

City of Wimberley

**Public Hearing
January 8, 2019**

**Proposed Central Wastewater Project
Modifications**

One of the Purposes of this Hearing is to Discuss the Potential Impacts of the Project Changes and Alternatives to it

- Proposed Project Changes
- Potential Environmental Impacts
- Alternatives to Proposed Changes
- Economic Impact on Rate Payers

Why Is Original Plan Being Modified?

In Summary - The Modified Plan Is:

- More **Environmentally Responsible**, including being a true “No Discharge” option into Deer Creek/Blanco River
- More **Financially Responsible** for the initial project cost, but more importantly, lower ongoing annual costs that affect customer rates and City support, as well as long-term financial risks and burdens of the City owning and operating a Plant at Blue Hole Park

Proposed Project Changes

Project Changes are
Summarized in
Engineering Feasibility
Report (EFR)
Amendment No. 2
Prepared by:
Alan Plummer
Associates, Inc.

EFR has been displayed
for this Hearing

**CITY OF WIMBERLEY
CENTRAL WASTEWATER SYSTEM
ENGINEERING FEASIBILITY REPORT
AMENDMENT NO. 2**

December 3, 2018



Stephen Coonan
12/3/18

Proposed Project Changes – Collection System

Collection System

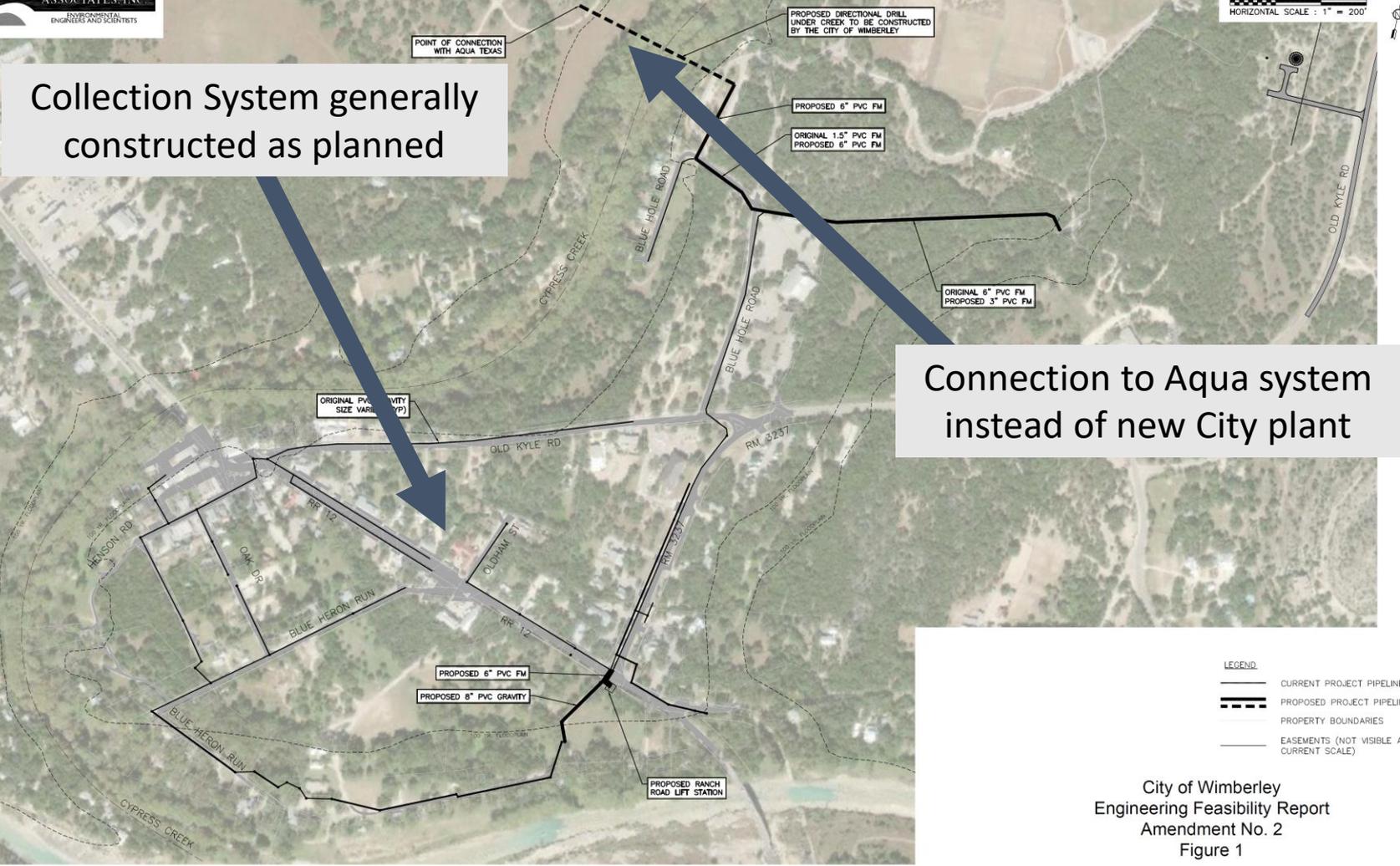
- Generally remains the same as originally planned and being constructed, except it will connect to Aqua's system instead of a new City wastewater treatment plant
- City will still provide sewer service to the Central Wimberley area – initially to serve approximately 100 residences and businesses
- City will still own, maintain and manage the collection system
- City still retains ownership and control of its CCN
- Sewer customers will still be served by the City with City determining customer rates

