forty-five (45) days.
Penalty. A person who commits an offense under this section is guilty of a misdemeanor, punishable by a fine of not less than one dollar ($1.00) and not more than two thousand dollars ($2,000.00). Each day that one (1) or more of the provisions of this section is violated constitutes a separate offense.

(g) Civil remedies. Nothing in this section shall be construed as limiting the city's ability to pursue any other civil remedies to enforce a provision of this section as available under applicable law, including seeking injunctive relief and civil penalties for a violation of this section.

(h) Exemptions. The provisions of sections 41-14.1(a)—(b) do not apply to water users who derive their water from non-potable sources or sources other than the city's water system.

(Ord. No. 2008-9027, § 6, 12-11-08; Ord. No. 2011-9259, § 2, 6-9-11; Ord. No. 2014-9604, § 1, 8-7-14)
Sec. 41-14.2. - Rain and freeze sensors.

(a) Any automatic irrigation system installed or operated within the city must be equipped with working rain and freeze sensors.

(b) A person commits an offense if, on premises owned, leased, or managed by the person, the person:

(1) Installs, or causes or permits the installation of, an automatic irrigation system in violation of subsection (a); or

(2) Operates, or causes or permits the operation of, an automatic irrigation system that does not comply with subsection (a).

(Ord. No. 2013-9521, § 1, 11-7-13)

Note—See similar requirements for rain and freeze sensors in Section 8-5 "International Building Code" of the Irving Land Development Code.
APPENDIX D

COUNCIL ADOPTED ORDINANCES FOR AMENDMENTS MADE TO ORDINANCE NO. 7524 OF THE WATER MANAGEMENT PLAN (DROUGHT CONTINGENCY AND WATER CONSERVATION PLAN)
AN ORDINANCE AMENDING APPENDIX “A” ENTITLED “WATER MANAGEMENT PLAN” OF THE CODE OF CIVIL AND CRIMINAL ORDINANCES OF THE CITY OF IRVING, TEXAS, BY UPDATING AND REVISING THE WATER MANAGEMENT PLAN, WHICH INCLUDES THE DROUGHT CONTINGENCY PLAN AND THE WATER CONSERVATION PLAN; PROVIDING A PENALTY CLAUSE; AND PROVIDING REPEALER AND SEVERABILITY CLAUSES

WHEREAS, subsection (b) of Section 41-14 of Chapter 41 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, states in pertinent part: “The director shall promulgate and submit a water management plan to the city council for approval and when it has been approved by the city council it is incorporated by reference in this chapter . . .”; and

WHEREAS, the City adopted a Water Management Plan on August 26, 1999 in Ordinance No. 7524 and amended such Water Management Plan on April 21, 2005 in Ordinance No. 8467; on June 29, 2006 in Ordinance No. 8659; and on March 22, 2007 in Ordinance No. 8767; on December 11, 2008 in Ordinance No. 9027; on April 23, 2009 in Ordinance No. 9064; on June 9, 2011 in Ordinance No. 9259; on December 8, 2011 in Ordinance No. 9302; on August 7, 2014 in Ordinance No. 9603; and on April 18, 2019 in Ordinance No. 10183; and

WHEREAS, the City desires to replace the Water Management Plan adopted on April 18, 2019 with the 2024 Water Management Plan, attached hereto; and

WHEREAS, the City of Irving, Texas, recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require a Water Conservation Plan and a Drought Contingency Plan (collectively referred to as the “Water Management Plan” in this ordinance); and

WHEREAS, the Water Management Plan provides procedures for voluntary and mandatory actions to be placed into effect to reduce water usage and temporarily reduce demand placed on the City’s available water system during water shortages; and

WHEREAS, Texas Local Gov’t Code Sec. 551.007 authorizes a home-rule municipality to adopt and enforce ordinances requiring water conservation in the City and by customers of the City’s municipally owned water and sewer utility; and
WHEREAS, the Irving City Council finds that it is in the best interest of the community to conserve potable water, and deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies; and

WHEREAS, this ordinance is necessary to preserve and protect the health, safety, and welfare of the City of Irving and its citizens, the region, and the State of Texas.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That all matters and recitals stated hereinabove are found to be true and correct and are incorporated herein by reference as if copied in their entirety.

SECTION 2. That Appendix “A” entitled “Water Management Plan” of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is hereby amended by replacing Appendix “A” in its entirety with a new Appendix “A” entitled “2024 Water Management Plan”, which is attached hereto and made a part hereof and is hereby adopted as the official policy of the City of Irving.

SECTION 3. That any person violating or failing to comply with any provision of this ordinance shall be fined upon conviction, not less than One Dollar ($1.00) nor more than Two Thousand Dollars ($2,000.00). Each day in which one or more of the provisions of this ordinance is violated shall constitute a separate offense.

SECTION 4. That all ordinances of the City of Irving, Texas in conflict with the provisions of this Ordinance are hereby repealed to the extent of the conflict.

SECTION 5. That nothing in this ordinance shall be construed to affect any prosecution currently pending, or any suit or proceeding currently proceeding in any Court, or any liability incurred, or any cause or causes of action acquired or existing, under any act or prior ordinance, nor shall any legal right or remedy of the City of any character be lost, impaired, or affected by this ordinance.

SECTION 6. That the terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause, word, or phrase of this ordinance should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause, word, or phrase of this ordinance.

SECTION 7. That this ordinance shall be effective upon passage.
PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS,
on April 11, 2024.

ATTEST:

Shanae Jennings
City Secretary/Chief Compliance Officer

APPROVED AS TO FORM:

Kuruvilla Oommen
City Attorney

ORD-2024-10896

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ORDINANCE NO. ORD-2019-10183

AN ORDINANCE AMENDING APPENDIX "A" ENTITLED "EMERGENCY WATER MANAGEMENT PLAN" AND CHAPTER 41 ENTITLED "WATER AND SEWER SYSTEMS" OF THE CODE OF CIVIL AND CRIMINAL ORDINANCES OF THE CITY OF IRVING, TEXAS, BY UPDATING AND REVISING THE WATER MANAGEMENT PLAN, WHICH INCLUDES THE DROUGHT CONTINGENCY PLAN AND THE WATER CONSERVATION PLAN; BY AMENDING SECTIONS 41-1 AND 41-71(e) TO REFERENCE THE WATER MANAGEMENT PLAN; PROVIDING A PENALTY CLAUSE; AND PROVIDING REPEALER AND SEVERABILITY CLAUSES.

WHEREAS, subsection (b) of Section 41-14 of chapter 41 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, states in pertinent part: "The director shall promulgate and submit a water management plan to the city council for approval and when it has been approved by the city council it is incorporated by reference in this chapter . . . "; and

WHEREAS, the City adopted a Water Management Plan on August 26, 1999, in Ordinance No. 7524 and amended such Water Management Plan on April 21, 2005, in Ordinance No. 8467; on June 29, 2006, in Ordinance No. 8659; and on March 22, 2007, in Ordinance No. 8767; on December 11, 2008, in Ordinance No. 9027; on April 23, 2009, in Ordinance No. 9064; and on June 9, 2011, in Ordinance No. 9259; on December 8, 2011, in Ordinance No. 9302; and on August 7, 2014, in Ordinance No. 9603; and

WHEREAS, the City desires to amend the Water Management Plan adopted on August 7, 2014, and an amended Water Management Plan has been prepared and is attached to this ordinance; and

WHEREAS, the City of Irving, Texas, recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require a Water Conservation Plan and a Drought Contingency Plan (collectively referred to as the "Water Management Plan" in this ordinance); and

WHEREAS, the Water Management Plan provides procedures for voluntary and mandatory actions to be placed into effect to reduce water usage and temporarily reduce demand placed on the City’s available water system during water shortages; and

WHEREAS, Texas Local Gov't Code Sec. 551.007 authorizes a home-rule municipality to adopt and enforce ordinances requiring water conservation in the City and by customers of the City’s municipally owned water and sewer utility; and

WHEREAS, the Irving City Council finds that it is in the best interest of the community to conserve potable water, and deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies; and
WHEREAS, this ordinance is necessary to preserve and protect the health, safety, and welfare of the City of Irving and its citizens, the region, and the State of Texas.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That all matters and recitals stated hereinabove are found to be true and correct and are incorporated herein by reference as if copied in their entirety.

