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The Environmental Services Department ensures that all residents of the City of San Diego are provided with a clean, safe, and ecologically-sound environment. The Department operates a full-service landfill and maintains eight closed landfills and eight inactive burn sites, all of which require sustained improvements related to landfill gas systems, groundwater monitoring networks, and grading and slope work. The Department also manages the City's energy use and a variety of programs focused on implementing innovative alternatives to increase energy efficiency at City facilities. Through the Capital Improvements Program, the Department identifies and dedicates Refuse Disposal Fund resources to projects that focus on providing reliable solid waste management.

2015 CIP Accomplishments

The Department has continued to dedicate capital improvement resources towards its mission of providing reliable solid waste management, resource conservation, and environmental protection to preserve public health and ensure sustainable communities for future generations.

The Department's Energy, Sustainability, and Environmental Protection Division completed projects for Fiscal Year 2015 included:

 Completion of the Broad Spectrum Post Top Pedestrian Street Lighting project which retrofitted 3,465 decorative pedestrian street lights with energy efficient LED fixtures with adaptive controls. Expected project savings are over 2.5 million kilowatt hours and \$254,000 in utility costs annually.

The Department's Waste Reduction and Disposal Division completed improvements at landfills throughout the City included:

- Completion of design work of a landfill gas blower/flare station for the West Miramar landfill.
- Implementing comprehensive grading, drainage, and landfill gas improvements at the Chollas Operations Yard. This also includes the replacement of lighting poles, storage containers, and permanent staging areas which will ensure a clean, safe, and healthy environment for the employees and customers at the operations yard.

2016 CIP Goals

The Department will continue to promote sustainability and public health through its effective delivery of capital improvement projects. The following are the Department's goals for Fiscal Year 2016:

- Solicit designs from pre-qualified vendors and select one to begin construction on a Compressed Natural Gas Fueling Station at the Environmental Services Operations Station. This project will provide the necessary fueling infrastructure to begin converting the City's refuse and recycling fleet from low sulfur diesel to compressed natural gas.
- Continue construction on energy improvements to City facilities resulting in the installation of more efficient technologies, such as lighting and air conditioning, in order to reduce energy consumption.
- In collaboration with the Public Utilities Department, the Environmental Services Department, through its Energy Conservation Fund, is contributing \$1.3 million toward a \$4.0 million project which will finance solar photovoltaic systems at Bayview Reservoir and the Metropolitan Operations Center complex. These systems will range in size from 30 to 500 kilowatts. Combined, these systems are anticipated to generate one megawatt of solar power and be completed in Fiscal Year 2016.

- Award a solar power purchase agreements to install solar photovoltaic systems at over 100 City facilities and closed landfills.
- Begin construction of a new landfill gas handling facility at West Miramar Landfill in order to capture and destroy greenhouse gases that would otherwise enter into the atmosphere, thus ensuring compliance with state, federal, and local regulations.
- Complete construction at the South Chollas Landfill and Operations Yard in order to bring site into compliance with State regulations.

Environmental Services: Capital Improvement Projects

Project	F	Prior iscal Years	FY2016 Adopted	F	Future Fiscal Years	Ρ	roject Total
CNG Fueling Station for Refuse & Recycling / S15000	\$	1,200,000	\$ 900,000	\$	900,000	\$	3,000,000
Citywide Energy Improvements / ABT00003		522,246	-		-		522,246
Environmental Services Operations Yard Improvement / AFA00003		8,076	-		-		8,076
Future Waste Mgmt Disposal & Pro Fac / S01088		13,626,920	-		-		13,626,920
Minor Improvements to Landfills / AFA00001		1,634,975	-		-		1,634,975
Miramar Landfill Greenery Expansion / S00975		397,858	-		-		397,858
South Chollas Landfill / S00776		1,776,000	-		-		1,776,000
South Chollas Landfill Improvements / S00684		15,828,624	-		-		15,828,624
Underground Tank Program / AFA00002		407,565	-		-		407,565
West Miramar Landfill - Phase 2 / S00774		3,060,000	-		-		3,060,000
West Miramar Refuse Disposal Fac Ph 2 / S01074		39,112,334	-		-		39,112,334
Environmental Services Total	\$	77,574,598	\$ 900,000	\$	900,000	\$	79,374,598



