

**Notice of City Council Workshop
AGENDA**

July 11, 2023 at 5:00 PM

NOTICE IS HEREBY GIVEN that a Meeting of the Montgomery City Council will be held on **Tuesday, July 11, 2023, at 5:00 PM** at the City of Montgomery City Hall, 101 Old Plantersville Road, Montgomery, Texas.

Members of the public may view the meeting live on the City's website under Agenda/Minutes and then select **Live Stream Page (located at the top of the page)**. The meeting will be recorded and uploaded to the City's website.

CALL TO ORDER

CONSIDERATION AND POSSIBLE ACTION:

- 1.** Review and Discussion on the Montgomery Transportation Advisory Committee Charter and Appointment Process

- 2.** Waste Water Treatment Plant Analysis

ADJOURNMENT

/s/ Nici Browe

Nici Browe, City Secretary. TRMC

I certify that the attached notice of meeting was posted on the bulletin board at City of Montgomery City Hall, 101 Old Plantersville Road, Montgomery, Texas, on July 7, 2023 at 4:30 p.m.

This facility is wheelchair accessible and accessible parking spaces are available. Please contact the City Secretary's office at 936-597-6434 for further information or for special accommodations.

Montgomery City Council
WORKSHOP AGENDA REPORT

Meeting Date: July 11, 2023 Workshop	Budgeted Amount: N/A
Department: Administration	Prepared By: G. Palmer

Subject

Review and Discussion on the Montgomery Transportation Advisory Committee Charter and Appointment Process

Recommendation

Review and Provide Feedback

Discussion

I think we all agree the City needs a better way to evaluate, collaborate and plan for future transportation needs. Moreover, the City has a desire to build close, long lasting relationships with our local, regional and state transportation partners.

As a small city, we are limited on our resources and expertise. However, the City has the ability to tap into its residents and business partners as an alternative resource by way of an advisory committee/team.

In your packets please find a draft Charter for the Montgomery Transportation Advisory Committee which upon approval will provide for the appointment of specific individuals (TBD). What we need to discuss and determine:

- Who appoints? Mayor unilaterally, Mayor with Council confirmation? Council appointment?
- Is the mission aligned with the Council’s intent for this committee?
- Qualifications for appointment to the committee?
- Any other elements of the Charter that need discussion?

This is a workshop item only. I will bring the Charter back for formal consideration when it is ready.

Approved By

		Date:
City Administrator	Gary Palmer	Date: July 6, 2023

Montgomery Transportation Advisory Committee

ARTICLE I: NAME

The name of this body shall be the **Montgomery Transportation Advisory Committee** (herein called the “committee”).

ARTICLE II: PURPOSE

The committee is established with the primary mission of advising on all issues and/or projects related to transportation (traffic/pedestrian/mass) within the City of Montgomery upon request of the City Council or City Administrator. The committee shall utilize their expertise, current best-practices in multi-modal transportation planning, and data to provide an analysis and recommendations.

ARTICLE III: COMMITTEE

Section I. Number, Terms, Qualifications

The committee shall consist of five (5) members appointed by the Mayor. Members should have a clear positive nexus with the City of Montgomery along with a background in transportation, engineering, urban planning, or any other discipline the Mayor finds relevant to the committee work. Members shall serve two-year terms and may be reappointed for consecutive terms. Members may hold committee membership until a successor is appointed.

The City Administrator or his/her designee shall serve as an ex officio non-voting member of this committee and be responsible for providing support to the committee as the City Administrator deems appropriate.

Section II. Committee Responsibilities:

- a. Act in a positive and civil manner at all times that reflects positively upon the City.
- b. Research and utilize best practices in local government transportation planning.
- c. Provide input on the transportation projects proposed in the annual Capital Improvement Plan (CIP).
- d. Provide recommendations to the Mayor on appointments to the committee.

Section III. Attendance at Meetings

Members are expected to attend all scheduled meetings. Members may be removed from the committee for poor attendance by majority vote of the committee.

Section IV. Disclosure of Interests

A committee member who has any interest in any matter before the committee shall disclose said interest to the committee.

Section V. Removal

Committee members may be removed by the Mayor or upon majority vote of the City Council with or without cause.

ARTICLE IV: OFFICERS

Section I. Officers

The officers of the committee shall be a chairman, vice-chairman, and secretary.

Section II. Chairman

The Chairman may prepare agendas in collaboration with the City Administrator or his/her designee, preside at all meetings of the committee, call special meetings of the committee as needed, have the authority to cancel meetings of the committee, act as spokesperson for the committee, and appoint a sub-committee of the committee as needed.

Section III. Vice Chairman

In the absence of the Chairman, the Vice Chairman shall perform the duties of the Chairman.

Section IV. Secretary

The Secretary shall record and maintain accurate records and minutes of the proceedings of the committee.

Section V. Nomination and Election of Officers

Any member may nominate any other member of the committee to serve as an officer of the committee. Councilmembers appointed to the committee are not eligible. Officers of the committee shall be elected by majority vote of the committee.

Section VI. Terms of Officers

Officers of the committee shall be for a term of one (1) year commencing on June 1.

Section VII. Vacancies

A vacancy in office because of resignation, removal, or otherwise may be filled by majority vote of the committee for the unexpired portion of the term.

ARTICLE V: MEETINGS

Section I. Regular Meetings

The committee shall meet at least quarterly or as needed at City Hall with the time and date to be determined by the committee. The committee shall determine and publish the upcoming year's meeting schedule on or around June 1.

Section II. Quorum

A quorum shall consist of a majority of the voting members present upon calling of the roll at any meeting.

Section III. Length of Meetings

Committee meetings should not be more than two (2) consecutive hours in duration.

Section IV. Procedures

All meetings shall be held in accordance with the Texas Open Meetings Act.

ARTICLE VI: AMENDMENTS

This Charter may be amended at any time upon committee recommendation to the Mayor or upon request of the Mayor to the City Administrator.

DRAFT



CONSULTING ENGINEERS

July 6, 2023

The Honorable Mayor and City Council
 City of Montgomery
 101 Old Plantersville Road
 Montgomery, Texas 77316

RE: Wastewater Treatment Plant Expansion Analysis
 City of Montgomery
 WGA Project No. 00574-901-23

I. PROJECT SUMMARY

The City directed WGA to perform a preliminary evaluation of the existing wastewater treatment plant (“WWTP”) and onsite lift stations to plan for future development within the City. The City intends to advertise a Request for Proposals for the engineering services for the design of the expansion to their WWTP. This expansion will increase the existing WWTP treatment capacity in the City from 0.4 million gallons per day (“MGD”) to 0.8 MGD.

II. EXISTING WWTP EVALUATION

The current Stewart Creek WWTP was designed to treat an average daily flow (ADF) of up to 0.4 MGD. The existing onsite lift station (Lift Station No. 1) was designed with a wet well capacity of up to 0.8 MGD and a pumping capacity of 0.4 MGD.

According to the Design Report for the existing Stewart Creek WWTP completed by Bleyl & Associates in November 2007, the influent wastewater quality characteristics used for design were as follows:

Table 1: Stewart Creek WWTP Characteristics

<u>Parameter</u>	<u>Concentration</u>
BOD ₅	200 mg/l
TSS	200 mg/l

The City is currently experiencing an average daily flow of 185,755 gpd, or 46% of existing permitted capacity, based on 12 months of actual flow data. Inclusive of existing connections, platted developments, and developments which are in permitting or under construction, the City has committed approximately 351,623 gpd or 88% of existing permitted capacity at full build out. Inclusive of existing connections, platted developments, developments currently underway, and other developments in feasibility and design, the City will have committed 578,495 gpd or 144% of existing permitted capacity.

