Water Conservation Plan

for

San Jacinto River Authority
Woodlands Division

Prepared by

San Jacinto River Authority

Adopted: April 25, 2024

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Table of Contents

Section **Page**

Water Conservation Plan 1

Section 1. Introduction 1-1

Section 2. Utility and Service Area Description 2-1

2.1 Utility Description 2-1

2.2 Service Area Description 2-2

Section 3. Water Conservation Plan 3-1

3.1 Woodlands Division 5- and 10-year Water Conservation Target Goals 3-1

3.2 Water Conservation Methods 3-1

3.2.1 Metering and Record Management 3-2

3.2.2 Leak Detection, Repair, and Minimization of Conveyance Losses 3-2

3.2.3 Recycling and Reuse 3-2

3.2.4 Rate Structure 3-3

3.2.5 Conservation Coordination 3-3

3.2.6 Conservation Stakeholder Group 3-3

3.2.7 Contractual Requirements for Customer Water Conservation Plans 3-3

3.2.8 Customer Conservation Plan Guidance; 3-4

3.2.9 Customer Reporting Requirements 3-4

3.2.10 Public Information and Education 3-4

3.2.11 Encouraging Customer Conservation Practices 3-5

3.2.12 Implementation, Enforcement, Coordination with RWPG, and Updating of the Plan 3-5

Tables

Table 2-1. 2023 Groundwater Production 2-3

Table 2-2. 2023 Reuse Production 2-3

Figures

Figure 1-1. Watershed Area and Facility Locations 1-2

Figure 2-1. Woodlands MUDs 2-5

Figure 2-2. Woodlands Division Water Distribution System 2-6

Figure 2-3. Woodlands Division Wastewater Infrastructure 2-7

Appendices

Appendix A – Water Utility Profiles

Appendix B – Resolutions Passed by SJRA, Transmittal Letter to Region H RWPG

Appendix C – TCEQ Form 20645

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Section 1. Introduction

In 1996, severe drought conditions affected every region of the State. Water systems throughout the State were forced to cope with water shortages or system capacity problems. In response to the 1996 drought, the 75th Texas Legislature enacted Senate Bill 1, which directed the State to take a regional approach to water planning. One of the provisions of the legislation required the Texas Commission on Environmental Quality (TCEQ) to adopt rules requiring wholesale and retail public water suppliers to develop water conservation and drought contingency plans.[1]

Water conservation and drought contingency plans work together to help Texans manage short-term and long-term water shortages. The goal of a water conservation plan is to achieve lasting, long-term improvements in water use efficiencies using strategies to reduce the amount of water withdrawn from a particular source, and to ensure that the water withdrawn is used in an efficient manner. Drought contingency plans are short-term in nature, using temporary supply and demand management measures in response to temporary and potentially recurring water shortages and other emergencies.

The San Jacinto River Authority (SJRA), as a water right holder and wholesale water supplier, is required to submit a Water Conservation and Drought Contingency Plan to the TCEQ and Texas Water Development Board (TWDB). SJRA was created by the Texas Legislature in 1937 to:

> *"Provide water for domestic, municipal, commercial, industrial and mining purposes within and without the watershed of [the San Jacinto River], including water supplies for cities, towns and industries, and in connection therewith to construct or otherwise acquire water transportation, treatment and distribution facilities and supplemental sources of water."*[2]

The SJRA service area includes all of Montgomery County and portions of Waller, Grimes, Walker, San Jacinto, Fort Bend, and Liberty Counties (Figure 1-1). The SJRA also serves customers and is authorized to operate in east Harris County through an agreement with the City of Houston.

SJRA is governed by a seven-member board. The General Manager oversees approximately 170 employees and all facilities across five divisions: Lake Conroe, Highlands, Groundwater Reduction Plan (GRP), Woodlands, and Flood Management. The following is provided as the Water Conservation Plan (including utility description, service area description, and customer data) for the Woodlands Division (the Division). The Division's Drought Contingency Plan is provided under separate cover.

[1] Senate Bill 1, 75th Legislature, Section 12.1272 of the Texas Water Code.
[2] House Bill No. 832, 45th Legislature, Regular Session, Austin, TX, 1937.

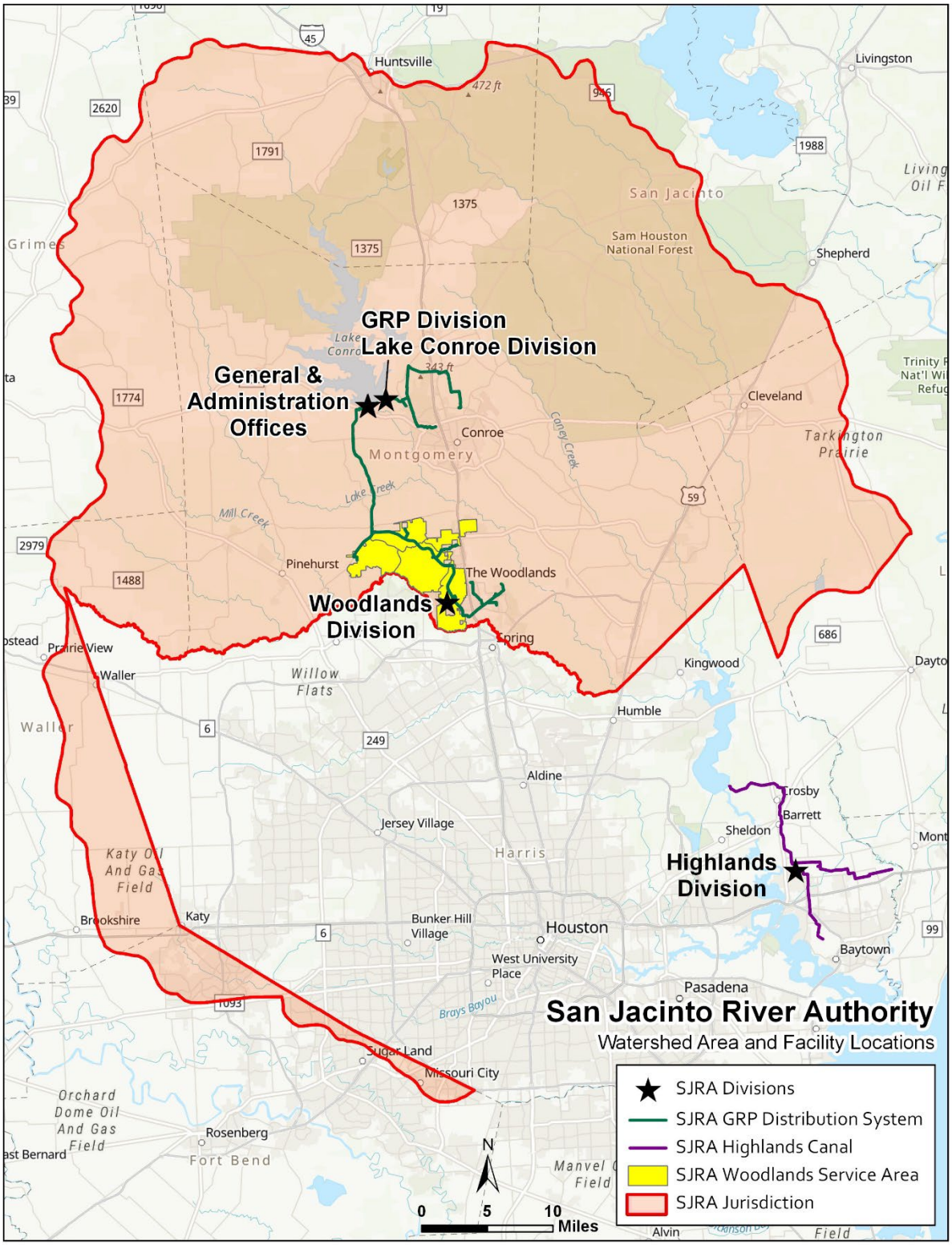

Figure 1-1. Watershed Area and Facility Locations

Section 2. Utility and Service Area Description

2.1 Utility Description

The Division currently provides its customers with water on a wholesale basis from a blend of water generated by 38 groundwater wells within the Evangeline and Jasper formations of the Gulf Coast Aquifer and surface water from Lake Conroe. SJRA is currently authorized by Lone Star Groundwater Conservation District (LSGCD) to produce up to 11,550 acre-feet per year (ac-ft/yr) from these wells. Water is disinfected at five water treatment plants and conveyed to customers through a series of potable distribution pipelines. The Division also provides wholesale wastewater service to customers through a wastewater collection system and three wastewater treatment plants.

In 2004, SJRA was granted 14,944 ac-ft/yr of water rights associated with groundwater (since amended to also include surface water) based effluent return flows from its three wastewater treatment plants in The Woodlands, within the San Jacinto River Basin (Permit 5809). A portion of this return flow is allowed to be conveyed through streams to Lake Houston where it is diverted by SJRA to serve its customers in southeast Harris County. Customers of the Division also utilize indirect reuse through Permit 3960 (held by others).

SJRA operates Lake Conroe, one of two major surface water supply reservoirs located in the San Jacinto River Basin. Completed in 1973, Lake Conroe is owned by SJRA and the City of Houston. SJRA owns one-third and the City of Houston owns two-thirds of the total 100,000 ac-ft/yr permitted water rights from the lake under Certificate of Adjudication (COA) 10-4963. The SJRA's water right is permitted for multiple uses. Lake Houston, which is owned by the City of Houston, is the other surface water supply reservoir in the basin. SJRA also holds an option contract for the purchase of the Houston portion of raw water in Lake Conroe.

The Woodlands Division is a GRP Participant in the SJRA Joint Groundwater Reduction Plan, which under the current LSGCD Regulatory Plan, aims to augment groundwater supply and to reduce future groundwater use within Montgomery County. Prior to 2018, LSGCD determined that groundwater production in Montgomery County exceeded the sustainable recharge rate and in response established certain requirements to reduce groundwater use. Phase I of the LSGCD DRP, which was adopted in 2006, established a target for sustainable production. DRP Phase II(A) was adopted in 2008 and required entities or groups of entities permitted to produce 10,000,000 gallons per year of groundwater (Large Volume Groundwater Users, or LVGUs) to assess future water needs and potential alternative supplies. Phase II(B) of the DRP required that all LVGUs either individually or in conjunction with others reduce their groundwater production to not more than 70% of their year 2009 permitted production (Total Qualifying Demand) no later than January 2016. In 2020, LSGCD adjusted the Regulatory Plan and removed

requirements for LVGUs and groundwater withdrawal.