SECTION 2. That Appendix “A” entitled “Emergency Water Management Plan” of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is hereby amended by replacing Appendix “A” in its entirety with a new Appendix “A” entitled “Water Management Plan”, which is attached hereto and made a part hereof and is hereby adopted as the official policy of the City of Irving.

SECTION 3. That Section 41-1 of Chapter 41 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is hereby amended by amending the definition of “Water Emergency” to read as follows:

Water emergency means a condition of water shortage as described in the Water Management Plan.

SECTION 4. That Section 41-71(e) of Chapter 41 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is hereby amended to read as follows:

(e) Enforcement. Any employee certified or licensed by the State of Texas for water, wastewater (sanitary sewer), or irrigation systems work and working as an environmental specialist or technician, or any employee licensed or certified by the State of Texas for code enforcement, may enforce the provisions of this chapter, and may issue a citation to a person the employee reasonably believes to be in violation thereof. In addition and including the foregoing employees, any employee certified or licensed by the State of Texas to work on water, wastewater (sanitary sewer), or irrigation systems, or any other suitable person designated by the director, may enforce the provisions of the Water Management Plan and may issue a citation to a person the employee reasonably believes to be in violation thereof.

SECTION 5. That any person violating or failing to comply with any provision of this ordinance shall be fined upon conviction, not less than One Dollar ($1.00) nor more than Two Thousand Dollars ($2,000.00). Each day in which one or more of the provisions of this ordinance is violated shall constitute a separate offense.

SECTION 6. That all ordinances of the City of Irving, Texas in conflict with the provisions of this Ordinance are hereby repealed to the extent of the conflict.

SECTION 7. That nothing in this ordinance shall be construed to affect any prosecution currently pending, or any suit or proceeding currently proceeding in any Court, or any liability incurred, or any cause or causes of action acquired or existing, under any act or prior ordinance, nor shall any legal right or remedy of the City of any character be lost, impaired, or affected by this ordinance.
SECTION 8. That the terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause, word, or phrase of this ordinance should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause, word, or phrase of this ordinance.

SECTION 9. That this ordinance shall be effective upon passage.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS, on April 18, 2019.

RICHARD H. STOPFER
MAYOR

ATTEST:

Shanae Jennings
City Secretary

APPROVED AS TO FORM:

Kuruvilla Oommen
City Attorney
AN ORDINANCE AMENDING THE CITY OF IRVING EMERGENCY WATER MANAGEMENT PLAN (DROUGHT CONTINGENCY PLAN AND WATER CONSERVATION PLAN); CHANGING THE NAME OF THE PLAN; MODIFYING DROUGHT RESTRICTIONS BY REDUCING TO THREE STAGES; ADDING WATER CONSERVATION FEATURES; AMENDING CHAPTER 41 ENTITLED "WATER AND SEWER SYSTEMS" OF THE CODE OF CIVIL AND CRIMINAL ORDINANCES OF THE CITY OF IRVING, TEXAS, BY AMENDING SECTION 41-14 TO CHANGE THE NAME OF THE PLAN AND TO PROVIDE A PENALTY FOR VIOLATING THE PLAN; REPEALING SECTION 41-16; AND PROVIDING A SEVERABILITY CLAUSE.

WHEREAS, subsection (b) of Section 41-14 of Chapter 41 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, states in pertinent part: “The director shall promulgate and submit an emergency water management plan to the city council for approval and when it has been approved by the city council it is incorporated by reference in this chapter . . .”; and

WHEREAS, the City adopted an Emergency Water Management Plan on August 26, 1999, in Ordinance No. 7524 and amended such Emergency Water Management Plan on April 21, 2005, in Ordinance No. 8467; on June 29, 2006, in Ordinance No. 8659; on March 22, 2007, in Ordinance No. 9027; on December 11, 2008, in Ordinance No. 8767; on April 23, 2009, in Ordinance No. 9064; on June 9, 2011, in Ordinance No. 9259; and on December 8, 2011, in Ordinance No. 9302; and

WHEREAS, the City desires to amend the Emergency Water Management Plan adopted on December 8, 2011, including changing the formal plan name, and an amended Water Management Plan has been prepared and attached to this ordinance; and

WHEREAS, the City of Irving, Texas, recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require a Water Conservation Plan and a Drought Contingency Plan (Water Management Plan); and

WHEREAS, the Water Conservation Plan and Drought Contingency Plan (Water Management Plan) provide procedures for voluntary and mandatory actions to be placed into effect to reduce water usage and temporarily reduce demand placed on the City’s available water system during a water shortage emergency; and

WHEREAS, Local Government Code Section 551.007 authorizes a home-rule municipality to adopt and enforce ordinances requiring water conservation in the municipality and by customers of the municipality’s municipally owned water and sewer utility; and

WHEREAS, the City believes it is in the best interest of the community to conserve potable water, and deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies;
NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That the Water Management Plan (Water Conservation Plan and Drought Contingency Plan) of the City of Irving attached hereto and made a part hereof is hereby adopted as the official policy of the City of Irving.

SECTION 2. That Section 41-14 of Chapter 41 entitled “Water and Sewer Systems” of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is hereby amended in its entirety to read as follows:

Sec. 41-14. Authority under drought conditions.

(a) Purpose and scope. The purpose of this section is to establish the city’s policy in the event of shortages or delivery limitations in the city’s water supply. This section applies to:

(1) All persons and premises within the city using water from the water system; and

(2) All retail customers who live in incorporated areas within another city’s jurisdiction and are served by the city water system.

(b) Water management plan. The director shall promulgate and submit a water management plan to the city council for approval and when it has been approved by the city council it is incorporated by reference in this chapter as if fully set forth in it and it is enforceable as part of this article, the guidelines of which should include:

(1) The conditions under which a particular drought stage will be implemented or terminated; and

(2) Provisions defining specific events that will trigger a drought stage implementation.

(c) Authority. The city manager is authorized to implement measures prescribed in the water management plan when required by this section and by the water management plan approved by the city council. The director is authorized to enforce the measures implemented and to promulgate regulations, to the extent authorized by the water management plan, not in conflict with this section or state and federal laws, in aid of enforcement.

(d) Implementation of drought response. The director, upon determination that the conditions of a drought exist, shall advise the city manager. The city manager may order that the appropriate stage of drought response, as detailed in the water management plan, be implemented. To be effective, the order must be:

(1) Made by public announcement; and

(2) Published in a newspaper of general circulation in the city within 24 hours after the public announcement, which order becomes immediately effective upon publication.

(e) Duration of order; change; extension. Upon recommendation of the director, the city manager may upgrade or downgrade the drought stage when the conditions triggering that stage occur. Any change in the order must be made in the same manner prescribed in subsection (d) for implementing a drought response. The city manager shall terminate the drought stage in the manner prescribed in
subsection (d) for implementing a drought response when the director determines that the conditions creating the drought no longer exist. Each stage of drought response shall remain in effect until upgraded, downgraded, or terminated by the city manager.

(f) **Violation of section.** A person commits an offense if he or she knowingly makes, causes or permits a use of water supplied by the city, contrary to the measures implemented by the city manager as prescribed in the water management plan. For purposes of this section, it is presumed that a person has knowingly made, caused or permitted a use of water supplied by the city, contrary to the measures implemented by the water management plan if the mandatory measures have been formally ordered consistent with the terms of subsection (d) and:

1. The manner of use has been prohibited by the water management plan; or
2. The amount of water used exceeds that allowed by the water management plan.

(g) **Penalty.** A person who commits an offense under this section is guilty of a misdemeanor, punishable by a fine of not less than one dollar ($1.00) and not more than two thousand dollars ($2000.00). Each day that one or more of the provisions of this section is violated constitutes a separate offense.

(h) **Rebuttable presumption.** Any person, including a person classified as a water customer of the city, in apparent control of the property where a violation occurs or originates shall be presumed to the violator, and proof that the offense occurred on the person’s property shall constitute a rebuttable presumption that the person in apparent control of the property committed the offense, but any such person shall have the right to show that he/she did not commit the offense. Parents shall be presumed to be responsible for offenses committed by their minor children and proof that an offense committed by a minor child occurred on property within their parents’ control shall constitute a rebuttable presumption that the parent committed the violation, but any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of the water management plan and that the parent could not have reasonably known of the offense.