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CNG Fueling Sta	CNG Fueling Station for Refuse & Recycling / S15000		ing Fac / Struct
Council District:	1	Priority Score:	55
Community Plan:	: University	Priority Category:	Low
Project Status:	Continuing	Contact Information:	Fergusson, Craig
Duration:	2015 - 2021		858-627-3311
Improv Type:	New		cfergusson@sandiego.gov

station at the Enivironmental Services Operations Station located at 8353 Miramar Place. In conjunction with eral Fund and Recycling Enterprise Fund. the completion of the fueling station, the division plans to put into service refuse and recycling vehicles that run on CNG eventually replacing the entire fleet of low sulpher diesel refuse and recycling packers. The construction of CNG fueling infrastructure and the replacement of vehicles will be implemented in a phased approach. It is estimated that CNG infrastructure will be constructed to allow for the replacement of approximately 20 vehicles on an annual basis until all vehicles have been replaced.

Justification: This project provides for the necessary infrastructure to convert Environmental Services fleet refuse and recycling vehicles from low sulfur diesel to compressed natural gas.

Description: This project provides for the design and construction of a compressed natural gas (CNG) fueling Operating Budget Impact: Provides for a positive operating budget impact by saving fuel costs to the Gen-

Relationship to General and Community Plans: This project is in conformance with the Conservation Element of the City's General Plan.

Schedule: Design and construction are scheduled to continue in Fiscal Year 2016 and will continue through each phase of the project which is scheduled to be completed in Fiscal Year 2021.

Summary of Project Changes: A total of \$1.8 million of General Fund funding will be allocated to this project, of which \$900,000 is in Fiscal Year 2016 and \$900,000 is anticipated in Fiscal Year 2018.

Expenditure by Funding Source													
Fund Name	Fund N	0	Exp/Enc	Con Appn	FY 2016	FY 2016 Anticipated	FY 2017	FY 2018	FY 2019	FY 2020	U Future FY	Inidentified Funding	Project Total
CIP Contributions from General Fund	400265	\$	- 9	6 - \$	900,000 \$	- \$	- \$	900,000 \$	- \$	- \$	s - \$	- \$	1,800,000
Recycling Fund CIP Fund	700049		70,352	1,129,648	-	-	-	-	-	-	-	-	1,200,000
	Total	\$	70,352	1 ,129,648 \$	900,000 \$	- \$	- \$	900,000 \$	- \$	- \$	5-\$	- \$	3,000,000

owned facilities to identify opportunities for energy savings.

Citywide Energy	/ Improvements / ABT00003	Bldg - Other City Fa	acility / Structures
Council District:	Citywide	Priority Score:	Annual
Community Plan:	Citywide	Priority Category:	Annual
Project Status:	Continuing	Contact Information:	Reddy, Chandra
Duration:	2010 - 2020		858-492-6002
Improv Type:	Betterment		creddy@sandiego.gov

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Description: This project will provide for energy efficiency improvements in City facilities. Projects typically **Operating Budget Impact:** None address lighting, air conditioning, chiller, pumping and fan systems, invertors, and City-owned solar systems. Newer, more efficient technologies greatly reduce energy consumption.

Relationship to General and Community Plans: These projects are consistent with applicable community plans and are in conformance with the City's General Plan.

Justification: Energy efficiency improvements repay capital costs in one to nine years, depending upon the Schedule: Projects will be scheduled on a priority basis.

project. The energy savings continue each year thereafter. Energy audits are performed in a variety of City-Summary of Project Changes: No significant changes have been made to this project for Fiscal Year 2016.

Expenditure by Funding Source													
Fund Name	Fund No	c	Exp/Enc	Con Appn	FY 2016	FY 2016 Anticipated	FY 2017	FY 2018	FY 2019	FY 2020	Future FY	Unidentified Funding	Project Total
Energy Conservation Program CIP Fund	200225	\$	- 4	522,246	- (\$-\$	- \$	- \$	- \$	- \$	- \$	- \$	522,246
	Total	\$	- \$	5 522,246 \$	-	5 - \$	- \$	- \$	- \$	- \$	- \$	- \$	522,246

Environmental S	Services Operations Yard Improvement / AFA00003	Landfills	
Council District:	5	Priority Score:	Annual
Community Plan:	University	Priority Category:	Annual
Project Status:	Continuing	Contact Information:	Coleman, Monique
Duration:	2010 - 2016		858-526-2335
Improv Type:	New		mcoleman@sandiego.gov

Description: This annual allocation provides for operational yard improvements necessary to support heavy **Operating Budget Impact:** None. equipment and other upgrades related to yard security, safety, and stormwater runoff to the Environmental Services Operations Station (ESOS) Yard.