The Joint GRP specifies multiple strategies to meet Participant needs, including surface water supplies, conservation, groundwater use from multiple formations, and wastewater reuse. As one of the selected GRP Participants partially converting to treated surface water, the Division is utilizing treated surface water originating from Lake Conroe to supply The Woodlands Since conversion, the Division receives a base amount of treated surface water and will meet remaining demand with groundwater. The Water Conservation and Drought Contingency Plans for SJRA's GRP Division have been developed separately. The objectives and methods specified in this Water Conservation Plan are consistent with the requirements of the GRP Water Conservation Plan in order to maintain compatibility with the overlying GRP and Lake Conroe Division plans.

2.2 Service Area Description

The approximately 2,453-square mile SJRA watershed area of the San Jacinto River Basin is bounded on the north and the east by the Trinity River Basin and the Trinity-San Jacinto Coastal Basin, on the west by the Brazos River Basin, and on the south by Harris County. The Division covers approximately 38 square miles and is a wholesale provider of water and wastewater service to The Woodlands.

The Woodlands is a master-planned community located in southern Montgomery County, Texas on IH-45, just north of the Harris County line. The Woodlands is made up of eleven individual Municipal Utility Districts ("The Woodlands Districts"), ten of which are operated and managed through The Woodlands Water Agency (WWA), along with Harris-Montgomery County MUD No. 386 which is not a part of the WWA (see Figure 2-1). The WWA provides retail water and wastewater service to The Woodlands community. The Woodlands Districts purchase all of their wholesale water and wastewater treatment services from the Division.

In 2023, The Woodlands used 18,970 acre-feet (≈6,181,182,000 gallons) of groundwater and surface water and utilized approximately 1,722 acre-feet of reuse as shown in Tables 2-1 and 2-2. A map of the Division's service area, along with existing potable water treatment facilities and appurtenances, is provided below (Figure 2-2). Major wastewater infrastructure is shown in Figure 2-3.

Table 2-1. 2023 Blended Surface Water and Groundwater Usage

Municipal – GW	10,221 ac-ft
Municipal - SW	8,749 ac-ft
Industrial	0 ac-ft
Irrigation	0 ac-ft
Total	18,970 ac-ft

Table 2-2. 2023 Reuse Usage

Municipal*	1,722 ac-ft
Industrial	0 ac-ft
Irrigation	0 ac-ft
Total	1,722 ac-ft

*Includes approximately 18 ac-ft of indirect reuse for landscape irrigation and 1,704 ac-ft of direct reuse for WWTP process and washdown water.

A full description of the Division's customer information can be found in Appendix A, the Water Utility Profile.

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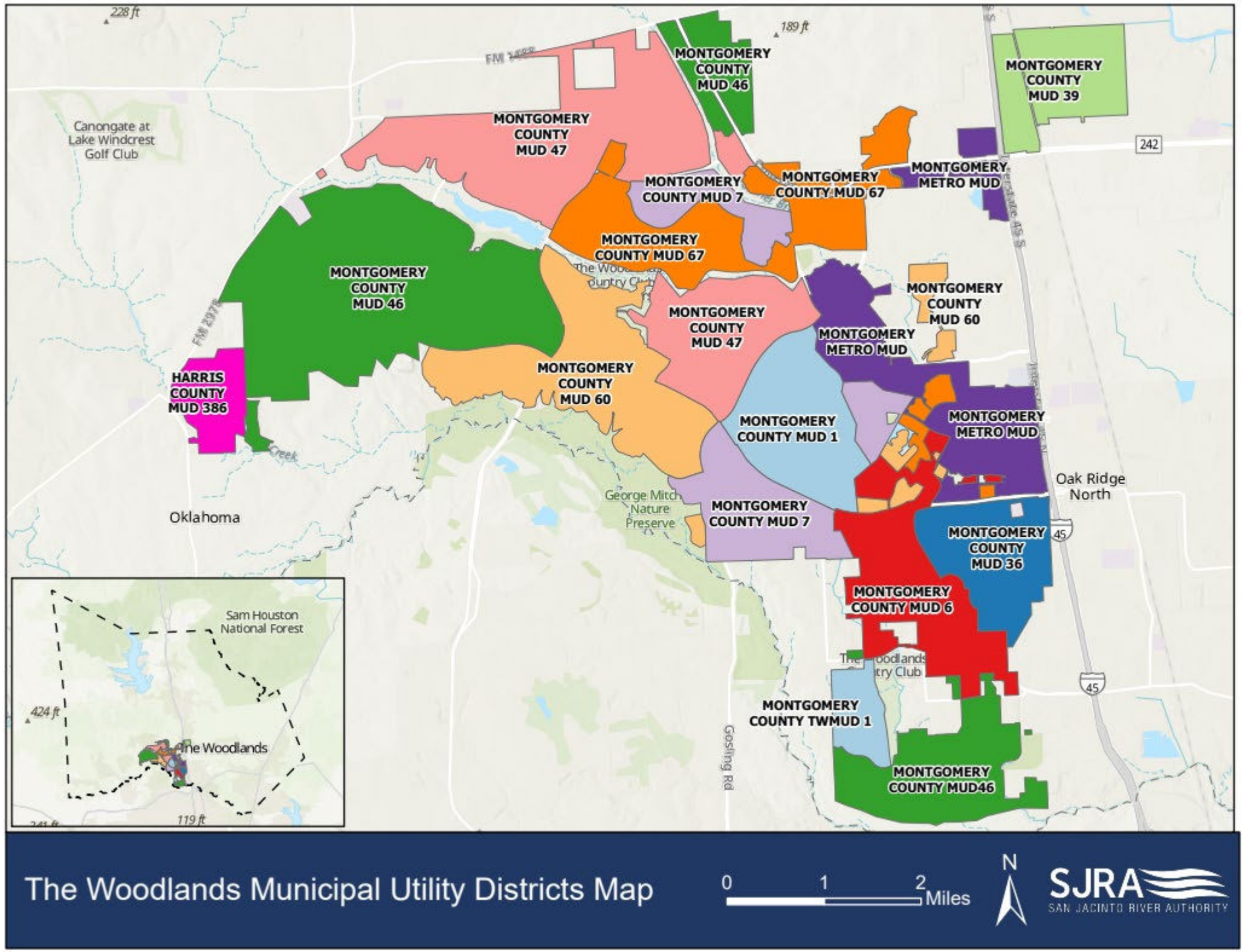

