FORT WORTH®

June 2017

2017-2037 Comprehensive Solid Waste Management Plan
Appendix F - Solid Waste 5-Year Capital Improvement Plan 2017-2021

RETHINKING WASTE For a Greener Fort Worth

GBB SOLID WASTE MANAGEMENT CONSULTANTS

AZ&B

OCG|PR OPEN CHANNELS GROUP

Risa Weinberger & Associates, Inc.

Submitted to:

Robert Smouse
Assistant Director – Solid Waste Services
Code Compliance Department,
4100 Columbus Trail
Fort Worth, Texas 76133

Submitted by:

Gershman, Brickner & Bratton, Inc.
2010 Corporate Ridge
Suite 510
McLean VA 22102
JCarlton@gbbinc.com

GERSHMAN, BRICKNER & BRATTON, INC.

City of Fort Worth, TX, Comprehensive Solid Waste Management Plan

Gershman, Brickner & Bratton, Inc.

2010 Corporate Ridge, Suite 510
McLean VA 22102
Phone 703.573.5800 • Fax 703.698.1306

www.gbbinc.com

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BACKGROUND/HISTORY:

Prior to 2003, the City collected residential garbage. Through a competitive purchasing process, the City selected a private contractor to replace City services. Commercial collection is open market with customers that can choose their own contractor. Single-family residents receive once a week, garbage, yard trimmings and recycling services and once a month bulk collections as a part of their monthly bill. They pay for these services through their Water Bill. In FY14-15, there were 212,563 residential customers, and there were 217,442 residential garbage carts in distribution. The use of a Pay As You Throw (PAYT) system is where residents are billed by garbage cart size with recycle carts, yard trimmings and bulk provided free of charge, but subject to weekly setout limits.

The Code Compliance Department - Solid Waste Services manages the private contracts and still provides other core services. Solid Waste Services consists of three primary sections: Contract Compliance, Litter & Illegal Dumping Operations and the Citizens Drop-off Stations.

The Contract Compliance Section is responsible for overseeing multiple City contracts for the residential solid waste collection and recycle processing services which are provided by Waste Management, operations of the City's Southeast Landfill and transportation services for drop-off station containers provided by Republic Services. Solid Waste Services also manages the Grants of Privilege Program for authorized and permitted commercial solid waste haulers. This program collects 5% of the contractor's gross receipts and is transferred to the General Fund for street repairs and maintenance.

The Litter and Illegal Dumping Operations section is responsible for overseeing and responding to reported illegal dump complaints or sites, Dead Animal Collections, litter abatement and related code enforcement activities. Code Enforcement Officers dedicate approximately 40% of their time to solid waste education, enforcement and abatement. This results in a transfer from the Solid Waste Fund to the General to pay for this portion of their salary and benefits.

The Citizens Drop-off Station section coordinates and manages the three (3) existing Citizens Drop-off Stations (built after the 2003 change to solid waste collection), with the fourth (4th) under construction. The Drop-off Stations are accessible for all Fort Worth residential solid waste customers to dispose of and recycle materials that are accepted in the residential collection

program. They provide a convenient and accessible solution for higher volumes of waste that is produced during landscaping, move in/move out, spring cleaning, etc. Since the Drop Off Stations were built, illegal dumping has dropped significantly.

Most solid waste contracts run in 10 year increments. The collection contract was renegotiated in 2013 and will be up for review again in 2023.

RESIDENTIAL COLLECTIONS AND SERVICES:

The City offers a Pay-As-You-Throw (PAYT) volume-based residential container sizing system to encourage recycling and discourage waste generation. Three residential container sizes are offered: 32 gallons, 64 gallons and 96 gallons. **The City charges a variable rate for each container size: $12.50 per month for 32 gallons, $17.50 per month for 64 gallons, and $22.75 per month for 96 gallons.**

Just over 60 % of the carts in service are 64 gallons with the 32 and 96 gallon carts representing about 20 %each. All garbage and recycling carts are owned by the City and provided to the customer free of charge.

The City operates a Call Center to handle service issues and answer questions. It operates Monday through Saturday from 7:00 a.m. to 6:00 p.m. Customers can also use a smart app on mobile devices or use a portal on the web.

Collection contractors are connected to the City through an application that provides real time data and streamlines service requests. Contractors service over 600,000 carts/setouts weekly with a missed collection rate of less than 1%. Reported missed collections are picked up within 24 hours.

In Fiscal Year (FY) 14-15, 329,849 tons of waste was collected or dropped off by residential customers. The average weekly set out (garbage and recycling) per household was 48 pounds: 40 pounds of garbage and 8 pounds of recycling. This multiplies out to approximately 2,428 pounds

of garbage and recycling per household, per year. Additionally, 31,879 tons of bulk waste and 28,973 tons of yard waste were collected. The average number of residential customers was 211,111, or an average of 302 pounds of bulk waste and 275 pounds of yard waste per household respectively. All of the yard waste collected is diverted from the landfill used for mulch by Living Earth Technologies (contracted by Republic Services).

Participation in garbage collection is presumed to be 100 % for paying and occupied housing units, the recycling participation rate is estimated to be 65 to 70 %. The diversion rate in FY 2015 was 20.71%. Recent analysis shows more recyclable metal and plastic is going to the landfill through the garbage carts than is being recycled in the blue recycling carts. The historic 10 year expenditure allocation is shown below in Figure 1.

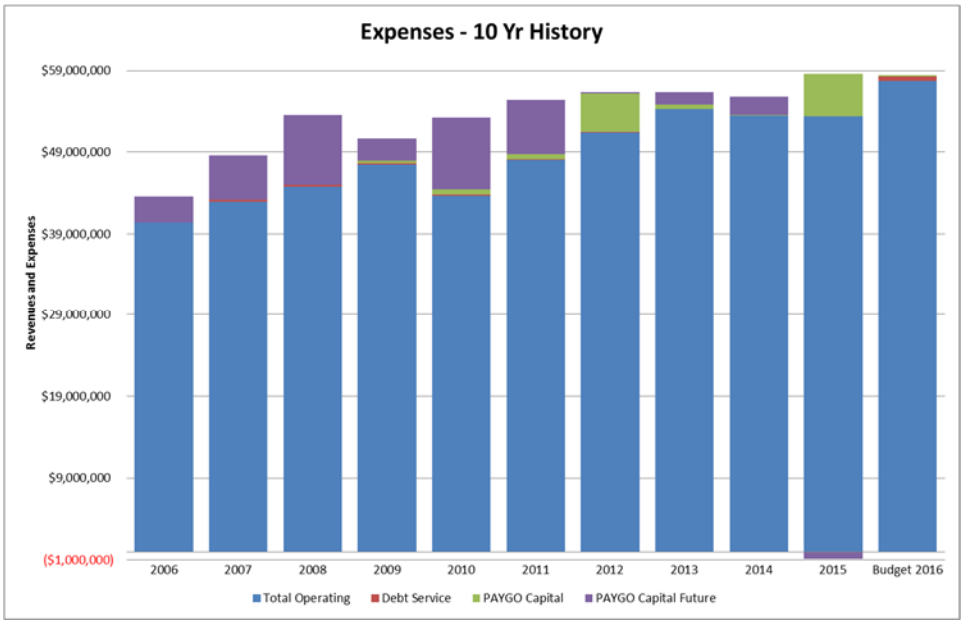


Figure 1 - Historic 10 Year Program Expenditure Allocation

Revenue sources include: Residential Service Fees (which include Compliant & Non-compliant collections and Yard Trimming Cart sales), small business Commercial Service Fees, Landfill Lease/Operations revenues, Recycling Processing revenues, Community Education Funding (required by contract), minimal miscellaneous programs and the Grant of Privilege fees (pass through to the General Fund for street maintenance or other areas). The historic 10 year and FY 2016 Annual Revenue shown below in Figure 2.

