

PROPOSED
KERR COUNTY REGIONAL
WATER & WASTEWATER PROJECT
for
CENTER POINT & EASTERN KERR COUNTY
SERVICE AREA

Prepared for
KERR COUNTY
and
UPPER GUADALUPE RIVER AUTHORITY

**This study was prepared
with the assistance of a
Texas Water Development
Board Planning Grant**

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Feasibility Analysis for Center Point, Texas Regional Wastewater Collection System and Regional Water Supply and Distribution

This feasibility study is to determine the cost and potential benefit of providing a wastewater collection system with treatment being provided by either the Kendall County WCID No. 1 Wastewater Treatment Plant or by the City of Kerrville Wastewater Treatment Plant.



I. Introduction

The Regional Wastewater Planning Study for Kerr County (TWDB Contract No. 0604830607) provides an analysis of a wastewater collection system for the Center Point Community and Eastern Kerr County Texas.

By an agreement between Kerr County and the Upper Guadalupe River Authority, the planning study has been expanded to also provide an analysis of a potential surface water treatment plant. This plant will provide surface water to some existing CCNs in the region, and a proposed distribution system to serve other residential and commercial units not presently served by any system.

Eastern Kerr County and the Center Point Community are presently served only by on-site septic systems for wastewater disposal, and as such are experiencing significant environmental and health problems along with a detrimental atmosphere for development of the area. Many OSSF's in Center Point are totally out of compliance with current TCEQ standards, and serve properties that are too small to accommodate updated systems; or are in close proximity to water wells for domestic use.

The location of the Center Point Community in Eastern Kerr County subjects it to growing pressure of suburban development from San Antonio.

This continuing pressure for development utilizing septic tanks and individual wells is rapidly depleting the ground water resources and posing significant proliferation of septic tank seepage into streams and rivers.

The development of this required surface water supply will provide a source of treated surface water to relieve pressure on the ground water resources, and the wastewater system will significantly reduce the environmental degradation of streams and water sources from inadequate septic systems.

The proposed regional service area is being jointly proposed by Kerr County and the Upper Guadalupe River Authority. Exhibit A shows the proposed regional service area as recommended in the conclusions to this study.

II. Executive Summary

The results of this study provide a preliminary evaluation of the feasibility of providing a wastewater collection system and a potable surface water treatment facility to serve the Center Point Community and the river valley of Eastern Kerr County.

The results are broken into four categories:

1. Wastewater Collection

The conclusion was made that the wastewater collection system could be constructed with one central lift station for pumping wastewater flows to respective treatment sites. It was also determined that the same wastewater collection system would work for both identified treatment options.

2. Alternatives for wastewater treatment

Alternatives for wastewater treatment that were investigated consisted of City of Kerrville as Option A and Kendall County WCID No. 1 as Option B.

Option A would require a pressure force main to transport waste flows to the entire distance to Kerrville. This force main could not be used to provide service to any of the areas through which it passes.

Option B would allow a gravity transmission line for nearly all of the distance between Center Point and the Kerr/Kendall County line. This would allow wastewater services to be provided for a regional area identified in Exhibit A.

Based on estimates of probable cost shown in Sections IV and VII, the system totals for each option are as follows:

- a. Option A Wastewater - \$10,697,500
- b. Option B Wastewater - \$12,436,500
- c. Water Treatment and Supply to Center Point Area \$4,587,200
- d. Water Treatment and Supply to Region \$8,188,700

Operating cost for power

With an assumed cost of power \$0.05/kwhr, electrical operating cost for Option A would be approximately \$0.08/1000 gal., and Option B would be approximately \$0.03/1000 gal. See Section V.

3. Water Supply

The water supply within the region is provided by individual wells or from wells owned and operated by a number of small utilities holding CCNs in the region.

All of the supply sources are from the Trinity Aquifer which has been under increasing pumpage demands. The Texas Water Development Board's 2001 study titled "The Lower Trinity Aquifer of Bandera and Kerr County," found the following:

2001 Report: The Lower Trinity Aquifer of Bandera and Kerr Counties

"Lower Trinity water levels in areas where pumpage has been heavy and localized have declined significantly in the past. The City of Kerrville relied on the lower Trinity as a source of water from the 1920s to the early 1980s, and water-level declines of as much as 250 feet were observed during that time. In 1981, a surface-water treatment plant was brought on-line, and ground-water production was reduced dramatically. This resulted in water levels in the Kerrville area rebounding as much as 200 feet between 1982 and 1990. Since 1990, however, many wells are again showing significant water-level declines as ground-water use has again increased."

4. Water Distribution

Water Distribution is proposed to provide supplemental surface water to the individual CCNs that are experiencing depleted ground water problems, and to existing and proposed residential and commercial areas that are outside any of the existing CCNs.

III. Wastewater Services

A. Collection System

The collection system, shown on the preliminary plan Exhibit B, would provide service to the existing developed area of Center Point. At the present time, the on-site treatment of septic tanks does not provide acceptable protection for ground water and has had unacceptable impacts on the streams and the Guadalupe River.

Kerr County will adopt a policy of mandatory sewer hookups as required by TWDB.

There are a number of developments that have been created in recent years between Center Point and Kendall County WCID No. 1 that can be served by the proposed interceptor line to Kendall County WCID No. 1.



B. Transmission Lines

Alternative “A”

Treatment by the City of Kerrville. This alternative, shown on Exhibit C, requires a lift station with a pump capacity of 715gpm and a total head of 120-feet. This lift station would tie to a force main of 8-inches in diameter and a total length of 25,000-feet to tie to an existing manhole on the Kerrville system in the vicinity of the Kerrville-Kerr County Airport.



The only advantage to this transmission line alternative is the initial cost estimated to be \$2.6 million.

The major disadvantage to this line is, as a force main, it could not serve any of the area between Center Point and Kerrville City Limits; however, a portion of this area can be served with a gravity flow line back to Center Point, thus increasing the Regional Service Area capabilities both to the west and east of Center Point.

The cost of operation of the lift station would be greater than Alternative “B” due to the increased head required. See Section V.

Alternative “B”

This alternative, shown on Exhibit D, also requires a lift station with the same capacity as Alternative “A”, 715 gpm; but with a lower head of 60 ft.

This lift station would tie into a force main of approximately 7,000 ft. where it would discharge into a gravity sewer line that would be constructed all the way to Comfort (Kendall County) for delivery to the WCID No. 1 wastewater system, approximately 48,000 ft. This line is estimated to have a total cost of \$4.4 million for the force main and the gravity line.

The main advantage to this alternative is that it would truly provide regional service by serving all of the area along Hwy 27, between Center Point and Kendall County WCID No. 1, and it would have less operating cost for the lift station. The only disadvantage is the initial construction cost.

C. Treatment Comparisons:

Treatment by City of Kerrville

City of Kerrville’s impact fee is \$500.00 per connection. The City has indicated it is “premature to speculate on negotiations without knowing how the proposed wastewater system will benefit Kerrville.”

The City of Kerrville has a rate of 1.5x the current in-city rate for each 1,000 gallons passing the meter for sewage received from outside city limits. This process could be difficult to handle for billing purposes in Center Point and may wind up paying for any infiltration in the system.

Treatment by Kendall County WCID No. 1

Kendall County WCID No. 1 and Kerr County have signed a “Letter of Intent” to negotiate an Inter-Governmental Agreement setting forth all conditions and fees associated with this project.

This makes it easy to bill customers and does not charge customers for incidental infiltration flows.