The Texas Commission on Environmental Quality (“TCEQ”) requires the City to initiate design of a wastewater treatment capacity expansion when the ADF exceeds 75% of the City’s 0.4 MGD permitted capacity for 3 consecutive months. The ADF for the City, including tracts in design and/or feasibility, is not expected to exceed 75% of the permitted capacity (300,000

gpd) until around the 2nd quarter of 2024. Additionally, the TCEQ requires the commencement of the construction phase of the expansion after 3 consecutive months of ADF exceeding 90% of the permitted capacity (360,000 gpd). This is expected to occur around the 4th quarter of 2024.

The City has an older WWTP (Town Creek WWTP) which was decommissioned in 2007 when the Stewart Creek WWTP was placed online. The Town Creek WWTP has been offline but the City has maintained the permit for the plant to allow for the plant to be placed back into service, if needed. The Town Creek WWTP is the current location of Lift Station No. 2, which served as the onsite lift station for the plant when it was in service. After the Town Creek WWTP was decommissioned, the Lift Station No. 2 force main was rerouted to discharge into a downstream manhole and flow to the Stewart Creek WWTP.

Figure 1: Wastewater System Map



III. EXISTING ONSITE LIFT STATION EVALUATION

A preliminary investigation was conducted of the existing lift stations at both wastewater treatment plants to evaluate the capacities to withstand peak flows of the growing system. The first portion of the analysis proved that the existing lift station pump systems are sized to meet all TCEQ minimums for the existing system.

Lift Station No. 1 (Stewart Creek WWTP onsite lift station) is outfitted with three (3) 436-gpm submersible pumps that are sized to meet the capacity of the existing 0.4 MGD treatment facility. The existing wet well is sized to a maximum capacity of 0.8 MGD to eliminate the need for a future wet well expansion.

Lift Station No. 2 (Town Creek WWTP onsite lift station) is outfitted with one (1) 350-gpm pump and two (2) 200-gpm pumps that are sized to an average daily flow of 144,000 gpd. This lift station currently serves an average daily flow of 114,300 gpd.

Our evaluation showed the need to upsize the existing Lift Station No. 2 to an average daily flow capacity of 0.4 MGD with the ability to reach a future capacity of 0.8 MGD by changing the pumps. This expansion will need to include an expansion of the existing wet well capacity and three (3) lift pumps to assume two (2) in service.

Table 2: Available Capacity at Existing Lift Stations

Facility	Firm Capacity (gpm)	Average Daily Flow (gpm)	2-Hr Peak Flow (gpm)	Adequately Sized?
Lift Station 1	872	387	833	Yes
Lift Station 2	400	238	300	Yes

IV. PROPOSED WWTP EXPANSION – OPTION 1

The first option to expand treatment facility capacity in the City is to expand the existing Stewart Creek WWTP from a capacity of 0.4 MGD to 0.8 MGD. The existing facility is designed as a bullseye-style plant, with room on the site for an additional, similar bullseye-style facility to be constructed. Initial influent loading data showed an increase in concentration from the parameters included in the existing facility’s design report. It is recommended that additional influent loading data be collected and analyzed as part of the design of an expanded wastewater treatment facility.

This option will allow the sanitary sewer flow pattern in the City to remain the same as is existing; however, additional capital projects will be required throughout the City to maintain an increased flow throughout the existing sanitary sewer system. These improvements include upsizing the existing pumps at Lift Station No. 1 to a capacity of 0.8 MGD, upsizing Lift Station No. 2 to a capacity of 0.4 MGD with room for a future expansion to 0.8 MGD (as previously discussed) and replacing the existing 10” gravity sanitary sewer line upstream from Lift Station No. 1 with a 15” gravity sanitary sewer line (Attachment A). A high-level cost estimate for these improvements is shown below:

	Estimated Cost
Lift Station No. 1 Expansion and 0.4 MGD WWTP:	\$8,825,000
Lift Station No. 2 Replacement:	\$1,200,000
Gravity Sanitary Sewer Line Upsizing:	\$1,800,000
Contingencies (30%)	\$3,548,000
Engineering (15%)	<u>\$2,306,000</u>
Total:	\$17,679,000

The City’s latest water and sewer usage projections (Attachment B) indicate that the City’s sanitary sewer flow will exceed 800,000 gpd by 2029 when considering existing connections,

platted developments, developments currently underway, developments in feasibility and design, and anticipated development within the current City Limits. As the City nears that limit, it is recommended that a 0.4 MGD and subsequent expansion to a 0.8 MGD facility be constructed at the existing Town Creek WWTP site to accommodate the demand.

V. PROPOSED WWTP EXPANSION – OPTION 2

The second option to expand treatment facility capacity in the City is to demolish the existing Town Creek WWTP facility and reconstruct a new facility in its place with a capacity of 0.4 MGD and the option for a future capacity of 0.8 MGD. The existing facility is severely undersized for the City’s needs and is now outdated. It is WGA’s opinion that the cost to rehabilitate and expand the existing facility from its current condition would be cost-prohibitive and would not be in the best long-term interest of the City.

While a bullseye-style facility will fit on the site, there are significant elevation changes onsite that may allow for an efficient traditional WWTP design onsite with room for additional future basins to be added as needed. Initial influent loading data showed an increase in concentration from the parameters included in the existing facility’s design report. It is recommended that additional influent loading data be collected and analyzed as part of the design of a new wastewater treatment facility.

This option will modify the existing sanitary sewer flow pattern, as all flow that is currently pumped through Lift Station No. 2 to the downstream manhole and ultimately to the Stewart Creek WWTP would then be treated at the Town Creek WWTP. This would relieve capacity in the gravity sanitary sewer line where Lift Station No. 2 currently discharges and would delay the need for said gravity sewer line to be upsized. As development in the City continues and regional growth continues to be established, it should be considered to redirect the Lift Station Nos. 8 and 3 force mains to the Stewart Creek WWTP service area instead of the current discharge locations in the Lift Station No. 2 gravity service area (see Figure 1). These redirections do not need to be completed at this time but should be considered as an option to relieve capacity at the Town Creek WWTP if needed.

WGA also evaluated the potential change in pumping costs at each lift station as a result of the changes in flow experienced with construction of the Town Creek WWTP. Our evaluation did not show a substantial change in pumping costs over the next 7-10 years.

The capital projects that would be required to be completed with Option 2 include the demolition and construction of the Town Creek WWTP and the replacement of Lift Station No. 2. No other capital projects would be required at this time. A high-level cost estimate for these improvements is shown below:

	Estimated Cost
Lift Station No. 2 Replacement and 0.4 MGD WWTP:	\$10,350,000
Contingencies (30%)	\$3,105,000
Engineering (15%)	<u>\$2,018,000</u>
Total:	\$15,473,000

The City's latest water and sewer usage projections (Attachment A) indicate that the City's sanitary sewer flow will exceed 800,000 gpd by 2029 when considering existing connections, platted developments, developments currently underway, developments in feasibility and design, and anticipated development within the current City Limits. It is recommended that an evaluation of flows at each plant is completed at that time to determine if the Town Creek WWTP or Stewart Creek WWTP (or both) should be upgraded to an ultimate phase of 0.8 MGD (1.2 MGD to 1.6 MGD total treatment plant capacity in City).