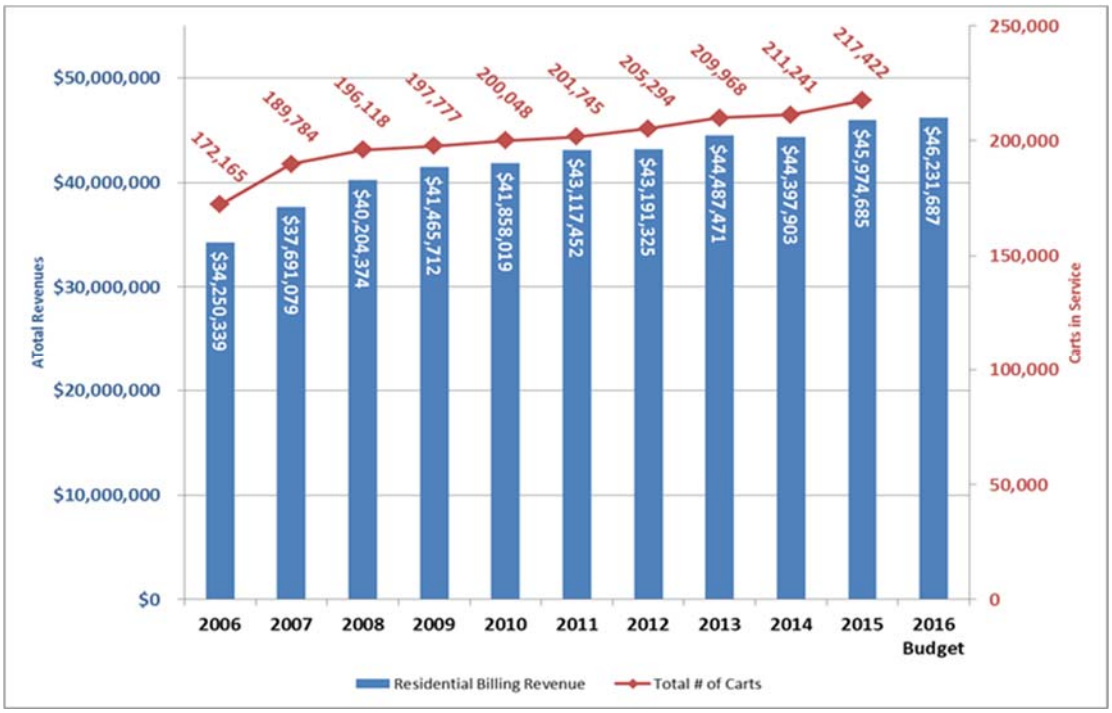


Figure 2 - Historic 10 Year & FY 2016 Annual Revenue

COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN (CSWMP)

In 2014, the City began a long journey to update and revise Fort Worth's existing Solid Waste Plan (CSWMP) The previous plan was developed in 1995; nonetheless, the world has changed significantly since then. The new plan will layout future improvements, programs and new technology for providing a safe and cost effective/integrated solid waste program through 2035. The draft plan will be presented to City Council in mid 2016. We have included some of the plans findings/recommendations as part of the proposed Five Year CIP Plan.

Resource Reduction & Recycling Rate Description

The Texas state recycling goal is 40 %; the national recycling rate average from U.S. EPA is 34.5 %, and recent Columbia University research puts the national recycling rate average at around 29 %. A January 2015 report called: The Texas Recycling Data Initiative, showed a tons-over-tons statewide municipal solid waste (MSW) recycling rate of 18.9 %.

Figure 3 shows the characterization of the average Fort Worth curbside set-out. In recent years, not including yard waste, Fort Worth residents have source separated from the garbage 22 to 23 % of their waste. A waste sort conducted in March 2014 of garbage and recycling found that the subject residences source separated a bit more than average, at 28 %. However, nearly that much recycling by weight—i.e., what could have been recycled—remained in the trash and was lost to landfill. This comparison shows that even without yard waste recycling, Fort Worth should ultimately be able to recycle much more than the 30 % goal rate.

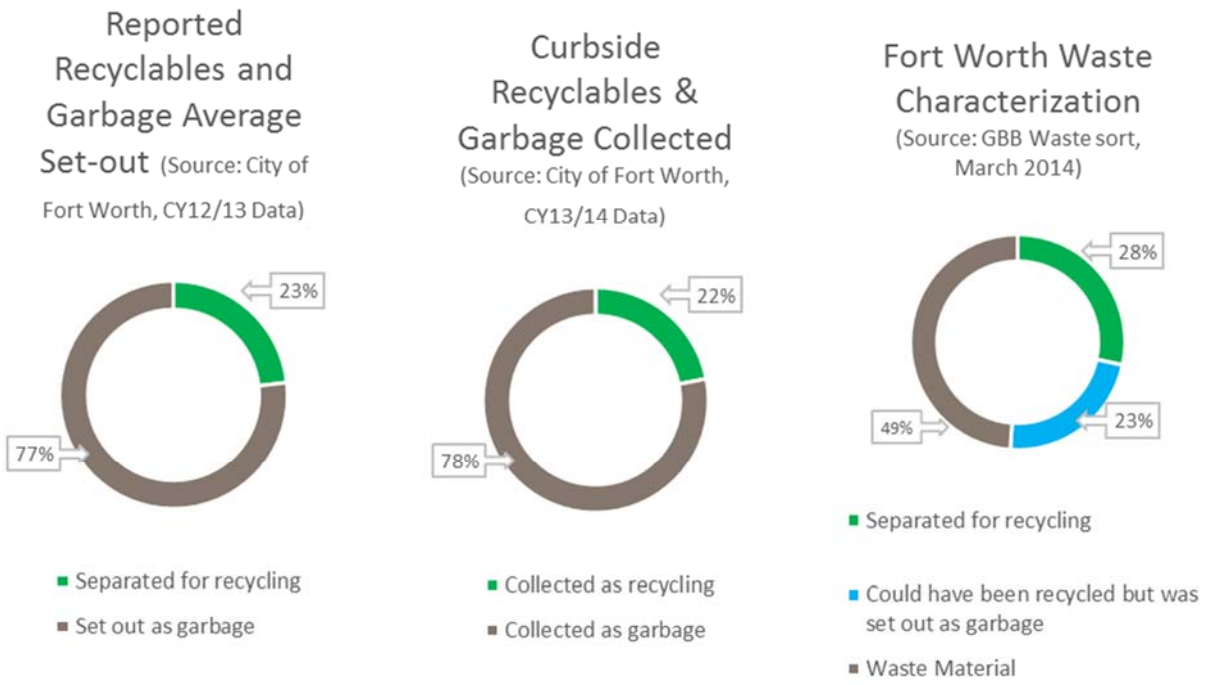


Figure 3 - Average Curbside Set-out Compared to Actual Waste Stream Characterization

Bulky Waste Program Description

Collection of bulk material is provided once monthly during a designated week. This service is for items that are too large, heavy, or otherwise unable to fit in a garbage cart. Bulk collection is not for excessive amounts of garbage, and bagged waste is not accepted. Other items not accepted in the bulk collection program include electronics, appliances containing coolant or gasoline, hazardous materials such as chemicals or poisons, automotive parts (including batteries and tires), glass, rock, soil, concrete, or tile. Volume is limited to 10 cubic yards per collection.

