City of Richwood
TEXAS

AGENDA MEMORANDUM

CONTACT: CLIF CUSTER

SUBJECT: CIAC/CIP PRESENTATION

SUMMARY:

The CIAC/CIP Presentation is to provide Council with a comprehensive overview of the existing Capital Improvement Plan as well as the existence and purpose of the Capital Improvement Advisory Committee.

BACKGROUND INFORMATION:

With the current review of Richwood's Impact Fee Schedule in progress, Richwood must reenact the CIAC according to Local Government Code. Richwood's CIAC is an extension of the Planning and Zoning Committee. The CIAC is required to meet twice annually to review and discuss existing land use assumptions and the CIP.

Presenting an overview of the 2018 established land use assumptions and CIP allows staff to offer the current City Council a view into the methodology of the previous City Council that was responsible for the initial implementation of Richwood's Impact Fee Schedule.

FISCAL IMPACT:

N/A

RECOMMENDATION:

N/A

CIAC (Capital Improvement Advisory Committee)

CIP (Capital Improvement Plan)

A CIAC is formed and implemented to establish and regularly review land use assumptions, and CIPs for the sole purpose of development and implementation of an impact fee schedule.

The initial proposal to develop an impact fee schedule was initiated by Richwood staff in 2017. The impact fee schedule was developed on the cusp of Richwood being required to expand upon existing water and wastewater infrastructure to accommodate a growing population. Another reason for the implementation of impact fees was due to Councils' discontent for Richwood residents having to bear the full financial burden of infrastructure upgrades due solely to new development. Impact fees can be applicable to several types of infrastructure, but Richwood's impact fees are only established to serve water and wastewater infrastructure upgrades.

A Capital Improvement Plan as well as Land Use Assumptions play a large role in the determining of a potential impact fee schedule. Any individual fee is based on water meter and sewer service size. In instances where property is being developed, the impact fee itself might not be applicable depending on any obligation of infrastructure construction the Council wishes the developer to be responsible for.

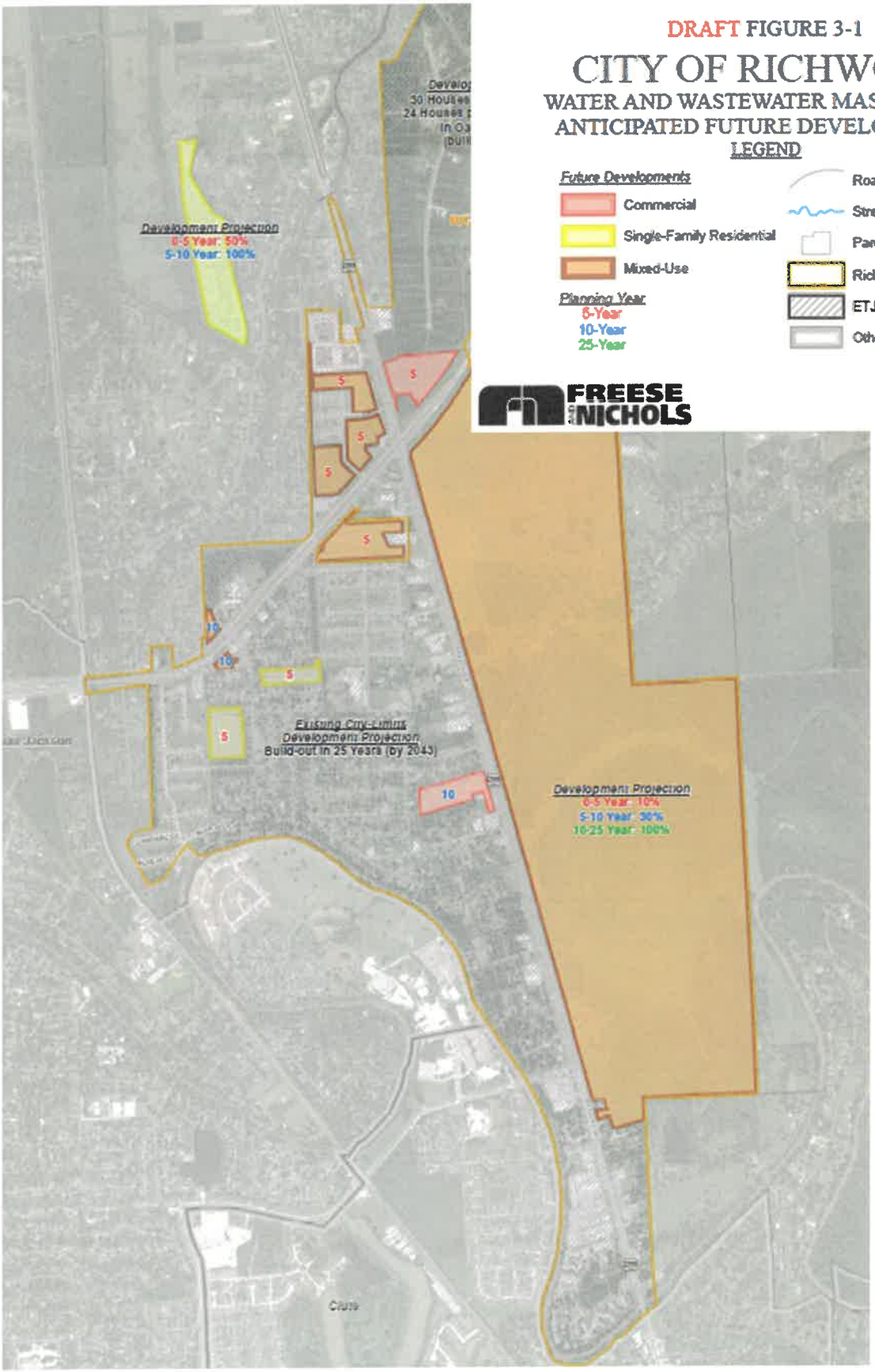
Not all capital improvements identified within the CIP are eligible to be funded using impact fee revenue. Only projects that are due to future development of existing platted properties within the city or properties that could be developed in the future and have been identified within the land use assumptions.