D. Expansion

On the assumption of using the Kendall County WCID No. 1 connection as the preferred plan, because of its regional service characteristics, with a 12-inch gravity line running from Center Point to Kendall County WCID No. 1, the future expansion capacity would be as follows:

Estimated number of connections for 12-inch pipe at minimum slope 0.20%
3 persons per connection
100 gallons per day per person with a 2.5 peak factor

12-inch capacity @ 0.20% = 715 GPM = 1,029,600 GPD
 $1,029,600 \text{ GPD} / 4 \times 100 \times 2.5 = 1030 \text{ connections}$

There are approximately 450 existing connections to be initially served within Center Point proper.

The lift station and gravity line to Kendall County WCID No. 1 is being designed to accommodate 1,000,000 gallons per day, or approximately 1030 connections. Center Point is estimated to grow by 3% per year* or to 835 connections in 25 years.



The area between Center Point and Kendall County WCID No. 1 presently contains approximately 250 possible connections, and if it grows at 3% per year it would have 460 connections in 25 years. If both areas grow at this projected rate, the systems capacity would be reached in less than 25 years; however if the area experiences that growth, it is probable that an alternative treatment facility would need to be developed for the region.



*TWDB projected growth rate average of 1.91% for Kerr County was increased by 1.09% due to Kendall County's proximity with a 6.76% growth rate. Example: Comfort School District's present growth rate is 2.4%.

IV. Wastewater Preliminary Estimated Quantities & Probable Cost

Regional Sanitary Sewer Collection System

	Quantity	Unit	Unit Price	Extension
Mobilization	1	LS	\$200,000	\$ 200,000
Right-of-Way Prep	1	LS	100,000	100,000
6" Sanitary Sewer Pipe (All Depths)	9,600	LF	35	336,000
8" Sanitary Sewer Pipe (All Depths)	27,400	LF	40	1,096,000
12" Sanitary Sewer Pipe (All Depths)	8,000	LF	50	400,000
Sanitary Sewer Manholes (All Depths)	120	EA	4,500	540,000
Manhole Ring Encasement	120	EA	300	36,000
Siphons	800	LF	600	480,000
Siphon Structures	4	EA	30,000	120,000
Service Laterals to Property Line	500	EA	800	400,000
Service Laterals to Property Line to Dwelling	500	EA	1,800	900,000
Septic Tank Mitigation	500	EA	750	375,000
Cut & Patch Asphalt	5,000	SY	30	150,000
Bore, Jack Or Tunnel	300	LF	700	210,000
Dewatering	1	LS	20,000	20,000
Erosion Control	1	LS	90,000	90,000
Trench Safety Protection	45,000	LF	3	<u>135,000</u>
			Total	\$5,588,000

Alternate "A" to Kerrville

Mobilization	1	LS	\$120,000	\$ 120,000
R.O.W. Preparation	1	LS	60,000	60,000
8" Force Main	25,100	LF	40	1,004,000
12" Sanitary Sewer Pipe	14,000	LF	60	840,000
Sanitary Sewer Manholes	30	EA	4,500	135,000
Cut & Patch Asphalt	100	SY	35	3,500
Lift Stations	1	LS	300,000	300,000
24" Bore, Jack or Tunnel	100	LF	600	60,000
16" Bore, Jack or Tunnel	100	LF	450	45,000
Trench Safety Protection	14,000	LF	3	<u>42,000</u>
			TOTAL	\$2,609,500

Wastewater System with Alternate "A" to Kerrville

Collection System	\$5,588,000
Transmission Main	<u>2,609,500</u>
Total Construction	\$8,197,500
Planning & Design	900,000
Contingencies	900,000
Legal & Fiscal	400,000
Environmental	<u>300,000</u>
Total Wastewater	\$10,697,500

Alternate "B" to Kendall County WCID No. 1

Mobilization	1	LS	\$200,000	\$ 200,000
R.O.W. Preparation	1	LS	100,000	100,000
8" Force Main	7,000	LF	40	280,000
12" Sanitary Sewer Pipe	48,000	LF	60	2,880,000
Sanitary Sewer Manholes	66	EA	4,500	297,000
Cut & Patch Asphalt	500	SY	35	17,500
Lift Stations	1	LS	250,000	250,000
24" Bore, Jack or Tunnel	300	LF	600	180,000
Trench Safety Protection	48,000	LF	3	<u>144,000</u>
			Total	<u>\$4,348,500</u>

Wastewater System with Alternate "B" Direct Flow to Kendall County WCID No. 1

Collection System	\$5,588,000
Transmission Main	<u>4,348,500</u>
Total Construction	\$9,936,500
Planning & Design	900,000
Contingencies	900,000
Legal & Fiscal	400,000
Environmental	<u>300,000</u>
Total Wastewater	\$12,436,500

V. Operational Cost Differentials

Due to the increased elevation and head loss in the proposed pipe going to the City of Kerrville, over a proposed pipeline going to Kendall County WCID., the pump horsepower required for Kerrville would be 93 bhp and the horsepower required to go to Kendall County would be 34 bhp.

The following table shows the estimated differential in operating cost for the lift station from 8 cents/1000 for Kerrville and 3 cents/1000 for Kendall County.

All other operating and maintenance costs for the collection system are assumed to be the same for either disposal route.

Process Data	Alt "A" – Kerrville	Alt "B" – Kendall County WCID No. 1
Flow Rate	800	800 gpm
TDH	300	110 ft
Pump Efficiency	65%	65%
Power	93.2	34.2 bhp
Standard Motor Size	100.0	40.0 hp
Number of pumps in service	1	1
Motor Efficiency	95%	95%
Total Power consumption	105.3	42.1 bhp
Total Power consumption	78.6	31.4 kW
Volume Basis		
Energy Consumption	1.64	\$0.65kWh/1000 gal
Assumed Cost of power	\$ 0.05	\$0.05 /kWh
Daily energy cost	\$ 0.08	\$0.03 /1000 gal

VI. Water Services

The rapid depletion in ground water supply has been under study for several years by many different agencies.

Gene Williams, General Manager of The Headwater Ground Water Conservation District has provided the following comment:

“The Center Point area is the center of a growing population area that extends from Kerrville to Comfort. Many new wells have been drilled in the area placing stress upon both the Middle and Lower Trinity aquifers. Two public water system wells were drilled by Aquatex in 2006 to test the Lower Trinity in the Center Point area. Both wells failed to yield enough water from the Lower Trinity due to low permeability and partial depletion problems. One well was re-drilled to the Middle Trinity and a successful well was completed. Conjunctive use of groundwater and surface water for the Center Point area and areas east toward Comfort is highly recommended. I have attached a Well Log of the Lower Trinity well drilled by Aquatex in the Center Point area. In the summer of 2006 an extended drought that began in early 2005 caused well levels to drop in a number of wells from 50 to 80 feet, some wells went dry.”

As part of the regional water and wastewater services for Center Point, the feasibility study has been expanded to cover water supply.

The proposed water supply system would include a Surface Water Treatment Plant on Center Point Lake, transmission lines to connect each of the four existing owner operated water supply companies, an elevated water storage tank, ASR facilities for underground storage, securing of Water Rights, and water distribution to areas not presently served Each of these items is discussed in the following sections:



A. Water Supply

1. Surface Water Treatment Plant Initial Service Areas

The CCN Map (Exhibit G) shows the various CCNs that presently serve the area.

The two major CCNs have agreed to change all or part of their supply from ground water to the new surface water supply. Both of these operators are having difficulty in maintaining the required water capacity with the rapidly depleting ground water.

It is anticipated that other CCNs will request service.

At present there are approximately 400 existing connections with an additional 100 connections that could be served outside of the existing CCNs. Using 500 existing connections at 10,000 gal/mo would require approximately 150,000 gpd of supply.

Project potential growth within the regional service area of 3% per year* for 25 years would result in approximately 1,000 connections or demand of 300,000 gpd.