(i) **Discontinuation of services.** If a person is convicted of three (3) or more offenses under this section, the water utilities director shall, upon due notice to the customer, be authorized to discontinue water service to the premises where the offenses occur. Services discontinued under this subsection shall be restored only upon payment of a current connection charge, and any other costs incurred by the city in discontinuing service and upon adequate assurances being provided to the water utilities director that the offense will not reoccur while a drought stage under the water management plan is in effect.

(j) **Authority under other laws.** Nothing in this section limits the authority of the mayor, the city council, and the city manager to seek emergency relief under the provisions of any state or federal disaster relief act.

(k) **Civil remedies.** Nothing in this section shall be construed as limiting the city’s ability to pursue any other civil remedies to enforce a provision of this section as available under applicable law, including seeking injunctive relief and civil penalties for a violation of this section.

SECTION 3. That Section 41-16 of Chapter 41 entitled “Water and Sewer Systems” of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is hereby repealed in its entirety.

SECTION 4. Any person violating or failing to comply with any provision of this ordinance

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shall be fined upon conviction, not less than One Dollar ($1.00) nor more than Two Thousand Dollars ($2,000.00). Each day in which one or more of the provisions of this ordinance is violated shall constitute a separate offense.

SECTION 5. That the terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause, or phrase of this ordinance should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause, or phrase of this ordinance.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS, on August 7, 2014.

BETH VAN DUYNE
MAYOR

ATTEST:
Anita C. Corb for Shane Jennings
Shane Jennings
City Secretary

APPROVED AS TO FORM:
Charles R. Anderson
City Attorney
AN ORDINANCE AMENDING THE CITY OF IRVING EMERGENCY WATER MANAGEMENT PLAN (DROUGHT CONTINGENCY PLAN AND WATER CONSERVATION PLAN); PROVIDING A PENALTY; AND PROVIDING A SEVERABILITY CLAUSE.

WHEREAS, subsection (b) of Section 41-14 of chapter 41 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, states in pertinent part: "The director shall promulgate and submit an emergency water management plan to the city council for approval and when it has been approved by the city council it is incorporated by reference in this chapter . . ."; and

WHEREAS, the City adopted an Emergency Water Management Plan on August 26, 1999, in Ordinance No. 7524 and amended such Emergency Water Management Plan on April 21, 2005, in Ordinance No. 8467; on June 29, 2006, in Ordinance No. 8659; and on March 22, 2007, in Ordinance No. 9027; on December 11, 2008, in Ordinance No. 8767; on April 23, 2009, in Ordinance No. 9064; and on June 9, 2011, in Ordinance No. 9259; and

WHEREAS, the City desires to amend the Emergency Water Management Plan adopted on June 9, 2011, and an amended Emergency Water Management Plan has been prepared and attached to this ordinance; and

WHEREAS, the City of Irving, Texas, recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require a Water Conservation Plan and a Drought Contingency Plan (Emergency Water Management Plan); and

WHEREAS, the Water Conservation Plan and Drought Contingency Plan (Emergency Water Management Plan) provide procedures for voluntary and mandatory actions to be placed into effect to reduce water usage and temporarily reduce demand placed on the City's available water system during a water shortage emergency; and

WHEREAS, the City believes it is in the best interest of the community to conserve potable water, and deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That the Emergency Water Management Plan (Water Conservation Plan and Drought Contingency Plan) of the City of Irving attached hereto and made a part hereof is hereby adopted as the official policy of the City of Irving.

SECTION 2. Any person violating or failing to comply with any provision of this ordinance shall be fined upon conviction, not less than One Dollar ($1.00) nor more than Two Thousand Dollars ($2,000.00). Each day in which one or more of the provisions of this ordinance is violated shall constitute a separate offense.
SECTION 3. That the terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause, or phrase of this ordinance should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause, or phrase of this ordinance.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS, on December 8, 2011.

BETH VAN DUYNE
MAYOR

ATTEST:
Shanae Jennings
Acting City Secretary

APPROVED AS TO FORM:
Charles R. Anderson
City Attorney
AN ORDINANCE AMENDING SECTION 41-14.1 OF CHAPTER 41 OF THE CODE OF CIVIL AND CRIMINAL ORDINANCES OF THE CITY OF IRVING, TEXAS, AND THE CITY'S EMERGENCY WATER MANAGEMENT PLAN (DROUGHT CONTINGENCY PLAN AND WATER CONSERVATION PLAN) TO MODIFY 10:00 A.M. TO 6:00 P.M. WATERING RESTRICTIONS; PROVIDING A PENALTY; AND PROVIDING A SEVERABILITY CLAUSE.

WHEREAS, subsection (b) of Section 41-14 of Chapter 41 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, states in pertinent part: "The director shall promulgate and submit an emergency water management plan to the city council for approval and when it has been approved by the city council it is incorporated by reference in this chapter..."; and

WHEREAS, the City adopted an Emergency Water Management Plan on August 26, 1999, in Ordinance No. 7524 and amended such Emergency Water Management Plan on April 21, 2005, in Ordinance No. 8467; on June 29, 2006, in Ordinance No 8659; on March 22, 2007, in Ordinance No. 8767; and on April 23, 2009, in Ordinance No. 9064; and

WHEREAS, the City desires to amend the Emergency Water Management Plan adopted on April 23, 2009, and an amended Emergency Water Management Plan has been prepared and attached to this ordinance; and

WHEREAS, the City of Irving, Texas, recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require a Water Conservation Plan and a Drought Contingency Plan (Emergency Water Management Plan); and

WHEREAS, the Water Conservation Plan and Drought Contingency Plan (Emergency Water Management Plan) provide procedures for voluntary and mandatory actions to be placed into effect to reduce water usage and temporarily reduce demand placed on the City's available water system during a water shortage emergency; and

WHEREAS, the City believes it is in the best interest of the community to conserve potable water, and deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That the Emergency Water Management Plan (Water Conservation Plan and Drought Contingency Plan) of the City of Irving attached hereto and made a part hereof is hereby approved and adopted by the City Council and incorporated by reference in Chapter 41 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas.

SECTION 2. That Section 41-14.1 of Chapter 41 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is hereby amended by adding subsections (c) and (d) to read as follows:
(c) A person commits an offense if, during the period from April 1 through October 31 of any year and between the hours of 10:00 a.m. and 6:00 p.m. on any day during that period, the person knowingly or recklessly irrigates, waters, or causes or permits the irrigation or watering of any lawn or landscape located on premises owned, leased, or managed by the person.

(d) It is an affirmative defense to prosecution under subsection (c) if the person irrigates or waters by means of a hand-held hose unless such means is restricted or prohibited by the emergency water management plan.

SECTION 3. Any person violating or failing to comply with any provision of this ordinance shall be fined upon conviction, not less than One Dollar ($1.00) nor more than Two Thousand Dollars ($2,000.00). Each day in which one or more of the provisions of this ordinance is violated shall constitute a separate offense.

SECTION 4. That the terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause, or phrase of this ordinance should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause, or phrase of this ordinance.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS, on June 9, 2011.

[Signature]
HERBERT A. GEARS
MAYOR

ATTEST:

[Signature]
Shanae Jennings
Acting City Secretary

APPROVED AS TO FORM:

[Signature]
Charles R. Anderson
City Attorney
ORDINANCE NO. ORD-2009-9064

AN ORDINANCE ADOPTING THE CITY OF IRVING EMERGENCY WATER MANAGEMENT PLAN (DROUGHT CONTINGENCY PLAN AND WATER CONSERVATION PLAN); AND PROVIDING FOR PENALTY AND SEVERABILITY.