VI. BUFFER ZONE REQUIREMENTS

According to Chapter 309 Subchapter B of the Texas Administrative Code of the TCEQ there are several buffer requirements for wastewater treatment facility locations. Wastewater facilities cannot be within:

- 100-year floodplain unless the plant unit is protected from inundation and damage that may occur during a flood event
- Wetlands
- 500 feet from a public water well
- 150 feet from a private water well
- 500 feet from a surface water treatment plant or ground storage tank.

Both existing WWTP sites have a portion of the site that is located within the 500-year floodplain, 100-year floodplain, or Floodway according to the latest FEMA FIRM maps. Exhibits of the current floodplain boundaries at each wastewater treatment facility are included as Attachments C and D. This will need to be taken into consideration when designing the proposed improvements, and a drainage analysis is recommended to determine the detention requirements as a result of the improvements. WGA does not anticipate any other TCEQ buffer zone compliance concerns.

VII. TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM "TPDES" PERMIT

The City currently maintains permits on both the Town Creek and Stewart Creek Wastewater Treatment Plants. The current permit limit on the Town Creek WWTP is 0.175 MGD and the Stewart Creek Plant is 0.4 MGD.

In order to proceed with the expansion of either wastewater treatment plant, the City will need to obtain amended permits. If the City proceeds with Option 1, the City should immediately proceed with the preparation of a major permit amendment for the Stewart Creek Wastewater Treatment plant to add a ultimate phase of 0.8 MGD. If the City proceeds with Option 2, they should amend the permit to have an interim phase of 0.4 MGD and an ultimate phase of 0.8 MGD.

The City will eventually need to amend both permits to meet growing demands. After obtaining the permit amendment for the option selected above, the City should proceed with obtaining the other amendment to be ready for future expansion.

VIII. OTHER DESIGN CONSIDERATIONS

Additionally, the scope of the above work does not include any possible design changes that could arise as a result of consultation with the design consultant (and their subconsultants) that is selected by the City. The design consultant should consult with their subconsultants, the City Engineer, and City Staff to determine the final design. It is recommended that the design consultant coordinate a geotechnical investigation to determine site characteristics for design and construction of the lift station and structural components of the treatment facility. Furthermore, a topographic survey should be conducted of the site to ensure design elevations and hydraulics do not contain any conflicts.

IX. SUMMARY & RECOMMENDATION

WGA recommends proceeding with Option 2 as presented in this report, which includes demolition of the existing Town Creek WWTP, construction of a new WWTP on the same site, and expansion of Lift Station No. 2 to 0.4 MGD with the ability to be upgraded to 0.8 MGD in an ultimate phase. This option is not only a lower up-front capital expense but is a better option for the City as it looks to the future and anticipated growth on the west side of the City. Rebuilding the Town Creek WWTP will provide the City the flexibility to expand only the facilities that need to be expanded based on the location of new development. It will also relieve some capacity from the Stewart Creek WWTP and allow any expansion to the treatment facility or lift station to be delayed.

WGA recommends the design consultant selected by the City to perform a detailed Preliminary Engineering Report for the design of the Town Creek WWTP, and recommends the final design include the ability for additional basins to be constructed in the future.

We recommend the City continue to evaluate existing and anticipated development to ensure that the timing of construction aligns with the expected growth. The anticipated timeline for various activities is as follows:

- July – August 2023: Prepare and Release Request for Qualifications for Engineering Services
- August 2023: Authorize Preparation of the TPDES Permit Amendment
- September 2023: Receive Statements of Qualifications
- October 2023: Select Engineer and Enter Into Engineering Contract
- October 2023: TPDES Permit Amendment Submitted to TCEQ
- December 2023: Design Engineer Completes Preliminary Engineering Report, Proposed Site Plan, and Updated Cost Estimate
- February 2024: Received Amended TPDES Permit
- March 2024: City Secure Funding for Construction
- May 2024: Design Engineer Completes Design
- June 2024: Receive Bids for Construction
- August 2024: Construction Begins
- July 2025: Construction Complete

Wastewater Treatment Plant Expansion Analysis
City of Montgomery
Page 7 of 7

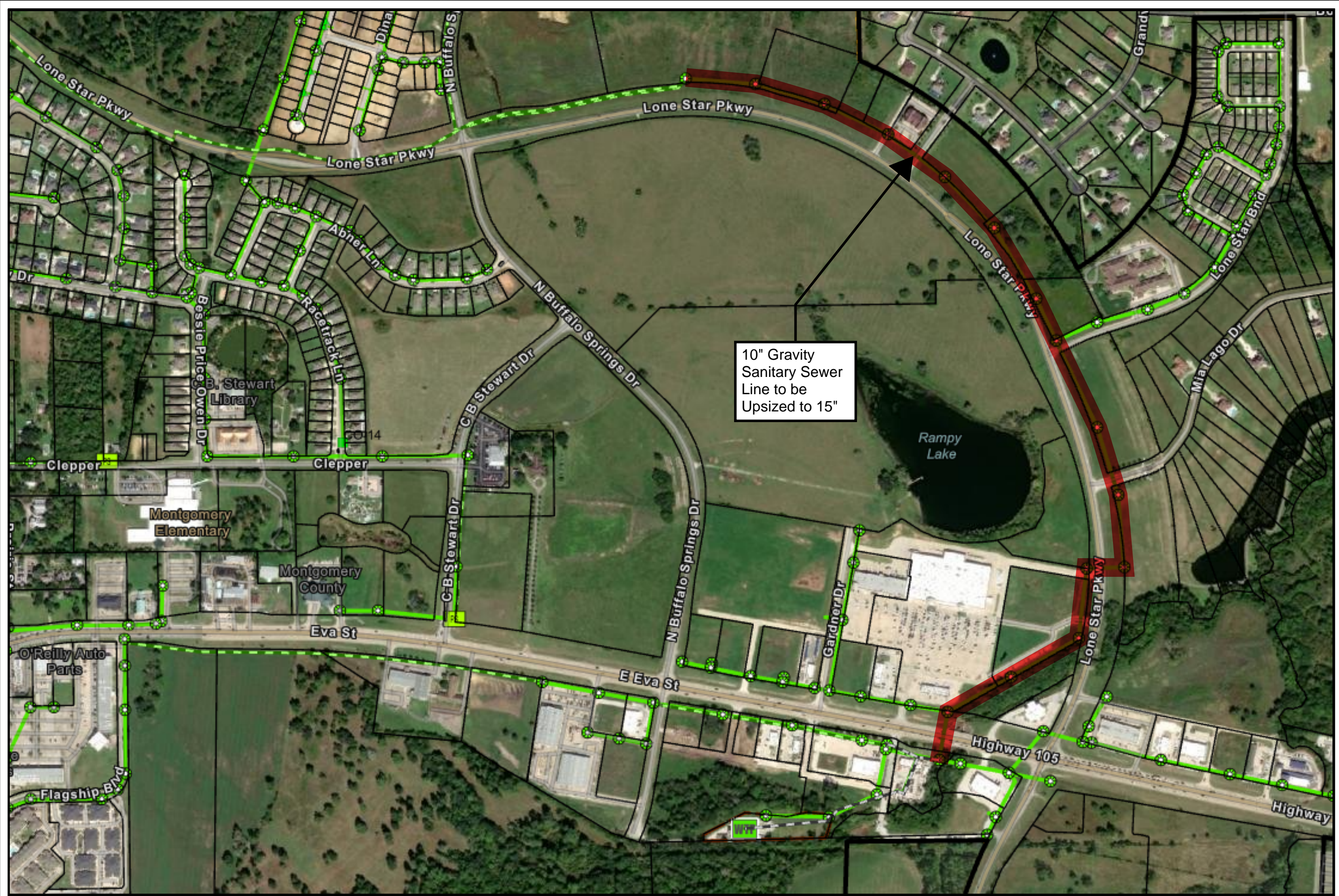
We trust this provides you with the information needed at this time. If you have any questions or comments, please call us at (713) 789-1900.

