

**SCHEDULE P**  
**UTILITIES STANDARDS AND SPECIFICATIONS AND**  
**DESIGN STANDARDS FOR WATER CONSERVATION**

**SECTION 1.0 UTILITIES STANDARDS AND SPECIFICATIONS**

Detailed standards and specifications for the design and construction of potable water, wastewater, and reclaimed water facilities that are to be constructed within, dedicated to, owned by, maintained by, or operated by the City shall be contained within the *Utilities Standards and Specifications Manual*, herein referred to as the "*Utilities Manual*".

The *Utilities Manual* shall be adopted and revised from time to time by a separate City Resolution so as to provide the appropriate flexibility in its application in order for the City to be responsive to site specific considerations, changes in technology, and emerging concepts.

**SECTION 2.0 RECLAIMED WATER SYSTEM**

In order to protect water resources and ensure that groundwater supplies are adequate to meet potable water demand, all new development shall comply with the following regulations:

- A. Applicability.** In accordance with the most recent edition of the City's *Reclaimed Water and Cross Connection Control Policy* and with Section 62-610, Part III, *Florida Administrative Code*, all new developments shall utilize the City's reclaimed water system for irrigation and other uses that do not require potable water. Reclaimed water facilities shall be independent of all potable water, raw water supply, wastewater, and storm water systems. Materials used in the installation and construction of reclaimed water systems shall be the same as that used for potable water facilities, with the exception of the color-coding, and shall be as specifically described in the City's *Utilities Manual*.
- B. Evaluation.** For all new developments, the Utilities Director shall evaluate the need of the development to incorporate the use of reclaimed water. The Director shall review the take-back capacity of the proposed development to determine if connection to the reclaimed water system represents a benefit to the City. The developer's engineer shall place all take-back calculations, based on City approved wastewater flow quantities, on the development plans. Reclaimed water usage shall equal or exceed anticipated wastewater flows.

If a required irrigation system will have a negative impact on environmental systems or is inconsistent with the rules of other regulatory jurisdictions, the Utilities Director may approve an alternative irrigation system.

- C. Mandatory Connection.** Upon completion of the evaluation, the Utilities Director shall have the authority to require the development, including all individual lots and tracts therein, to connect to the reclaimed water system. A fully automatic reclaimed water irrigation system shall serve all landscaped and sodded areas of the development, including

all adjacent rights-of-way and alleys. This requirement shall also apply to each lot and tract of a subdivided development.

The developer shall be responsible for all costs necessary to provide onsite distribution and offsite transmission to the development. Connection to the City’s reclaim water system is mandatory under the following schedule. Distances shall be measured along public right-of-ways, alleys, easements and railroad right-of ways. Connection distances and minimum line sizes are shown in the table below. The developer shall provide a master irrigation meter for town home and multi-family units.

**Reclaim Water Connection Distances**

<b>Type and Quantity of Development</b>	<b>Distance from Existing Reclaimed Water Line (Linear feet)</b>	<b>Min. line size</b>
1. Single family residences (individually owned)	100	2-inch
2. Single-family residential developments		
2 -10 houses	400	2-inch
11-35 houses	1,400	4-inch
36-120 houses	2,000	6-inch
121 or more houses	50 ft. each additional house	8-inch
3. Multi-family or Town home developments		
1-100 units	1,500	4-inch
Greater than 100 units	50 ft. each additional unit	6-inch
4. Commercial or Industrial developments		
4,999 or less Sq. ft.	900	2-inch
5,000 - 25,000 Sq. ft.	1,250	4-inch
25,001 - 60,000 Sq. ft.	1,500	6-inch
Greater than 60,000 Sq. ft.	200 ft. each additional 100,000 sq. ft.	8-inch

**D. Alternative Water Supply System.**

1. If reclaimed water is available within the distances listed above, a new development shall be required to connect to the City's system. Developments that are not required to connect to an existing reclaimed water line and which choose not to connect shall be required to connect to an alternative water supply source for irrigation purposes.
2. The alternative water supply shall be a shallow or brackish well or storm water and all irrigation lines shall be capable of connecting to the City's reclaimed water system. The Developer shall be responsible for all costs necessary to provide an alternative water dual distribution and supply system. The City will not provide a separate potable irrigation meter for new or existing developments, including individual residences that are not required to connect to the City's reclaimed water system pursuant of Section 2.0 C of this Schedule and cannot provide an alternative water source.