Proposed Project Changes – Wastewater Treatment

Wastewater Treatment

- \$3.1 million sewer plant planned to be constructed and operated at the northwest corner of Blue Hole Regional Park is eliminated from the project
- City will connect its Collection System to the Aqua Texas System on the west side of Cypress Creek
- Aqua will then transport the wastewater to its existing land application, non-discharge plant for treatment
- City will enter into a long-term agreement with Aqua for treatment of the City's wastewater

Modification - Map



Aqua Agreement Terms

- City Retains CCN - No CCN Transfer to Aqua
- Aqua takes City collection system wastewater at west side of Cypress Creek, transports and processes it at their non-discharge wastewater plant
- Aqua will be City wholesale wastewater treatment provider
- Aqua Cost is:
 - Up to 50,000 gpd- \$4,398 per month (\$52,776 per year)
 - 50,000 to 75,000 gpd - \$7,037 per month (\$84,444 per year)
 - Cost is based on tariff rates in effect since 2009
- There will be no increase in rates for five years, and increases thereafter tied to regulated tariffs
- Aqua will upgrade entire plant from Type 2 to Type 1 effluent
- Reclaimed Type 1 effluent will be made available to the City at no cost
- One time capacity buy-in (impact) fee of \$300,000
- Timing of completion of construction consistent with City's plans

Modified Plan - Reclaimed Water

- Under the Aqua agreement, Aqua will upgrade its entire plant from Type 2 to Type 1 treated effluent, benefiting the entire Wimberley Valley
- Type 1 effluent will be made available to the City at no cost for irrigation
- The City would like to utilize reclaimed water to provide irrigation to Blue Hole Park – primarily for the soccer fields
- At this time, sufficient funding is not available for a reclaimed water line back to Blue Hole in this project scope
- Until the City develops a plan for a reclaimed return water line, City will have available Type 1 effluent via truck if needed
- Under the Modified Plan, all effluent will be beneficially used for irrigation – with no discharge into waterways