Since the service area is within the growth impact area of San Antonio, it is likely that significant new growth will occur and provisions should be made for expansion to serve that growth. On the basis of this evaluation, the initial design capacity should be a treatment plant of 200,000 gpd with expansion capability in 200,000 gpd increments as required.

The proposed surface water treatment plant would be located on the high bank of Center Point Lake, along Center Point River Road, in the vicinity of the dam. The treatment plant will be a version of the membrane treatment process.

B. Water Distribution

1. Elevated Storage

The elevated water tank will be constructed adjacent to the treatment plant with a preliminary estimated capacity of 500,000 gallons and a tank bottom elevation of 1600 feet. From this elevation, water service can be provided to the service area below 1600 feet elevation, which should cover most of the growth area.

2. Transmission Mains

Transmission mains will be installed to provide service to the various CCNs within the region and provide distribution to areas not presently serviced by any of the CCNs.

The Distribution System is shown on Exhibit E.

*TWDB projected growth rate average of 1.91% for Kerr County was increased by 1.09% due to Kendall County's proximity with a 6.76% growth rate. Example: Comfort School District's present growth rate is 2.4%.

3. ASR Facilities

ASR facilities are to be included to allow storage of surplus water for use in times of surface water shortages or to relieve the demand on ground water facilities.

Aquatex, the operator of the largest CCN, indicated that they have a non-producing well that might be a good injection well for the ASR.

VII. Water Preliminary Estimated Quantities & Probable Cost

Water Treatment System

Surface Water Treatment Plant - 200,000 gpd	
200,000 gal. Membrane Plant	\$ 400,000
Intake Structure	300,000
Pumping Station & ASR	300,000
500,000 gal Elevated Storage Tank	<u>750,000</u>
Total Treatment System	\$1,750,000

Water Distribution System

	Quantity	Unit	Unit Price	Extension
Mobilization	1	LS	\$100,000	\$100,000
Right-of-Way Prep	1	LS	50,000	50,000
6" Water Pipe	18,100	LF	20	362,000
6" Gate Valve with Box, Complete	12	EA	900	10,800
8" Water Pipe	15,500	LF	25	387,500
8" Gate Valve with Box, Complete	8	EA	1,250	10,000
Standard FH Assembly, Complete	70	EA	3,000	210,000
Tie-in to Existing Line	4	EA	2,500	10,000
Testing	1	LS	15,000	15,000
Fittings	8	TON	4,000	32,000
2" Combination Air/Vac. Release Valve	4	EA	3,500	14,000
Cut & Patch Asphalt	11,000	SY	30	330,000
Bore, Jack Or Tunnel	200	LF	700	140,000
Dewatering	1	LS	20,000	20,000
Trench Safety Protection	15,300	LF	3	<u>45,900</u>
Total Distribution System				\$1,737,200

Total Construction	\$3,487,200
Planning, Design & Contingencies	800,000
Legal & Fiscal	200,000
Environmental	100,000
Total Water Project	\$4,587,200

If Kendall County WCID No. 1 is to be supplied with wholesale water, it will require a transmission main of 45,000 l.f. The total cost of the transmission main is estimated to be \$3,601,500, as shown on the following cost estimate.

Water Transfer Main to Kendall County WCID No. 1

	Quantity	Unit	Unit Price	Extension
Mobilization	1	LS	\$100,000.00	\$100,000
Right-of-Way Preparation	1	LS	50,000.00	50,000
8" Gate Valve with Box, Complete	10	EA	1,250.00	12,500
12" Water Pipe	45,000	LF	55.00	2,475,000
12" Gate Valve with Box, Complete	30	EA	3,500.00	105,000
Standard Fire Hydrant Assembly, Complete	90	EA	3,000.00	270,000
Tie-in to Existing Line	4	EA	2,500.00	10,000
Testing & Disinfection	1	LS	20,000.00	20,000
Fittings	10	TON	4,000.00	40,000
2" Combination Air/Vac. Release Valve	10	EA	3,500.00	35,000
Cut & Patch Asphalt	1,000	SY	30.00	30,000
Bore, Jack or Tunnel	300	LF	700.00	210,000
Dewatering	1	LS	20,000.00	20,000
Trench Safety Protection	44,800	LF	5.00	224,000
				\$3,601,500

VIII. Public Input

After the initial public meeting at the Center Point School on January 11, 2007, individual meetings were held with UGRA, Kendall County WCID, City of Kerrville Public Works and Texas Water Development Board.

An additional public meeting will be held on July 26, 2007, to review the draft feasibility report and anticipated implementation program. After this review, any changes will be made and the final report will be submitted to the Texas Water Development Board.

IX. Conclusion/Recommendations:

Wastewater

The development of Option B for wastewater provides the maximum benefit for regional wastewater service to Center Point and Eastern Kerr County. This option will allow service to the entire service area as outlined in the report.

From the point of power cost of operation per 1000 gal., Option B is 2.6 times less expensive than Option A.

Kendall County WCID has indicated a willingness to participate in the regional system program by negotiating acceptable rates, impact fees and connection fees, and investigating the possibility of participating in the operation of the Regional Wastewater System.

For the above reasons, the recommendation for the Regional Wastewater System is to follow Option B.

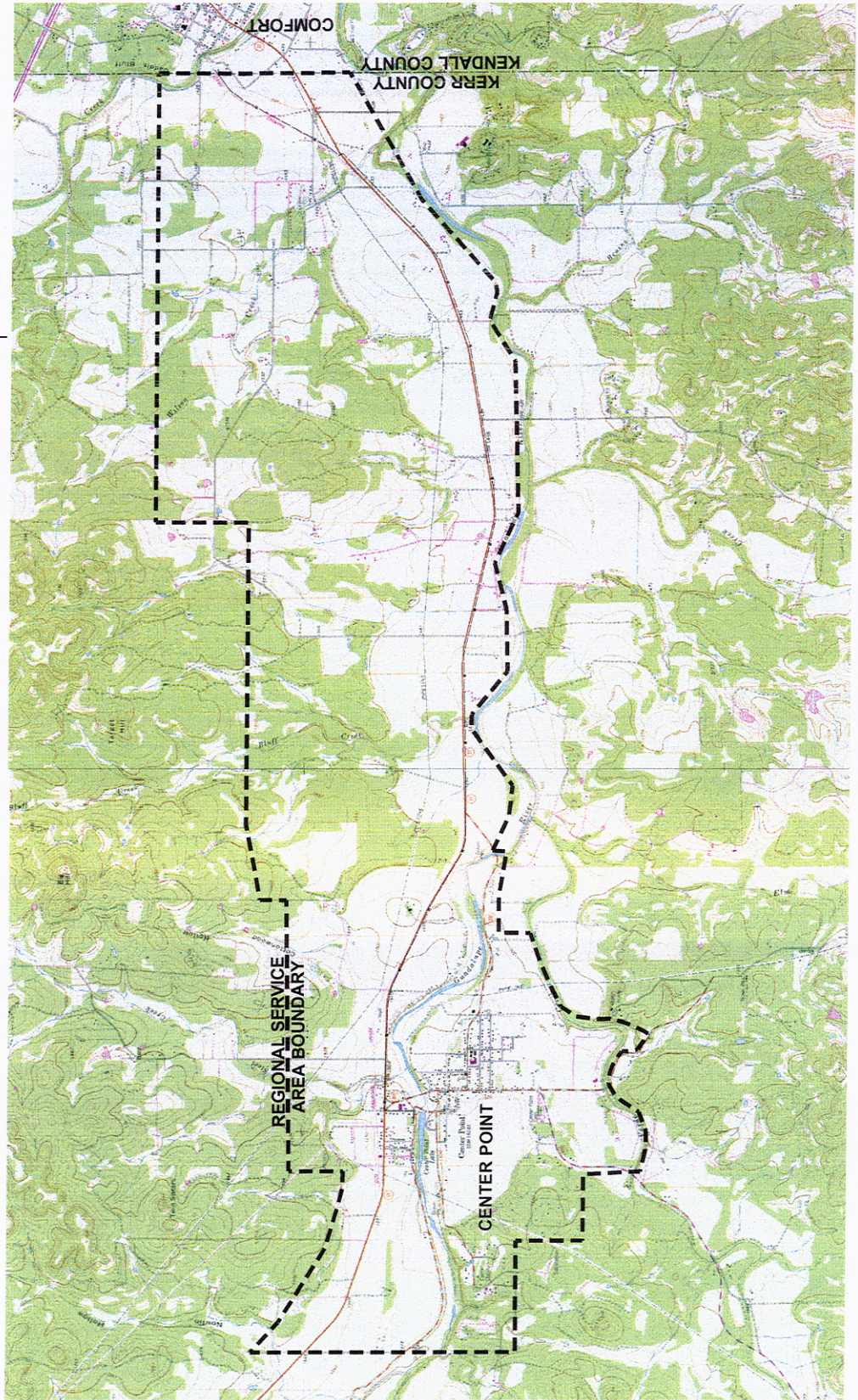
Operating cost will be dependent on final negotiations with Kendall County WCID No. 1.