WHEREAS, subsection (b) of Section 41-14 of chapter 41 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, states in pertinent part: "The director shall promulgate and submit an emergency water management plan to the city council for approval and when it has been approved by the city council it is incorporated by reference in this chapter . . . "; and

WHEREAS, the City adopted an Emergency Water Management Plan on August 26, 1999, in Ordinance No. 7524 and amended such Emergency Water Management Plan on April 21, 2005, in Ordinance No. 8467; on June 29, 2006, in Ordinance No 8659; and on March 22, 2007, in Ordinance No. 8767; and

WHEREAS, the City desires to amend the Emergency Water Management Plan adopted on March 22, 2007, and an amended Emergency Water Management Plan has been prepared and attached to this ordinance; and

WHEREAS, the City of Irving, Texas, recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require a Water Conservation Plan and a Drought Contingency Plan (Emergency Water Management Plan); and

WHEREAS, the Water Conservation Plan and Drought Contingency Plan (Emergency Water Management Plan) provide procedures for voluntary and mandatory actions to be placed into effect to reduce water usage and temporarily reduce demand placed on the City's available water system during a water shortage emergency; and

WHEREAS, the City believes it is in the best interest of the community to conserve potable water, and deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought and other water supply emergencies;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That the Emergency Water Management Plan (Water Conservation Plan and Drought Contingency Plan) of the City of Irving attached hereto and made a part hereof is hereby adopted as the official policy of the City of Irving.

SECTION 2. Any person violating or failing to comply with any provision of this ordinance shall be fined upon conviction, not less than One Dollar ($1.00) nor more than Two Thousand Dollars ($2,000.00). Each day in which one or more of the provisions of this ordinance is violated shall constitute a separate offense.
SECTION 3. That the terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause, or phrase of this ordinance should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause, or phrase of this ordinance.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS, on April 23, 2009.

HERBERT A. GEARS
MAYOR

ATTEST:
Janice Carroll, TRMC
City Secretary

APPROVED AS TO FORM:
Charles R. Anderson
City Attorney
ORDINANCE NO. ORD-2008-9027

AN ORDINANCE AMENDING CHAPTERS 8 AND 41 OF THE CODE OF CIVIL AND CRIMINAL ORDINANCES OF THE CITY OF IRVING, TEXAS RELATING TO IRRIGATION SYSTEMS; AMENDING THE 2003 INTERNATIONAL BUILDING CODE BY REVISIONING APPENDIX K ENTITLED “FEE SCHEDULE”; AMENDING THE 2003 INTERNATIONAL RESIDENTIAL CODE AND THE 2003 INTERNATIONAL PLUMBING CODE BY ADDING APPENDIX I “IRRIGATION SYSTEMS” TO SUCH CODES; PROVIDING PENALTY, SEVERABILITY, AND AN EFFECTIVE DATE.

WHEREAS, the City Council of the City of Irving 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 Irving; 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 Irving.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That the findings contained in the preamble of this ordinance are determined to be true and correct and are hereby adopted as a part of this ordinance.

SECTION 2. That Section 8-5 of Chapter 8 entitled “Irving Building Standards Code” of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is amended by adding a new Subitem f. “Landscape irrigation systems” to Item 10. of Section K102 entitled “Combination Permit Fee Schedule (Building, Electrical, Plumbing, and Mechanical)” of Appendix K entitled “Fee Schedule,” to read as follows:

f. Landscape irrigation systems - $100 for one or two family residential; $150 for commercial.

SECTION 3. That Section 8-6(b) of Chapter 8 entitled “Irving Building Standards Code” of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is amended by revising Section R102.5 of Section R102 “Applicability” of Chapter 1 “Administration” of the 2003 International Residential Code to read as follows:

R102.5 Appendices. Provisions in the appendices shall not apply unless specifically adopted. Appendix A “Sizing and Capacities of Gas Piping”; Appendix B “Sizing of Venting Systems Serving Appliances Equipped with Draft Hoods, Category I Appliances, and Appliances Listed for Use and
Type B Vents”; Appendix C “Exit Terminals of Mechanical Draft and Direct-Vent Venting Systems”; Appendix G “Swimming Pools, Spas and Hot Tubs”; Appendix H “Patio Covers”; Appendix I “Irrigation Systems”; and Appendix M “Aircraft Noise Attenuation Requirements” are hereby adopted as amended and shall be considered part of the requirements of this code.

SECTION 4. That Section 8-8(b) of Chapter 8 entitled “Irving Building Standards Code” of the Code of Civil and Criminal Ordinances of the City of Irving, Texas, is amended by adding a new Section R102.10 of Section 102 “Applicability” of Chapter 1 “Administration” of the 2003 International Plumbing Code to read as follows:

R102.10 Appendices. Provisions in the appendices shall not apply unless specifically adopted. Appendix I “Irrigation Systems” is hereby adopted and shall be considered part of the requirements of this code.

SECTION 5. That Sections 8-6(b) and 8-8(b) of Chapter 8 entitled “Irving Building Standards Code” of the Code of Civil and Criminal Ordinances of the City of Irving, Texas, relating to the 2003 International Residential Code and the 2003 International Plumbing Code, respectively, are amended by adding a new Appendix I “Irrigation Systems” to such Codes, to read as follows:

APPENDIX I

IRRIGATION SYSTEMS

I101.1 Scope. This appendix applies to the installation, alteration, repairs, relocation, replacement, addition to, use, or maintenance of irrigation systems within the city. This appendix regulates the installation of backflow prevention devices, control valves, automatic irrigation controllers, control wiring, and water conservation required for the proper design, installation, and operation of irrigation systems. All irrigation systems must comply with the provisions of this appendix and with Title 30, Texas Administrative Code, Chapter 344.

I101.2 Purpose. The purpose of this appendix is to require all irrigation systems to be designed, installed, maintained, altered, repaired, serviced, and operated in a manner that will promote water conservation.

I101.3 Definitions. The following words and terms shall have the meanings shown herein.

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.

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 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, Title 26, United States Code Service, Section 3212(d) based on the behavioral control, financial control, and the type of relationship involved in performing employment related tasks.

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

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 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.

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.

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 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 Section 251.002.

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.

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, offers consultations regarding, installs, maintains, alters, repairs, services, or supervises the installation of an irrigation system, including the connection of such system to a private or public, raw or potable water supply system, or any water supply, and who is required to be licensed under Title 30, Texas Administrative Code, Chapter 30.

IRRIGATOR-IN-CHARGE. 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.

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

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.

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 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.

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.

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.

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.

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.

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.

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.

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 zone flow is the total flow of all nozzles in the zone at a specific pressure.

ZONE VALVE. An automatic valve that controls a single zone of a landscape irrigation system.

I101.4 License.

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

Exemption: A homeowner is not required to be licensed in accordance with Title 12, Texas Occupations Code Section 1903.002(c)(1) if the homeowner is performing irrigation work in a building or on a premises owned and occupied by the homeowner as the homeowner’s homestead. A homeowner 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 and freeze sensors, backflow prevention and isolation valves.

I101.5 Permit.

Any person or homeowner installing an irrigation system in 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 appendix.

Exemptions:

1. An irrigation system that is an on-site sewage disposal system, as defined by Texas Health and Safety Code, Section 355.002; or
2. An irrigation system used on or by an agricultural operation as defined by Section 251.002, Texas Agriculture Code, Section 251.002; or

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

I101.6 Backflow prevention methods and devices.

1. 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 device must be approved by: the American Society of Sanitary Engineers; the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California; the 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.

2. If conditions that present a health hazard exist, one of the following methods must be used to prevent backflow:

   a. An air gap may be used if:

      i. There is an unobstructed physical separation; and

      ii. 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.

   b. Reduced pressure principle backflow prevention assemblies may be used if:

      i. The device is installed at a minimum of 12 inches above ground in a location that will ensure that the assembly will not be submerged; and

      ii. Drainage is provided for any water that may be discharged through the assembly relief valve.

   c. Pressure vacuum breakers may be used if:

      i. No back-pressure condition will occur; and

      ii. 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.

   d. Atmospheric vacuum breakers may be used if:

      i. No back-pressure will be present;

      ii. There are no shutoff valves downstream from the atmospheric vacuum breaker;
iii. 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;

iv. 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

v. 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.

3. Backflow prevention devices used in applications designated as health hazards must be tested upon installation and annually thereafter.

4. 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.

5. If a double check valve is installed below ground:
   a. Test cocks must be plugged, except when the double check valve is being tested;
   b. Test cock plugs must be threaded, water-tight, and made of non-ferrous material;
   c. A y-type strainer is installed on the inlet side of the double check valve;
   d. 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
   e. There must be space on the side of the double check valve to test and repair the double check valve.

6. 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.

7. 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.

8. 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.
1101.7 Specific conditions and cross-connection control.

1. 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.

2. 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.

3. 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.