Figure 2-1. Woodlands MUDs

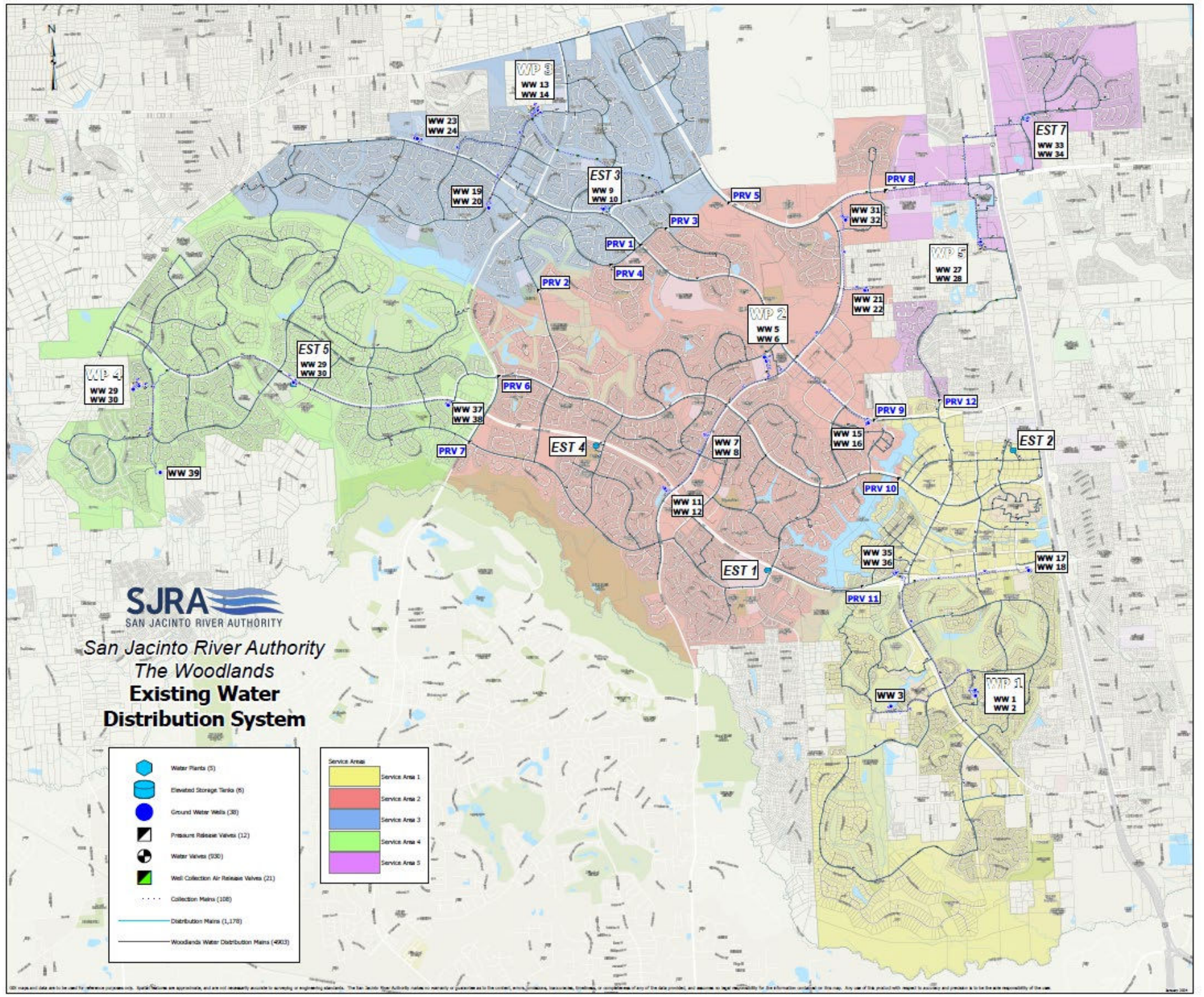

Figure 2-2. Woodlands Division Water Distribution System

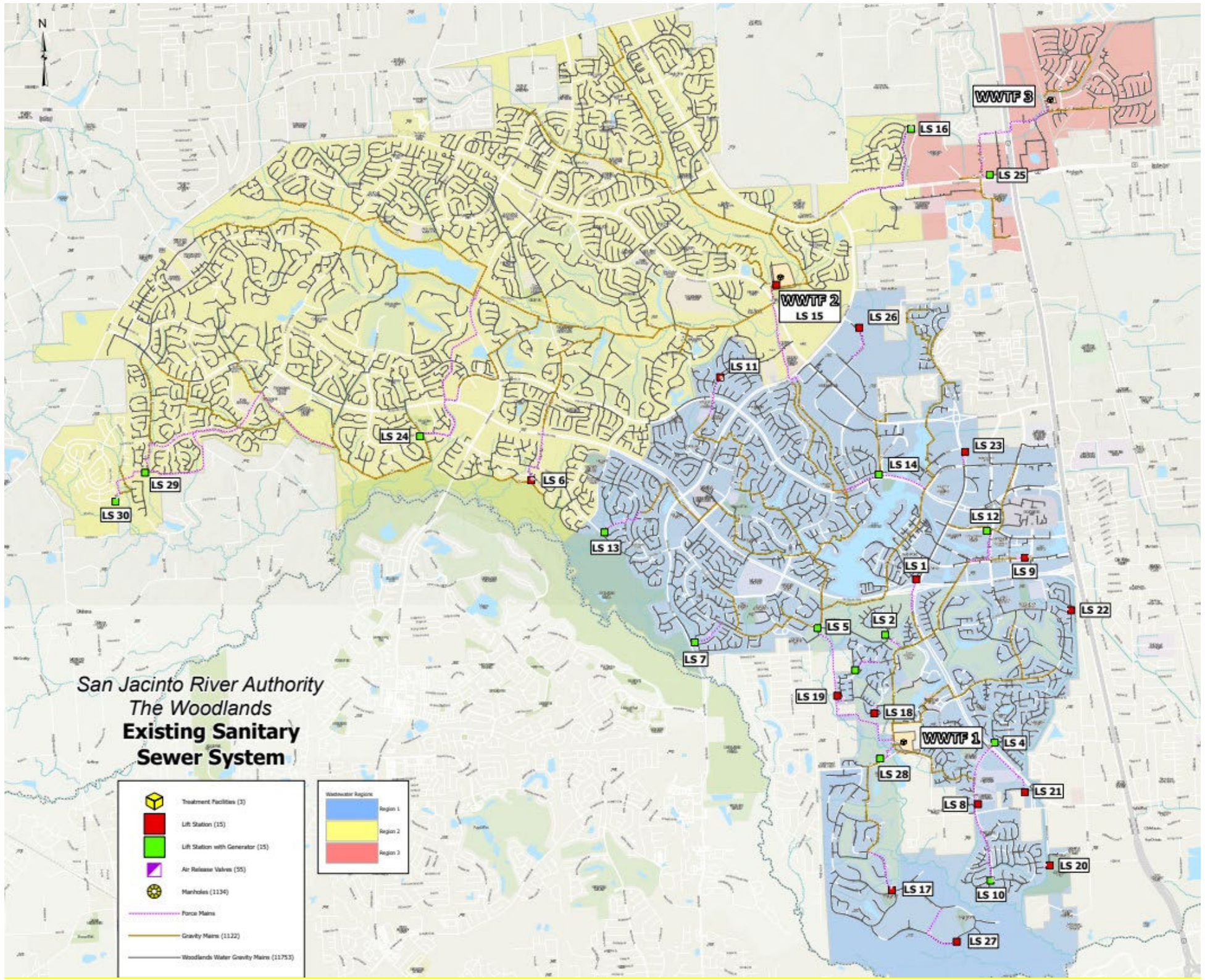

Figure 2-3. Woodlands Division Wastewater Infrastructure

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Section 3. Water Conservation Plan

In the Texas Water Code, water conservation is defined as follows:

"(A) The development of water resources; and,

"(B) Those practices, techniques, and technologies that will 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 water supply is made available for future or alternative uses."[3]

Based upon these concepts of water conservation, the Division's objective is to develop a water conservation plan that increases water use efficiency, thereby reducing water demands, without adversely affecting population and/or the economic growth potential of its customers.

3.1 Woodlands Division 5- and 10-year Water Conservation Target Goals

As a wholesale water provider, the Division is not involved in the day-to-day operations of its customers and therefore does not have direct control over the demands that it serves; however, it is working closely with the MUDs and the WWA to encourage water-use reduction. The water conservation measures described below include those under the direct control of, and being implemented by, the Division as well as goals supported and encouraged by the Division for implementation by its customers. Average per-capita municipal demand for the Division for 2019 through 2023 was 144.14 gallons per capita per day (gpcd). It is the goal of the Division to maintain municipal per-capita water demand at or below 165 gpcd for the next 10 years and beyond.

3.2 Water Conservation Methods

The Division's water conservation plan includes the following water conservation methods. Each method is described in greater detail in the following subsections.

- Metering and Record Management;
- Leak Detection, Repair, and Minimization of Conveyance Losses;
- Recycling and Reuse;
- Rate Structure;
- Conservation Coordination;
- Conservation Stakeholder Group;

[3] TWC, Section 17.001 (23) (A) and (B).

- Contractual Requirements for Customer Water Conservation Plans;
- Customer Conservation Plan Guidance;
- Customer Reporting Requirements;
- Public Information and Education;
- Awards and Recognition Program;
- Encouraging Customer Conservation Practices; and
- Implementation, Enforcement, Coordination with RWPG, and Updating of the Plan.

3.2.1 Metering and Record Management

The customers of the Division are responsible for metering their water use. The data collected from the metering of the customers allows the Division and SJRA to maintain a detailed record management system of water deliveries. Note that the Division's delivery to each customer MUD is not directly metered. However, all retail municipal and commercial water connections within the WWA and MUD 386 as well as some irrigation connections are metered. Customers of the Division are responsible for installing and maintaining meters at the points of retail delivery, including calibration to a level of accuracy compatible with the conservation goals of the Division. Access to these meters will be given to the Division by each customer for inspection purposes. The Division is responsible for metering and maintenance of meters at its production and treatment facilities.

3.2.2 Leak Detection, Repair, and Minimization of Conveyance Losses

The Division's wholesale distribution mains are maintained by the Division. The Division is responsible for lines 12-inches in diameter and larger. Potential leaks identified through accounting, inspection, or customer reporting are repaired promptly to minimize conveyance losses. Those components of the system used to take water from the mains into each wholesale customer's system are owned and maintained by the customer. The Division encourages its customers to engage in leak detection and repair in their own systems. SJRA and the Division encourage customers to take measures to reduce unaccounted-for water to prevent waste and facilitate achievement of the Water Conservation Plan demand reduction goals as specified above.

3.2.3 Recycling and Reuse

The Division currently utilizes reuse supplies, including providing reclaimed effluent to a golf course in the Woodlands through a long-term supply contract. The Division also implements direct reuse by using WWTP effluent for maintenance and process water. As a part of conservation efforts, the Division will continue reuse.

3.2.4 Rate Structure

SJRA utilizes a non-promotional rate structure for wholesale contracts with its customers; these rates are periodically reviewed and adjusted as necessary. SJRA also encourages the Division's customers to establish rate structures promoting conservation for sales to their own wholesale and retail customers.

3.2.5 Conservation Coordination

The Utility Enterprise Manager and/or a designee will serve as conservation liaison and primary point of contact for Division customers and State agencies regarding the development, monitoring, and implementation of the Division's Water Conservation Plan. The Utility Enterprise Manager and/or a designee will oversee the execution and implementation of all elements of the program and will be responsible for maintaining adequate records for program verification.

3.2.6 Conservation Stakeholder Group

SJRA will coordinate with MUD 386 Board of Directors, WWA staff and WWA Trustees regarding conservation practices and Water Conservation Plan implementation. Meetings may be held periodically at the discretion of the General Manager, Utility Enterprise Manager, or a designated representative to discuss issues relevant to conservation and gather stakeholder input.

3.2.7 Contractual Requirements for Customer Water Conservation Plans

SJRA will enforce the terms of contracts with wholesale water supply customers related to water conservation measures and Water Conservation Plan requirements. Additionally, SJRA will include in all water supply contracts entered into, renewed, or amended after the adoption of the Division's Water Conservation Plan a requirement that customers develop and implement water conservation plans as required by Title 30, Texas Administrative Code, Chapter 288 30 TAC §288). Per 30 TAC §288, any future contract, renewal, or amendment will also require that successive sales from SJRA customers to others include a contractual stipulation for water conservation requirements. At a minimum, customer conservation plans must comply with the requirements of 30 TAC §288.

SJRA requests that customer water conservation plans be consistent with the conservation goals of the Division, including a reduction in water demand in accordance with the per-capita goals referenced above, and shall be at least equal to or more stringent than the Division's Plan.

SJRA may periodically update these criteria, as well as the Water Conservation and Drought Contingency Plans for the Division to meet legal requirements or address changing conditions; subsequent to such revisions, customers of the Division are requested to update their water conservation and drought contingency plans as applicable.

3.2.8 Customer Conservation Plan Guidance;

SJRA will develop, and will provide to customers upon request, model water conservation plans meeting the contractual requirements described in Section 3.2.7 above. Additionally, SJRA will at customer request review draft customer water conservation and drought contingency plans for consistency with contractual requirements and the Division's Water Conservation and Drought Contingency Plans. SJRA will also hold one or more workshops providing information to water supply customers regarding the Plans and contractual requirements, upon request.

3.2.9 Customer Reporting Requirements

In 2011, the 82nd Texas Legislature passed Senate Bill (SB) 181, which addressed the need for consistency in water use reporting by municipalities, water utilities, and others. Subsequently, TWDB and TCEQ developed detailed guidance and procedures for calculating and reporting water use, water loss, and other factors.

While SJRA is not directly impacted by these requirements as a wholesale provider, the Division and other divisions provide contract supply to a number of entities which are impacted by SB181. The broad range of water uses served by SJRA and the requirements of multiple State reporting programs creates a need for the consistent customer reporting. As such, SJRA will require customer water usage reports, including any values for per-capita water demand, to follow the procedures established by TWDB and TCEQ.[4] Water use reports should include data at the sector level (single family residential, multi-family residential, industrial, commercial, agricultural, etc.) and should additionally include estimated population served and calculated water loss.