Water

The recommendation for the water system is to continue to explore the possibilities of expanding the water distribution to serve the region.

Operating cost will be dependent on final cost of development, debt service required, and number of CCNs participating.

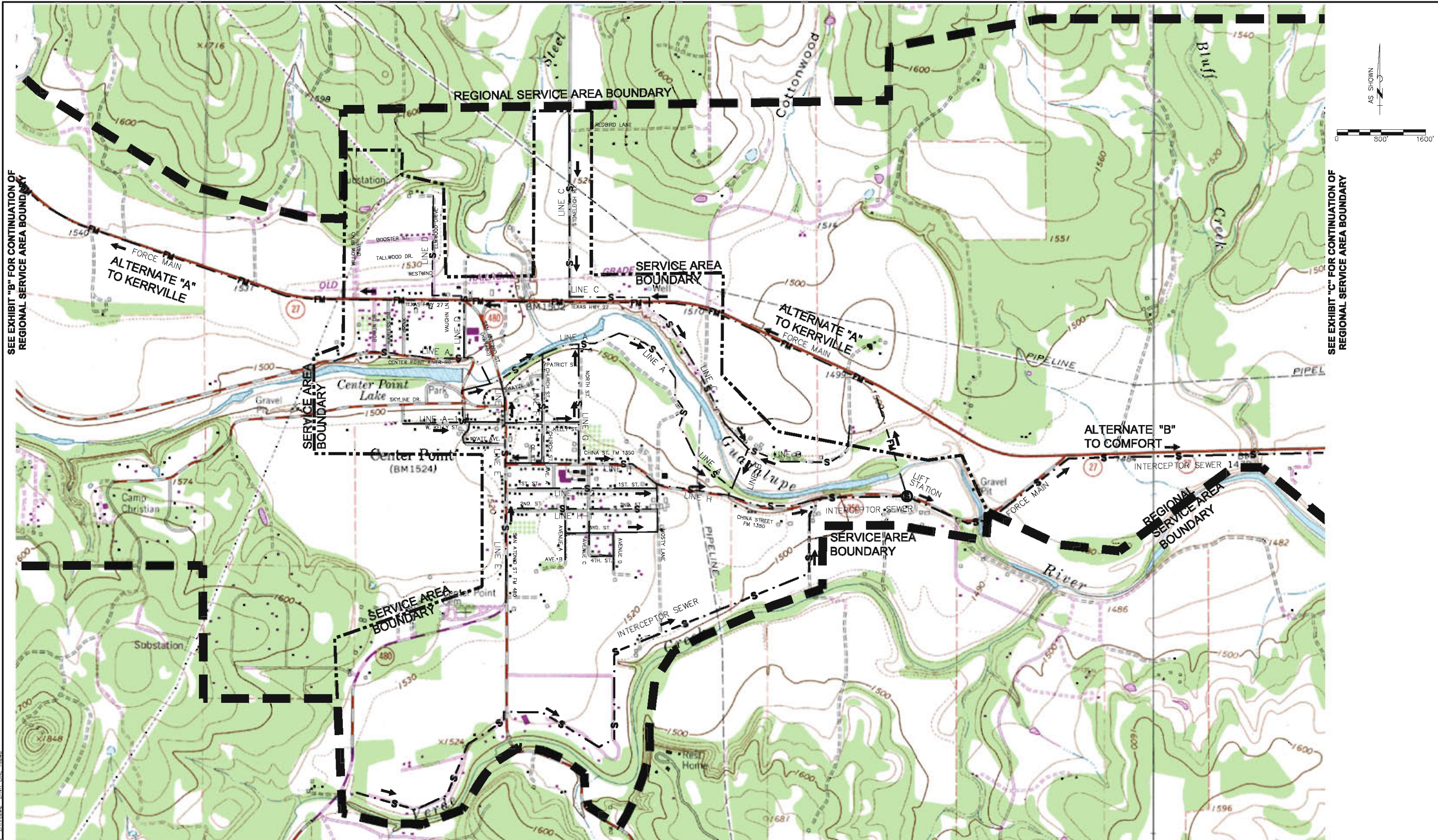
REFERENCE FILES:



KERR COUNTY, TEXAS

PROPOSED REGIONAL SERVICE AREA

EXHIBIT
A



SEE EXHIBIT "B" FOR CONTINUATION OF REGIONAL SERVICE AREA BOUNDARY

SEE EXHIBIT "C" FOR CONTINUATION OF REGIONAL SERVICE AREA BOUNDARY

REV	DESCRIPTION	ENGR	DATE	APPD	DATE

SCALE	AS SHOWN
DATE	
FILENAME	SSPP01
DESIGNED BY	KK
DRAWN BY	JL
CHECKED BY	AG



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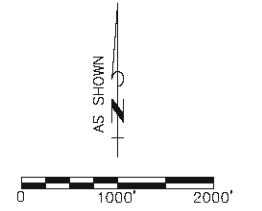
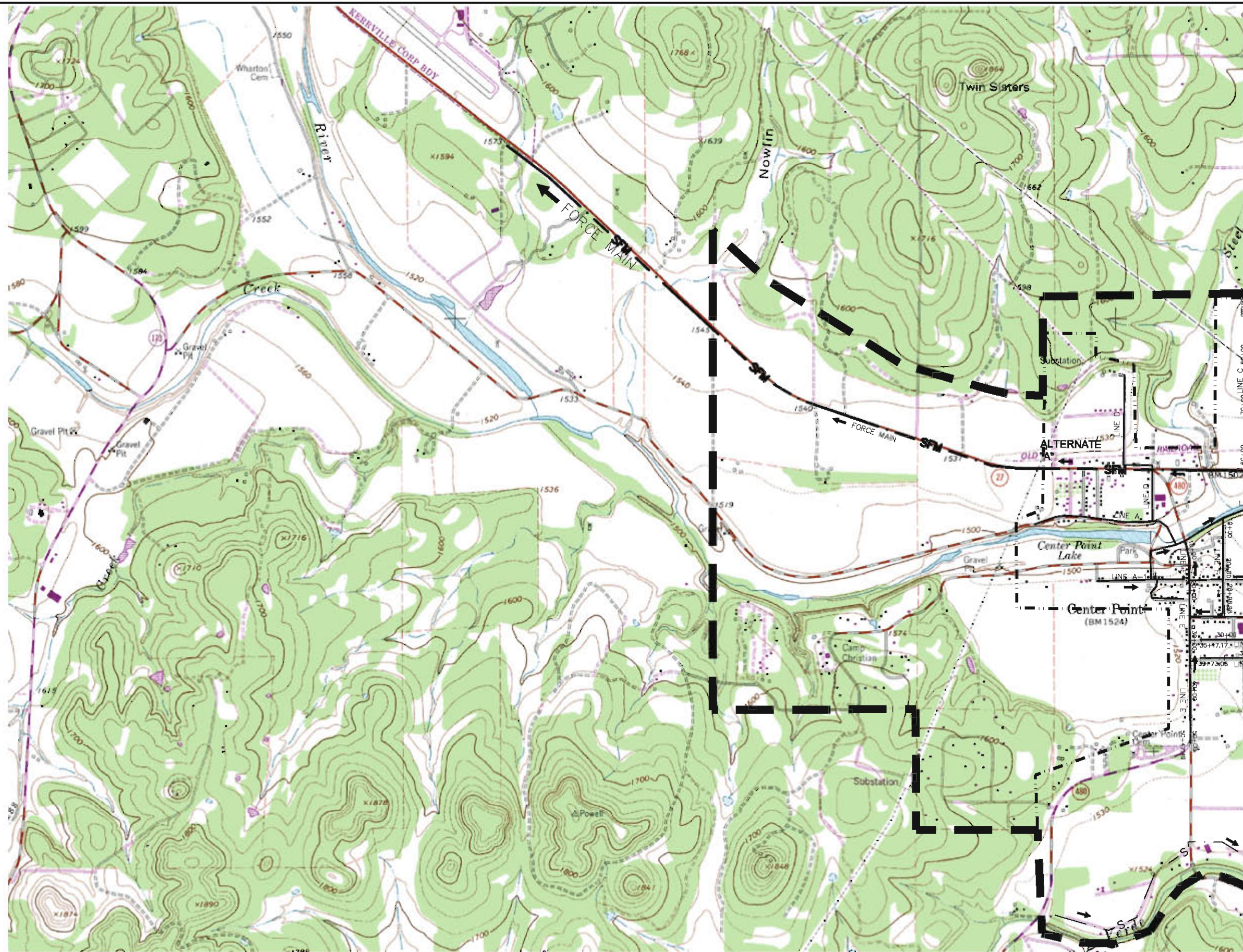
**COMMUNITY OF CENTER POINT
 AND EASTERN KERR COUNTY
 KERR COUNTY, TEXAS**

**PROPOSED WASTEWATER
 COLLECTION SYSTEM
 EXHIBIT B**

SSPP01
PROJECT NO. P0931.0001.00
DWG. NO. _____ OF _____

REFERENCE FILES: ZRBD.dwg, ZRHA.dwg, ZRVA-LINE-A.dwg

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REFERENCE FILES: ZRS0.dwg ZRHA.dwg

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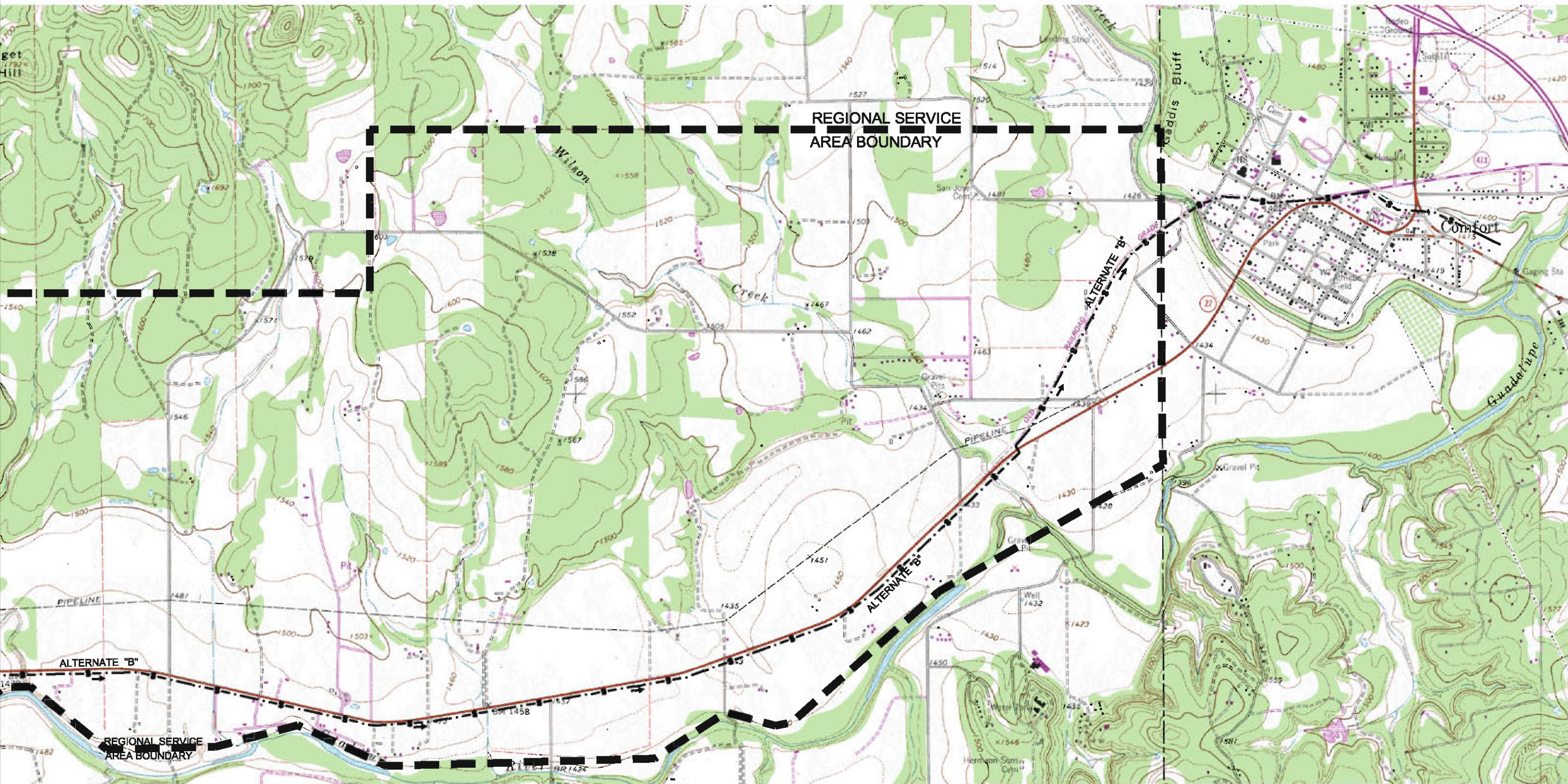
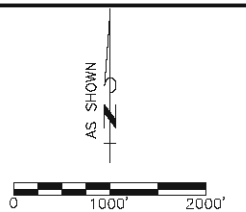
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**COMMUNITY OF CENTER POINT
 AND EASTERN KERR COUNTY
 KERR COUNTY, TEXAS**