Relationship to General and Community Plans: This project is consistent with the University Community Plan and is in conformance with the City's General Plan.

Justification: Operational yard improvements are required to support heavy equipment. Other upgrades will improve yard security, safety, and ensure regulatory compliance with stormwater runoff.

Schedule: This annual is scheduled to be closed by the end of the Fiscal Year 2016.

Expenditure by Funding Source													
Fund Name	Fund No	Exp	/Enc	Con Appn	FY 2016	FY 2016 Anticipated	FY 2017	FY 2018	FY 2019	FY 2020	U Future FY	Inidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$	8,076 \$	- \$	- \$	s - \$	- \$	- \$	- \$	- \$	- \$	- \$	8,076
Tota	I	\$	8,076 \$; - \$	- \$	5 - \$	- \$	- \$	- \$	- \$	- \$	- \$	8,076

idue from other solid waste disposal facilities.

Future Waste M	gmt Disposal & Pro Fac / S01088	Landfills - Supporting Fac / Struct						
Council District:	Citywide	Priority Score:	92					
Community Plan:	Citywide	Priority Category:	High					
Project Status:	Continuing	Contact Information:	Fergusson, Craig					
Duration:	1989 - 2018		858-627-3311					
Improv Type:	New		cfergusson@sandiego.gov					

Description: This project provides for the development and construction of solid waste disposal and processing facilities. Strategic planning, design, construction, environmental review, and potential purchase of mitigation property are all within the scope of the project.

Operating Budget Impact: None.

Relationship to General and Community Plans: This project is consistent with applicable community plans and is in conformance with the City's General Plan.

Justification: The City must continue to have adequate disposal or processing facilities for the solid waste it generates each year. Technology to recover and/or convert portions of refuse material is being explored and developed. It appears that there will always be a need for landfilling part of the generated waste stream and res-

Expenditure by Funding Source													
Fund Name	Fund No)	Exp/Enc	Con Appn	FY 2016	FY 2016 Anticipated	FY 2017	FY 2018	FY 2019	FY 2020	Future FY	Unidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$	3,676,304	\$ 9,950,615 \$	- 9	- \$	- \$	- \$	- \$	- 9	} -	\$- \$	13,626,920
Tota	ıl	\$	3,676,304	\$ 9,950,615 \$	- \$	- \$	- \$	- \$	- \$	- \$; -	\$-\$	13,626,920

Minor Improvem	ents to Landfills / AFA00001	Landfills	
Council District:	Citywide	Priority Score:	Annual
Community Plan:	Citywide	Priority Category:	Annual
Project Status:	Continuing	Contact Information:	Fergusson, Craig
Duration:	2010 - 2016		858-627-3311
Improv Type:	New		cfergusson@sandiego.gov

Description: This annual allocation provides for minor improvements to existing sanitary landfills to comply with operating permits and regulatory requirements. Such improvements may include fencing, access roads, drains, small structures, and environmental protection projects. This project also provides for minor improvements to existing groundwater monitoring networks at all closed and operating landfills managed by the City. Improvements include new facilities as well as engineering reports and/or design specifications necessary to mitigate groundwater issues or modify groundwater montoring programs.

Operating Budget Impact: None.

Relationship to General and Community Plans: This project is consistent with applicable community plans and is in conformance with the City's General Plan.

Schedule: Projects are scheduled on a priority basis to meet regulatory requirements.

Summary of Project Changes: A balance of \$1.6 million remains in this project for future projects. No additional funds will be added to this project until tasks are identified and scheduled.

Justification: This project provides the flexibility for timely initiation of minor improvements and construction needed to meet operational and solid waste regulatory mandates such as drainage, grading, and groundwater monitoring improvements.