Regards,

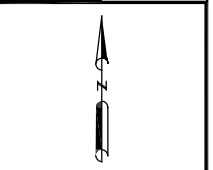


Katherine Vu, PE, CFM
Project Manager
Municipal & Special Districts





Gravity Sanitary Sewer Upsizing
 City of Montgomery

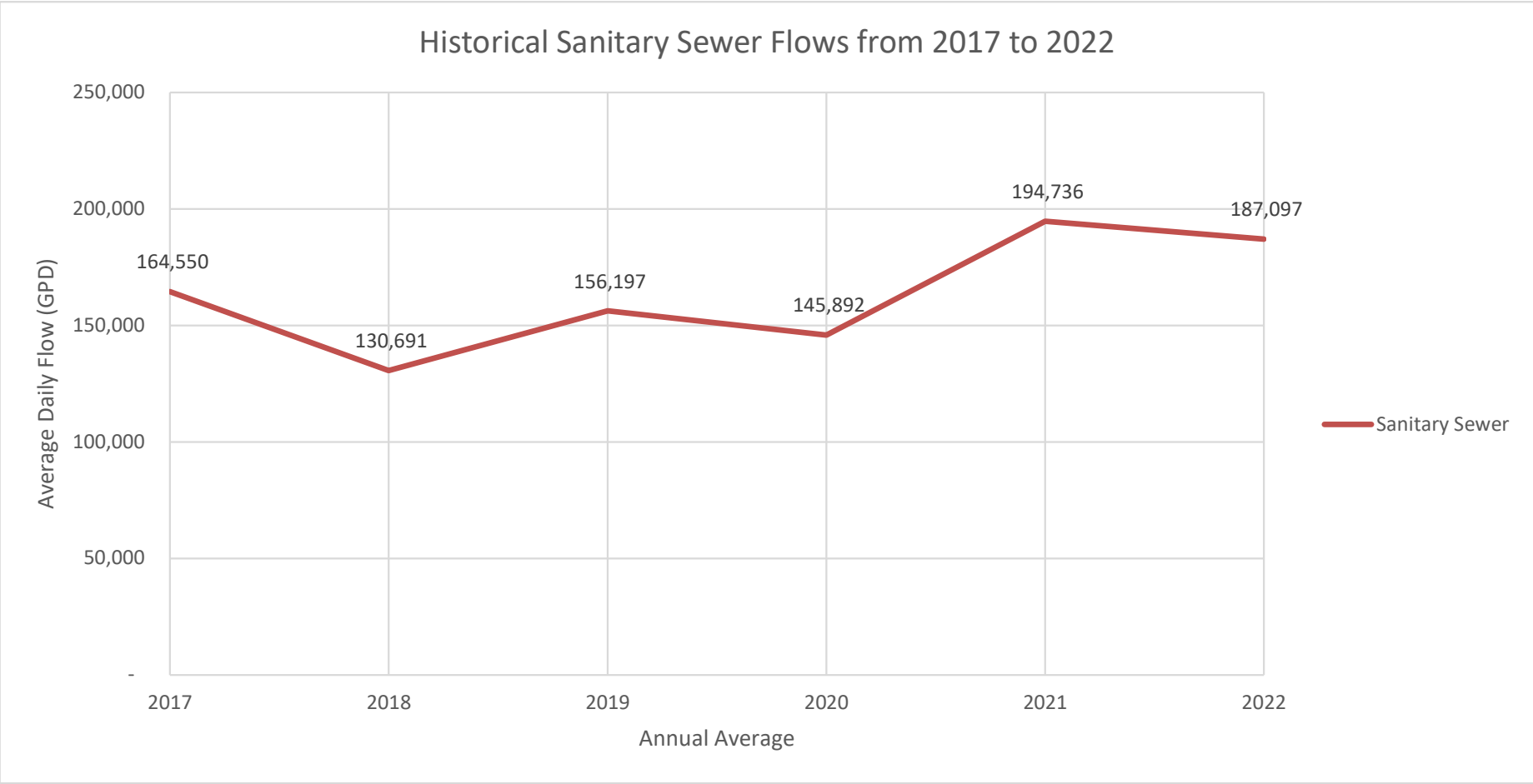


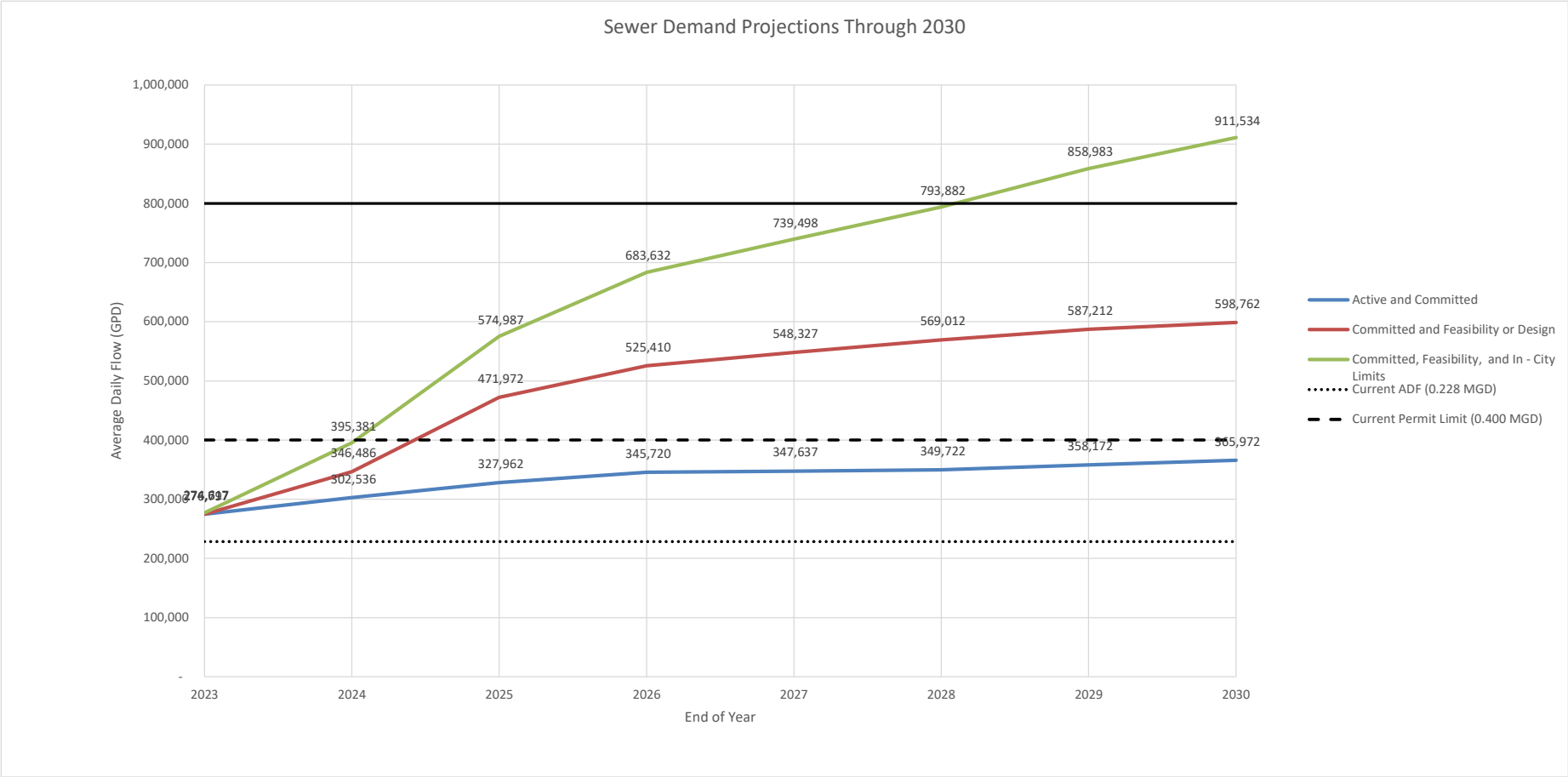
	Development Info & Capacities							Service Demands																	
	Current Connections	Ultimate Connections	Water		Wastewater		Gravity Lift Station Service Area	2023			2024			2025			2026			2027					
			Current Actual	Ultimate	Current	Ultimate		Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary			
Commercial/Multi Family per ESFC Single Family			360 225	360 225	250 150	250 150																			
Potential Future Development (Within Current City Limits)																									
HEB Tract (HEB store only)	-	1	-	10,000	-	6,500	1				1	10,000	6,500												
HEB Tract (pad sites only)	-	5	-	15,000	-	9,750	1				2	6,000	3,900	3	9,000	5,850									
Summit Business Park, Phase 2	-	6	-	4,400	-	2,860	13				2	1,467	953				2	1,467	953						
Moon Over Montgomery	-	15	-	3,375	-	2,194	2				15	3,375	2,194												
Waterstone, Section 3	-	36	-	8,100	-	5,265	14				10	2,250	1,463	10	2,250	1,463	10	2,250	1,463	6	1,350	900			
J. Allen Kent (19.6 Ac)	-	126	-	28,350	-	18,900	10				50	11,250	7,500	50	11,250	7,500	26	5,850	3,900						
Hills of Town Creek Section 5	-	72	-	16,200	-	10,800	6				30	6,750	4,500	30	6,750	4,500	12	2,700	1,800						
Peter Hill 5.7 Acre Feasibility	-	5	-	5,000	-	3,250	1				1	1,000	650	1	1,000	650	1	1,000	650	2	2,000	1,300			
Porter Farms Tract	-	92	-	20,700	-	11,960	9				30	6,750	3,900	30	6,750	3,900	38	8,550	4,940						
Olde Montgomery Food Gardens	-	1	-	2,180	-	2,180	2	1	2,180	2,180															
The Woods of Town Creek	-	212	-	47,700	-	31,800	5				45	10,125	6,750	47	10,575	7,050	30	6,750	4,500	30	6,750	4,500			
Summer Wind	-	211	-	47,475	-	31,650	10				72	16,200	10,800	72	16,200	10,800	67	15,075	10,050						
Group 1A (Mix)	-	1,519	-	379,650	-	303,720	1																		
Group 1B (Mix)	-	715	-	178,650	-	142,920	3																		