3.2.10 Public Information and Education

SJRA will use the resources of the TWDB, the American Water Works Association, and the American Public Works Association to assist in obtaining publications and materials for the public education program. Individual pamphlets and flyers provided from these entities may be selected for specialized water-conservation needs as they arise. SJRA also provides information on conservation and efficient water use on the Authority website at http://www.sanjacintoriverauthority.com/.

SJRA will provide, as needed, water conservation literature to customers of the Division. Through dialogue with its customers, the Division is committed to promoting improvements in industrial, municipal, and irrigation processes to achieve conservation.

SJRA will make information available through its public information and education program for

[4] TWDB et al. 2012. Guidance and Methodology for Reporting on Water Conservation and Water Use

customers to use when purchasing and installing plumbing fixtures, water-using appliances, and watering equipment. Information regarding retrofit devices, such as low-flow shower heads or toilet dams that reduce water use by replacing or modifying existing fixtures or appliances, will also be provided.

Other public information approaches which SJRA has utilized in the past and may implement in the future include public tours of facilities, participation in local environmental events that promote water awareness and conservation.

3.2.11 Encouraging Customer Conservation Practices

SJRA and the Division will work with MUD 386 Board of Directors and WWA to consider implementing rules, measures, and emerging technologies that promote water conservation and efficient use. Recommended measures include, but are not limited to, the following:

- Prohibitions on wasting water;
- Time-of-day watering restrictions;
- Water conservation pricing structures;
- Landscape irrigation conservation, including integrating rainfall/freeze sensors into irrigation systems;
- Water reuse
- Rainwater harvesting
- Public education programs

Additional information on conservation practices for a wide range of water uses can be found at the TWDB website (http://www.twdb.state.tx.us/).

3.2.12 Implementation, Enforcement, Coordination with RWPG, and Updating of the Plan

The Utility Enterprise Manager and/or designees will act as the administrators of the water conservation program. The administrators will oversee the execution and implementation of all elements of the program and monitor the progress of the plan. Additionally, the administrators will be responsible for submission of an annual report to the TCEQ and TWDB on the progress, and any changes to, the Water Conservation Plan. SJRA is responsible for maintaining adequate records for program verification.

SJRA will enforce the terms of contracts with wholesale water supply customers related to water conservation measures and Water Conservation Plan requirements.

The Division is located within the Region H Regional Water Planning Area. In accordance with the TCEQ rules, the Division provides a copy of its Water Conservation Plan to the Region H Regional Water Planning Group. A copy of the transmittal letter is included in Appendix B.

Appendix A
Water Utility Profiles

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San Jacinto River Authority – Woodlands Division

TCEQ Form 20162: Profile and Water Conservation Plan Requirements for Wholesale Public Water Supplies

Texas Commission on Environmental Quality

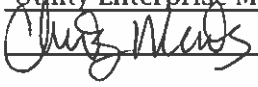
Water Availability Division
MC-160, P.O. Box 13087 Austin, Texas 78711-3087
Telephone (512) 239-4600, FAX (512) 239-2214

Utility Profile and Water Conservation Plan Requirements for Wholesale Public Water Suppliers

This form is provided to assist wholesale public water suppliers in water conservation plan development. If you need assistance in completing this form or in developing your plan, please contact the Conservation staff of the Resource Protection Team in the Water Availability Division at (512) 239-4600.

Water users can find best management practices (BMPs) at the Texas Water Development Board's website http://www.twdb.texas.gov/conservation/BMPs/index.asp. The practices are broken out into sectors such as Agriculture, Commercial and Institutional, Industrial, Municipal and Wholesale. BMPs are voluntary measures that water users use to develop the required components of Title 30, Texas Administrative Code, Chapter 288. BMPs can also be implemented in addition to the rule requirements to achieve water conservation goals.

Contact Information

Name:	San Jacinto River Authority	
Address:	PO Box 329, Conroe, TX 77305 / 2436 Sawdust Road, The Woodlands, TX 77380	
Telephone Number:	(936)588-3111	Woodlands: (281) 367-9511
Water Right No.(s):		
Regional Water Planning Group:	H	
Person responsible for implementing conservation program:	Chris Meeks	Phone: (281) 367-9511
Form Completed By:	Chris Meeks	
Title:	Utility Enterprise Manager	
Signature:		Date: 3/6/2024

A water conservation plan for wholesale public water suppliers must include the following requirements (as detailed in 30 TAC Section 288.5). If the plan does not provide information for each requirement, you must include in the plan an explanation of why the requirement is not applicable.

Utility Profile

I. WHOLESALE SERVICE AREA POPULATION AND CUSTOMER DATA

A. Population and Service Area Data:

1. Service area size (in square miles): 37.86

   (Please attach a copy of service-area map)

   Service map is included in Attachment A

2. Current population of service area:

   110,447

3. Current population served for:

   a. Water 110,447

   b. Wastewater 110,447

4. Population served for previous five years:

Year	*Population*
2023	110,447
2022	109,354
2021	108,271
2020	107,199
2019	106,138

5. Projected population for service area in the following decades:

Year	*Population*
2020	100,003
2030	105,894
2040	111,674
2050	118,464
2060	128,339

6. List source or method for the calculation of current and projected population size.

   Region H 2021 Regional Water Plan, Volume 2, “Region H Water User Group (WUG) Population”.

B. Customer Data

List (or attach) the names of all wholesale customers, amount of annual contract, and amount of annual use for each customer for the previous year:

Wholesale customer	Contracted amount (ac-ft/yr)*	Previous year amount of water delivered (acre-feet)
The Woodlands MUD 1	1,495	1,329
MC MUD 6	1,430	969
MC MUD 7	1,795	1,279

MC MUD 36	993	678
MC MUD 39	997	613
MC MUD 46	4,490	4,537
MC MUD 47	3,678	3,219
MC MUD 60	2,231	2,115
MC MUD 67	1,974	1,813
METRO MUD	3,015	2,060
HC MUD 386	463	356

II. WATER USE DATA FOR SERVICE AREA

A. Water Delivery

Indicate if the water provided under wholesale contracts is treated or raw water and the annual amounts for the previous five years (in acre feet):

Year	*Treated Water*	*Raw Water*
2023	18,968	0
2022	18,568	0
2021	15,564	0
2020	17,378	0
2019	16,959	0
Totals	87,438	0

B. *Water Accounting Data*

1. Total amount of water diverted at the point of diversion(s) for the previous five years (in acre-feet) for all water uses:

Year	*2023*	*2022*	*2021*	*2020*	*2019*
Month					
January	799	855	939	920	872
February	773	876	1085	862	780
March	1204	724	1123	1133	1182
April	1170	1448	1340	1086	1327
May	1333	1697	1258	1489	1421
June	1784	2361	1395	1747	1691
July	2527	2796	1399	2133	1781
August	3176	2047	1937	2352	2211

September	2460	1837	1639	1797	2021
October	1661	1922	1370	1615	1580
November	1131	1059	1087	1308	1070
December	952	948	990	935	1025
Totals	18,968	18,568	15,564	17,378	16,959

2. Wholesale population served and total amount of water diverted for **municipal use** for the previous five years (in acre-feet):

Year	*Total Population Served*	*Total Annual Water Diverted for Municipal Use*
2023	110,447	18,969
2022	109,354	18,568
2021	108,271	15,564
2020	107,199	17,378
2019	106,138	16,959

C. Projected Water Demands

SJRA – Woodlands has utilized a planning study for growth and development in relation to water and sewer demands since the 1980's. The last planning study was done in 2017 and projected out to full development of The Woodlands in 2027. In this planning effort, projections showed to increase the daily demand from 19.4 MGD to 20.6 MGD for the water system. The 5-year average for the water system daily demand has been 15.6 MGD.

III. WATER SUPPLY SYSTEM DATA

A. Projected Water Demands

List all current water supply sources and the amounts authorized (in acre feet) with each.

Water Type	*Source*	*Amount Authorized*
Surface Water	SJRA GRP SWTF	*
Groundwater	Evangeline & Jasper aquifers	**
Other		

**Amount authorized is set annually by the SJRA GRP Review Committee.*

*** Amount authorized is per LSGCD. SJRA is not contractually limited for water sales to the MUDs.*

B. Treatment and Distribution System (if providing treated water)

1. Design daily capacity of system (MGD): 63.95 MGD

2. Storage capacity (MGD):

   a. Elevated 4.5 MG

   b. Ground 19 MG

3. Please attach a description of the water system. Include the number of treatment plants, wells, and storage tanks

   The Woodlands districts purchase all their treated water from the SJRA through a wholesale purchase agreement. The SJRA facilities provide water under direct pressure to the districts at multiple points. SJRA's treated water infrastructure includes five water plants, thirty-eight groundwater wells, six elevated storage tanks, nine ground storage tanks, and wholesale water distribution pipelines. The system is illustrated in Attachment B to TCEQ Form 20162.

IV. WASTEWATER SYSTEM DATA

A. Wastewater System Data (if applicable)

1. Design capacity of wastewater treatment plant(s) (MGD): 14.7 MGD

2. Briefly describe the wastewater system(s) of the area serviced by the wholesale public water supplier. Describe how treated wastewater is disposed. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and the receiving stream if wastewater is discharged.

   All SJRA WWTP's are versions of the activated sludge processes. Treated wastewater is disinfected then disposed of in nearby creeks and rivers as identified below. A system diagram is also included in Attachment C.