Crews collect bulk set-outs throughout the designated week. Residents may set out their bulk items as early as 6 p.m. the Friday before the collection week, and crews have until 5 p.m. on the Saturday, at the end of the collection week, to pick up the material. During the life of the current 1995-2015 Plan, unbudgeted costs for this program have been reduced due to program improvements, residents conforming to the set out instructions and establishing the three (3) Drop-off Stations.

In a 2012 Customer Service survey, 70.4 percent of respondents indicated that they use the bulk program. In the same survey, 87.3 percent of respondents said they were “somewhat” or “very” satisfied with the bulk collection program.

Southeast Landfill (SELF) Program Description

Residential and commercial waste that cannot be recycled through either a material processing facility or mulching/composting operation is disposed of at SELF. SELF is owned by the City and operated by Republic Services, Inc. under a contract with an expiration date of December 31, 2033. The SELF permit was amended in 2010 to add capacity. The Landfill is located at 6288 Salt Road, Fort Worth.

A total of 907,800 tons of debris was landfilled in calendar year 2015, including residential and commercial waste. The City’s residential waste stream accounted for 187,677 tons (20 %) of the total 907,800 tons disposed at the landfill. The remaining amount is from private collectors providing service to the businesses and institutions in the City or collecting waste from other municipalities or industrial, commercial and institutional (ICI) customers outside the City.

There are no limitations on the amount of waste Republic is allowed to accept at the landfill, as long as they stay in compliance with all regulations and maintain efficient service to the City. At the current rates of disposal, the Landfill has 22-24 years remaining capacity (Source: Annual Report to TCEQ – FY 2016).

Commercial waste that is generated by the private sector is hauled to one of several regional landfills including SELF, Table 1 below, summarizes the landfills that are located within the region.

Construction and demolition (C&D) waste generated in Fort Worth is disposed at either one of the several Type I landfills (MSW landfills), or the Type IV C&D landfills. There is one permitted Type IV Landfill in the area and it is owned and operated by Progressive Waste. This C&D landfill is located on Dick Price Road. It currently accepts approximately 359,000 tons per year and has eight (8) years of remaining permitted capacity. Progressive Waste is actively seeking a permit modification to increase the site capacity and extend the site life, but will need to complete the public hearing process.

Landfill	Owner	Operator	Location	Disposal Tons	Remaining Capacity (years)	Remaining capacity (tons)	Disposal Rate $/ton	Compaction Rate
City of Fort Worth	**City of Fort Worth**	**Republic**	**Fort Worth**	**501,336**	**46**	**23,261,387**	**21.84**	**1,747**
121 Regional Disposal Facility	North Texas Municipal Water District	North Texas Municipal Water District	Melissa	782,790	112	88,114,323	$ 31.00	1,426
City of Arlington	City of Arlington	Republic	Arlington	781,354	12	9,185,762	$ 26.77	1,670
DFW Recycling and Disposal Facility	WMI of Texas	WMI of Texas	Lewisville	1,289,401	11	11,865,964	$ 19.00	1,760
Camelot Landfill	City of Farmers Branch		Lewisville	298,875	20	6,023,197	$ 28.90	1,785
Charles M Hinton Jr. Regoinal Landfill	City of Garland	City of Garland	Rowlett	342,020	49	20,880,811	$ 26.37	1,200
City of Denton Landfill	City of Denton	City of Denton	Denton	176,509	32	5,673,041	$ 43.50	1,009
Ellis County Landfill	Pine Hill Farms Landfill TX LP	Pine Hill Farms Landfill TX LP	Ennis	57,154	522	29,812,238	$ 28.00	1,496
City of Grand Prairie Landfill	City of Grand Prairie	City of Grand Prairie	Grand Prairie	162,366	43	5,736,143	$ 32.00	909
IESI Fort Worth C & D Landfill*	IESI	IESI	Fort Worth	359,439	10	3,457,732	$ 29.95	1,560
IESI Weatherford Landfill	IESI	IESI	Weatherford	173,240	11	1,837,511	$ 30.00	1,400
Hunter Ferrell Landfill	City of Irving	City of Irving	Irving	146,573	67	11,078,627	$ 40.00	1,574
Itasca Landfill	Itasca Landfill Tx LP	Itasca Landfill Tx LP	Itasca	186,726	237	54,053,503	$ 28.30	2,193
Lewisville Landfill	Lewisville Landfill Tx LP	Lewisville Landfill Tx LP	Lewsiville	174,687	141	24,611,226	$ 17.96	2,230
Republic Maloy Landfill	Republic Waste Services of Tx LTD	Republic Waste Services of Tx LTD	Campbell	97,828	39	3,774,141	$ 29.42	1,234
City of Dallas Mccommas Bluff Landfill	City of Dallas	City of Dallas	Dallas	1,461,947	45	66,338,351	$ 21.50	1,400
CSC Disposal and Landfill	Republic Waste Services of Tx LTD	Republic Waste Services of Tx LTD	Avalon	6,680	655	18,052,237	$ 30.25	1,163
Waste Management Skyline Landfill	WMI of Texas	WMI of Texas	Ferris	1,120,301	20	22,301,520	$ 18.50	1,440
City of Stephenville Landfill	City of Stephenville	City of Stephenville	Stephenville	6,955	81	402,957	$ 40.00	850
IESI Turkey Creek Landfill	IESI	IESI	Alvarado	425,462	17	7,171,192	$ 32.00	1,460
Total				***8,551,643***		***413,631,863***		
Average				***427,582***	***109***	***20,681,593***	***29***	***1,475***

Table 1 - Regional Landfill Listing

Staff feels the City is well positioned to finalize the CSMWP by engaging City Management, Elected Officials and gaining broad community support to capitalize on numerous improvements in the next 20 years.

FIVE YEAR FORECAST

While balancing our current projections, assumptions and conservative Fund Balance allocation, we are projecting the next five (5) years would be balanced and avoid a potential residential rate increase until 2018 or 2019. Figure 4 shows the projected revenues and expenditures.