Group 1C (Res Low)	-	114	-	28,530	-	22,820	5										41	10,250	8,200	42	10,500	8,400			
Group 1D (Mix Use)	-	207	-	51,730	-	41,390	5				19	4,750	3,801	18	4,500	3,601	18	4,500	3,601						
Group 1E (Res Low Density)	-	283	-	70,740	-	56,600	2																		
Group 1F (Mix Use)	-	162	-	40,610	-	32,480	7																		
Group 1G (Mix Use)	-	86	-	21,450	-	17,160	7				15	3,750	3,000				20	5,000	4,000						
Group 1H (Comm)	-	230	-	57,490	-	45,990	9																		
Group 1I (Comm)	-	214	-	53,510	-	42,810	9							13	3,250	2,600	14	3,500	2,800						
Group 1J (Mix Use)	-	1324	-	330,920	-	264,730	1							18	4,500	3,600	33	8,250	6,600	34	8,500	6,800			
Group 1K (Comm)	-	151	-	37,770	-	30,220	1							4	1,000	800	5	1,250	1,000	5	1,250	1,000			
Group 1L (Comm)	-	153	-	38,280	-	30,630	6				8	2,006	1,605	9	2,256	1,806									
Subtotal	-	5,728	-	1,450,335	-	1,136,929		1	2,180	2,180	228	69,473	46,716	305	79,282	54,119	322	77,517	55,207	186	45,425	32,950			
Total Projected Committed Volumes Plus Feasibility, Plus Potential In-City																									
								1,718	462,902	276,797	2,245	645,683	395,381	3,234	893,326	574,987	3,785	1,049,058	683,632	4,122	1,129,566	739,498			
Potential Future Development (ETJ)																									
Group 2A (Mix Use)	-	516	-	129,120	-	103,290	1																		
Group 2B (Res Low Density)	-	150	-	37,440	-	29,940	5																		
Group 2C (Res High Density)	0	428	-	106,890	-	85,510	5																		
Group 2D (Mix Use)	0	807	-	201,750	-	161,390	6																		
Group 2E (Mix Use)	0	1118	-	279,380	-	223,500	7																		
Group 2F (Res Low)	0	410	-	102,550	-	82,030	7																		
Group 2G (Comm)	0	406	-	101,400	-	81,120	2																		
Group 2H (Res Low Density)	0	229	-	57,320	-	45,850	13																		
Subtotal	-	4,063	-	1,015,850	-	812,630	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potential Ultimate Totals																									
	1,467	12,464	398,345	3,265,347	246,733	2,472,984	46	1,718	462,902	276,797	2,245	645,683	395,381	3,234	893,326	574,987	3,785	1,049,058	683,632	4,122	1,129,566	739,498			