DRAFT FIGURE 3-1

CITY OF RICHWOOD

WATER AND WASTEWATER MASTER PLAN
ANTICIPATED FUTURE DEVELOPMENTS

LEGEND



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City of Richwood TEXAS

3.0 POPULATION AND LAND USE ASSUMPTIONS

Population and projected land use are important elements in the analysis of water distribution and wastewater collection systems. Water demands and wastewater loads are dependent on the residential population and commercial development served by the system and affect the sizing and location of system infrastructure. An analysis of historical and projected populations and developments provides the basis for future water demands and wastewater flows. FNI worked with City staff to develop population projections and land use assumptions for the City of Richwood. These assumptions were utilized throughout this water and wastewater master plan study.

3.1 EXISTING SERVICE AREA

The City's water distribution system extends to the southern City limits and includes the Oakwood Shores subdivision to the north. The wastewater service area excludes Oakwood Shores.

3.2 PROJECTED DEVELOPMENTS AND LAND USE

The City is anticipating future developments to the northwest of the City, east of SH 288B, and at various locations within the City as shown on **Figure 3-1**. The City is planning to provide water and wastewater services to these future developments. Richwood's existing land use is shown on **Figure 3-2**. Existing land use in Richwood includes the following categories:

- Single-Family Residential
- Multi-Family Residential
- Commercial
- Institutional
- City Owned
- Parks

FNI worked with City staff to identify projected changes to existing land use and future land use for the developments identified in **Figure 3-1.** The future land use assumptions include a Mixed Use category and are also shown on **Figure 3-2**.

Table 3-1: Historical Population

Year	Population	Average Annual Growth Rate
2010[1]	3,510	
2011[3]	3,540	0.9%
2012[3]	3,571	0.9%
2013[2]	3,602	0.9%
2014[2]	3,807	5.7%
2015[2]	4,002	5.1%
2016[2]	4,207	5.1%
2017[2]	5,556	32.1%
2018[2]	5,651	1.7%
Average		6.5%

(1) From US Census
(2) Data from City for July of respective year
(3) Estimated assuming steady 0.9% growth rate between 2011 and 2013

In order to address existing issues in Oakwood Shores and serve the City's projected 25-year growth, the City of Richwood should do the following:

- **Construct a new water plant in Oakwood Shores**
- **Increase available fire flow by upsizing water lines and looping dead-end water lines**
- **Add additional storage, pumping, and supply to meet TCEQ requirements**

Specific capital improvement projects to accomplish the above are discussed in detail in **Section 7.0**.

7.0 WATER SYSTEM CAPITAL IMPROVEMENTS PLAN

A water system capital improvements plan (CIP) was developed for the City of Richwood to promote an increased level of water service to its residential and commercial customers. The water CIP consists of supply, pumping, storage, and distribution projects sized to meet the projected water demands through the 25-year planning horizon in this study.

Planning level capital cost estimates were calculated for all recommended improvements and do not include individual service connections or subdivision lines. The costs are provided as estimates based on previous similar engineering experience in 2019 dollars and include an allowance for engineering, surveying, and contingencies. Costs do not include easements or land acquisition, except where specifically noted.