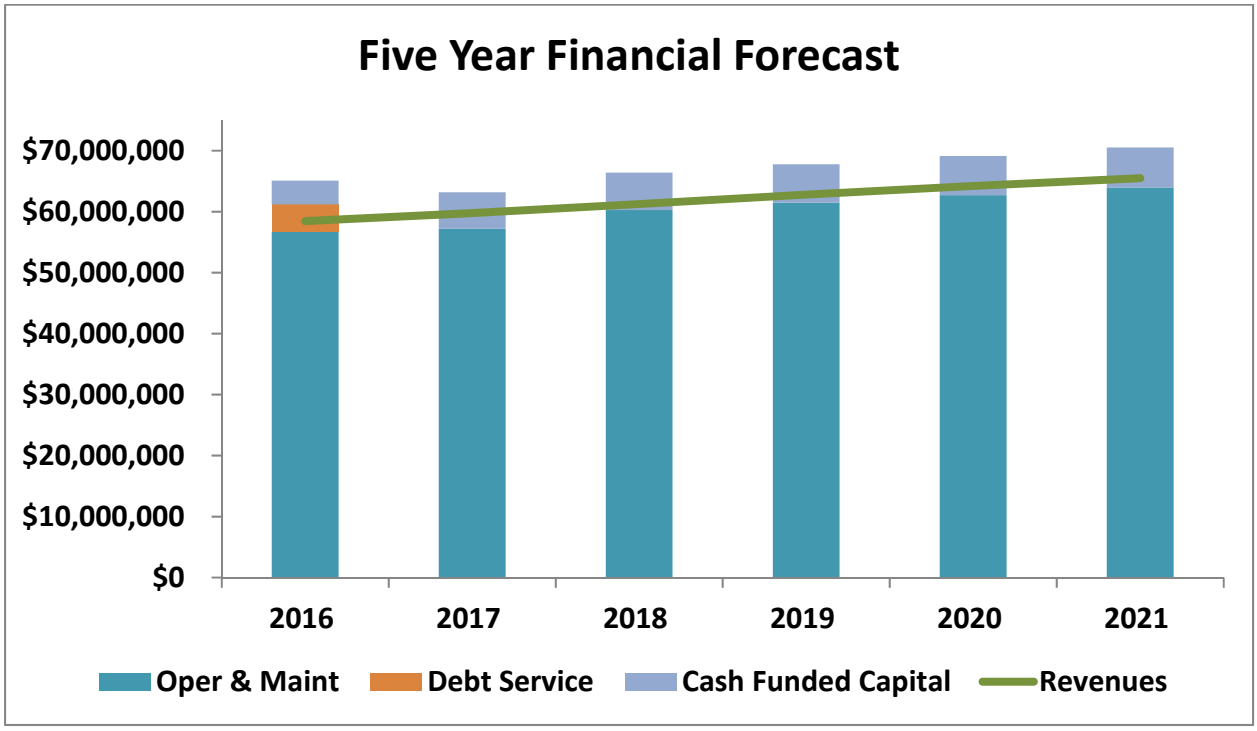


Figure 4 - Five Year Financial Forecast

Capital Improvement Strategy:

The development and implementation of the Five Year CIP will assure that the Solid Waste Fund is managed to flatten industry-based and cyclical environmental events and minimize residential rate fluctuations between major contracted services, program enhancements and capital projects.

Capital Revenue Sources:

Fund Balance

The Solid Waste Enterprise Fund balance serves as the source of cash funding for capital projects in order to meet the City of Fort Worth's 20 year solid waste and related environmental program needs. Over $30.8 million is available to support the annual operational budget, annual Pay as you Go Capital projects and Five Year CIP plan. Approximately $2.7 million of the amount transferred will fund a portion of the FY2016 capital projects.

Residential Service Fee

As noted earlier, the residents pay a monthly Solid Waste Services fee based on the size of their trash cart, for any extra bags of trash ($10 per bag or stickered bags) and for all non-compliant bulk or brush piles ($65.00 for each five (5) cubic yards of material, plus a one (1) time administration fee of $10.00 per collection). Since all three (3) streams of revenue are fluid and change constantly, the annual additional revenue stream is projected based on a historic three (3) year average, which is $67,502.00 annually.

SELF Lease Payment

Since the SELF is owned by the City and contracted with Republic Services for operational lease and management aspects, the City receives an average annual lease payment from Republic of $750,668.00 plus an average annual tonnage adjustment of $446,903.00 to account for the volume of material disposed of at the SELF.

Summary of Planned Capital Investment by Source

Projects are identified in three key areas:

1. Plans & Evaluations
2. Building, Equipment & Land Acquisitions
3. Program Enhancements through Staffing Additions

Table 3 (on the next page) provides an overview of proposed costs and implementation schedules for each of the projects to be included in the five-year 2016-21 Solid Waste CIP Plan. It is important to note that cost estimates for many solid waste projects are difficult to prepare without project evaluations and/or a site characterization completed through consultant/engineering studies.

Projections for Solid Waste Fund							
CIP REVENUE	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**TOTAL**
Current Solid Waste Cash Balance	$ 23,421,000	$ 24,621,000	$ 24,333,012	$ 22,973,153	$ 19,677,544	$ 13,878,264	
Revenues	$ 58,450,241	$ 59,619,246	$ 60,811,631	$ 62,027,863	$ 63,268,421	$ 64,533,789	
Expenses	$ 57,250,241	$ 59,907,235	$ 62,171,489	$ 65,323,472	$ 69,067,700	$ 70,386,184	
Projected Cash Balance	**$ 24,621,000**	**$ 24,333,012**	**$ 22,973,153**	**$ 19,677,544**	**$ 13,878,264**	**$ 8,025,870**	
PROJECTED CIP EXPENSES	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**TOTAL**
Vehicle & Equipment Replacement - Solid Waste	$99,100.00	$164,500.00	$175,000.00	$175,000.00	$200,000.00	$200,000.00	$1,013,600.00
Street Sweepers & Vacuum Trucks	$550,000.00	$550,000.00	$225,000.00				$1,325,000.00
Drop-off Station Buildings	$2,250,000.00	$500,000.00					$2,750,000.00
Litter Prevention - Big Belly Containers		$1,000,000.00					$1,000,000.00
Solid Waste Administrative Office Consolidation (Fire Station #12)		$1,265,000.00					$1,265,000.00
Vehicle Computer Installations		$30,000.00					$30,000.00
Environmental Collection Center / Household Hazardous Waste Equipment		$150,000.00					$150,000.00
Drop-off Station Equipment		$200,000.00					$200,000.00
Compressed Natural Gas Conversion Vehicle/Equipment Replacement		$165,000.00	$165,000.00	$165,000.00	$165,000.00	$165,000.00	$825,000.00
Call Center Expansion		$870,000.00					$870,000.00
Code Compliance Consolidation			$2,000,000.00	$4,000,000.00			$6,000,000.00
Brennan Conversion to T-station			$750,000.00	$2,500,000.00			$3,250,000.00
5th Westside Drop-off Station				$2,500,000.00	$4,200,000.00		$6,700,000.00
Future Land & Facilities Use Needs			$5,000,000.00	$2,000,000.00			$7,000,000.00
Eco-park Land Project						$5,000,000.00	$5,000,000.00
SELF Landfill Gas Reclamation System					$3,000,000.00	$2,000,000.00	$5,000,000.00
							$ -
TOTAL	**$2,899,100.00**	**$4,894,500.00**	**$8,315,000.00**	**$11,340,000.00**	**$7,565,000.00**	**$7,365,000.00**	**$ 42,378,600**
PROJECTED FUND BALANCE	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**TOTAL**
CIP Projected Revenue Summary	$ 58,450,241	$ 59,619,246	$ 60,811,631	$ 62,027,863	$ 63,268,421	$ 64,533,789	
CIP Projected Expense Summary	$ (57,250,241)	$ (59,907,235)	$ (62,171,489)	$ (65,323,472)	$ (69,067,700)	$ (70,386,184)	
Source or Use of Fund Balance	$ 1,200,000	$ (287,989)	$ (1,359,858)	$ (3,295,609)	$ (5,799,279)	$ (5,852,395)	
Projected Cash Balance	$ 24,621,000	$ 24,333,012	$ 22,973,153	$ 19,677,544	$ 13,878,264	$ 8,025,870	

Table 3: Summary of CIP Projects with Project Costs by Year

1. Low-volume Commercial Transfer Station Evaluation Plan

Project ID: **SW.CIP.2017-1** *Council District #:* To be Determined

Location: Central-Downtown *Size:* Citywide

Narrative:
Evaluate the direct benefits of converting an existing Drop-off Station (potentially Brennan) or opening a new centralized transfer station allowing small businesses and commercial clean-up crews to dispose of their commercial waste.