3. The City may, if it desires to accept ownership in its sole discretion, own such part or all of any alternative water dual distribution and supply system for residential subdivisions, and other developments of commercial, industrial or other types which system is located on the property owner's side of the point of service delivery (the onsite irrigation system). As a general rule, the City will obtain ownership and maintenance responsibility only for lines and systems that are not located on private property although the City may obtain the right to spray alternative water on such properties and may, also, impose an obligation upon a property owner to accept such delivery and use of alternative water. When the City determines that it desires to obtain any such rights, appropriate legal instruments of conveyance of such rights as may be desired by the City shall be provided by the developer to the City in a recordable form acceptable to the City and as approved by the City Attorney. Also, as a general rule, the City shall not accept any maintenance obligation for any irrigation system located on private property. Each home shall have an individual reclaim/alternative irrigation meter consistent with City standards. All legal costs and costs of recordation shall be borne by the developer.
4. A customer may apply for a variance from the requirements of Subsections (1) through (3) of this Section. Such application shall be made and acted upon in accordance with the following provisions:
  - i. A potable water irrigation meter may only be set on a single lot or parcel.
  - ii. The application shall be in a form established by the Utility Director or designee.
  - iii. The application shall be reviewed and acted upon by the Utility Director or designee.
  - iv. The potable water irrigation meter must comply with all applicable land development regulations and City policies including, but not limited to: water budget plans, landscape techniques for conserving water, all pertinent utility specifications (i.e. cross connection controls, etc.), all pertinent conservation technology requirements (i.e. rain sensor, etc.), alternative water source feasibility calculation or analysis, all pertinent utility account requirements, all pertinent permits (including irrigation, electrical, etc.), all pertinent inspections (utility, building, etc.), and payment of all pertinent fees and charges.
  - v. A potable water irrigation meter size shall be restricted to 1-inch or smaller.

The City Commission shall establish an application fee and other appropriate fees by resolution until which time; however, fees shall be established by the City Manager, or designee. Appeals may be perfected in accordance with the provisions of this Code.

## SECTION 3.0 WATER BUDGET PLANS.

All developers shall submit to the Utilities Department water budget plans prepared by a certified landscape architect or certified irrigation contractor that account for all water usage on a site. The plan must include, at a minimum, the water requirements for each landscaped or turfed area and plant location and selection. A copy of the irrigation and landscape plans shall be provided to the City and property owner. The developer shall familiarize the property owner with the proper operation of the irrigation system including the timer. Water management tools including, but not limited to, rain and soil sensors shall be incorporated into the irrigation system design.

- A. Water Usage.** For residential developments, the water budget plan must demonstrate that indoor/ outdoor potable usage does not exceed three hundred (300) gallons per day. Any additional outdoor usage must be addressed through an alternative water supplied irrigation. The plan must also include an assurance that the water budget plans are available to every prospective home buyer.

For commercial, industrial and multifamily developments, the water budget plan must demonstrate compliance with the City's take-back reuse program for future growth and development. This program requires new developments that connect to the City's wastewater system to 'take-back' the same amount of highly treated effluent as generated by the developments. Effluent from developments will receive tertiary treatment, which can be used for non-potable water purposes such as irrigation. Projected water usage by fixture and/or component must be provided.

- B. General Requirements for Irrigation Plans.** All developments, whether on the City's reclaimed water system or on an alternative water system, shall submit an irrigation plan on a form supplied by the Utilities department. The plan shall demonstrate compliance with the following:

1. An irrigation plan shall be required for each developed parcel, lot or tract and shall be approved by the Utilities Department. Irrigation plans shall be reviewed in conjunction with engineering plan review or improvement plan review or, in the case of a single residential lot, prior to the issue of a building permit.
2. All new irrigation systems shall have a rain sensor device.
3. The developer shall construct reclaimed water distribution facilities to the proposed development and to each lot and tract within said development.
4. A fully automatic irrigation system, utilizing reclaimed water, or an alternative water system shall be installed on every lot, parcel or tract that is to be developed and shall provide total irrigation coverage for all landscaping, including hedges, trees, and grassed areas.
5. A minimum horizontal separation of three (3) feet, (outside of pipe to outside of pipe) shall be maintained between reclaimed water facilities and potable water or wastewater mains.
6. All construction requirements and materials shall comply with the latest version of the *Utilities Manual*.

## **SECTION 4.0           LANDSCAPE TECHNIQUES FOR CONSERVING WATER.**

At least twenty percent (20%) of all landscape material obtained from off-site sources for use on any site shall have a soil moisture range of 'dry', as characterized in the list of plants from St. Johns River Water Management District's publication: *Waterwise Florida Landscape* which document is incorporated herein by this reference thereto as if fully set forth herein verbatim. No more than forty percent (40%) of all plant material shall have a high water demand, characterized by 'moist' in *Waterwise Florida Landscape*.

Plants shall be grouped according to their water needs and soil conditions. If plant placement is done correctly, once plants are established, little to no supplemental irrigation will be necessary:

- Natural zone: In this area, place plants that have adapted to the wet and dry extremes of Florida's climate so that regular watering (once plants are established) won't be necessary, except during prolonged drought.
- Drought-tolerant zone: In this area, place plants that can survive extended periods of time without rain or supplemental irrigation.
- Oasis zone: In this area, place plants that may require some watering.