4. 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:
   
a. All irrigation piping and valves must meet the separation distances from the on-site sewage facilities system as required for a private water line in Title 30, Texas Administrative Code, Section 285.91(10);

b. Any connections using a private or public potable water source that is not the city’s potable water system must be connected to the water source through a reduced pressure principle backflow prevention assembly as defined in Title 30, Texas Administrative Code, Section 344.50; and

c. 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.

1101.8 Irrigation plan design: Minimum standards.

1. 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 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 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:

   a. Diminish the operational integrity of the irrigation system;

   b. Violate any requirements of this appendix; and

   c. Go unnoted in red on the irrigation plan.

2. 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.
3. All irrigation plans used for construction must be drawn to scale. The plan must include, at a minimum, the following information:

a. The irrigator's seal, signature, and date of signing;

b. All major physical features and the boundaries of the areas to be watered;

c. A North arrow;

d. A legend;

e. The zone flow measurement for each zone;

f. Location and type of each:
   i. Controller; and
   ii. Sensor (i.e., rain and freeze);


g. Location, type, and size of each:
   i. Water source, including, but not limited to, a water meter and point(s) of connection;
   ii. Backflow prevention device;
   iii. Water emission device, including, but not limited to, spray heads, rotary sprinkler heads, quick-couplers, bubblers, drip, or micro-sprays;
   iv. Valve, including but not limited to, zone valves, master valves, and isolation valves;
   v. Pressure regulation component; and
   vi. Main line and lateral piping.

h. The scale used; and

i. The design pressure.

1101.9 Design and installation: Minimum requirements.

1. 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.
2. Spacing.
   
a. 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.

b. 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, including, but not limited to, a building foundation, fence, concrete, asphalt, pavers, or stones set with mortar.

c. 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.

3. 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.

4. 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.

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

6. 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.

7. 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.

8. Master valve. When provided, a master valve shall be installed on the discharge side of the backflow prevention device on all new installations.

9. PVC pipe primer solvent. All new irrigation systems that are installed using PVC pipe and fittings shall be primed with a purple primer prior to applying the PVC cement in accordance with the International Plumbing Code, Section 605.
10. Rain and freeze sensors.

a. Any commercial, industrial, multi-family, or residential customer class irrigation system installed within the City on or after January 1, 2009, must be equipped with rain and freeze sensors.

b. Any commercial, industrial, or multi-family customer class irrigation system installed within the City before January 1, 2009, may not be operated after January 1, 2010, without being equipped with rain and freeze sensors.

c. Any residential customer class irrigation system installed within the City before January 1, 2009, may not be operated after January 1, 2011, without being equipped with rain and freeze sensors. If a person repairs or replaces more than 50% of a residential customer class irrigation system before January 1, 2011, then such irrigation system must be equipped with rain and freeze sensors.

d. Any rain and freeze sensor shall be installed according to the manufacturer's published recommendation and shall be from a list approved by the public works director.

e. Repairs to existing automatic irrigation systems that require replacement of an existing controller shall include a rain and freeze sensor designed to inhibit or interrupt operation of the irrigation system during periods of freezing temperatures and rainfall.

11. Isolation valve. All new irrigation systems must include a lockable isolation valve between the water meter and the backflow prevention device.

12. Depth coverage of piping. Piping in all irrigation systems must be installed according to the manufacturer's published specifications for depth coverage of piping.

a. 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.

b. 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.

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

13. Wiring irrigation systems.

a. 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.
b. Electrical wiring that connects any electrical components of an irrigation system must be sized according to the manufacturer's recommendation.

c. Electrical wire splices which may be exposed to moisture must be waterproof as certified by the wire splice manufacturer.

d. 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.

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

15. 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 on-site, the irrigator shall be responsible for ensuring that a licensed irrigation technician is on-site to supervise the installation of the irrigation system.

II01.10 Completion of irrigation system installation. Upon completion of the irrigation system, the irrigator or irrigation technician who provided supervision for the on-site installation shall be required to complete four items:

1. A final "walk through" with the irrigation system's owner or the owner's representative to explain the operation of the system.

2. The maintenance checklist on which the irrigator or irrigation technician shall obtain the signature of the irrigation system's owner or owner's representative and shall sign, date, and seal the checklist. If the irrigation system's owner or owner's representative is unwilling or unable to sign the maintenance checklist, the irrigator shall note the time and date of the refusal on the irrigation system's owner or owner's representative's signature line. The irrigation system owner or owner's representative will be given the original maintenance checklist and a duplicate copy of the maintenance checklist shall be maintained by the irrigator. The items on the maintenance checklist shall include, but are not limited to:

   a. The manufacturer's manual for the automatic controller, if the system is automatic;

   b. 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;

   c. A list of components, such as the nozzle, pump filters, and other such components, that require maintenance and the recommended frequency for the service; and
d. 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. 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 with waterproof ink.

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

I101.11 Maintenance, alteration, repair, or service of irrigation systems.

1. 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.

2. 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.

3. Purple 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.

4. When maintenance, alteration, repair, or service of an irrigation system involves excavation work at the water meter or backflow prevention device, a lockable isolation valve shall be installed, if an isolation valve is not present.

I101.12 Reclaimed water. Reclaimed water may be utilized in landscape irrigation systems if:

1. There is no direct contact with edible crops, unless the crop is pasteurized before consumption;

2. The irrigation system does not spray water across property lines that do not belong to the irrigation system's owner;

3. The irrigation system is installed using purple components;

4. The domestic potable water line is connected using an air gap or a reduced pressure principle backflow prevention device, in accordance with Title 30, Texas Administrative Code, Section 290.47(i);

5. A minimum of an eight inch by eight inch sign, in English and Spanish, is prominently posted on/in the area that is being irrigated, that reads, "RECLAIMED WATER – DO NOT DRINK" and "AGUA DE RECUPERACIÓN – NO BEBER"; and
6. Backflow prevention on the reclaimed water supply line shall be in accordance with city ordinances.

SECTION 6. That Chapter 41 entitled "Water and Sewer Systems" of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is amended by adding a new Section 41-14.1 "Lawn and landscape irrigation restrictions," to read as follows:

Sec. 41-14.1. Lawn and landscape irrigation restrictions.

(a) A person commits an offense if the person knowingly or recklessly irrigates, waters, or causes or permits the irrigation or watering of a lawn or landscape located on premises owned, leased, or managed by the person in a manner that causes:

(1) A substantial amount of water to fall upon impervious areas instead of a lawn or landscape, such that a constant stream of water overflows from the lawn or landscape onto a street or other drainage area; or

(2) An irrigation system or other lawn or landscape watering device to operate during any form of precipitation.

(b) A person commits an offense if, on premises owned, leased, or managed by that person, the person operates an irrigation system or other lawn or landscape watering device that:

(1) Has any broken or missing sprinkler head; or

(2) Has not been properly maintained in a manner that prevents the waste of water.

SECTION 7. Any person violating or failing to comply with any provision of this ordinance shall be fined upon conviction not less than one dollar ($1.00) nor more than two thousand dollars ($2000.00). Each day any violation of any provision of this ordinance continues constitutes a separate offense.

SECTION 8. That nothing in this ordinance shall be constructed to affect any suit or proceeding pending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or prior ordinance; nor shall any legal right or remedy of any character be lost, impaired, or affected by this ordinance.

SECTION 9. That the terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause, or phrase of this ordinance shall be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause, or phrase of this ordinance.

SECTION 10. That this ordinance shall have an effective date of January 1, 2009.
PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS, on December 11, 2008.

HERBERT A. GEARS
MAYOR

ATTEST:

Janice Carroll, TRMC
City Secretary

APPROVED AS TO FORM:

Charles R. Anderson
City Attorney
ORDINANCE NO. 8767

AN ORDINANCE ADOPTING THE CITY OF IRVING EMERGENCY WATER MANAGEMENT PLAN (DROUGHT CONTINGENCY PLAN AND THE WATER CONSERVATION PLAN) AND AMENDING SECTION 41-14 OF CHAPTER 41 ENTITLED "WATER AND SEWER SYSTEMS" OF THE CODE OF CIVIL AND CRIMINAL ORDINANCES OF THE CITY OF IRVING, TEXAS, PROVIDING FOR THE DURATION, CHANGE, OR EXTENSION OF AN EMERGENCY ORDER; PROVIDING A PENALTY; AND PROVIDING A SEVERABILITY CLAUSE.