Cost Summary:
Table 4 presents the proposed costs associated for the Low-volume Commercial Transfer Station Evaluation plan.

Table 4

Low-volume Commercial Transfer Station Evaluation	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	TOTAL
Develop a comprehensive evaluation of adding or converting DOS to address small commercial solid waste volumes.	$ 25,000						$ 25,000
TOTAL	**$ 25,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,000**

2. Land & Facilities Use Study

Project ID: **SW.CIP.2017-2** *Council District #:* All Districts

Location: Citywide *Size:* To be Determined

Narrative:
Evaluate the City's current and future land and facility needs to accommodate long-term disposal options of the City's solid waste stream, including residential, commercial and industrial segments. This study will consider current volumes and recycling rates while also incorporating increases in both solid waste stream and recycling rates independently, while considering other alternative disposal options.

Cost Summary:
Table 5 presents the proposed costs associated for the Land & Facilities Use study.

Table 5

Land & Facility Use Study	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	TOTAL
Evaluate existing land & facility use and future 20 years+ requirements for Fort Worth	$ 60,000	$ 35,000	$ 35,000				$ 130,000
TOTAL	**$ 60,000**	**$ 35,000**	**$ 35,000**	**$ -**	**$ -**	**$ -**	**$ 130,000**

3. Eco-Park Feasibility Study

Project ID: **SW.CIP.2017-3** *Council District #:* All Districts

Location: South or Southeast *Size:* 25-30+ acres

Narrative:

As part of the 20 Year Comprehensive Solid Waste Plan, Fort Worth could benefit significantly from the development of an Eco-Park District that could support more regional economic development aspects for materials recovery and reuse. In addition, through establishing a local Eco-Park, future educational partnerships could develop collaborative joint business adventures to advance recycling markets for all residential and commercial materials, reducing the dependence on foreign markets.

Cost Summary:

Table 6 presents the proposed costs associated for the Eco-Park Feasibility study.

Table 6

Eco-Park Feasibility Study	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Evaluate necessary land & facility needs to support a local Eco-Park Project within City Limits	$ 25,000	$ 45,000	$ 25,000			$ 95,000
TOTAL	**$ 25,000**	**$ 45,000**	**$ 25,000**	**$ -**	**$ -**	**$ 95,000**

4. Comprehensive Solid Waste Management Plan – Expanded Recommendations Studies

Project ID: **SW.CIP.2017-4** *Council District #:* All District

Location: Citywide *Size:* Citywide

Narrative:

Upon the completion of the CSWMP, the top three to five key recommendations will be prioritized and supported with further evaluation and/or supporting implementation resources over the next five years. The actual recommendations will be selected from the list based on overall impacts balanced with short-term implementation strategies within commercial recycling opportunities, residential recycling processing agreement and improving the overall residential services with future enhancements.

Cost Summary:

Table 7 presents the proposed costs associated for Comprehensive Solid Waste Management Plan – Expanded Recommendations Studies.

Table 7

Comprehensive Solid Waste Management Plan – Expanded Recommendations	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	TOTAL
Advance three key recommendations identified by plan: Commercial Recycling Program, Residential Recycling Processing Agreement & Residential Service Improvements	$ 25,000	$ 50,000	$ 50,000	$ 25,000			$ 150,000
TOTAL	**$ 25,000**	**$ 50,000**	**$ 50,000**	**$ 25,000**	**$ -**	**$ -**	**$ 150,000**

5. Grants of Privilege Audit Evaluation

Project ID: **SW.CIP.2017-5** *Council District #:* All Districts

Location: Citywide

Narrative:
Commercial solid waste companies must permit their vehicles and pay the City of Fort Worth a five percent (5%) franchise fee of gross solid waste billed revenues. The City has not completed and in-depth audit of the current permitted companies nor evaluated the impact of companies that operate without being permitted until they are determined to be out of compliance. This audit is to confirm the accuracy of each permitted company and verify the revenue stream owed to the City.

Cost Summary:
Table 8 presents the proposed costs associated with the Grants of Privilege Audit Evaluation.

Table 8

Grants of Privilege Audit	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Develop audit of all existing GOP solid waste vendors to ensure accurate franchise fee is paid to City through use of outside a consulting firm.	$ 35,200					$ 35,200
TOTAL	**$ 35,200**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 35,200**

6. Landfill Gas Reclamation Evaluation

Project ID: **SW.CIP.2017-6** *Council District #:* District 8

Location: 6288 Salt Road *Size:* Approximately 300+ acres

Narrative:
In partnership with Republic Services (current lease contractor for landfill), the City has determined a beneficial application of upgrading the current landfill gas collection system to allow for the necessary volumes and control mechanisms, ensuring controlled quality and quantity of methane gas. In addition, once operational, both partners would execute the most beneficial contract with a third party to purchase the methane gas towards generating a renewal energy source while reducing the greenhouse gas impacts. This study would evaluate and identify the most beneficial project (high BTU vs. low BTU) and third party proposal from vendors.

Cost Summary:
Table 9 presents the proposed costs associated with the Landfill Gas Reclamation evaluation.

Table 9

Southeast Landfill Gas Reclamation Evaluation	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Develop environmental engineering design / financial evaluation for renewable landfill gas engery generation plan with a consulting engineer.	$ 45,000	$ 25,000				$ 70,000
TOTAL	**$ 45,000**	**$ 25,000**	**$ -**	**$ -**	**$ -**	**$ 70,000**