Project Cost Summary

Project Cost	Original Plan		Modified Plan		Variance
Collection System	\$ 3,566,402	F	\$ 3,566,402	F	\$ -
Collection System Modifications	-		144,380	F	144,380
Treatment Plant	3,068,900	F	345,072	F	(2,723,828)
Treatment Plant - Termination Fee	-		200,000	C	200,000
Total Construction Costs	\$ 6,635,302		\$ 4,255,854		\$ (2,379,448)
Project and Construction Administration	\$ 252,575	C	\$ 252,575	F	\$ -
Engineering Redesign - Modification	-		36,500	F	36,500
Capacity Buy-in	-		300,000	F	300,000
Easements	44,000	C	44,000	C	-
Subtotal	\$ 6,931,877		\$ 4,888,929		\$ (2,042,948)
Bond Reserve, Origination and Other Fees	\$ 334,554	F	\$ 334,554	F	\$ -
Bond Counsel and Financial Advisor	68,950	C	79,450	C	10,500
Construction Interest (2 years)	170,847	C	170,847	F	-
Total Other Costs	\$ 574,351		\$ 584,851		\$ 10,500
Total Project Cost (excludes contingencies)	\$ 7,506,228		\$ 5,473,780		\$ (2,032,448)
Breakdown by Sources of Funds					
Funding Sources - TWDB, EDA, Way Grant	\$ 6,969,856	F	\$ 5,150,330	F	\$ (1,819,526)
City Funds	536,372	C	323,450	C	(212,922)
Total Project Cost - Sources of Funds	\$ 7,506,228		\$ 5,473,780		\$ (2,032,448)

Project Funding vs Cost

Sources of Funds	Original Plan	Modified Plan	Variance
TWDB Loan	\$ 5,255,000	\$ 5,255,000	\$ -
TWDB Loan - Design Loan Remaining	-	31,343	31,343
TWDB Funding Green Project	243,005	-	(243,005)
EDA Grant	1,000,000	-	(1,000,000)
Way Grant (Up to \$1 million)	471,851	-	(471,851)
Other Funding Sources Available	\$ 6,969,856	\$ 5,286,343	\$ (1,683,513)
City Funds	536,372	323,450	(212,922)
Total Sources of Funds Available	\$ 7,506,228	\$ 5,609,793	\$ (1,896,435)
Total Project Cost	\$ 7,506,228	\$ 5,473,780	\$ (2,032,448)
Excess Available Funds vs Cost	\$ -	\$ 136,013	

Notes:

- (1) TWDB Green Funding not available at this time
- (2) EDA Grant originally for both Collection System and Plant construction (including irrigation).
City requested 1st amendment to Grant in January 2018 to exclude Collection System and include Plant only.
City requested 2nd amendment to Grant in July 2018 to re-include Collection System, which was denied.
- (3) Way Grant available for contingency spending. Based on Project Cost Estimates available amount limited to \$471,851 under Original Plan. Grant not available for Modified Plan.

Economic Impact on Rate Payers

Under the Original Plan, Sewer Customers would be obligated to incur the following costs related to connecting to the City System:

- Cost to run lateral sewer lines from the sewer drain location on their property to the connection point with the City System
- Cost to decommission their existing septic tank
- Cost of a grinder pump if necessary
- Pay a one-time capital recovery fee of \$2,500 per Living Unit Equivalent (LUE), with such fee payable in monthly bill over 8 years

The Modified Plan does not change the above obligations

Sewer Customers will be obligated to pay a monthly bill that consists of the following components:

- The capital recovery fee payment described above
- A base rate per LUE
- A volume rate – based on water usage (per thousand gallons)

Under the Modified Plan, the base and/or volume rates are expected to be lower than the Original Plan rates due to lower revenue requirements

Economic Impact on Rate Payers - Revenues

The City must establish rates adequate to pay for:

- Annual Operating Costs of the System (including collection system and wastewater treatment costs)
- Annual Debt Service on the TWDB \$5.3 million revenue bonds

In addition to Sewer Customers, another source of revenues is for the Parks Dept to pay for access to and use of reclaimed water. Under a City agreement required by TWDB, this could be as much as \$200,000 per year, which is substantially greater than the fair market value of the volumes of available reclaimed water. **However, this amount (hereafter referred to as City Subsidy) will be at the sole discretion of the current and future City Councils to determine.**

The City Council will determine Sewer Customer rates based on this criteria – and will factor in the City Subsidy and expected number of sewer customers and their volumes. Individual rates will be determined based on assumptions regarding fixed base rates, capital recovery fees and volumetric rates, all at the discretion of the City Council in order to achieve the required revenues to cover costs.