WHEREAS, subsection (b) of Section 41-14 of Chapter 41 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, states in pertinent part: "The director shall promulgate and submit an emergency water management plan to the city council for approval and when it has been approved by the city council it is incorporated by reference in this chapter . . . ."; and

WHEREAS, the City adopted an Emergency Water Management Plan on August 26, 1999, in Ordinance No. 7524, and amended such Emergency Water Management Plan on April 21, 2005, in Ordinance No. 8467, and on June 29, 2006, in Ordinance No. 8659; and

WHEREAS, the City desires to amend the Emergency Water Management Plan adopted on June 29, 2006, and an amended Emergency Water Management Plan has been prepared and attached to this ordinance; and

WHEREAS, the City of Irving, Texas, recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require a Water Conservation Plan and Emergency Water Management Plan (Drought Contingency Plan); and

WHEREAS, the Water Conservation Plan and Emergency Water Management Plan provide procedures for voluntary and mandatory actions to be placed into effect to reduce water usage and temporarily reduce demand placed on the City's available water system during a water shortage emergency; and

WHEREAS, the City believes it is in the best interest of the community to conserve potable water, and deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought and other water supply emergencies;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That the Emergency Water Management Plan (Drought Contingency Plan and Water Conservation Plan) of the City of Irving attached hereto and made a part hereof is hereby adopted as the official policy of the City of Irving.
SECTION 2. That subsection (e) of Section 41-14 of Chapter 41 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is hereby amended to read as follows:

(e) Duration of order; change; extension. Upon recommendation of the director, the city manager may upgrade or downgrade the stage of emergency when the conditions triggering that stage occur. Any change in the order must be made in the same manner prescribed in subsection (d) for implementing an emergency order. The city manager shall terminate the order in the manner prescribed in subsection (d) for implementing an emergency order when the director determines that the conditions creating the emergency no longer exist. Each stage of emergency response shall remain in effect until upgraded, downgraded, or terminated by the city manager.

SECTION 3. Any person violating or failing to comply with any provision of this ordinance shall be fined upon conviction, not less than One Dollar ($1.00) nor more than Two Thousand Dollars ($2,000.00). Each day in which one or more of the provisions of this ordinance is violated shall constitute a separate offense.

SECTION 4. That the terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause, or phrase of this ordinance should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause, or phrase of this ordinance.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS, this 22nd day of March, A.D. 2007.

HERBERT A. GEAR
MAYOR

APPROVED AS TO FORM:

Charles R. Anderson
Acting City Attorney
ORDINANCE NO. 8659

AN ORDINANCE ADOPTING THE CITY OF IRVING EMERGENCY WATER MANAGEMENT PLAN (DRUGHT CONTINGENCY PLAN AND THE WATER CONSERVATION PLAN); PROVIDING A PENALTY; AND PROVIDING A SEVERABILITY CLAUSE.

WHEREAS, subsection (b) of Section 41-14 of Chapter 41 of the Code of Civil and Criminal Ordinances of the City of Irving, Texas, states in pertinent part: "The director shall promulgate and submit an emergency water management plan to the city council for approval and when it has been approved by the city council it is incorporated by reference in this chapter . . . ."; and

WHEREAS, the City adopted an Emergency Water Management Plan on August 26, 1999, in Ordinance No. 7524, and amended such Emergency Water Management Plan on April 21, 2005, in Ordinance No. 8467; and

WHEREAS, the City desires to amend the Emergency Water Management Plan adopted on April 21, 2005, and an amended Emergency Water Management Plan has been prepared and attached to this ordinance; and

WHEREAS, the City of Irving, Texas, recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require a Water Conservation Plan and Emergency Water Management Plan (Drought Contingency Plan); and

WHEREAS, the Water Conservation Plan and Emergency Water Management Plan provide procedures for voluntary and mandatory actions to be placed into effect to reduce water usage and temporarily reduce demand placed on the City’s available water system during a water shortage emergency; and

WHEREAS, the City believes it is in the best interest of the community to conserve potable water, and deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought and other water supply emergencies;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That the Emergency Water Management Plan (Drought Contingency Plan and Water Conservation Plan) of the City of Irving attached hereto and made a part hereof is hereby adopted as the official policy of the City of Irving.
SECTION 2. Any person violating or failing to comply with any provision of this ordinance shall be fined upon conviction, not less than One Dollar ($1.00) nor more than Two Thousand Dollars ($2,000.00). Each day in which one or more of the provisions of this ordinance is violated shall constitute a separate offense.

SECTION 3. That the terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause, or phrase of this ordinance should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause, or phrase of this ordinance.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS, this 29th day of June, A.D. 2006.

[Signature]
HERBERT A. GEARS
MAYOR

ATTEST:

[Signature]
Janice Carroll, TRMC
City Secretary

APPROVED AS TO FORM:

[Signature]
David Caylor
City Attorney
ORDINANCE NO. 8467

AN ORDINANCE ADOPTING THE CITY OF IRVING EMERGENCY WATER MANAGEMENT PLAN (DROUGHT CONTINGENCY PLAN AND THE WATER CONSERVATION PLAN); PROVIDING A PENALTY; AND PROVIDING A SEVERABILITY CLAUSE.

WHEREAS, subsection (b) of Section 41-14 of Chapter 41 of the Code of Civil and Criminal Ordinances of the City of Irving, Texas, states in pertinent part: "The director shall promulgate and submit an emergency water management plan to the city council for approval and when it has been approved by the city council it is incorporated by reference in this chapter..."; and

WHEREAS, the City adopted an Emergency Water Management Plan on August 26, 1999, in Ordinance No. 7524 and desires to amend such Emergency Water Management Plan; and

WHEREAS, an amended Emergency Water Management Plan has been prepared and attached to this ordinance; and

WHEREAS, the City of Irving, Texas, recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require a Water Conservation Plan and Emergency Water Management Plan (Drought Contingency Plan); and

WHEREAS, the Water Conservation Plan and Emergency Water Management Plan provide procedures for voluntary and mandatory actions to be placed into effect to reduce water usage and temporarily reduce demand placed on the City's available water system during a water shortage emergency; and

WHEREAS, the City believes it is in the best interest of the community to conserve potable water, and deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought and other water supply emergencies;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That the Emergency Water Management Plan (Drought Contingency Plan and Water Conservation Plan) of the City of Irving attached hereto and made a part hereof is hereby adopted as the official policy of the City of Irving.

SECTION 2. Any person violating or failing to comply with any provision of this ordinance shall be fined upon conviction, not less than One Dollar ($1.00) nor more than Two Thousand Dollars ($2,000.00). Each day in which one or more of the provisions of this ordinance is violated shall constitute a separate offense.
SECTION 3. That the terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause or phrase of this ordinance should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause or phrase of this ordinance.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS, this 21st day of April, A.D. 2005.

JOE PUTNAM
MAYOR

ATTEST:

Janice Carroll, TRMC
City Secretary

APPROVED AS TO FORM:

David Caylor
City Attorney
AN ORDINANCE ADOPTING THE CITY OF IRVING WATER MANAGEMENT PLAN CONSISTING OF THE EMERGENCY WATER MANAGEMENT PLAN (DROUGHT CONTINGENCY PLAN) AND THE WATER CONSERVATION PLAN; PROVIDING A PENALTY AND PROVIDING A SEVERABILITY CLAUSE.

WHEREAS, subsection (b) of Section 41-14 of Chapter 41 of the Code of Civil and Criminal Ordinances of the City of Irving, Texas, states in pertinent part: "The director shall promulgate and submit an emergency water management plan to the city council for approval and when it has been approved by the city council it is incorporated by reference in this chapter . . . ."; and

WHEREAS, the City of Irving, Texas, recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the Texas Water Code and applicable rules of the Texas Natural Resource Conservation Commission require a Water Conservation Plan and Emergency Water Management Plan (Drought Contingency Plan); and

WHEREAS, the Water Conservation Plan and Emergency Water Management Plan provide procedures for voluntary and mandatory actions to be placed into effect to reduce water usage and temporarily reduce demand placed on the City's available water system during a water shortage emergency; and

WHEREAS, the City believes it is in the best interest of the community to conserve potable water, and deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought and other water supply emergencies;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That the Emergency Water Management Plan (Drought Contingency Plan) of the City of Irving Water Management Plan attached hereto and made a part hereof is hereby adopted as the official policy of the City of Irving.