7. Drop-off Station (DOS) Building Site Plan & ECC/HHW Equipment Project

Project ID: **SW.CIP.2017-7** *Council District #:* All Districts

Location: Citywide

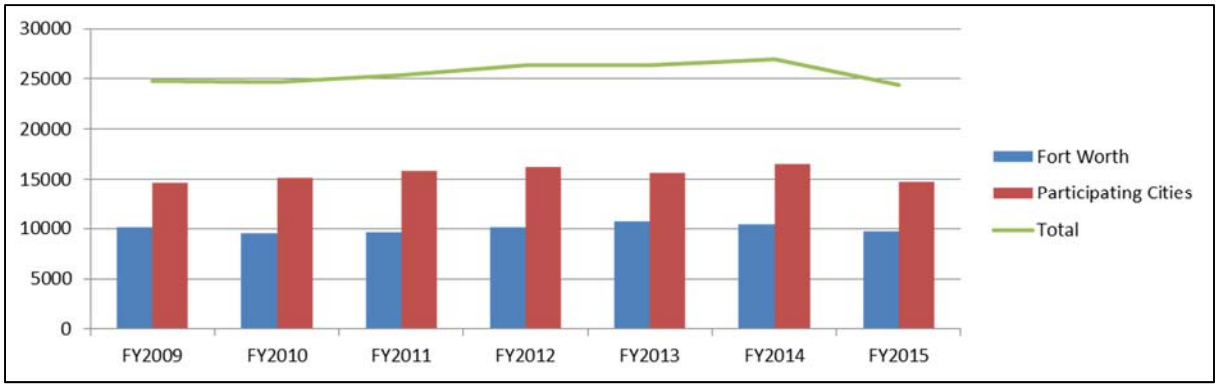
Narrative:
As identified by staff and the CSWMP consultant, the three (3) existing DOS sites will need significant site plan layout modifications to incorporate the additional staff, programs of services and collection activities. In addition, additional equipment and system components will be included to assist citizens, staff and operational standards. This project will fund the architect support for site plan layout to maximize each different site, while equipping them with identified items.

Cost Summary:
Table 10 presents the proposed costs associated with the Drop-off Station Building & ECC/HHW Equipment Project.

Table 10

Drop-off Station (DOS) Building & ECC/HHW Equipment	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Develop operational plan and site design for implementing new programs into the existing three (3) DOS.	$ 500,000					$ 500,000
TOTAL	**$ 500,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 500,000**

Annual Visits to the Environmental Collection Center



8. Westside (5th) DOS Land & Construction Project

Project ID: **SW.CIP.2017-8** *Council District #:* District 3

Location: Westside of City *Size:* Approximate 4-7 Acres

Narrative:

As identified by citizen's request and supported by staff and the CSWMP consultant, the fifth (5th) citizen's DOS will need to be designed, located and implemented along the western side of the City within the next two (2) to five (5) years. Staff hopes to work in conjunction with another commercial solid waste vendor to co-locate or develop a public-private partnership in developing the next DOS, building synergy and long term cost savings. However, if a beneficial partnership cannot be executed in a timely manner, the City will need to advance this project solely after securing the appropriate land.

Cost Summary:

Table 11 presents the proposed costs associated with the Westside (5th) DOS Land & Construction Project.

Table 11

Westside (5th) DOS Land & Construction	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Conduct feasibility and financial analysis for implementing additional DOS.		$ 2,200,000	$ 2,500,000	**$ 2,000,000**		$ 6,700,000
TOTAL	**$ -**	**$ 2,200,000**	**$ 2,500,000**	**$ 2,000,000**	**$ -**	**$ 6,700,000**

9. Future Land & Facilities Use Needs Assessment Project

Project ID: **SW.CIP.2017-9** *Council District #:* All Districts

Location: To be Determine *Size:* To be Determined

Narrative:
As identified within the current development of the 20 Year CSWMP, future land and facilities will need to be evaluated to ensure the long term solid waste disposal needs of Fort Worth will be available and secured. This project is to begin the process of setting aside or purchasing appropriate land and/or facilities that could help ensure long term disposal needs will be adequate. Based on current in-bound volumes, recycling rate and remaining capacity at the City's SELF, there is between 19-33 years of remaining landfill life/air space available.

Future of Site:
The future land and facilities to be used in the next five (5) to thirty-five (35) years will be determined at the conclusion of this assessment project.

Cost Summary:
Table 12 presents the proposed costs associated with the Future Land & Facilities Use Needs Project for the next five (5) years only. The five (5) year cost does not include the full $35.5 million capital allocation projected for Fort Worth's next landfill site which would need to be detailed out through a fifteen (15) year plan.

Table 12

Future Land & Facilities Use Needs	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Needs Assessment to determine the financial impact for future land & facilities use needs will be for the next 5 years and planning towards 35 years.		$5,000,000	$7,500,000	$2,500,000	$4,500,000	$ 19,500,000
TOTAL	**$ -**	**$ 5,000,000**	**$ 7,500,000**	**$ 2,500,000**	**$ 4,500,000**	**$ 19,500,000**

10. Eco-park Land Project

Project ID: **SW.CIP.2017-10** *Council District #:* To be Determined

Location: Citywide *Size:* Approximate 25-32 acres

Narrative:
As identified by staff and the CSWMP consultant, and confirmed by the recent softening of the recycling markets and reduction of available material recovery facilities (MRFs) in the Fort Worth area, building a Fort Worth based Eco-park would support long term economic growth, development and advocate stronger regional material avenues. In addition, as an off-set of the SELF site, if the Eco-park were to be located on property within close proximity, the landfill gas reclamation project could provide a renewable energy source to businesses/manufacturers within the Eco-park. Furthermore, this Eco-park could offer a platform to partner with an educational institution for pilot projects, educational programs, and future partnerships.

Cost Summary:
Table 13 presents the proposed costs associated with the former Eco-park Land Project.

Table 13

Eco-park Land	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Conduct feasibility and financial analysis for implementing an Eco-Park Program within City limits and/or City property.				$ 5,000,000	$ 2,000,000	$ 7,000,000
TOTAL	**$ -**	**$ -**	**$ -**	**$ 5,000,000**	**$ 2,000,000**	**$ 7,000,000**

11. Solid Waste Administration Staff Consolidation - Fire Station #12 Project

Project ID: **SW.CIP.2017-11** *Council District #:* District 2

Location: 120 N.W. 22nd Street *Size:* Approximate 6,000 sq. ft.

Narrative:
Due to the historic growth and consolidation of the Solid Waste and Code Compliance Department, the shortage of office space has led to staff members having to office in shared spaces, non-typical office areas (converted breakroom, conference areas and building entry/exits) and to office remotely from other staff members. All these aspects have increased operational costs, administrative challenges and coordination of effective deployment of resources. This project would provide temporary relief in consolidating all the necessary administrative and leadership team members of the Solid Waste Command Area into a centralized location, while allowing additional consolidation within the other command areas within the Code Compliance Department.

Cost Summary:
Table 14 presents the proposed costs associated with the Solid Waste Administration Staff Consolidation - Fire Station #12 Project.

Table 14

Solid Waste Administration Staff Consolidation - Fire Station #12	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Finish remodeling the Fire Station #12 to accommodate short term staffing for all Solid Waste Administration & north Fort Worth operational staffing.	$ 1,265,000					$ 1,265,000
TOTAL	**$ 1,265,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,265,000**

12. Code Compliance Department Consolidation Project

Project ID: **SW.CIP.2017-12** *Council District #:* To be Determine

Location: To be Determine *Size:* Approximate 15,000 – 20,000 sq. ft.

Narrative:
Due to the historic growth and consolidation of additional programs of services into the Code Compliance Department, the shortage of office space has led to staff members having to office in shared spaces, non-typical office areas (converted breakroom, conference areas and building entry/exits) and located remotely across the city and from other staff members. All these aspects have increased operational costs, administrative challenges and coordination of effective deployment of resources. This project would provide permanent consolidation for all the necessary administrative and leadership team members of the Code Compliance Department into a centralized location and including all other command areas.

Cost Summary:
Table 15 presents the proposed costs associated with the Code Compliance Department Consolidation Project.