Economic Impact on Rate Payers – Costs and Revenues

The Modified Plan will result in lower annual operating costs: a City owned Plant vs Aqua Processing Fees - Est \$161,473 per year. The following illustrates Sewer Customer revenue requirements assuming full City Subsidy of \$200,000 per year

	Original Plan	Modified Plan	Variance
Operating Costs	\$ 233,749	\$ 72,276	\$ (161,473)
Debt Service (TWDB Loan)	240,540	240,540	-
Total Revenue Required	\$ 474,289	\$ 312,816	\$ (161,473)
Blue Hole Reclaimed Water (Subsidy)	\$ (200,000)	\$ (200,000)	\$ -
Sewer Customer Revenue Required	\$ 274,289	\$ 112,816	\$ (161,473)

 **2.4X** 

Modified Revenue requirements for Sewer Customers reduced from \$274,89 to \$112,816

Assuming Sewer Customers benefit for entire difference: Original Plan rates are on average 2.4 X Modified Plan rates

Or the City and Customers can share in cost savings

Total Cost Difference over 30 years is over \$4 million

Economic Impact on Rate Payers - Rates

- This is an example of the comparative impact on Sewer Customer rate payers under the Original Plan vs the Modified Plan for one illustrative customer - See more examples on following slide.
- Because the amount of the annual City Subsidy is of such significance to the rates, it shows three scenarios – one at the Fair Market Value of reclaimed water at \$15k, at a premium of \$100k and the maximum under the agreement of \$200k per year.
- It also assumes a base customer rate of \$35 per LUE, a capital recovery fee of \$2,500 per LUE and a volumetric rate required to fulfill the total revenue requirements, as used in the Raftelis rate studies. However, these are individual assumptions that Councils may change that affect individual rates.
- Because of lower operating costs under the Modified Plan, the revenue requirements, and thus customer rates are lower than the Original Plan.

Examples	Typical	LUE's	Mo. Gallons	Original Plan			Modified Plan		
				Reclaimed Water Revenue			Reclaimed Water Revenue		
				At FMV	At \$100k	Max \$200k	At FMV	At \$100k	Max \$200k
Sewer	Residential	1.0	4,000	Monthly Bill \$ 198	Monthly Bill \$ 165	Monthly Bill \$ 126	Monthly Bill \$ 135	Monthly Bill \$ 102	Monthly Bill \$ 63

Source: Based on Raftelis Updated Study on 7-19-18

Economic Impact on Customer Rates

	Original Plan			Modified Plan		
	Reclaimed Water Revenue			Reclaimed Water Revenue		
	At FMV	At \$100k	Max \$200k	At FMV	At \$100k	Max \$200k
Operating Costs & Debt Service - Revenue Requirements						
Operating Costs	\$ 233,749	\$ 233,749	\$ 233,749	\$ 72,276	\$ 72,276	\$ 72,276
Debt Service	240,540	240,540	240,540	240,540	240,540	240,540
Total Costs - Revenue Requirements	\$ 474,289	\$ 474,289	\$ 474,289	\$ 312,816	\$ 312,816	\$ 312,816
Revenues						
Sewer Customers (approx 100 customers)	\$ 458,888	\$ 374,289	\$ 274,289	\$ 297,415	\$ 212,816	\$ 112,816
Blue Hole Reclaimed Water Access (City Subsidy) Rate/000 \$ 1.50	15,401	100,000	200,000	15,401	100,000	200,000
Total Revenues	\$ 474,289	\$ 474,289	\$ 474,289	\$ 312,816	\$ 312,816	\$ 312,816
Volumes						
LUE's - For Base Rates	162	162	162	162	162	162
LUE's - For Capital Recovery Fees	128	128	128	128	128	128
Monthly Volume - gallons	855,622	855,622	855,622	855,622	855,622	855,622
Rates Per Unit						
Base Rate - Per LUE	\$ 35.00	\$ 35.00	\$ 35.00	\$ 35.00	\$ 35.00	\$ 35.00
Volume Rate - Per thousand gallons	\$ 34.17	\$ 25.93	\$ 16.19	\$ 18.44	\$ 10.20	\$ 0.46
Capital Recovery Fee - Per LUE (over 8 yrs - \$26.04/mo)	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500