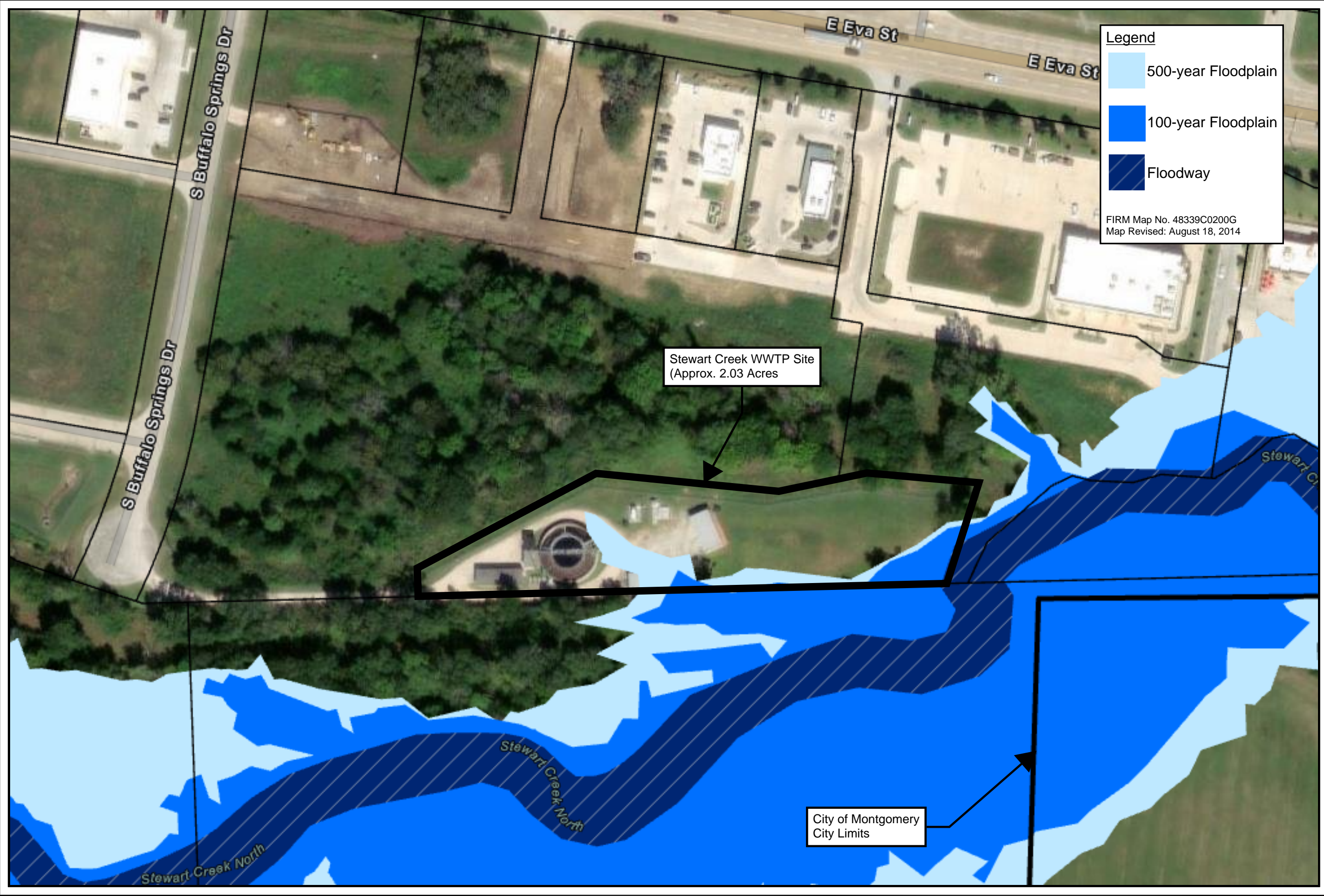
	Development Info & Capacities						Projections												
	Current Connections	Ultimate Connections	Water		Wastewater		2028			2029			2030			2035			
			Current Actual	Ultimate	Current	Ultimate	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	
Commercial/Multi Family per ESFC Single Family			360	360	250	250													
			225	225	150	150													
Potential Future Development (Within Current City Limits)																			
HEB Tract (HEB store only)	-	1	-	10,000	-	6,500													
HEB Tract (pad sites only)	-	5	-	15,000	-	9,750	-	-	-	-	-	-	-	-	-	-	-	-	
Summit Business Park, Phase 2	-	6	-	4,400	-	2,860													
Moon Over Montgomery	-	15	-	3,375	-	2,194													
Waterstone, Section 3	-	36	-	8,100	-	5,265													
J. Allen Kent (19.6 Ac)	-	126	-	28,350	-	18,900	-	-	-	-	-	-	-	-	-	-	-	-	
Hills of Town Creek Section 5	-	72	-	16,200	-	10,800	-	-	-	-	-	-	-	-	-	-	-	-	
Peter Hill 5.7 Acre Feasibility	-	5	-	5,000	-	3,250													
Porter Farms Tract	-	92	-	20,700	-	11,960	-	-	-	-	-	-	-	-	-	-	-	-	
Olde Montgomery Food Gardens	-	1	-	2,180	-	2,180													
The Woods of Town Creek	-	212	-	47,700	-	31,800	30	6,750	4,500	30	6,750	4,500	-	-	-	-	-	-	
Summer Wind	-	211	-	47,475	-	31,650	-	-	-	-	-	-	-	-	-	-	-	-	
Group 1A (Mix)	-	1,519	-	379,650	-	303,720									836	208,998	167,199		
Group 1B (Mix)	-	715	-	178,650	-	142,920	42	10,500	8,400	42	10,500	8,400	42	10,500	8,400	-	-	-	
Group 1C (Res Low)	-	114	-	28,530	-	22,820									114	28,530	22,820		
Group 1D (Mix Use)	-	207	-	51,730	-	41,390													
Group 1E (Res Low Density)	-	283	-	70,740	-	56,600													
Group 1F (Mix Use)	-	162	-	40,610	-	32,480	40	10,000	7,998	40	10,000	7,998	33	8,250	6,598	142	35,496	28,401	
Group 1G (Mix Use)	-	86	-	21,450	-	17,160	25	6,250	5,000										
Group 1H (Comm)	-	230	-	57,490	-	45,990				115	28,756	23,003	115	28,756	23,003				
Group 1I (Comm)	-	214	-	53,510	-	42,810													
Group 1J (Mix Use)	-	1324	-	330,920	-	264,730	34	8,500	6,800	15	3,750	3,000	15	3,750	3,000	75	18,750	14,999	
Group 1K (Comm)	-	151	-	37,770	-	30,220	5	1,250	1,000										
Group 1L (Comm)	-	153	-	38,280	-	30,630													
Subtotal	-	5,728	-	1,450,335	-	1,136,929	176	43,250	33,698	242	59,755	46,901	205	51,255	41,001	1,167	291,774	233,419	
Total Projected Committed Volumes Plus Feasibility, Plus Potential In-City							2028			2029			2030			2035			
							Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	
							4,427	1,204,599	793,882	4,740	1,292,654	858,983	4,973	1,361,985	911,534	6,150	1,656,008	1,146,453	
Potential Future Development (ETJ)																			
Group 2A (Mix Use)	-	516	-	129,120	-	103,290													
Group 2B (Res Low Density)	-	150	-	37,440	-	29,940									75	18,754	14,997		
Group 2C (Res High Density)	0	428	-	106,890	-	85,510													
Group 2D (Mix Use)	0	807	-	201,750	-	161,390									295	73,752	58,998		
Group 2E (Mix Use)	0	1118	-	279,380	-	223,500									228	56,999	45,598		
Group 2F (Res Low)	0	410	-	102,550	-	82,030													
Group 2G (Comm)	0	406	-	101,400	-	81,120									38	9,500	7,600		
Group 2H (Res Low Density)	0	229	-	57,320	-	45,850													
Subtotal	-	4,063	-	1,015,850	-	812,630	-	-	-	-	-	-	-	-	-	636	159,004	127,193	
Potential Ultimate Totals							2028			2029			2030			2035			
							Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	
							4,427	1,204,599	793,882	4,740	1,292,654	858,983	4,973	1,361,985	911,534	6,786	1,815,013	1,273,646	