   - *TCEQ names and numbers:*
     - *WWTP No. 1 – WQ0011401001*
     - *WWTP No. 2 – WQ0012597001*
     - *WWTP No. 3 – WQ0011658001*
   - *Owner / Operator: SJRA*
   - *Receiving stream*
     - *WWTP No. 1 – Panther Branch (Segment No. 1008 of the San Jacinto River Basin)*
     - *WWTP No. 2 – Panther Branch (Segment No. 1008 of the San Jacinto River Basin)*
     - *WWTP No. 3 – unnamed tributary (Segment No. 1004 of the San Jacinto River Basin)*

B. Wastewater Data for Service Area (if applicable)

1. Percent of water service area served by wastewater system: 100%

2. Monthly volume treated for previous five years (in 1,000 gallons):

Year	*2023*	*2022*	*2021*	*2020*	*2019*
Month					
January	229,399	211,803	215,062	224,837	209,196
February	195,185	193,230	214,410	205,938	192,904
March	209,522	208,870	213,107	222,556	217,668
April	208,870	205,612	209,848	212,455	227,770
May	234,613	220,601	251,557	227,770	253,838
June	215,062	206,264	226,466	227,770	245,366
July	216,365	211,803	229,399	235,264	257,096
August	221,905	223,534	230,051	227,118	258,074
September	209,848	205,286	217,343	223,860	235,916
October	216,691	202,028	220,601	221,905	236,242
November	202,028	201,050	209,196	209,196	21,506
December	208,219	224,185	218,320	221,253	222,882
Totals	2,567,706	2,514,266	2,655,360	2,659,922	2,578,459

Water Conservation Plan

In addition to the description of the wholesaler's service area (profile from above), a water conservation plan for a wholesale public water supplier must include, at a minimum, additional information as required by Title 30, Texas Administrative Code, Chapter 288.5. Note: If the water conservation plan does not provide information for each requirement an explanation must be included as to why the requirement is not applicable.

A. Specific, Quantified 5 & 10-Year Targets

The water conservation plan must include specific, quantified 5-year and 10-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable water loss, and the basis for the development of these goals. Note that the goals established by a wholesale water supplier under this subparagraph are not enforceable. These goals must be updated during the 5-year review and submittal.

B. Measuring and Accounting for Diversions

The water conservation plan must include a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply.

C. Record Management Program

The water conservation plan must include a monitoring and record management program for determining water deliveries, sales, and losses.

D. Metering/Leak-Detection and Repair Program

The water conservation plan must include a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system.

E. Contract Requirements for Successive Customer Conservation

The water conservation plan must include a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, 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 of Title 30 TAC Chapter 288. If the customer intends to resell the water, then 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.

F. Reservoir Systems Operations Plan

The water conservation plan must include 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. The reservoir systems operations plan shall include optimization of water supplies as one of the significant goals of the plan.

G. Enforcement Procedure and Official Adoption

The water conservation plan must include a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan.

H. Coordination with the Regional Water Planning Group(s)

The water conservation plan must include documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

Example statement to be included within the water conservation plan:

The service area of the _____ (name of water supplier) is located within the _____ (name of regional water planning area or areas) and _____ (name of water supplier) has provided a copy of this water conservation plan to the _____ (name of regional water planning group or groups).

I. Plan Review and Update

A wholesale water supplier shall review and update its water conservation plan, as appropriate based on an assessment of previous 5-year and 10-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan no later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. The revised plan must also include an implementation report.

V. ADDITIONAL CONSERVATION STRATEGIES

Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of 30 TAC §288.5(1), if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

1. 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;

2. A program to assist agricultural customers in the development of conservation, pollution prevention and abatement plans;

3. A program for reuse and/or recycling of wastewater and/or graywater;

4. Any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

VI. WATER CONSERVATION PLANS SUBMITTED WITH A WATER RIGHT APPLICATION FOR NEW OR ADDITIONAL STATE WATER

Water Conservation Plans submitted with a water right application for New or Additional State Water must include data and information which:

1. support the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan;

2. evaluates conservation as an alternative to the proposed appropriation; and

3. evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and marketing, regionalization, and optimum water management practices and procedures.

Additionally, it shall be the burden of proof of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.

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San Jacinto River Authority – Woodlands Division

Attachments to TCEQ Form 20162: Profile and Water Conservation Plan Requirements for Wholesale Public Water Supplies

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Attachment A

SJRA Service Area

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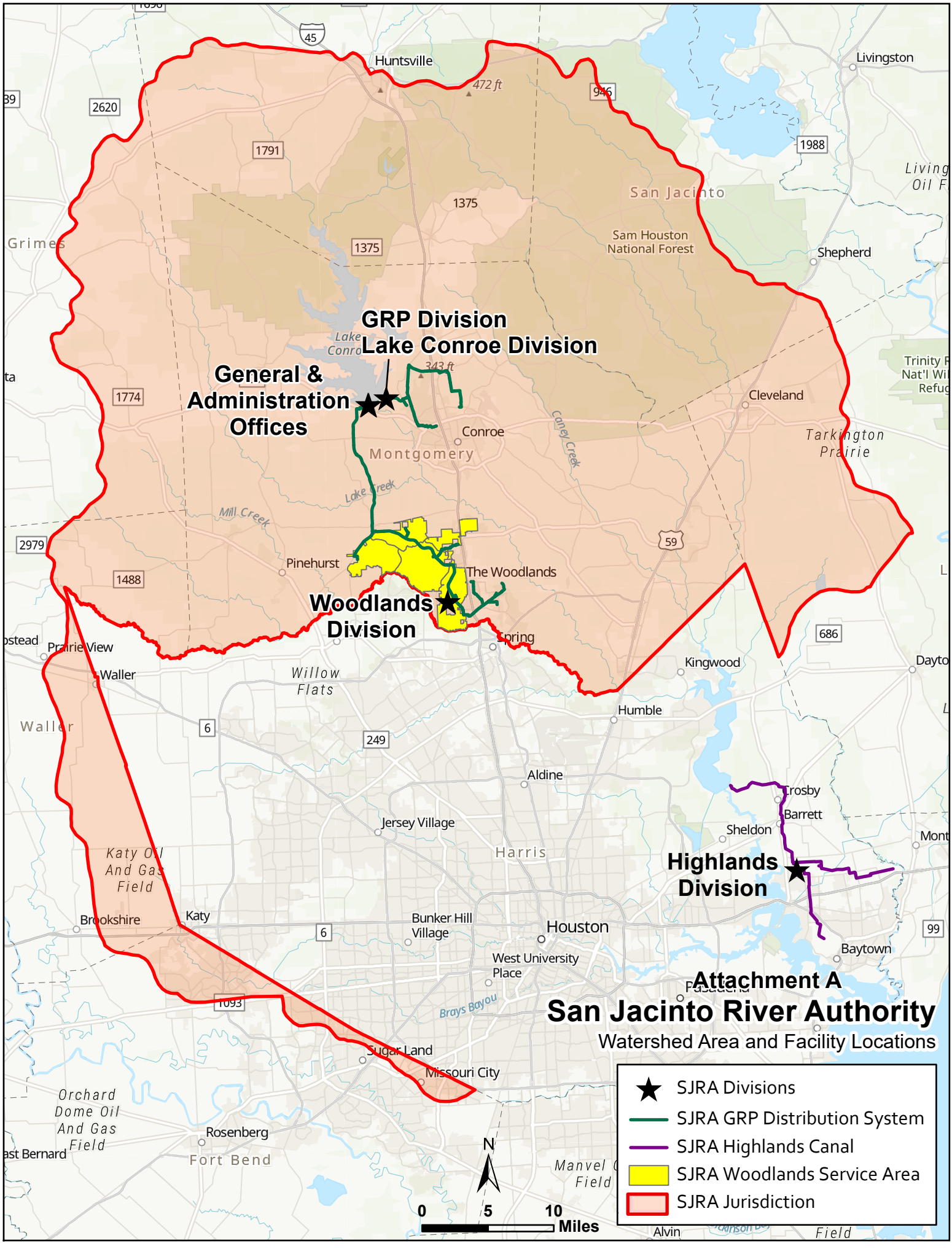
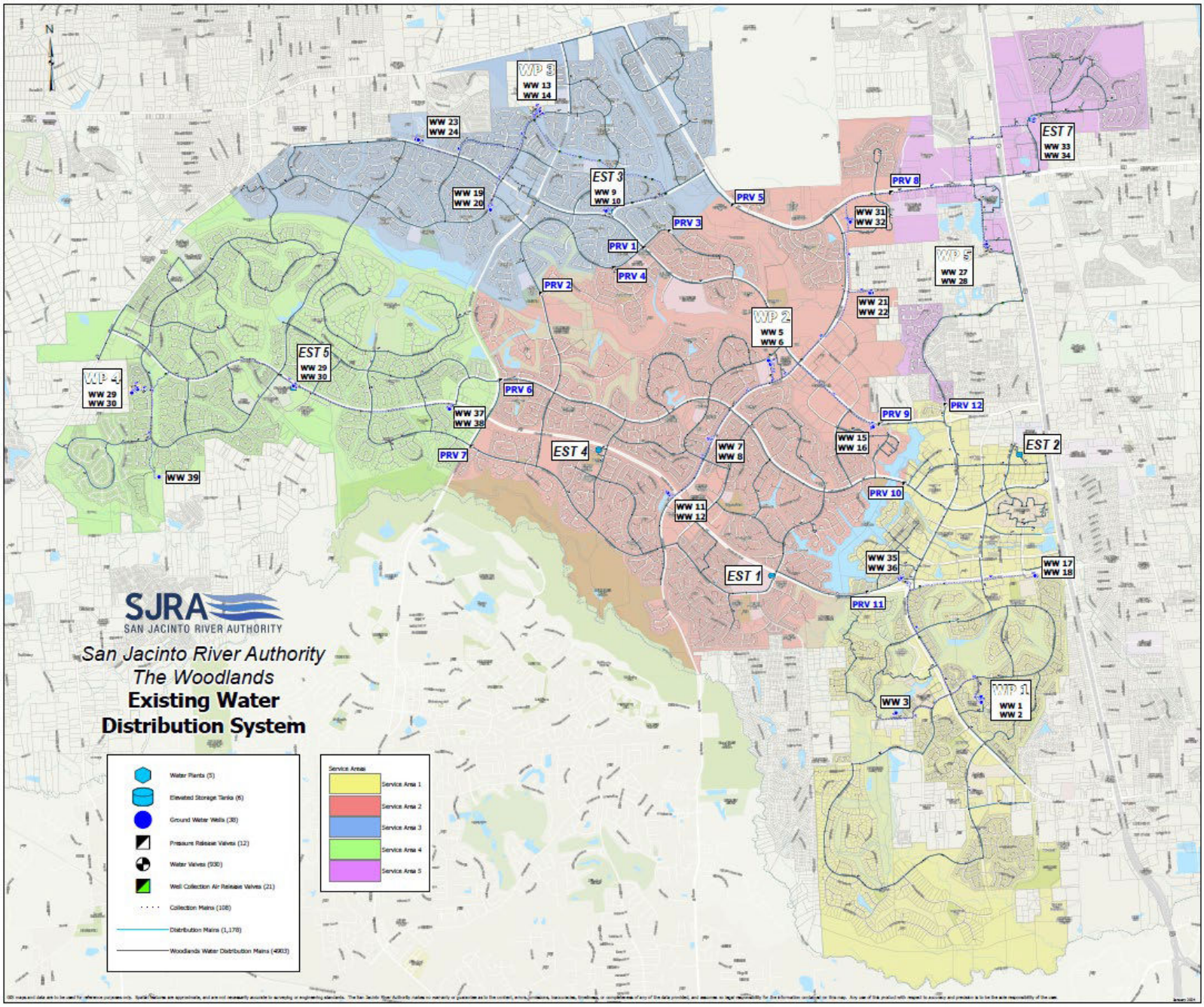