Examples	Typical	LUE's	Mo. Gallons	Original Plan			Modified Plan		
				Monthly Bill	Monthly Bill	Monthly Bill	Monthly Bill	Monthly Bill	Monthly Bill
Monthly Sewer Bills at Various Volumes (Water Usage)	Small Business	1.0	2,000	\$ 129	\$ 113	\$ 93	\$ 98	\$ 81	\$ 62
	Residential	1.0	4,000	\$ 198	\$ 165	\$ 126	\$ 135	\$ 102	\$ 63
	Small Restaurant	1.0	9,000	\$ 369	\$ 294	\$ 207	\$ 227	\$ 153	\$ 65
	Large Restaurant	1.7	15,000	\$ 614	\$ 491	\$ 345	\$ 378	\$ 255	\$ 109
	Deer Creek	3.3	30,000	\$ 1,229	\$ 981	\$ 689	\$ 757	\$ 510	\$ 217
	Deer Creek	5.6	50,000	\$ 2,048	\$ 1,636	\$ 1,149	\$ 1,261	\$ 849	\$ 362
Deer Creek	33.3	300,000	\$ 11,417	\$ 8,945	\$ 6,024	\$ 6,699	\$ 4,227	\$ 1,306	

Source: Based on Raftelis Updated Study on 7-19-18

Note: 300,000 gal customer represents Deer Creek with no capital recovery fee

Environmental Information Document

2014 Environmental
Information Document
(EID) prepared by:

Alan Plummer
Associates, Inc.

TWDB Issued a Finding
of No Significant Impact
(FNSI) Following Their
Review

EID has been displayed
for this Hearing

State Revolving Fund Program
Texas Water Development Board

FINAL
Environmental Information Document

for

THE CITY OF WIMBERLEY

PROPOSED WASTEWATER COLLECTION AND TREATMENT SYSTEM PROJECT

WIMBERLEY, HAYS COUNTY, TEXAS

June 18, 2014

Prepared by:

Alan Plummer Associates, Inc.
1320 S. University Drive, Suite 300
Fort Worth, Texas 76107-5764

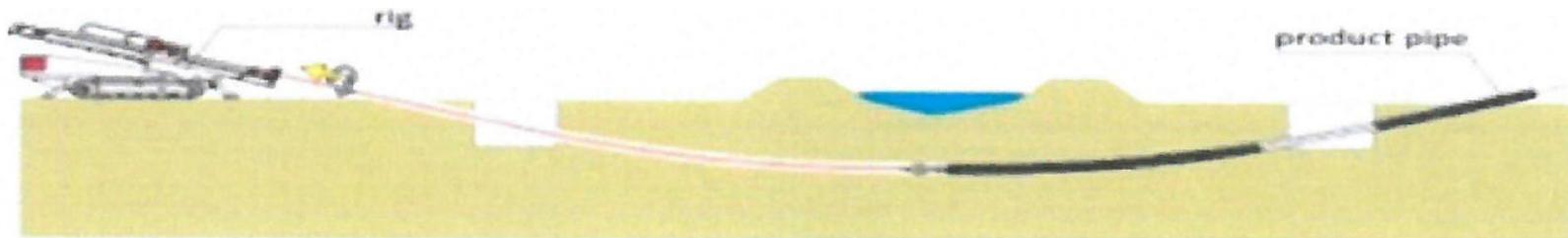
Potential Environmental Impacts

Environmental Issues Include:

- **Modified Plan will result in no City wastewater treatment plant at Blue Hole Park. Therefore no discharge of effluent into Deer Creek/Blanco River will occur. The Original Plan provided for both irrigation at the Park and discharge when irrigation could not occur. Under the current permit issued by the TCEQ for the proposed plant, the City could discharge up to 75,000 gallons of effluent per day**
- **Modified Plan eliminates the risk of sewage spills at the proposed plant site**
- **Modified Plan will result in Aqua upgrading its entire plant to produce Type 1 effluent, with all such effluent beneficially reused for irrigation. No discharge into waterways is allowed under its permit**
- **Modified Plan will require a connecting line installed under Cypress Creek using a directional drill to avoid adversely impacting the creek**

Boring Under Cypress Creek

- Installation will occur using horizontal directional drilling (HDD)
- Drilling equipment utilized will not be in or adjacent to Cypress Creek – it will take place approximately 100-200 feet away
- It is expected that the HDD will be approximately 10 feet below the bottom of the creek
- The pipe used to carry the wastewater would be high density polyethylene pipe (HDPE). This pipe is very durable, has a long life span and has fused joints that do not pull apart or leak
- The following illustrates the drilling process



Alternatives to the Proposed Changes

11 Options were considered in the initial feasibility study. Two options included using Aqua to process wastewater.

The Modified Plan is a version of these options that also includes eliminating the current Deer Creek Plant. Modified Plan became economically preferable due to:

- Original Plan bid costs significantly higher than expected
- Original Plan estimated annual plant operating costs higher than expected
- Annual Aqua fees under Modified Plan reduced significantly
- Modified Plan in compliance with Original Stakeholders' Committee conclusion

City of Wimberley

Wastewater Collection and
Treatment System Feasibility Study

December 2013



SUBMITTED BY:



TBPE Firm Registration No. F-13

Benefits of Modified Plan - Environmental

- No discharge of effluent into Deer Creek/Blanco River and resulting environmental impact
- No risk of excess effluent runoff into Cypress Creek due to over irrigation
- No aquifer contamination from discharge into Deer Creek/Blanco River
- No unsightly sewer plant with a 500,000 gallon effluent storage tank at Blue Hole Park
- No potential for raw sewer plant spills in Blue Hole Park or Deer Creek/Blanco River
- No sewer plant odor issues at Blue Hole Park
- Aqua's plant will be upgraded to Type 1, benefiting the entire Wimberley Valley
- Reduces risk of even higher levels of potential discharge in the future due to City growth

Benefits of Modified Plan – Financial

- Initial Project Cost requires less from City Funds/Reserves
- Lower annual costs by not owning/operating a plant - millions over time
- Opportunity to significantly reduce sewer customer rates and/or City subsidy
- Eliminates potential for costly sewer plant spills
- Eliminates costs and risks of maintaining a plant in working order and in environmental compliance for decades
- TCEQ requires expansion plans when plant reaches 75% of capacity - 56,250 gpd
- No need to plan for cost to replace the sewer plant at its end of life - 20-30 years

Objectives of Wastewater System	Original	Modified
Clean up Cypress Creek (to extent caused by failing septics)	✓	✓
Maintain Local Control with City Owned CCN	✓	✓
Provide Infrastructure to Allow for Controlled Growth Downtown as Permitted by the City	✓	✓
Provide Water to Irrigate Blue Hole Park	✓	Half ✓
Protect Our Environment - Blanco River, Cypress Creek, and Aquifers	X	✓
Make Rates Affordable to Sewer Customers	X	✓
Accomplish in a Financially Responsible Manner	X	✓

Thank You