	Development Info & Capacities																
	Current Connections	Ultimate Connections	Water		Wastewater		2040			2045			2050				
			Current Actual	Ultimate	Current	Ultimate	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary		
Commercial/Multi Family per ESFC			360	360	250	250											
Single Family			225	225	150	150											
Single Family																	
Buffalo Crossing	8	13	1,800	2,925	1,200	1,950	-	-	-	-	-	-	-	-	-	-	-
Buffalo Springs, Section 1	24	24	5,400	5,400	3,600	3,600	-	-	-	-	-	-	-	-	-	-	-
Buffalo Springs, Section 2	63	64	14,175	14,400	9,450	9,600	-	-	-	-	-	-	-	-	-	-	-
Estates of Mia Lago, Section 1	4	27	900	6,075	-	-	-	-	-	-	-	-	-	-	-	-	-
FM 149 Corridor	21	25	4,725	5,625	3,150	3,750	-	-	-	-	-	-	-	-	-	-	-
Simonton and Lawson	13	23	2,925	5,175	1,950	3,450	-	-	-	-	-	-	-	-	-	-	-
Martin Luther King	51	55	11,475	12,375	7,650	8,250	-	-	-	-	-	-	-	-	-	-	-
Baja Road	7	11	1,575	2,475	1,050	1,650	-	-	-	-	-	-	-	-	-	-	-
Community Center Drive	3	3	675	675	450	450	-	-	-	-	-	-	-	-	-	-	-
Community Center Drive (Water Only)	8	10	1,800	2,250	-	-	-	-	-	-	-	-	-	-	-	-	-
Lake Creek Landing	15	15	3,375	3,375	2,250	2,250	-	-	-	-	-	-	-	-	-	-	-
Gulf Coast Estates, Section 2	2	4	450	900	300	600	-	-	-	-	-	-	-	-	-	-	-
Lake Creek Village, Section 1	36	37	8,100	8,325	5,400	5,550	-	-	-	-	-	-	-	-	-	-	-
Lake Creek Village, Section 2	40	45	9,000	10,125	6,000	6,750	-	-	-	-	-	-	-	-	-	-	-
Estates of Lake Creek Village	18	22	4,050	4,950	2,700	3,300	-	-	-	-	-	-	-	-	-	-	-
Lone Star Estates	10	10	2,250	2,250	1,500	1,500	-	-	-	-	-	-	-	-	-	-	-
Hills of Town Creek, Section 2	51	51	11,475	11,475	7,650	7,650	-	-	-	-	-	-	-	-	-	-	-
Hills of Town Creek, Section 3	49	49	11,025	11,025	7,350	7,350	-	-	-	-	-	-	-	-	-	-	-
Hills of Town Creek Sec. 4	23	30	5,175	6,750	3,450	4,500	-	-	-	-	-	-	-	-	-	-	-
Historic/Downtown	132	150	29,700	33,750	19,800	22,500	-	-	-	-	-	-	-	-	-	-	-
Terra Vista Section 1	58	61	13,050	13,725	8,700	9,150	-	-	-	-	-	-	-	-	-	-	-
Town Creek Crossing Section 1	79	102	17,775	22,950	11,850	15,300	-	-	-	-	-	-	-	-	-	-	-
Villas of Mia Lago Section 1	14	14	3,150	3,150	2,100	2,100	-	-	-	-	-	-	-	-	-	-	-
Villas of Mia Lago Section 2	42	42	9,450	9,450	6,300	6,300	-	-	-	-	-	-	-	-	-	-	-
Waterstone, Section 1	46	53	10,350	11,925	6,900	7,950	-	-	-	-	-	-	-	-	-	-	-
Waterstone, Section 2	35	89	7,875	20,025	5,250	13,350	-	-	-	-	-	-	-	-	-	-	-
Gary Hammons	1	1	225	225	150	150	-	-	-	-	-	-	-	-	-	-	-
Mobile Home Park (connection)	29	29	4,000	4,000	3,300	3,300	-	-	-	-	-	-	-	-	-	-	-
City Hall	1	1	1,070	1,070	890	890	-	-	-	-	-	-	-	-	-	-	-
Community Center	1	1	200	200	150	150	-	-	-	-	-	-	-	-	-	-	-
Buffalo Spring Plant	1	1	360	360	250	250	-	-	-	-	-	-	-	-	-	-	-
Cedar Brake Park Restrooms	1	1	200	200	150	150	-	-	-	-	-	-	-	-	-	-	-
Ferland Park	1	1	200	200	150	150	-	-	-	-	-	-	-	-	-	-	-
Homecoming Park Restrooms	1	1	200	200	150	150	-	-	-	-	-	-	-	-	-	-	-
Water Plant No. 3	1	1	4,000	4,000	2,000	2,000	-	-	-	-	-	-	-	-	-	-	-
West Side at the Park	8	11	1,800	2,475	1,200	1,650	-	-	-	-	-	-	-	-	-	-	-
Subtotal	897	1,077	203,955	244,455	134,390	157,640	-	-	-	-	-	-	-	-	-	-	-
Commercial Platted and Existing																	
Buffalo Run, Section 1	1	6	1,000	10,000	650	6,500	-	-	-	-	-	-	-	-	-	-	-
Longview Greens Miniature Golf	1	1	1,400	1,400	910	910	-	-	-	-	-	-	-	-	-	-	-
Summit Business Park, Phase 1	3	6	1,300	6,000	845	3,900	-	-	-	-	-	-	-	-	-	-	-
Prestige Storage (SBP Res. D)	1	1	225	225	146	146	-	-	-	-	-	-	-	-	-	-	-
McCoy's	1	1	750	750	488	488	-	-	-	-	-	-	-	-	-	-	-
AutoZone	1	1	360	360	234	234	-	-	-	-	-	-	-	-	-	-	-
McCoy's Reserves B & D	-	2	-	5,000	-	3,250	-	-	-	-	-	-	-	-	-	-	-
Pizza Shack	1	1	4,900	4,000	3,185	2,600	-	-	-	-	-	-	-	-	-	-	-
CareNow & Other Suites	3	3	1,200	1,500	780	975	-	-	-	-	-	-	-	-	-	-	-
KenRoc (Montgomery First)	-	3	-	12,000	-	7,800	-	-	-	-	-	-	-	-	-	-	-
Wendy's	1	1	1,300	1,300	845	845	-	-	-	-	-	-	-	-	-	-	-
Dusty's Car Wash	1	1	17,000	17,000	11,050	11,050	-	-	-	-	-	-	-	-	-	-	-
ProCore Developments	1	1	1,500	1,500	975	975	-	-	-	-	-	-	-	-	-	-	-
Christian Brothers	1	1	225	225	146	146	-	-	-	-	-	-	-	-	-	-	-
Madsen and Richards	1	1	225	405	146	263	-	-	-	-	-	-	-	-	-	-	-
Kroger	2	2	4,500	5,000	2,925	3,250	-	-	-	-	-	-	-	-	-	-	-
Burger King	1	1	1,450	1,450	943	943	-	-	-	-	-	-	-	-	-	-	-
Buffalo Springs Shopping, Ph. I (Reserve B)	1	1	6,300	6,300	4,095	4,095	-	-	-	-	-	-	-	-	-	-	-
Buffalo Springs Shopping, Ph. I (Reserve A2)	-	1	-	3,000	-	1,950	-	-	-	-	-	-	-	-	-	-	-
Buffalo Springs Shopping, Ph. I (Reserve E)	-	1	-	3,000	-	1,950	-	-	-	-	-	-	-	-	-	-	-
Buffalo Springs Shopping, Ph. I (Reserve D)	-	1	-	6,000	-	3,900	-	-	-	-	-	-	-	-	-	-	-
Spirit of Texas Bank	1	1	2,100	2,100	1,365	1,365	-	-	-	-	-	-	-	-	-	-	-
Heritage Place	1	1	360	360	234	234	-	-	-	-	-	-	-	-	-	-	-
Buffalo Springs Shopping, Ph. 2 (Reserve J)	-	1	-	12,000	-	7,800	-	-	-	-	-	-	-	-	-	-	-
Buffalo Springs Shopping, Ph. 2	-	2	-	8,000	-	5,200	-	-	-	-	-	-	-	-	-	-	-
BlueWave Car Wash	1	1	7,000	7,000	4,550	4,550	-	-	-	-	-	-	-	-	-	-	-
Brookshire Brothers	2	2	1,500	1,500	975	975	-	-	-	-	-	-	-	-	-	-	-
Ransoms	1	1	1,500	1,500	975	975	-	-	-	-	-	-	-	-	-	-	-
Heritage Medical Center	1	1	600	1,200	390	780	-	-	-	-	-	-	-	-	-	-	-
Lone Star Pkwy Office Building	2	2	400	720	260	468	-	-	-	-	-	-	-	-	-	-	-
Old Iron Work	1	1	225	225	146	146	-	-	-	-	-	-	-	-	-	-	-
Apache Machine Shop	1	1	225	225	146	146	-	-	-	-	-	-	-	-	-	-	-
Montgomery Community Center (lone Star)	1	1	850	850	553	553	-	-	-	-	-	-	-	-	-	-	-
Jim's Hardware	1	1	225	225	146	146	-	-	-	-	-	-	-	-	-	-	-
Town Creek Storage	1	1	225	225	146	146	-	-	-	-	-	-	-	-	-	-	-
Lake Creek Village 3 Commercial (Res A & B)	-	5	-	25,000	-	16,250	-	-	-	-	-	-	-	-	-	-	-
Waterstone Commercial Reserves	3	11	1,000	16,000	650	10,400	-	-	-	-	-	-	-	-	-	-	-
Lupe Tortilla	-	1	-	4,000	-	2,600	-	-	-	-	-	-	-	-	-	-	-
Discount Tire	-	1	-	225	-	146	-	-	-	-	-	-	-	-	-	-	-
Express Oil and Tire	1	1	225	225	146	146	-	-	-	-	-	-	-	-	-	-	-
Popeyes	1	1	1,450	1,450	943	943	-	-	-	-	-	-	-	-	-	-	-