The water system CIP is summarized in **Table ES-4,** presenting the cost estimate for each project by phase.

Table ES-4: Water Capital Improvements Plan Summary

Phase	Project Number	Project Name	Cost (2019 Dollars)
5-Year (by 2024)	1	New Oakwood Shores Water Plant	$ 4,049,800
	2	Construct New 12-inch East Water Line Loop	$ 2,457,800
	3	Construct New 0.5 MG Ground Storage Tank at BWA Take Point	$ 780,000
		Total 2019 - 2024	**$ 7,287,600**
10-Year (by 2029)	4	New 0.5 MG Elevated Storage Tank (EST)	$ 2,925,000
	5	Replace System Pumping	$ 2,340,000
		Total 2024 - 2029	**$ 5,265,000**
25-Year (by 2044)	6	Raise Elevated Storage Tank (0.25 MG)	$ 546,000
	7	Construct Additional 650 gpm (0.94 MGD) Pumping	$ 1,950,000
	8	Rehab/Replace 330,000 Gallon GST	$ 514,800
		Total 2029 - 2044	**$ 3,010,800**
		Total Water CIP	**$ 15,563,400**
Developer Projects	D1	Construct New Northeast 8-inch Water Line Loop	$ 1,852,400
	D2	Construct New East 12-inch Water Line Loop	$ 3,202,300

FNI developed the resulting wastewater system rehabilitation recommendations and capacity improvements into a phased capital improvement plan to convey and treat the projected wastewater flows over the 25-year period through 2044. In order to address inflow and infiltration (I/I) in the wastewater system and serve the City's projected 25-year growth, the City of Richwood should do the following:

- **Conduct sanitary sewer evaluation study (SSES) projects to identify and repair defects in the collection system contributing to high I/I levels.**
- **Consolidate and upsize lift station facilities.**
- **Purchase approximately 10 acres of land for the construction of a future City of Richwood wastewater treatment facility (WWTF).**

11.0 WASTEWATER SYSTEM CAPITAL IMPROVEMENTS PLAN

A wastewater system capital improvements plan (CIP) was developed for the City of Richwood to promote an increased level of wastewater service to its residential and commercial customers. The wastewater CIP consists of collection system conveyance and treatment projects sized for the projected wastewater flows through the 25-year planning horizon in this study, including some inflow and infiltration (I/I). Planning level capital cost estimates were calculated for all recommended improvements and do not include individual service connections or subdivision lines. The costs are provided as estimates based on previous similar engineering experience in 2019 dollars and include an allowance for engineering, surveying, and contingencies. Costs do not include easements or land acquisition, except where specifically noted.

The wastewater system CIP is summarized in **Table ES-7,** presenting the cost estimate for each project by phase.

Table ES-7: Wastewater Capital Improvements Plan Summary

Phase	Project Number	Project Name	Cost (2019 Dollars)
5-Year (by 2024)	1	Sanitary Sewer Evaluation Study - Phase 1 (Lift Station No. 1 and No. 2 Service Areas)	$ 136,100
	2	New 1.5 MGD Lift Station No. 2A and 8-inch Force Main	$ 2,614,600
	3	Sanitary Sewer Evaluation Study - Phase 2 (RW-01 Basin and Reminder of RW-02 Basin)	$ 160,000
	4	New 2.6 MGD Lift Station No. 4A and 10-inch Force Main	$ 3,379,400
		Total 2019 - 2024	**$ 6,289,700**
10-Year (by 2029)	5	New 1.0 MGD Wastewater Treatment Facility	$ 13,260,000
	6	New Wastewater Transfer System (Lift Station No. 6 to New WWTF)	$ 3,381,700
	7	Sanitary Sewer Evaluation Study - Phase 3 (RW-03 Basin)	$ 130,000
	8	Lift Station No. 3 Capacity Expansion to 0.8 MGD	$ 842,400
		Total 2024 - 2029	**$ 17,614,100**
25-Year (by 2044)	9	WWTF 0.5 MGD Expansion to 1.5 MGD Capacity	$ 6,240,000
		Total 2029 - 2044	**$ 6,240,000**
		Total Wastewater CIP	**$ 30,143,800**
Developer Projects	D1	New 12-inch Gravity Lines along FM 2004/288B	$ 1,054,000
	D2	New 8-inch Gravity Lines, 0.14 MGD (100 gpm) Lift Station, and Force Main	$ 996,300
	D3	New 12-inch Gravity Lines East of Highway 288B	$ 818,800