GRP Division
Lake Conroe Division
General & Administration Offices
Woodlands Division
Highlands Division
Huntsville
Livingston
Shepherd
Cleveland
Conroe
Montgomery
Pinehurst
The Woodlands
Spring
Kingwood
Humble
Aldine
Jersey Village
Harris
Houston
Bunker Hill Village
West University Place
Baytown
Trosby
Barrett
Sheldon
Waller
Prairie View
Willow Flats
Katy
Brookshire
Sugar Land
Missouri City
Rosenberg
Fort Bend
Alvin
Grimes
San Jacinto
Sam Houston National Forest
Tarkington Prairie
Lake Conroe
Caney Creek
Lake Creek
Mill Creek
Brays Bayou
Katy Oil And Gas Field
Orchard Dome Oil And Gas Field
Manvel Field
472 ft
343 ft
Attachment A
San Jacinto River Authority
Watershed Area and Facility Locations
SJRA Divisions
SJRA GRP Distribution System
SJRA Highlands Canal
SJRA Woodlands Service Area
SJRA Jurisdiction
N
0 5 10 Miles

Attachment B

Water Distribution System


N
WP 3
WW 13
WW 14
WW 23
WW 24
EST 3
WW 9
WW 10
WW 19
WW 20
PRV 5
PRV 8
EST 7
WW 33
WW 34
PRV 3
WW 31
WW 32
PRV 1
PRV 4
WP 5
WW 27
WW 28
PRV 2
WW 21
WW 22
WP 2
WW 5
WW 6
EST 5
WW 29
WW 30
WP 4
WW 29
WW 30
PRV 6
WW 37
WW 38
PRV 9
PRV 12
EST 4
WW 7
WW 8
WW 15
WW 16
EST 2
PRV 7
WW 39
PRV 10
WW 11
WW 12
WW 35
WW 36
WW 17
WW 18
EST 1
PRV 11
WW 3
WP 1
WW 1
WW 2
SJRA
SAN JACINTO RIVER AUTHORITY
San Jacinto River Authority
The Woodlands
Existing Water
Distribution System
Water Plants (5)
Elevated Storage Tanks (6)
Ground Water Wells (30)
Pressure Release Valves (12)
Water Valves (930)
Well Collection Air Release Valves (21)
Collection Mains (108)
Distribution Mains (1,178)
Woodlands Water Distribution Mains (4003)
Service Areas
Service Area 1
Service Area 2
Service Area 3
Service Area 4
Service Area 5

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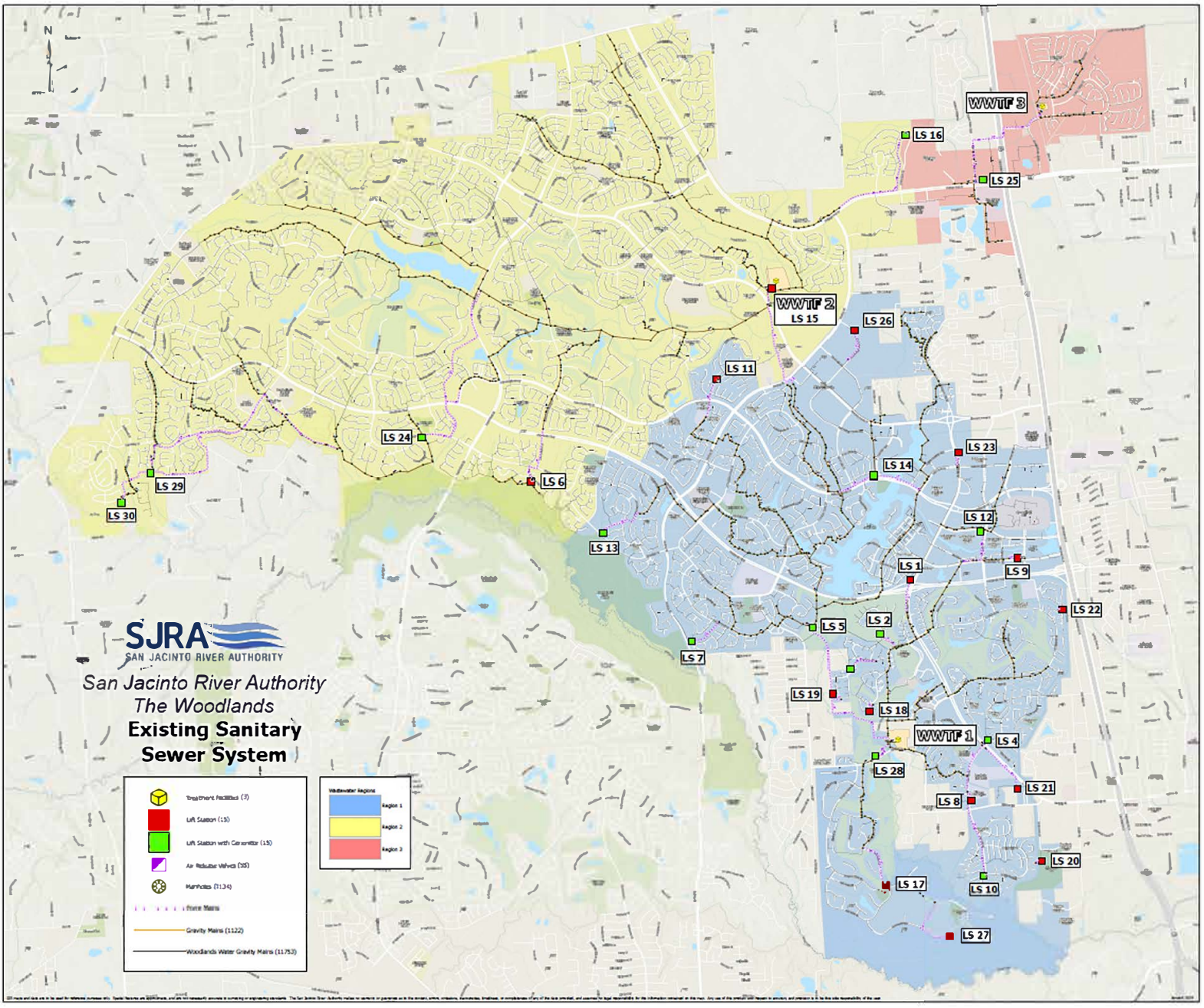
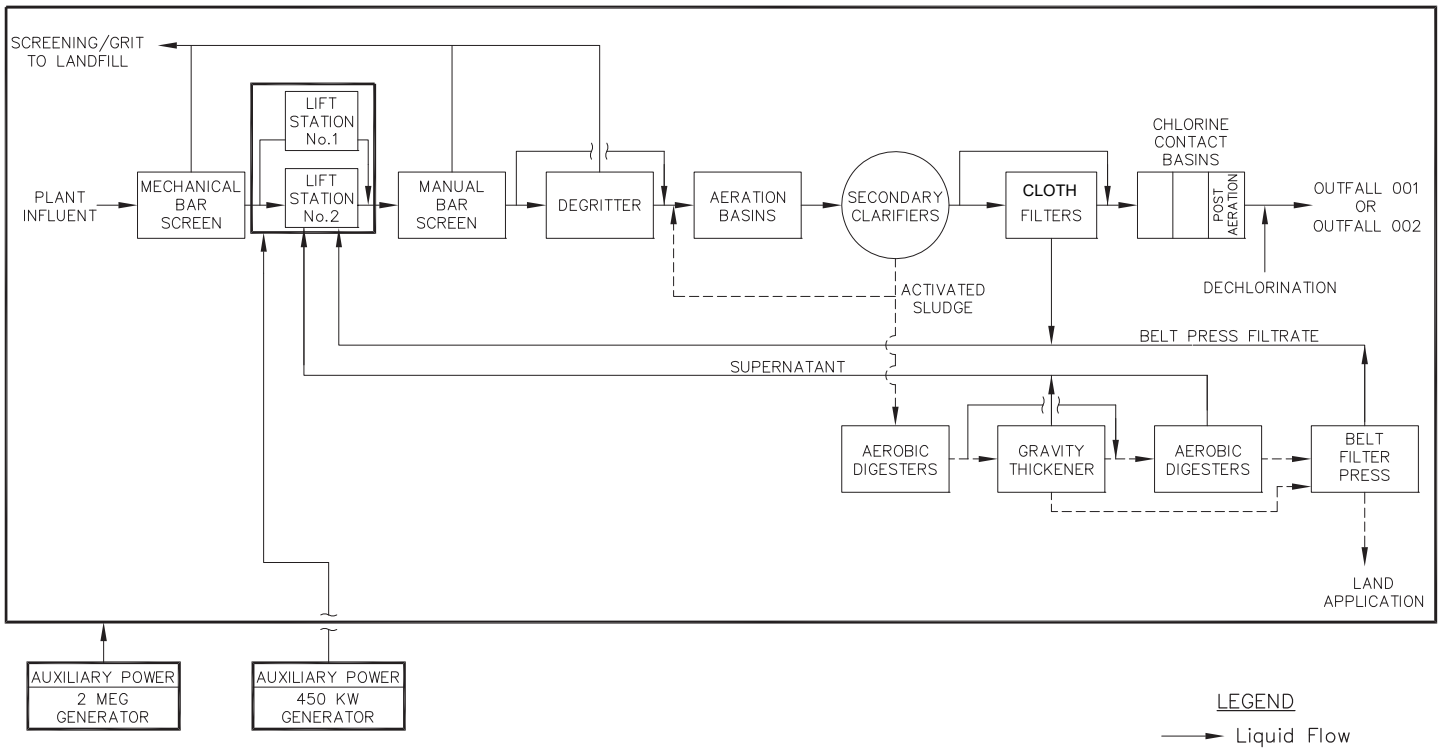
Attachment C