SECTION 2. That the Water Conservation Plan of the City of Irving Water Management Plan attached hereto and made a part hereof is hereby adopted as the official policy of the City of Irving.

SECTION 3. Any person violating or failing to comply with any provision of this ordinance shall be fined upon conviction, not less than One Dollar ($1.00) nor more than Two Thousand Dollars ($2,000.00). Each day in which one or more of the provisions of this ordinance is violated shall constitute a separate offense.
SECTION 4. That the terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause or phrase of this ordinance should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause or phrase of this ordinance.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS,

this 26th day of August, A.D., 1999.

[Signature]
JOE PUTNAM
MAYOR

ATTEST:

[Signature]
Janice Carroll, CMC
City Secretary

APPROVED AS TO FORM:

[Signature]
David Caylor
City Attorney
APPENDIX E

EXAMPLE WATER RATIONING PLAN
EXAMPLE WATER RATIONING PLAN

1. Single-Family Residential Customers

The allocation to residential water customers residing in a single-family dwelling shall be as follows:

<table>
<thead>
<tr>
<th>Persons per Household</th>
<th>Gallons Per Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 or 2</td>
<td>6,000</td>
</tr>
<tr>
<td>3 or 4</td>
<td>7,000</td>
</tr>
<tr>
<td>5 or 6</td>
<td>8,000</td>
</tr>
<tr>
<td>7 or 8</td>
<td>9,000</td>
</tr>
<tr>
<td>9 or 10</td>
<td>10,000</td>
</tr>
<tr>
<td>11 or more</td>
<td>12,000</td>
</tr>
</tbody>
</table>

“Household” means the residential premises served by the customer’s meter. “Persons per household” includes only those persons currently physically residing at the premises and expected to reside there for the entire billing period. It shall be assumed that a particular customer’s household is comprised of two (2) persons unless the customer notifies Irving Water Utilities of a greater number of persons per household on a form prescribed by the Director. The Director shall make his/her best effort to see that such forms are mailed, otherwise provided, or made available to every residential customer. If, however, a customer does not receive such a form, it shall be the customer’s responsibility to go to the Irving Water Utilities offices to complete and sign the form claiming more than two (2) persons per household. New customers may claim more persons per household at the time of applying for water service on the form prescribed by the Director. When the number of persons per household increases so as to place the customer in a different allocation category, the customer may notify Irving Water Utilities on such form and the change will be implemented in the next practicable billing period. If the number of persons in a household is reduced, the customer shall notify the Irving Water Utilities in writing within two (2) days. In prescribing the method for claiming more than two (2) persons per household, the Director shall adopt methods to ensure the accuracy of the claim. Any person who knowingly, recklessly, or with criminal negligence falsely reports the number of persons in a household or fails to timely notify Irving Water Utilities of a reduction in the number of person in a household may be fined. Residential water customers shall pay the following surcharges:

$3.00 for the first 1,000 gallons over allocation.
$6.00 for the second 1,000 gallons over allocation.
$10.00 for the third 1,000 gallons over allocation.
$15.00 for each additional 1,000 gallons over allocation.

Surcharges shall be cumulative.
2. Master-Metered Multi Family Residential Customers

The allocation to a customer billed from a master meter which jointly measures water to multiple permanent residential dwelling units (e.g., apartments, mobile homes) shall be allocated 6,000 gallons per month for each dwelling unit. It shall be assumed that such a customer’s meter serves two (2) dwelling units unless the customer notifies the Irving Water Utilities of a greater number on a form prescribed by the Director. The Director shall make his/her best effort to see that such forms are mailed, otherwise provided, or made available to every such customer. If, however, a customer does not receive such a form, it shall be the customer’s responsibility to go to the Irving Water Utilities offices to complete and sign the form claiming more than two (2) dwellings. A dwelling unit may be claimed under this provision whether it is occupied or not. New customers may claim more dwelling units at the time of applying for water service on the form prescribed by the Director. If the number of dwelling units served by a master meter is reduced, the customer shall notify the Irving Water Utilities in writing within two (2) days. In prescribing the method for claiming more than two (2) dwelling units, the Director shall adopt methods to ensure the accuracy of the claim. Any person who knowingly, recklessly, or with criminal negligence falsely reports the number of dwelling units served by a master meter or fails to timely notify the Irving Water Utilities of a reduction in the number of persons in the household may be fined.

Customers billed from a master meter under this provision shall pay the following monthly surcharges:

- $4.00 for 1,000 gallons over allocating up through 1,000 gallons for each dwelling unit.
- $8.00, thereafter, for each additional 1,000 gallons over allocation up through a second 1,000 gallons for each dwelling unit.
- $12.00, thereafter, for each additional 1,000 gallons over allocation up through a third 1,000 gallons for each dwelling unit.
- $15.00, thereafter for each additional 1,000 gallons over allocation.

Surcharges shall be cumulative.

3. Commercial Customers

A monthly water usage allocation shall be established by the Director, or his/her designee, for each nonresidential commercial customer other than an industrial customer who uses water for processing purposes. The non-residential customer’s allocation shall be approximately eighty-five percent (85%) for the customer’s usage for corresponding month’s billing period for the previous 12 months. If the customer’s billing history is shorter than 12 months, the monthly average for the period for which there is a record shall be used for any monthly period for which no history exists. Provided, however, a customer, whose monthly usage is less than 10,000 gallons, shall be allocated 10,000 gallons. The Director shall give his/her best effort to see that
notice of each non-residential customer’s allocation is mailed to such customer. If, however, a customer does not receive such notice, it shall be the customer’s responsibility to contact the Irving Water Utilities to determine the allocation. Upon request of the customer or at the initiative of the Director, the allocation may be reduced or increased if, (1) the designated period does not accurately reflect the customer’s normal water usage, or (2) other objective evidence demonstrates that the designated allocation is inaccurate under present conditions. A customer may appeal an allocation established hereunder to the Director. Nonresidential commercial customers shall pay the following surcharges.

Customers whose allocation is less than 30,000 gallons per month:

- $5.00 per thousand gallons for the first 1,000 gallons over allocation.
- $10.00 per thousand gallons for the second 1,000 gallons over allocation.
- $15.00 per thousand gallons for the third 1,000 gallons over allocation.
- $20.00 per thousand gallons for each additional 1,000 gallons over allocation.

Customers whose allocation is 30,000 gallons per month or more:

- 1.10 times the block rate for each 1,000 gallons in excess of the allocation up through 5 percent (5%) above allocation.
- 1.20 times the block rate for each 1,000 gallons from 5 percent through 10 percent (10%) above allocation.
- 1.30 times the block rate for each 1,000 gallons from 10 percent through 15 percent (15%) above allocation.
- 1.50 times the block rate for each 1,000 gallons more than 15 percent (15%) above allocation.

The surcharges shall be cumulative. As used herein, “block rate” means the charge to the customer per 1,000 gallons at the regular water rate schedule at the level of the customer’s allocation.

4. Industrial Customers

A monthly water usage allocation shall be established by the Director, or his/her designee, for each industrial customer, which uses water for processing purposes. The industrial customer’s allocation shall be approximately ninety percent (90%) of the customer’s water usage baseline. Ninety (90) days after the initial imposition of the allocation for industrial customers, the industrial customer’s allocation shall be further reduced to eighty five percent (85%) of the customer’s water usage baseline. The industrial customer’s water usage baseline will be computed on the average water usage for the prior twelve (12) months period. If the industrial water customer’s billing history is shorter than twelve (12) months, the monthly average for the period for which there is a record shall be used for any monthly period for which no billing
history exists. The Director shall give his/her best effort to see that notice of each industrial customer’s allocation is mailed to such customer. If, however, a customer does not receive such notice, it shall be the customer’s responsibility to contact the Irving Water Utilities to determine the allocation, and the allocation shall be fully effective notwithstanding the lack of receipt of written notice. Upon request of the customer or at the initiative of the Director, the allocation may be reduced or increased if, (1) the designated period does not accurately reflect the customer’s normal water usage because the customer had shut down a major processing unit for repair or overhaul during the period, (2) the customer has added or is in the process of adding significant processing capacity, (3) the customer has shut down or significantly reduced the production of a major processing unit, (4) the customer has previously implemented significant permanent water conservation measures such that the ability to further reduce usage is limited, or (5) if other objective evidence demonstrates that the designated allocation is inaccurate under present condition. A customer may appeal an allocation established hereunder to the Director.