**PROPOSED WASTEWATER TRANSMISSION LINE
 ALTERNATE "A" TO KERRVILLE
 EXHIBIT C**

SSPL-ALT-A
 PROJECT NO.
 P0931.0001.00
 DWG. NO. ____ OF ____

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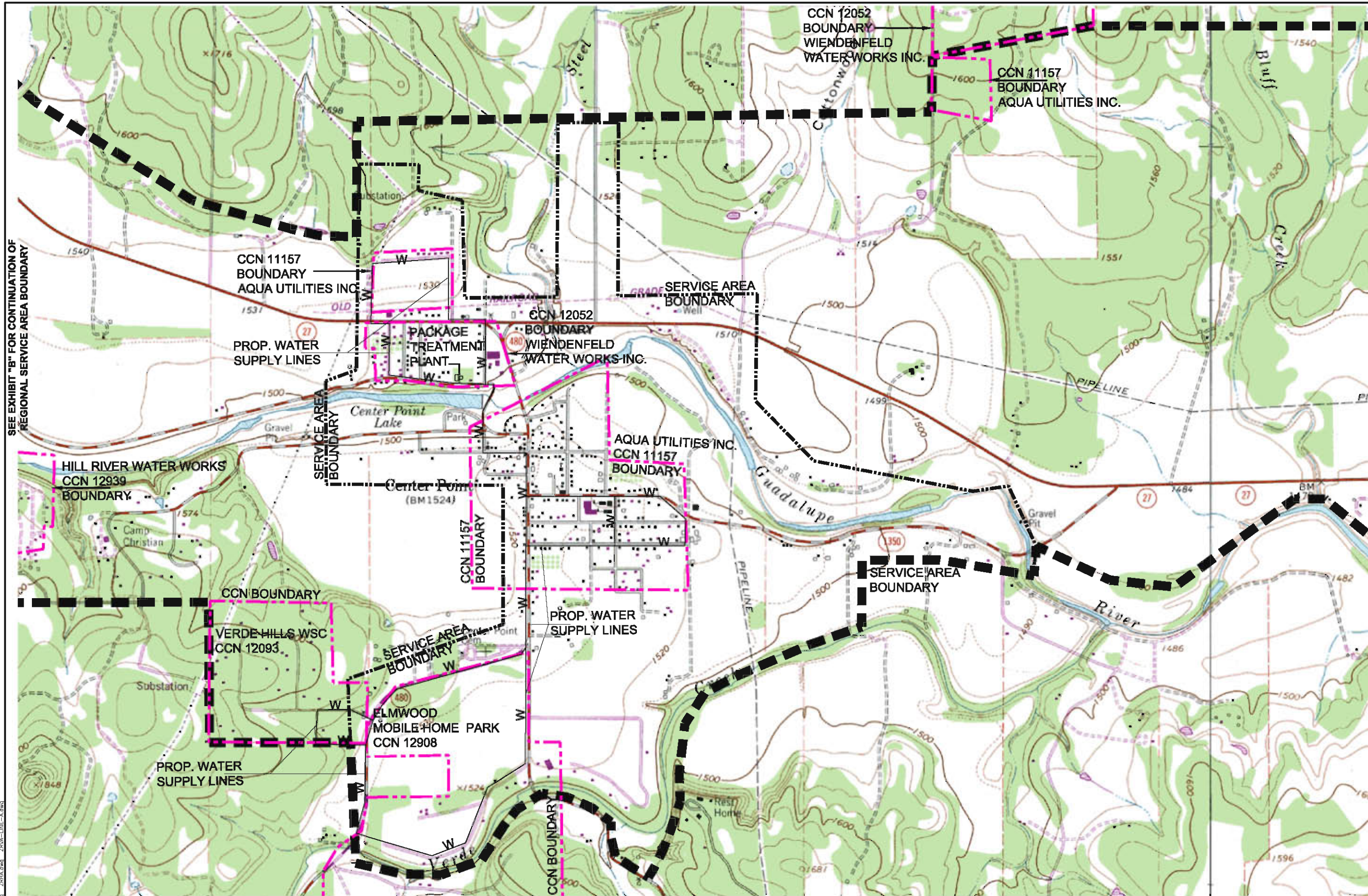
**COMMUNITY OF CENTER POINT
 AND EASTERN KERR COUNTY
 KERR COUNTY, TEXAS**

**PROPOSED TRANSMISSION LINE
 TO KENDALL COUNTY
 WCID NO. 1
 EXHIBIT D**

SSPL-ALT-B
 PROJECT NO.
 P0931.0001.00
 DWG. NO. ___ OF ___

REFERENCE FILES: ZRSO.dwg ZRHA.dwg

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SEE EXHIBIT "B" FOR CONTINUATION OF REGIONAL SERVICE AREA BOUNDARY

SEE EXHIBIT "C" FOR CONTINUATION OF REGIONAL SERVICE AREA BOUNDARY

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DATE			
FILENAME	WPL01		
DESIGNED BY	KK		
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ENGR	DATE	APPD	DATE
REV	DESCRIPTION		



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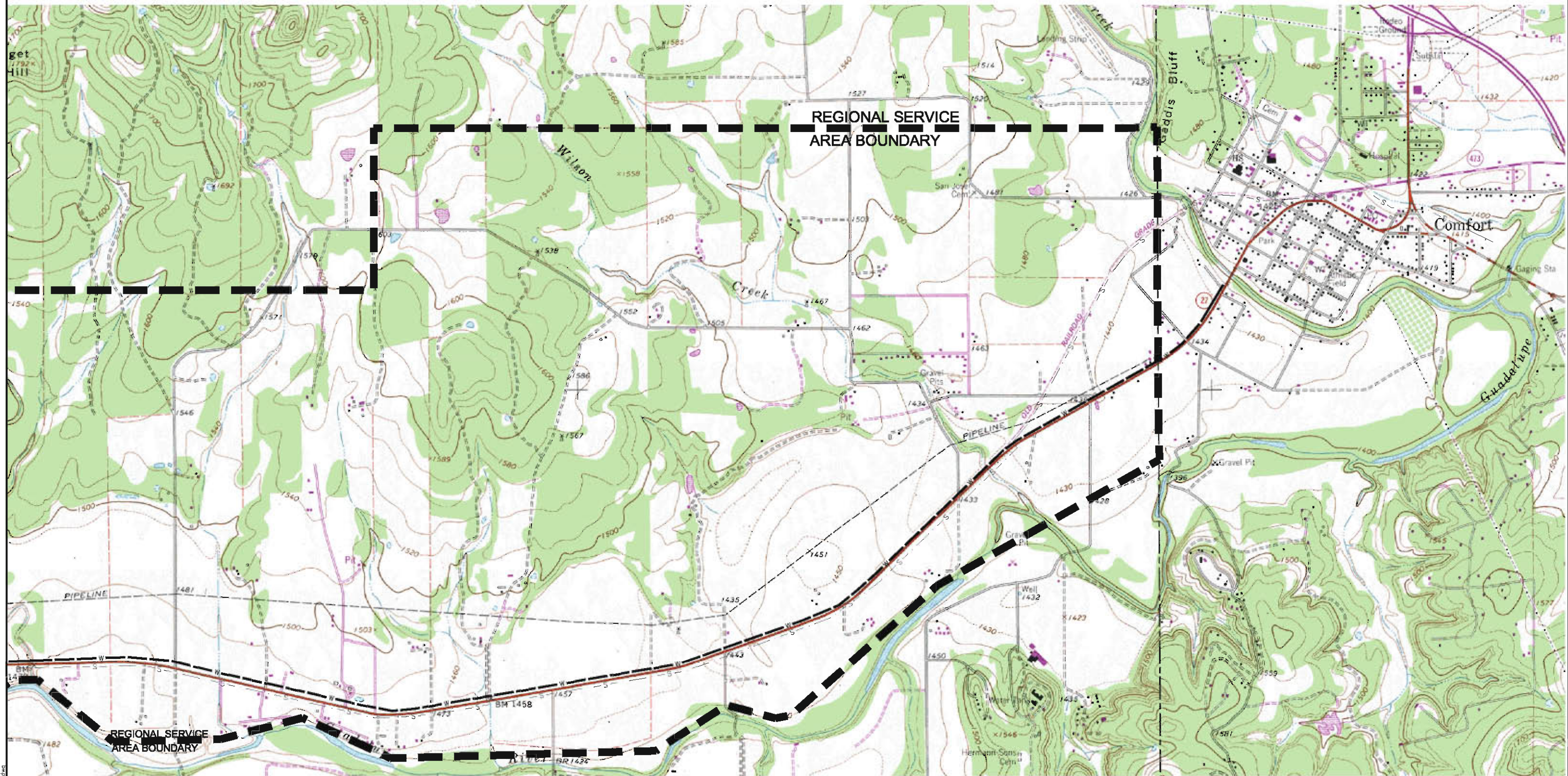
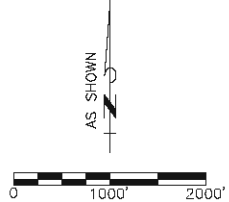
**COMMUNITY OF CENTER POINT
 AND EASTERN KERR COUNTY
 KERR COUNTY, TEXAS**