Table 15

Code Compliance Department Consolidation	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Complete design and construction of 15k - 20k square feet of centralized office space to staff the entire Code Compliance administrative & leadership staff.		$ 2,000,000	$ 4,000,000			$ 6,000,000
TOTAL	**$ -**	**$ 2,000,000**	**$ 4,000,000**	**$ -**	**$ -**	**$ 6,000,000**

13. City of Fort Worth 311 Call Center Construction Project

Project ID: **SW.CIP.2017-13** *Council District #:* District 6

Location: 4100 Columbus Trail *Size:* Approximate 10,000 square feet

Narrative:
As the City moves toward a more consolidated and collaboratively coordinated Customer Service Call Center (and possible a formal 311 based structure), additional office space is needed to incorporate the increased call volume and related tasks, work load and reporting activities. This additional space will be completed within the existing Southside Service Center after Solid Waste and/or Stormwater Operations relocates from their current office areas.

Cost Summary:
Table 16 presents the proposed costs associated with the City of Fort Worth 311 Call Center Construction Project.

Table 16

311 Call Center Construction	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Complete design and construction of additional Call Center unit.	$ 870,000					$ 870,000
TOTAL	**$ 870,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 870,000**

14. City of Fort Worth SELF Landfill Gas Reclamation System Project

Project ID: **SW.CIP.2017-14** *Council District #:* District 8

Location: 6288 Salt Road *Size:* Approximate 300+ acres

Narrative:
In partnership with Republic Services (current lease contractor for landfill), the City has determined a beneficial application of upgrading the current landfill gas collection system to allow for the necessary volumes and control mechanisms, ensuring controlled quality and quantity of methane gas. In addition, once operational, both partners would execute the most beneficial contract with a third party to purchase the methane gas towards generating a renewal energy source while reducing the greenhouse gas impacts. This project would fund the identified system upgrades needed to support the long term supply of required methane gas.

Cost Summary:
Table 17 presents the proposed costs associated with the SELF Landfill Gas Reclamation System Project.

Table 17

SELF Landfill Gas Reclamation System	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Complete design and construction of enhancing the SELF Gas system to support generating renewable energy.		$ 3,000,000	$ 2,000,000			$ 5,000,000
TOTAL	**$ -**	**$ 3,000,000**	**$ 2,000,000**	**$ -**	**$ -**	**$ 5,000,000**

15. City of Fort Worth Litter Abatement Equipment Enhancement

Project ID: **SW.CIP.2017-15** *Council District #:* All Districts

Location: Citywide

Narrative:
As the Code Compliance Department has taken on the City's litter prevention and collection program in support of the City's Stormwater Permit and Environmental Management efforts, additional equipment has been identified for the Solid Waste team. This equipment will allow the Litter and Illegal Dumping crews to increase their productivity, debris collected and response time to reported areas of concern.

Cost Summary:
Table 18 presents the proposed costs associated with the City of Fort Litter Abatement Equipment Enhancement.

Table 18

Litter Abatement Equipment	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Purchase of additional Litter Abatement equipment: riding vacuums, sweepers and portable power carts/mules.	$ 175,000	$ 225,000				$ 400,000
TOTAL	**$ 175,000**	**$ 225,000**	**$ -**	**$ -**	**$ -**	**$ 400,000**

16. City of Fort Worth Drop Off Station Equipment Project

Project ID: **SW.CIP.2017-16** *Council District #:* All Districts

Locations: Citywide

Narrative:
As the Solid Waste team begins to collect additional residential volumes of donated materials and becomes a centralized location for community-based volunteer groups to perform litter collections, additional site equipment is needed to assist with operational improvements. Each DOS will need the required equipment (storage, litter collection supplies, power brooms and roadside signage) to maximize collections and minimize operational costs.

Cost Summary:
Table 19 presents the proposed costs associated with the Drop Off Station Project.

Table 19

DOS Equipment	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Purchase various additional equipment for all four (4) DOS to enhance operations and cleanliness of site.	$ 150,000					$ 150,000
TOTAL	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 150,000**

17. City of Fort Worth Litter Prevention – Streetscape Pedestrian Container Champaign Project

Project ID: **SW.CIP.2017-17** *Council District #:* All Districts

Locations: Citywide

Narrative:
The Code Compliance Department has taken on the City's litter prevention and collection program in support of the City's Stormwater Permit and Environmental Management efforts, the need for additional community-based trash and/or recycling containers has been identified by the Solid Waste team. The solar powered Big Belly units offer operational effectiveness as well as educational messaging associated with a citywide litter prevention program.

These units or other identified "streetscape" pedestrian containers will be strategically placed or coordinated with the appropriate City departments so that trash and/or recyclables are contained until serviced instead of becoming litter all across the City, streets, parks, creeks and neighborhoods.

Cost Summary:
Table 20 presents the proposed costs associated with the Streetscape Pedestrian Containers.

Table 20

Litter Prevention - Streetscape Pedestrian Container Champaign	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Install 275+ Big Belly Trash Compactor units or other identified containers throughout strategic locations to aid in litter prevention.	$ 1,000,000					$ 1,000,000
TOTAL	**$ 1,000,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,000,000**

18. Litter/Illegal Automation Units Project

Project ID: **SW.CIP.2017-18** *Council District #:* All Districts

Location: Citywide

Narrative:
The Code Compliance Department has taken on the City's litter prevention and collection program in support of the City's Stormwater Permit and Environmental Management efforts, adding laptops or tablets to each of the litter and illegal dumping crew vehicles will improve the operational effectiveness and response time. In addition, these units will offer a tracking application to document crew productivity, and efficiency in real time to determine if corrective action is necessary.

Cost Summary:
Table 21 presents the proposed associated costs for the Litter/Illegal Automation Units project.

Table 21

Litter/Illegal Automation Units	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Adding computer tablets to each crew vehicle to automate dispatching & completing Work Orders in the field in real time.	$ 27,344					$ 27,344
TOTAL	**$ 27,344**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 27,344**

19. ECC/HHW Equipment Project

Project ID: **SW.CIP.2017-19** *Council District #:* All Districts

Location: Citywide

Narrative:
As the Solid Waste team begins to collect Fort Worth residential volumes of Household Hazardous Waste (chemicals and products) at the existing DOSs, which will allow greater volumes of material from contracted/partnering cities to be processed at the Environmental Collection Center. Each DOS will need the required equipment (containment barrels, portable trailer or stationary storage unit) to maximize collections and minimize operational costs.

Cost Summary:
Table 22 presents the proposed costs associated for the ECC/HHW Equipment project.

Table 22

ECC/HHW Equipment	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Adding four (4) portable HHW trailers to use for collections at DOSs.	$ 125,000					$ 125,000
TOTAL	**$ 125,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 125,000**

20. CNG Vehicle/Equipment Replacement Project

Project ID: **SW.CIP.2017-20** *Council District #:* All Districts

Location: Citywide

Narrative:
In partnership with Waste Management, the City's future CNG fueling station will be implemented at the current MLK DOS facility. Therefore, Solid Waste has identified future equipment and vehicles to be replaced, which will utilize CNG fuel instead of diesel or gasoline. This will project will help lead the City and area with cleaner emission based vehicles and reduce the negative impact of our air quality and greenhouse gases.