Industrial customers shall pay the following surcharges.

Customers whose allocation is less than 50,000 gallons per month:
- $7.50 per thousand gallons for the first 1,000 gallons over allocation.
- $15.00 per thousand gallons for the second 1,000 gallons over allocation.
- $20.00 per thousand gallons for the third 1,000 gallons over allocation.
- $25.00 per thousand gallons for each additional 1,000 gallons over allocation.

Customers whose allocation is 50,000 gallons per month or more:
- 1.10 times the block rate for each 1,000 gallons in excess of the allocation up through 5 percent (5%) above allocation.
- 1.20 times the block rate for each 1,000 gallons from 5 percent through 10 percent (10%) above allocation.
- 1.30 times the block rate for each 1,000 gallons from 10 percent through 15 percent (15%) above allocation.

The surcharges shall be cumulative. As used herein, “block rate” means the charge to the customer per 1,000 gallons at the regular water rate schedule at the level of the customer’s allocation.
APPENDIX F

CORRESPONDENCE WITH REGION C WATER PLANNING GROUP
AND DALLAS WATER UTILITIES
April 29, 2024

Mr. J. Kevin Ward
Chair, Region C Water Planning Group
c/o Trinity River Authority of Texas
P.O. Box 60
Arlington, TX 76004

Dear Mr. Ward:

Enclosed please find a copy of the recently amended Drought Contingency Plan and Water Conservation Plan for the City of Irving. I am submitting a copy of this plan to the Region C Water Planning Group in accordance with the Texas Water Development Board and Texas Commission on Environmental Quality rules. The City Council of the City of Irving adopted the attached plan on April 11, 2024.

Sincerely,

Todd W. Reck, P.E.
Water Utilities Director

Enclosure
April 29, 2024

Ms. Sarah Standifer  
Interim Director, Dallas Water Utilities  
City of Dallas  
1500 Marilla Street, Room 4AN  
Dallas, TX  75201

Dear Ms. Standifer:

Enclosed please find a copy of the recently amended Drought Contingency Plan and Water Conservation Plan for the City of Irving. I am submitting a copy of this plan to Dallas Water Utilities. The City Council of the City of Irving adopted the attached plan on April 11, 2024.

Sincerely,

Todd W. Reck, P.E.  
Water Utilities Director

Enclosure.
APPENDIX G

TCEQ GUIDLINES
Texas Administrative Code

TITLE 30  ENVIRONMENTAL QUALITY
PART 1  TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CHAPTER 288  WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
SUBCHAPTER B  DROUGHT CONTINGENCY PLANS
RULE §288.20¹  Drought Contingency Plans for Municipal Uses by Public Water Suppliers

(a) A drought contingency plan for a retail public water supplier, where applicable, must include the following minimum elements.

(1) Minimum requirements. Drought contingency plans must include the following minimum elements.

   (A) Preparation of the plan shall include provisions to actively inform the public and affirmatively provide opportunity for public input. Such acts may include, but are not limited to, having a public meeting at a time and location convenient to the public and providing written notice to the public concerning the proposed plan and meeting.

   (B) Provisions shall be made for a program of continuing public education and information regarding the drought contingency plan.

   (C) The drought contingency plan must document coordination with the regional water planning groups for the service area of the retail public water supplier to ensure consistency with the appropriate approved regional water plans.

   (D) The drought contingency plan must include a description of the information to be monitored by the water supplier, and specific criteria for the initiation and termination of drought response stages, accompanied by an explanation of the rationale or basis for such triggering criteria.

   (E) The drought contingency plan must include drought or emergency response stages providing for the implementation of measures in response to at least the following situations:

       (i) reduction in available water supply up to a repeat of the drought of record;

       (ii) water production or distribution system limitations;

       (iii) supply source contamination; or

       (iv) system outage due to the failure or damage of major water system components (e.g., pumps).

   (F) The drought contingency plan must include specific, quantified targets for water use reductions to be achieved during periods of water shortage and drought. The entity preparing the plan shall establish the targets. The goals established by the entity under this subparagraph are not enforceable.
(G) The drought contingency plan must include the specific water supply or water demand management measures to be implemented during each stage of the plan including, but not limited to, the following:

(i) curtailment of non-essential water uses; and

(ii) utilization of alternative water sources and/or alternative delivery mechanisms with the prior approval of the executive director as appropriate (e.g., interconnection with another water system, temporary use of a non-municipal water supply, use of reclaimed water for non-potable purposes, etc.).

(H) The drought contingency plan must include the procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public.

(I) The drought contingency plan must include procedures for granting variances to the plan.

(J) The drought contingency plan must include procedures for the enforcement of mandatory water use restrictions, including specification of penalties (e.g., fines, water rate surcharges, discontinuation of service) for violations of such restrictions.

(2) Privately-owned water utilities. Privately-owned water utilities shall prepare a drought contingency plan in accordance with this section and incorporate such plan into their tariff.

(3) Wholesale water customers. Any water supplier that receives all or a portion of its water supply from another water supplier shall consult with that supplier and shall include in the drought contingency plan appropriate provisions for responding to reductions in that water supply.

(b) A wholesale or retail water supplier shall notify the executive director within five business days of the implementation of any mandatory provisions of the drought contingency plan.

(c) The retail public water supplier shall review and update, as appropriate, the drought contingency plan, at least every five years, based on new or updated information, such as the adoption or revision of the regional water plan.


Source Note: The provisions of this §288.20 adopted to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384
Texas Administrative Code

TITLE 30  ENVIRONMENTAL QUALITY
PART 1  TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CHAPTER 288  WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
SUBCHAPTER A  WATER CONSERVATION PLANS
RULE §288.2  Water Conservation Plans for Municipal Uses by Public Water Suppliers

(a) A water conservation plan for municipal water use by public water suppliers must provide information in response to the following. If the plan does not provide information for each requirement, the public water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for municipal uses by public water suppliers must include the following elements:

(A) a utility profile in accordance with the Texas Water Use Methodology, including, but not limited to, information regarding population and customer data, water use data (including total gallons per capita per day (GPCD) and residential GPCD), water supply system data, and wastewater system data;

(B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses (i) - (vi) of this subparagraph. Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) - (vi) of this subparagraph:

(i) residential;
   (I) single family;
   (II) multi-family;
(ii) commercial;
(iii) institutional;
(iv) industrial;
(v) agricultural; and,
(vi) wholesale.

(C) specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in total GPCD and residential GPCD. The goals established by a public water supplier under this subparagraph are not enforceable;

(D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply;

(E) a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement;
(F) measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);

(G) a program of continuing public education and information regarding water conservation;

(H) a water rate structure which is not "promotional," i.e., a rate structure which is cost-based and which does not encourage the excessive use of water;

(I) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies; and

(J) a means of implementation and enforcement which shall be evidenced by:
   (i) a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the water supplier; and
   (ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(K) documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:

(A) a program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system;

(B) a requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in this chapter. If the customer intends to resell the water, the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

(3) Additional conservation strategies. Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements in paragraphs (1) and (2) of this subsection, if they are necessary to achieve the stated water conservation goals of the plan. The commission may require that any of the following strategies be implemented by the water supplier if the commission determines that the strategy is necessary to achieve the goals of the water conservation plan:

(A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;
(B) adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;
(C) a program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;
(D) reuse and/or recycling of wastewater and/or graywater;
(E) a program for pressure control and/or reduction in the distribution system and/or for customer connections;
(F) a program and/or ordinance(s) for landscape water management;
(G) a method for monitoring the effectiveness and efficiency of the water conservation plan; and
(H) any other water conservation practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to Required Water Conservation Plan) of the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board.

c) A public water supplier for municipal use shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The public water supplier for municipal use shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

Source Note: The provisions of this §288.2 adopted to be effective May 3, 1993, 18 TexReg 2558; amended to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384; amended to be effective December 6, 2012, 37 TexReg 9515