Wastewater Distribution System and Treatment Process Diagrams


N
WWTF 3
LS 16
LS 25
WWTF 2
LS 15
LS 26
LS 11
LS 24
LS 6
LS 29
LS 30
LS 23
LS 14
LS 12
LS 13
LS 1
LS 9
LS 22
LS 5
LS 2
LS 7
LS 19
LS 18
WWTF 1
LS 4
LS 28
LS 21
LS 8
LS 20
LS 17
LS 10
LS 27
SJRA
SAN JACINTO RIVER AUTHORITY
San Jacinto River Authority
The Woodlands
Existing Sanitary
Sewer System
Treatment Facilities (3)
Lift Station (15)
Lift Station with Generator (15)
Air Release Valves (55)
Manholes (7134)
Force Mains
Gravity Mains (1122)
Woodlands Water Gravity Mains (11753)
Wastewater Regions
Region 1
Region 2
Region 3

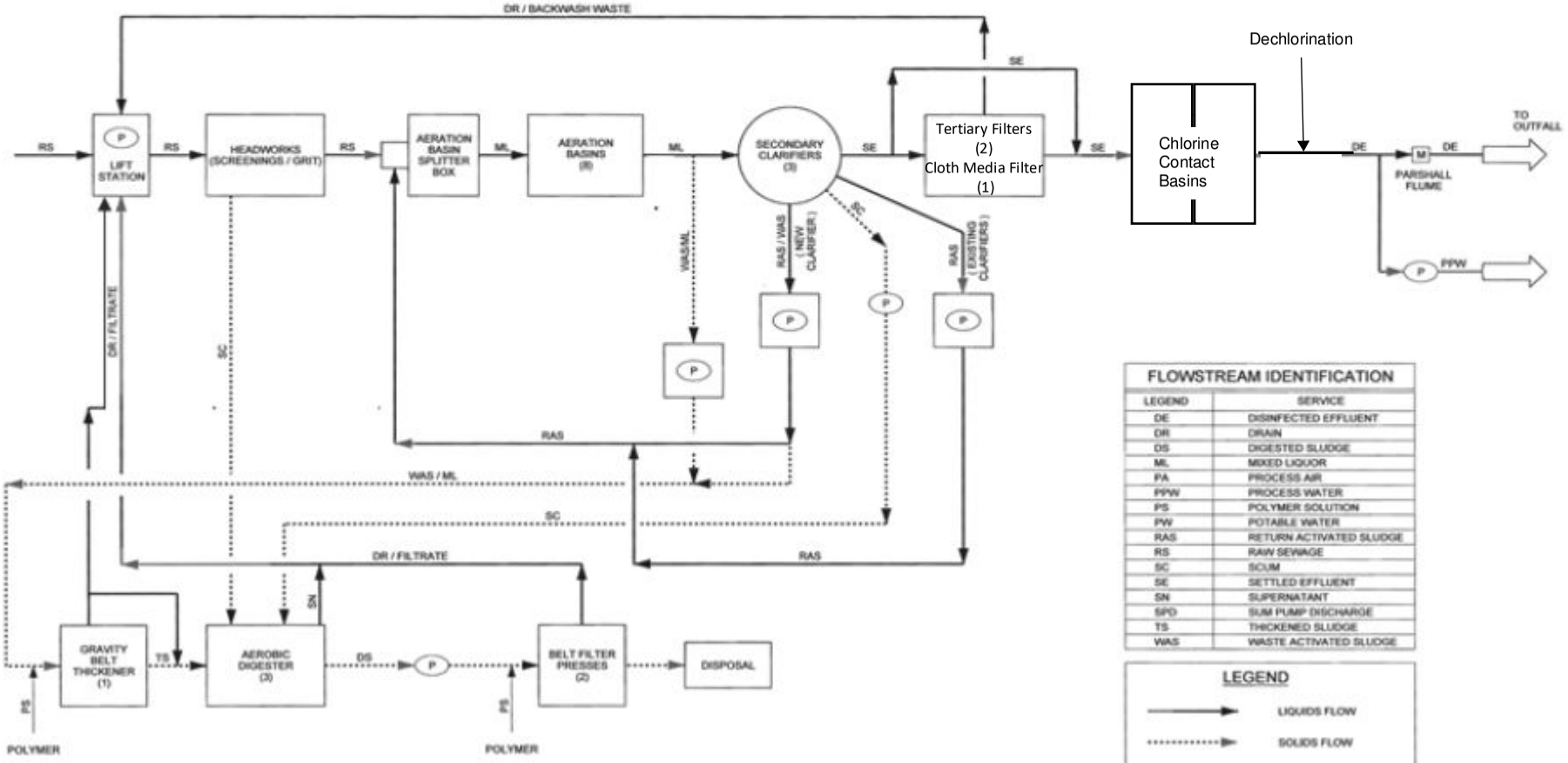


ATTACHMENT C
SAN JACINTO RIVER AUTHORITY
WASTEWATER TREATMENT PLANT NO. 1
TPDES PERMIT RENEWAL APPLICATION
FLOW DIAGRAM

ATTACHMENT C

SAN JACINTO RIVER AUTHORITY
WASTEWATER TREATMENT FACILITY NO. 2
PERMIT NO. WQ0012597001

EXISTING PROCESS FLOW DIAGRAM (6.0 MGD AAF AND 15.6 MGD P2HF)

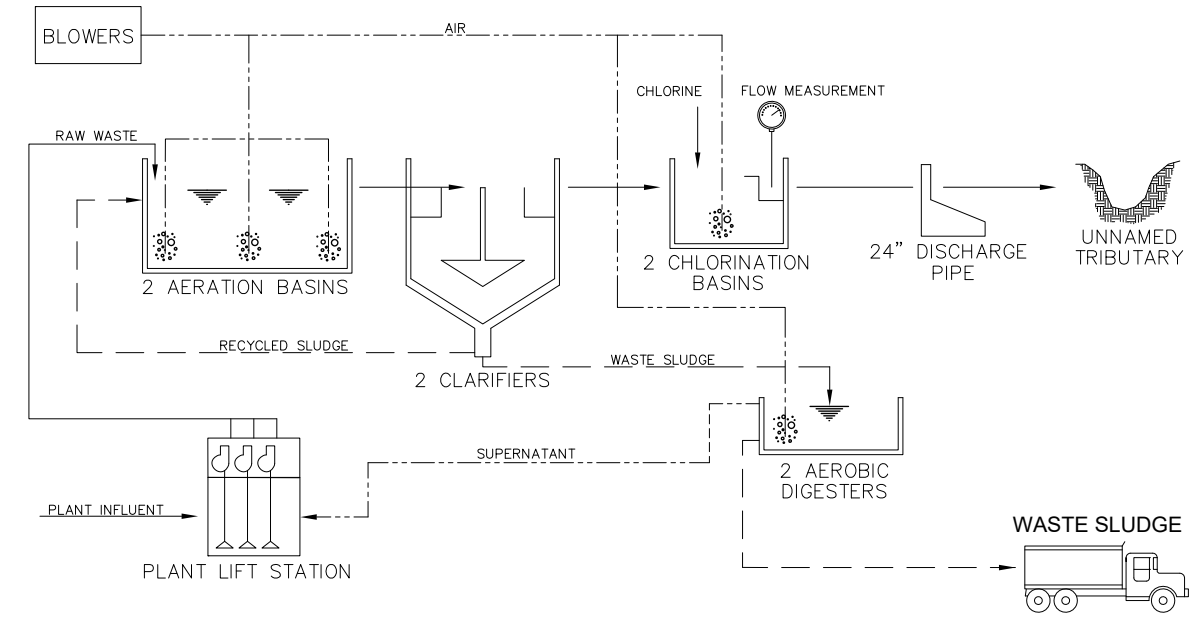


FLOWSTREAM IDENTIFICATION	
LEGEND	SERVICE
DE	DISINFECTED EFFLUENT
DR	DRAIN
DS	DIGESTED SLUDGE
ML	MIXED LIQUOR
PA	PROCESS AIR
PPW	PROCESS WATER
PS	POLYMER SOLUTION
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RS	RAW SEWAGE
SC	SCUM
SE	SETTLED EFFLUENT
SN	SUPERNATANT
SPD	SUM PUMP DISCHARGE
TS	THICKENED SLUDGE
WAS	WASTE ACTIVATED SLUDGE

LEGEND

- LIQUIDS FLOW
- SOLIDS FLOW
- M — FLOW MEASUREMENT
- P — MAJOR PUMP STATION

MODE OF TREATMENT
SINGLE STAGE NITRIFCATION ACTIVATED SLUDGE



LEGEND

- Liquid Flow
- Solid Flow
- Other Flow

ATTACHMENT C
SAN JACINTO RIVER AUTHORITY
WASTEWATER TREATMENT PLANT NO. 3
TPDES PERMIT APPLICATION
FLOW DIAGRAM – EXISTING/INTERIM I PHASE

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Appendix B
Resolutions Passed by SJRA
Transmittal Letter to Region H RWPG

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RESOLUTION NO. 2024-R-13

RESOLUTION ADOPTING REVISED WATER CONSERVATION PLANS AND DROUGHT CONTINGENCY PLANS; AUTHORIZING THE IMPLEMENTATION OF SUCH REVISED PLANS; REPEALING AND RESCINDING ALL PRIOR PLANS; AND CONTAINING OTHER PROVISIONS RELATING TO THE SUBJECT

WHEREAS, the San Jacinto River Authority (the "Authority") has water rights issued by the Texas Commission on Environmental Quality and its predecessor agencies (collectively, the "TCEQ") to divert water from the San Jacinto River and Trinity River basins; and

WHEREAS, the Authority, by and through its Highlands Division, owns and operates water supply and distribution systems and facilities, including the Lake Houston Pump Station, East Canal Transfer Pump Station, South Canal Transfer Pump Station, Highlands Reservoir, and the Highlands Canal System, in order to sell and deliver water out of such rights to certain customers generally located in eastern Harris County; and

WHEREAS, the Authority also owns an interest in Lake Conroe Dam and Reservoir, located in Montgomery and Walker Counties ("Lake Conroe") upstream on the San Jacinto River from the Lake Houston Reservoir, and holds certain contract rights and water rights issued by the TCEQ to divert or release and use water from Lake Conroe; and

WHEREAS, the Authority, by and through its Lake Conroe Division, operates Lake Conroe and sells water out of such rights to customers located in Montgomery County, and

WHEREAS, the Authority, by and through its Woodlands Division, owns and operates an extensive water supply and distribution system and facilities for providing regional, wholesale services to customers in the area of The Woodlands; and

WHEREAS, the Authority, by and through its Groundwater Reduction Plan Division (the "GRP Division"), owns and operates a surface water treatment facility and transmission system that withdraws water from Lake Conroe for treatment, distribution and sale to its Woodlands Division and certain other customers; and

WHEREAS, in connection with the management of such facilities, systems and operations, the Authority has previously adopted various Water Conservation Plans and Drought Contingency Plans (collectively, the "Plans") in accordance with the requirements of Chapter 11, Texas Water Code, as amended, and the rules of the TCEQ under Chapter 288 of Title 30, Texas Administrative Code, as amended; and

WHEREAS, the Board of Directors of the Authority has determined that it is in the public interest to revise and replace the Plans; Now, Therefore,

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE SAN JACINTO RIVER AUTHORITY, THAT:

Section 1: The Plans, as previously adopted and amended by the Authority, are hereby repealed and rescinded in their entirety.