Cost Summary:
Table 23 presents the proposed costs associated for the CNG Vehicle/Equipment Replacement project.

Table 23

CNG Vehicle/Equipment Replacement	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Replacing future vehicles/equipment with CNG fueling options instead of diesel.	$ 165,000	$ 165,000	$ 165,000	$ 165,000	$ 165,000	$ 990,000
TOTAL	**$ 165,000**	**$ 165,000**	**$ 165,000**	**$ 165,000**	**$ 165,000**	**$ 990,000**

21. Brennan DOS Conversion to T-station Project

Project ID: **SW.CIP.2017-21** *Council District #:* District 2

Location: 2400 Brennan Avenue *Size:* Approximate 3-7 acres

Narrative:
Based on the low-volume commercial transfer station study, the benefits of converting an existing Drop-off Station (currently Brennan) to allow small businesses, property owners and commercial clean-up crews to dispose of their non-compacted commercial solid waste in parallel with the citizens residential volumes. Since the commercial businesses do not currently support the DOS through fees, a future fee structure may be necessary.

Cost Summary:
Table 24 presents the proposed costs associated for the Brennan DOS Conversion to T-station plan.

Table 24

Brennan DOS Conversion to T-station	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Develop environmental engineering design / construction plan with a consulting engineer.		$ 750,000	$ 2,500,000			$ 3,250,000
TOTAL	**$ -**	**$ 750,000**	**$ 2,500,000**	**$ -**	**$ -**	**$ 3,250,000**

22. Keep Fort Worth Beautiful/Litter Program Expansion Project

Project ID: **SW.CIP.2017-22** *Council District #:* All Districts

Location: City-wide

Narrative:
As determined by staff and the CSWMP consultant, additional staffing is necessary to expand the program efforts and increase community participation in litter prevention and collection efforts. These additional educational and marketing staff members would be specifically targeted towards the litter and beautification efforts to develop direct results, instead of covering multiple department programs, which has been proven most effective across other programs within the state and country.

Cost Summary:
Table 25 presents the proposed costs associated with the Keep Fort Worth Beautiful/Litter Program Expansion project.

Table 25

Keep Fort Worth Beautiful/Litter Program Expansion	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Add Educational & Marketing Staffing to support future program enhancements.	$ 62,575	$ 62,575				$ 125,150
TOTAL	**$ 62,575**	**$ 62,575**	**$ -**	**$ -**	**$ -**	**$ 125,150**

23. Solid Waste Superintendent Addition

Project ID: **SW.CIP.2017-23** *Council District #:* All Districts

Location: City-wide

Narrative:
As part of the City strategically restructuring the Code Compliance Department in FY2016, Solid Waste absorbed personnel transfers from Parks and TPW to manage the Litter Abatement Program and Environmental Collections Center. The realignment resulted in 62 approved positions reporting to one Superintendent. To eliminate span of control issues currently handicapping the current program areas, the recommended additional Superintendent would assist in successfully managing six sections effectively and efficiently. The position would directly support the Assistant Director in management and implementation of ongoing program initiatives, deployment of staff and resources to the community, addressing public concerns and attendance at neighborhood meetings as necessary. Funding this management position would facilitate reducing operating overhead and improving significant milestones in performance and operational management KPIs as tied to the Code Business Plan. Significant improvement would include implementing the City's street sweeping program, increases in tons of litter collected (9%), additional miles of roadways cleaned (27%), improve response time to litter complaints (100% within 48 hours) and decrease time residents spend dropping off at the Drop Off Stations (8%).

Cost Summary:
Table 26 presents the proposed costs associated for the Solid Waste Superintendent addition.

Table 26

Solid Waste Superintendent	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Add Operational Superintendent to break operational area into two (2) separate segments.	$ 120,734					$ 120,734
TOTAL	**$ 120,734**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 120,734**

24. Material Management Program Addition

Project ID: **SW.CIP.2017-24** *Council District #:* All Districts

Location: Citywide

Narrative:
As determined by staff and the CSWMP consultant, additional staffing is necessary to expand the program efforts and increase the business community participation in waste reduction, recycling and other beneficial sustainability-based initiatives (similar to the Miller/Coors accomplishments). Advancing the proactive commercial waste and recycling efforts will be critical in advancing the City recycling goal towards 40%, and only with targeted efforts by City staff members to individual businesses and commercial groups. These additional educational and marketing staff members would be specifically targeted towards the commercial solid waste, recycling and sustainability efforts and create direct results.

Cost Summary:
Table 27 presents the proposed costs associated for the Material Management Program addition.

Table 27

Material Management Program	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Add Educational & Project Planning staffing to support future program enhancements.		$ 67,075	$ 67,075	$ 67,075		$ 201,225
TOTAL	**$ -**	**$ 67,075**	**$ 67,075**	**$ 67,075**	**$ -**	**$ 201,225**

25. Residential Services Education Program Addition

Project ID: **SW.CIP.2017-25** *Council District #:* All Districts

Location: Citywide

Narrative:
As determined by staff and the CSWMP consultant, additional staffing is necessary to expand the program efforts and increase community awareness and participation in all of the solid waste collection services and programs. These additional educational staff members would be specifically targeted towards residential services, increasing the recycling rate and developing direct results, instead of covering multiple department programs, which has been proven most effective across other programs within the state and country.

Cost Summary:
Table 28 presents the proposed costs associated for the Residential Services Education Program addition.

Table 28

Residential Services Education Program	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Add Educational Specialist to increase residents awareness and use of the service within established guidelines.	$ 125,150	$ 62,575				$ 187,725
TOTAL	**$ 125,150**	**$ 62,575**	**$ -**	**$ -**	**$ -**	**$ 187,725**

26. Illegal Dump Officers & Call Center Staff Addition

Project ID: **SW.CIP.2017-26** *Council District #:* All Districts

Location: Citywide

Narrative:
As the City moves toward a more consolidated and collaboratively coordinated Customer Service Call Center (and possibly a formal 311 based structure) and direct enforcement activities, additional staff is needed to incorporate the increased call volume and citation work load. These additional staff members will increase the response time of reported issues, decrease neighborhood-based concerns and will improve the customer service level through all Code Compliance activities.

Cost Summary:
Table 29 presents the proposed costs associated for the Residential Services Education Program addition.

Table 29

Illegal Dump Officers & Call Center Staff	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Add additional officers and customer service representatives for enhanced program results.	$ 380,000.00					$ 380,000
TOTAL	**$ 380,000.00**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 380,000.00**

27. DOS & Litter Abatement Enhancements Program Addition

Project ID: **SW.CIP.2017-27** *Council District #:* All Districts

Location: Citywide

Narrative:
The Code Compliance Department has taken on the City's litter prevention and collection program in support of the City's Stormwater Permit and Environmental Management efforts, adding additional cross trained crews will streamline the transition between the DOS and Litter Collection efforts as needed and in turn will improve the operational effectiveness and response time. In addition, these crews will increase the actual productivity of both areas.

Cost Summary:
Table 30 presents the proposed costs associated for the DOS & Litter Abatement Enhancements Program addition.

Table 30

DOS & Litter Abatement Enhancements	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	TOTAL
Add Operational crew members for Litter Abatement & Sweeping program activities.	$ 145,000					$ 145,000
TOTAL	**$ 145,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 145,000**