	Development Info & Capacities															
	Current Connections	Ultimate Connections	Water		Wastewater		2040			2045			2050			
			Current Actual	Ultimate	Current	Ultimate	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	Connections	GPD Water	GPD Sanitary	
Commercial/Multi Family per ESFC Single Family			360 225	360 225	250 150	250 150										
Potential Future Development (Within Current City Limits)																
HEB Tract (HEB store only)	-	1	-	10,000	-	6,500										
HEB Tract (pad sites only)	-	5	-	15,000	-	9,750	-	-	-	-	-	-	-	-	-	-
Summit Business Park, Phase 2	-	6	-	4,400	-	2,860										
Moon Over Montgomery	-	15	-	3,375	-	2,194										
Waterstone, Section 3	-	36	-	8,100	-	5,265	-	-	-	-	-	-	-	-	-	-
J. Allen Kent (19.6 Ac)	-	126	-	28,350	-	18,900	-	-	-	-	-	-	-	-	-	-
Hills of Town Creek Section 5	-	72	-	16,200	-	10,800	-	-	-	-	-	-	-	-	-	-
Peter Hill 5.7 Acre Feasibility	-	5	-	5,000	-	3,250										
Porter Farms Tract	-	92	-	20,700	-	11,960	-	-	-	-	-	-	-	-	-	-
Olde Montgomery Food Gardens	-	1	-	2,180	-	2,180										
The Woods of Town Creek	-	212	-	47,700	-	31,800	-	-	-	-	-	-	-	-	-	-
Summer Wind	-	211	-	47,475	-	31,650										
Group 1A (Mix)	-	1,519	-	379,650	-	303,720	835	208,748	166,999	-	-	-	-	-	-	-
Group 1B (Mix)	-	715	-	178,650	-	142,920										
Group 1C (Res Low)	-	114	-	28,530	-	22,820										
Group 1D (Mix Use)	-	207	-	51,730	-	41,390										
Group 1E (Res Low Density)	-	283	-	70,740	-	56,600	141	35,246	28,201	-	-	-	-	-	-	-
Group 1F (Mix Use)	-	162	-	40,610	-	32,480										
Group 1G (Mix Use)	-	86	-	21,450	-	17,160										
Group 1H (Comm)	-	230	-	57,490	-	45,990										
Group 1I (Comm)	-	214	-	53,510	-	42,810										
Group 1J (Mix Use)	-	1324	-	330,920	-	264,730	60	15,000	12,000	-	-	-	-	-	-	-
Group 1K (Comm)	-	151	-	37,770	-	30,220										
Group 1L (Comm)	-	153	-	38,280	-	30,630										
Subtotal	-	5,728	-	1,450,335	-	1,136,929	1,036	258,994	207,199	-	-	-	-	-	-	-
Total Projected Committed Volumes Plus Feasibility, Plus Potential In-City																
							7,186	1,915,002	1,353,652	7,186	1,915,002	1,353,652	7,186	1,915,002	1,353,652	
Potential Future Development (ETJ)																
Group 2A (Mix Use)	-	516	-	129,120	-	103,290	507	126,759	101,401	-	-	-	-	-	-	-
Group 2B (Res Low Density)	-	150	-	37,440	-	29,940	75	18,754	14,997	-	-	-	-	-	-	-
Group 2C (Res High Density)	0	428	-	106,890	-	85,510				214	53,501	42,799	214	53,501	42,799	
Group 2D (Mix Use)	0	807	-	201,750	-	161,390	290	72,502	57,998	-	-	-	-	-	-	-
Group 2E (Mix Use)	0	1118	-	279,380	-	223,500	228	56,999	45,598	229	57,249	45,798	-	-	-	-
Group 2F (Res Low)	0	410	-	102,550	-	82,030	136	34,005	27,201	137	34,255	27,401	137	34,255	27,401	
Group 2G (Comm)	0	406	-	101,400	-	81,120	38	9,500	7,600	-	-	-	-	-	-	-
Group 2H (Res Low Density)	0	229	-	57,320	-	45,850	54	13,504	10,802	54	13,504	10,802	54	13,504	10,802	
Subtotal	-	4,063	-	1,015,850	-	812,630	1,328	332,022	265,597	634	158,509	126,801	405	101,260	81,002	
Potential Ultimate Totals																
	1,467	12,464	398,345	3,265,347	246,733	2,472,984	9,150	2,406,029	1,746,442	9,784	2,564,538	1,873,242	10,189	2,665,798	1,954,245	







Legend

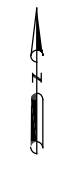
- 500-year Floodplain
- 100-year Floodplain
- Floodway

FIRM Map No. 48339C0200G
Map Revised: August 18, 2014

WGA
 CONSULTING ENGINEERS
 WARDEN & ASSOCIATES, PLLC
 4528 Research Forest Dr., Suite 175
 The Woodlands, TX 77381
 281.298.1824

FEMA FIRM Floodplain

Stewart Creek WWTP



Attachment
C



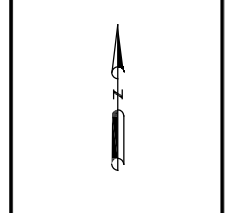
Legend

- 500-year Floodplain
- 100-year Floodplain
- Floodway

FIRM Map No. 48339C0200G
Map Revised: August 18, 2014

WGA
CONSULTING ENGINEERS
 WARDEN & ASSOCIATES, PLLC
 CONSULTING ENGINEERS, FIRM # 9756
 TEXAS REG. NO. 00000000000000000000
 4528 Research Forest Dr., Suite 175
 The Woodlands, TX 77381
 281.298.1824

FEMA FIRM Floodplain
Town Creek WWTP



Attachment
 D