**PROPOSED PLAN
 WATER SUPPLY SYSTEM
 EXHIBIT E**

WPL01-USGS
 PROJECT NO.
 P0931.0001.00
 DWG. NO. ___ OF ___

REFERENCE FILES: ZRS0.dwg ZRVA.dwg ZRVA-LINE.dwg

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REV	DESCRIPTION		



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 (210) 226-2922
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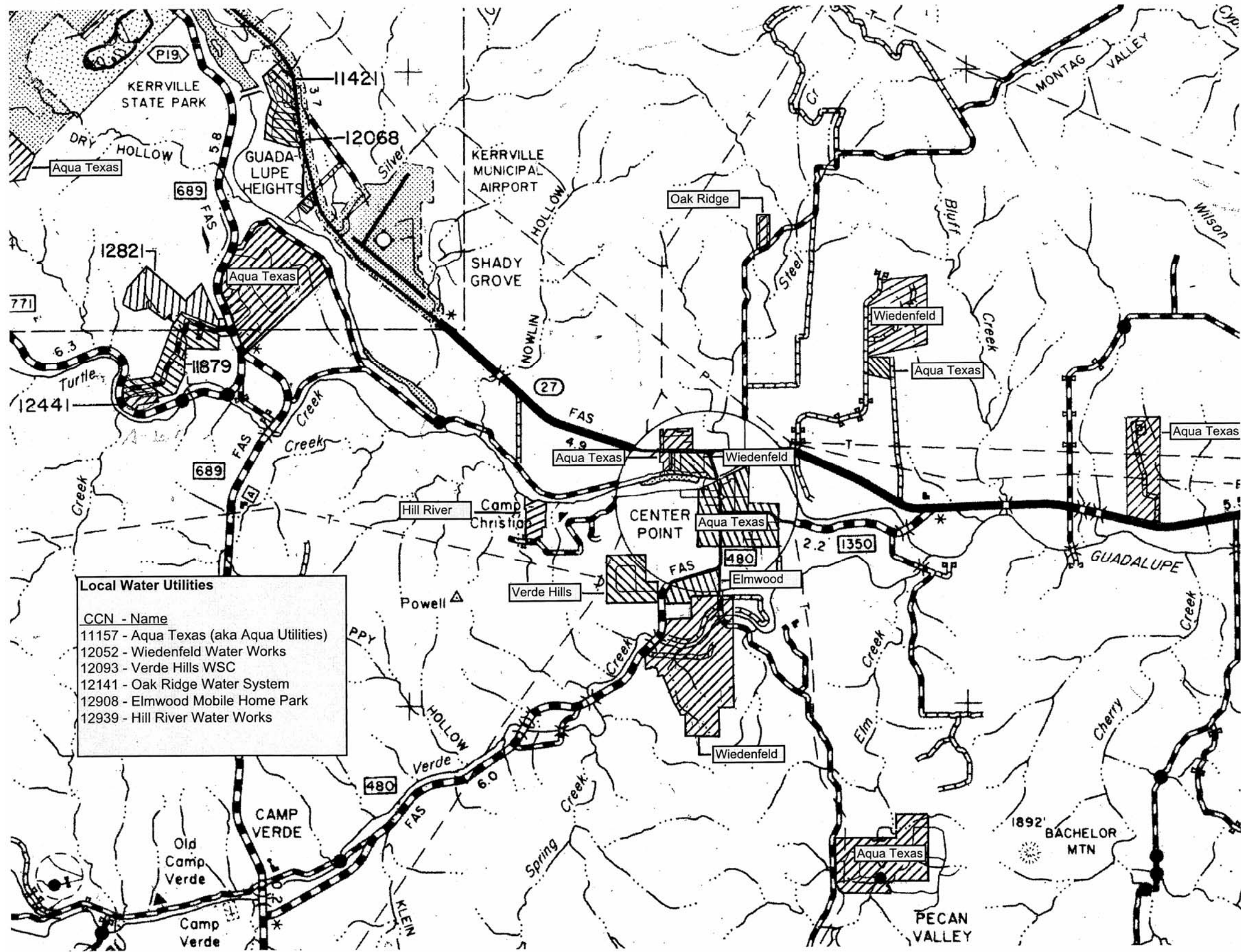
**COMMUNITY OF CENTER POINT
 AND EASTERN KERR COUNTY
 KERR COUNTY, TEXAS**

**PROPOSED WATER TRANSMISSION MAIN
 TO KENDALL COUNTY
 WCID NO. 1
 EXHIBIT F**

SSPL-EX-F
 PROJECT NO.
 P0931.0001.00
 DWG. NO. ____ OF ____

REFERENCE FILES: ZRSD.dwg ZRHA.dwg

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AS SHOWN
 NOT TO SCALE

Local Water Utilities	
CCN	Name
11157	Aqua Texas (aka Aqua Utilities)
12052	Wiedenfeld Water Works
12093	Verde Hills WSC
12141	Oak Ridge Water System
12908	Elmwood Mobile Home Park
12939	Hill River Water Works

REFERENCE FILES: Z800.dwg

REV	DESCRIPTION	ENGR	DATE	APPD	DATE

SCALE	AS SHOWN
DATE	
FILENAME	
DESIGNED BY	KK
DRAWN BY	lrm
CHECKED BY	AG



PLANS PREPARED BY:
TETRA TECH, INC.
 501 SOLEDAD
 SAN ANTONIO, TEXAS 78205
 (210) 226-2922
 (210) 226-8497 FAX

COMMUNITY OF CENTER POINT
 AND EASTERN KERR COUNTY
 KERR COUNTY, TEXAS

EXISTING CCNs
 EXHIBIT G

PROJECT NO.	P09310.0001.00
DWG. NO.	___ OF ___

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EXHIBIT H

Demographic Detail Summary Report

Population Demographics

					Percent Change	
	1990 Census	2000 Census	2006 Estimate	2011 Projection	1990 to 2000	2006 to 2011
Total Population	2,697	3,444	3,892	4,239	27.7%	8.9%
Population Density (Pop/Sq Mi)	20.8	26.6	30.0	32.7	27.7%	8.9%
Total Households	1,006	1,342	1,399	1,431	33.4%	2.3%

Population by Gender:

Male	1,296	48.1%	1,728	50.2%	1,963	50.4%	2,145	50.6%	33.3%	9.3%
Female	1,401	51.9%	1,716	49.8%	1,930	49.6%	2,094	49.4%	22.5%	8.5%

Population by Race/Ethnicity

					Percent Change					
	1990 Census	2000 Census	2006 Estimate	2011 Projection	1990 to 2000	2006 to 2011				
White	2,427	90.0%	3,054	88.7%	3,567	91.7%	3,955	93.3%	25.8%	10.9%
Black	8	0.3%	2	0.1%	4	0.1%	6	0.1%	-	49.9%
American Indian or Alaska Native	15	0.6%	24	0.7%	15	0.4%	10	0.2%	59.9%	-33.3%
Asian or Pacific Islander	7	0.3%	10	0.3%	16	0.4%	20	0.5%	43.0%	25.0%
Some Other Race	240	8.9%	294	8.5%	241	6.2%	210	5.0%	22.5%	-12.9%
Two or More Races			60	1.7%	49	1.3%	39	0.9%		-20.4%
Hispanic Ethnicity	533	19.8%	828	24.0%	1,096	28.2%	1,312	31.0%	55.5%	19.8%
Not Hispanic or Latino	2,165	80.3%	2,616	76.0%	2,797	71.9%	2,927	69.1%	20.9%	4.7%