Section 2: The Board of Directors of the Authority hereby approves and adopts the revised water conservation and drought contingency plans, each dated as of the date hereof, titled as follows: *Water Conservation Plan for San Jacinto River Authority Highlands Division*; *Drought Contingency Plan for San Jacinto River Authority Highlands Division*; *Water Conservation Plan for San Jacinto River Authority Lake Conroe Division*; *Drought Contingency Plan for San Jacinto River Authority Lake Conroe Division*; *Water Conservation Plan for San Jacinto River Authority Woodlands Division*; *Drought Contingency Plan for San Jacinto River Authority Woodlands Division*; *Water Conservation Plan for San Jacinto River Authority GRP Division*; and *Drought Contingency Plan for San Jacinto River Authority GRP Division* (collectively, the "Revised Plans").

Section 3: The Revised Plans, together with any amendments thereto which may be made from time to time, shall be maintained on file in the official records of the Authority and filed, as appropriate, with the TCEQ, the Texas Water Development Board and any other agencies with jurisdiction.

Section 4: It shall be the policy of the Authority that the programs and procedures set forth in the Revised Plans be implemented immediately.

Section 5: The General Manager of the Authority is hereby designated as the official responsible for implementation of the Revised Plans in accordance with the guidelines set forth in the Revised Plans.

Section 6: It shall be the policy of the Authority to support and assist its wholesale and retail customers in (1) designating their pre-assigned officials as having the responsibility and authority to implement the Revised Plans, (2) allowing for enforcement of the Revised Plans, and (3) providing civil penalties for noncompliance with the Revised Plans.

Section 7: It shall be the policy of the Authority that the *Water Conservation Plan for San Jacinto River Authority GRP Division* and the *Drought Contingency Plan for San Jacinto River Authority GRP Division* establish minimum requirements which shall be adopted, respectively, in a water conservation plan and a drought contingency by each participant in the Authority's Groundwater Reduction Plan. The General Manager of the Authority and the GRP Administrator are hereby authorized and directed to take such actions as are deemed necessary and appropriate to ensure that the participants in the Authority's Groundwater Reduction Plan (the "Participants") adopt water conservation plans and drought contingency plans that are reasonably determined to meet or exceed such minimum requirements. Further, it shall be the policy of the Authority to support and assist the Participants in (1) adopting such water conservation plans and drought contingency plans, and (2) implementing and enforcing such water conservation plans and drought contingency plans.

Section 8: This Resolution shall be and remain in full force and effect from and after the date of its passage and approval.

PASSED AND APPROVED this 25th day of April, 2024.

President, Board of Directors

Secretary, Board of Directors

(SEAL)

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SJRA
SAN JACINTO RIVER AUTHORITY

April 25, 2024

Mark Evans, Chair
Region H Water Planning Group
c/o San Jacinto River Authority
P.O. Box 329
Conroe, Texas 77305

Re: Water Conservation and Drought Contingency Plans

Dear Mr. Evans:

Please find enclosed one (1) copy of the revised Water Conservation and Drought Contingency Plans for the San Jacinto River Authority's Lake Conroe, GRP, Woodlands, and Highlands Divisions. San Jacinto River Authority's Board of Directors adopted the enclosed plans on April 25, 2024. These revisions have been completed to meet the regulatory requirement to update and submit the Plans to TCEQ and TWDB by May 1, 2024. Electronic versions of the Plans are available on San Jacinto River Authority's website at http://www.sjra.net/about/wc-dcp/.

If you have any questions, please do not hesitate to contact me at (936) 588-3111 or mbarrett@sjra.net.

Sincerely,

Matt Barrett, P.E.
Water Resources and Flood Management Division Manager
San Jacinto River Authority

Cc: Aubrey A. Spear, P.E.
Ed Shackelford, P.E.
Chris Meeks
Richard Tramm
Bret Raley

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Appendix C

Woodlands Division TCEQ Form 20645 - Water Conservation Implementation Report Form and Summary of Updates/Revisions to Water Conservation Plan

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Texas Commission on Environmental Quality

Water Availability Division
MC-160, P.O. Box 13087 Austin, Texas 78711-3087
Telephone (512) 239-4600, FAX (512) 239-2214

WATER CONSERVATION IMPLEMENTATION REPORT FORM AND SUMMARY OF UPDATES/REVISIONS TO WATER CONSERVATION PLAN

(Texas Water Code §11.1271(b) and Title 30 Texas Administrative Code §288.30(1) to (4))

Please note, this form replaces the following forms: TCEQ-20645 (Non-Public Water Suppliers) and TCEQ-20646 (Public Water Suppliers)

This Form is applicable to the following entities:

1. **Water Right Holders of 1,000 acre-feet or more for municipal, industrial, and other non-irrigation uses.**
2. **Water Right Holders of 10,000 acre-feet or more for irrigation uses.**

The above noted entities are required by rule to submit updates to their water conservation plan(s) and water conservation implementation report(s) every five years beginning May 1, 2009. See 30 Texas Administrative Code (TAC) §288.30(1) to (4). Entities must also submit any revisions to their water conservation plan within 90 days of adoption when the plans are revised in between the five-year submittal deadlines. This form may be used for the five-year submittal or when revisions are made to the water conservation plans in the interim periods between five-year submittals. Please complete the form as directed below.

1. Water Right Holder Name: San Jacinto River Authority
2. Water Right Permit or Certificate Nos. COA 10-4963, COA 10-4964, COA 10-4965, COA 10-4966, Permit 5807, Permit 5808, COA 08-4279, Permit 5271
3. Please Indicate by placing an 'X' next to all that Apply to your Entity:

Water Right Holder of 1,000 acre-feet or more for non-irrigation uses

X Municipal Water Use by Public Water Supplier

X Wholesale Public Water Supplier

X Industrial Use

X Mining Use

X Agriculture Non-Irrigation

Water Right Holder of 10,000 acre-feet or more for irrigation uses

_____ Individually-Operated Irrigation System

X Agricultural Water Suppliers Providing Water to More Than One User

Water Conservation Implementation Reports/Annual Reports

4. Water Conservation Annual Reports for the previous five years were submitted to the Texas Water Development Board (TWDB) for each of the uses indicated above as required by 30 TAC §288.30(10)(C)? Yes x No_____

TCEQ no longer requires submittal of the information contained in the detailed implementation report previously required in Forms TCEQ-20645 (Non-Public Water Suppliers) and TCEQ-20646 (Public Water Suppliers). However, the Entity must be up-to-date on its Annual Report Submittals to the TWDB.

Water Conservation Plans

5. For the five-year submittal (or for revisions between the five-year submittals), attach your updated or revised Water Conservation Plan for each of the uses indicated in Section 3, above. Every updated or revised water conservation plan submitted must contain each of the minimum requirements found in the TCEQ rules and must be duly adopted by the entity submitting the water conservation plan. Please include evidence that each water conservation plan submitted has been adopted.

   - Rules on minimum requirements for Water Conservation Plans can be found in 30 TAC Chapter 288. http://texreg.sos.state.tx.us/public/readtac%24ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=288
   - Forms which include the minimum requirements and other useful information are also available to assist you. Visit the TCEQ webpage for Water Conservation Plans and Reports. https://www.tceq.texas.gov/permitting/water_rights/wr_technical-resources/conserve.html

*Call **512-239-4600** or email to **wcp@tceq.texas.gov** for assistance with the requirements for your water conservation plan(s) and report(s).*

6. For each Water Conservation Plan submitted, list dates and descriptions of the conservation measures implemented, and the actual amount of water saved.

The previous Water Conservation Plan (2019) for the Woodlands Division set a goal of 2.5% reduction in water use per year for a 5-year period and 5% over a 10-year period. The Woodlands Division's total water use decreased from 194.4 gpcd from 2014-2018 to a gpcd of 144.14; which accounts for a 26% reduction.

The reduction can be attributed to raised awareness, alternating water schedules, and reduction through rates.

7. For each Water Conservation Plan submitted, state whether the five and ten-year targets for water savings and water loss were met in your *previous* water conservation plan.

   Yes _X_____ No _____

   If the targets were not met, please provide an explanation as to why any of the targets were not met, including any progress on that particular target.

8. For each five-year submittal, does each water conservation plan submitted contain *updated* five and ten-year targets for water savings and water loss?
Yes X No

If yes, please identify where in the water conservation plan the updated targets are located (page, section).

Section 3.1, Page 3-1

9. In the box below (or in an attachment titled "Summary of Updates or Revisions to Water Conservation Plans), please identify any other revisions/updates made to each water conservation plan that is being updated or revised. Please specify the water conservation plan being updated and the location within the plan of the newly adopted updates or revisions.

SJRA Woodlands Division
- Updated 5 and 10-year water conservation and water loss goals. (Section 3.1)
- Revised/Updated all Figures. (Throughout)
- Other minor text revisions (Throughout)

10. *Form Completed by (Point of Contact):* Chris Meeks
(If different than name listed above, owner and contact may be different individual(s)/entities)

Contact Person Title/Position: Chris Meeks, Utility Enterprise Manager
Contact Address: PO Box 329, Conroe, TX 77305
Contact Phone Number: 281-367-9511 Contact Email Address: cmeeks@sjra.net

Signature: [signature] Date: 3/6/24