Population by Age

	1990 Census		2000 Census		2006 Estimate		2011 Projection		Percent Change	
									1990 to 2000	2006 to 2011
0 to 4	163	6.0%	228	6.6%	273	7.0%	326	7.7%	39.8%	19.3%
5 to 14	389	14.4%	480	13.9%	495	12.7%	519	12.2%	23.3%	4.8%
15 to 19	212	7.9%	245	7.1%	287	7.4%	286	6.8%	15.5%	-0.4%
20 to 24	140	5.2%	152	4.4%	259	6.6%	294	6.9%	8.5%	13.5%
25 to 34	328	12.1%	346	10.1%	428	11.0%	571	13.5%	5.7%	33.3%
35 to 44	361	13.4%	530	15.4%	508	13.1%	488	11.5%	47.0%	-3.9%
45 to 54	296	11.0%	499	14.5%	590	15.2%	623	14.7%	68.9%	5.6%
55 to 64	278	10.3%	409	11.9%	445	11.4%	516	12.2%	47.5%	15.9%
65 to 74	353	13.1%	290	8.4%	287	7.4%	289	6.8%	-18.1%	0.7%
75 to 84	153	5.7%	211	6.1%	244	6.3%	246	5.8%	37.9%	0.8%
85+	26	1.0%	55	1.6%	76	2.0%	82	1.9%	111.6%	7.9%

Median Age:

Total Population	38.2	40.4	39.4	37.6	5.7%	-4.5%
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Households by Income

	1990 Census		2000 Census		2006 Estimate		2011 Projection		Percent Change	
									1990 to 2000	2006 to 2011
\$0 - \$15,000	364	36.2%	248	18.5%	229	16.4%	216	15.1%	-31.8%	-5.7%
\$15,000 - \$24,999	267	26.5%	218	16.3%	203	14.5%	194	13.6%	-18.1%	-4.4%
\$25,000 - \$34,999	133	13.2%	168	12.5%	166	11.8%	172	12.0%	26.3%	3.6%
\$35,000 - \$49,999	147	14.6%	292	21.8%	274	19.6%	248	17.4%	99.4%	-9.5%
\$50,000 - \$74,999	62	6.2%	213	15.9%	256	18.3%	273	19.1%	407.6%	6.6%
\$75,000 - \$99,999	13	1.3%	83	6.2%	106	7.6%	128	8.9%	539.1%	20.8%
\$100,000 - \$149,999	7	0.7%	64	4.8%	91	6.5%	105	7.3%	811.5%	15.4%
\$150,000 +	8	0.8%	56	4.2%	74	5.3%	95	6.6%	598.3%	28.4%
Average Hhld Income	\$27,516		\$47,099		\$52,629		\$58,105		71.2%	10.4%
Median Hhld Income	\$21,065		\$36,634		\$40,586		\$44,173		73.9%	8.8%
Per Capita Income	\$10,530		\$18,353		\$18,923		\$19,618		74.3%	3.7%

Employment and Business

					Percent Change	
	1990 Census	2000 Census	2006 Estimate	2011 Projection	1990 to 2000	2006 to 2011
Age 16 + Population	2,104	2,685	3,068	3,339	27.6%	8.8%
In Labor Force	1,192 56.7%	1,650 61.5%	1,875 61.1%	2,035 60.9%	38.4%	8.5%
Employed	1,120 93.9%	1,576 95.5%	1,822 97.2%	1,979 97.3%	40.8%	8.6%
Unemployed	74 6.2%	74 4.5%	53 2.8%	56 2.8%	0.0%	5.7%
In Armed Forces	0 0.0%	0 0.0%	0 0.0%	0 0.0%	N/A%	N/A%
Not In Labor Force	912 43.3%	1,035 38.6%	1,193 38.9%	1,305 39.1%	13.6%	9.4%
Number of Employees (Daytime Pop)			453			
Number of Establishments			74			
Emp in Blue Collar Occupations		841 53.3%				
Emp in White Collar Occupations		736 46.7%				

Housing Units

					Percent Change	
	1990 Census	2000 Census	2006 Estimate	2011 Projection	1990 to 2000	2006 to 2011
Total Housing Units	1,284	1,580	1,743	1,858	23.1%	6.6%
Owner Occupied	782 60.9%	1,082 68.4%	1,144 65.6%	1,180 63.5%	38.4%	3.2%
Renter Occupied	224 17.5%	260 16.5%	255 14.6%	250 13.5%	16.0%	-2.0%
Vacant	277 21.6%	238 15.1%	344 19.8%	427 23.0%	-14.0%	24.1%

Vehicles Available

					Percent Change	
	1990 Census	2000 Census	2006 Estimate	2011 Projection	1990 to 2000	2006 to 2011
Average Vehicles Per Hhld	1.80	1.60	2.00	2.00	-9.8%	4.5%
0 Vehicles Available	69 6.8%	48 3.6%	40 2.9%	34 2.4%	-30.5%	-15.0%
1 Vehicle Available	358 35.2%	427 31.8%	430 30.7%	429 30.0%	19.1%	-0.2%
2+ Vehicles	590 58.0%	867 64.6%	929 66.4%	968 67.7%	47.0%	4.2%

Available

Marital Status

					Percent Change	
	1990 Census	2000 Census	2006 Estimate	2011 Projection	1990 to 2000	2006 to 2011
Age 15+ Population	2,145	2,736	3,124	3,394	27.6%	8.7%
Married, Spouse Present	1,311 61.1%	1,648 60.2%	1,878 60.1%	2,040 60.1%	25.7%	8.6%
Married, Spouse Absent	31 1.4%	114 4.2%	131 4.2%	141 4.2%	267.6%	7.6%
Divorced	196 9.1%	276 10.1%	317 10.2%	345 10.2%	41.2%	8.8%
Widowed	199 9.3%	211 7.7%	241 7.7%	260 7.7%	6.0%	7.9%
Never Married	408 19.0%	488 17.8%	559 17.9%	610 18.0%	19.5%	9.1%

Educational Attainment

					Percent Change	
	1990 Census	2000 Census	2006 Estimate	2011 Projection	1990 to 2000	2006 to 2011
Age 25+ Population	1,793	2,340	2,578	2,817	30.5%	9.3%
Grade K - 8	257 14.3%	237 10.1%	334 12.9%	346 12.3%	-7.8%	3.9%
Grade 9 - 12	261 14.5%	266 11.4%	264 10.3%	259 9.2%	2.1%	-1.9%
High School Graduate	528 29.4%	748 32.0%	841 32.7%	937 33.3%	41.6%	11.4%
Some College, No Degree	386 21.6%	508 21.7%	563 21.9%	615 21.8%	31.5%	9.2%
Associates Degree	51 2.8%	120 5.1%	143 5.5%	167 5.9%	135.1%	16.8%
Bachelor's Degree	235 13.1%	264 11.3%	301 11.7%	343 12.2%	12.3%	14.3%
Graduate Degree	76 4.2%	117 5.0%	132 5.1%	149 5.3%	54.1%	12.9%
No Schooling Completed		81 3.5%				

Current year data is for the year **2006**, 5 year projected data is for the year **2011**.

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Crime data © 2006 by Experian/Applied Geographic Solutions.