Expenditure by Funding Source													
Fund Name	Fund No	E	Exp/Enc (Con Appn	FY 2016	FY 2016 Anticipated	FY 2017	FY 2018	FY 2019	FY 2020	L Future FY	Inidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$	- \$	1,634,975 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	1,634,975
	Total	\$	- \$	1,634,975 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	1,634,975

Environmental Services

Miramar Landfill	I Greenery Expansion / S00975	Landfills	
Council District:	Citywide	Priority Score:	53
Community Plan:	Citywide	Priority Category:	Low
Project Status:	Continuing	Contact Information:	Thompson, Michael
Duration:	2009 - 2018		858-492-6151
Improv Type:	Betterment		mthompson@sandiego.gov

the Miramar Landfill. The expansion of curbside greens collection to additional neighborhoods in the City will no community planning area. This project is in conformance with the City's General Plan. increase the tonnage coming into the facility, requiring additional acreage and equipment.

Justification: Expansion of curbside greens collection will increase the diversion of solid waste required by the State of California. A larger facility is required to process the increased tonnage expected as a result of expanded curbside pickup.

Description: This project provides for the expansion of the existing Miramar Greenery currently located at Relationship to General and Community Plans: This project is located on federal property and there is

Schedule: The remaining balance in this project will be used to conduct a feasibility study and potentially the preliminary design of an anaerobic digestion facility at the Miramar Greenery in Fiscal Year 2016. An anaerobic digestion facility will allow the Miramar Greenery to intake and process food waste into commodities such as compost.

Operating Budget Impact: None.

	Expenditure by Funding Source													
Fund Name		Fund No		Exp/Enc	Con Appn	FY 2016	FY 2016 Anticipated	FY 2017	FY 2018	FY 2019	FY 2020	L Future FY	Inidentified Funding	Project Total
Refuse Disposal CIP Fund		700040	\$	- \$	397,858	- 4	- \$	- \$	- \$	- \$	- \$	5 - \$	- \$	397,858
	Total		\$	- \$	397,858 \$	- \$	- \$	- \$	- \$	- \$	- \$; - \$	- \$	397,858

South Chollas L	andfill / S00776	Landfills - Support	ing Fac / Struct
Council District:	4	Priority Score:	85
Community Plan:	Eastern Area (Mid-City)	Priority Category:	Medium
Project Status:	Continuing	Contact Information:	Purtee, Ray
Duration:	2000 - 2016		858-573-1208
Improv Type:	Betterment		rpurtee@sandiego.gov

tions and maintain regulatory compliance.

Description: This project provides for modifying the existing landfill gas collection system to enhance opera-Area Community Plan and is in conformance with the City's General Plan.

Justification: Federal and State waste disposal legislation require proper environmental safeguards to control Schedule: This project is scheduled to be completed by the end of the Fiscal Year 2016. landfill gas.

Summary of Project Changes: No significant change has been made to this project for Fiscal Year 2016.

Operating Budget Impact: None.

Expenditure by Funding Source													
Fund Name	Fund No	,	Exp/Enc	Con Appn	FY 2016	FY 2016 Anticipated	FY 2017	FY 2018	FY 2019	FY 2020	U Future FY	nidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$	788,476	\$ 987,524 \$	- (S - \$	- \$	- \$	- \$	- \$	- \$	- \$	1,776,000
Tota		\$	788,476	\$ 987,524 \$	- 9	5 - \$	- \$	- \$	- \$	- \$	- \$	- \$	1,776,000

South Chollas L	andfill Improvements / S00684	Landfills - Support	ing Fac / Struct
Council District:	4	Priority Score:	85
Community Plan:	Eastern Area (Mid-City)	Priority Category:	Medium
Project Status:	Continuing	Contact Information:	Fergusson, Craig
Duration:	2000 - 2016		858-627-3311
Improv Type:	Replacement		cfergusson@sandiego.gov

Description: This project provides for cover material, grading, drainage, and site improvements at the inactive South Chollas Landfill. The project will also result in improvements to the Chollas Operations Yard Area Community Plan and it is in conformance with the City's General Plan. required by the Regional Water Quality Control Board in order to bring the site into compliance. A Corrective Action Plan has been developed to identify the corrective measures and timelines to mitigate the groundwater issues.

Justification: This project is required to maintain compliance with various State and federal regulatory requirements and to avoid code violations.

Relationship to General and Community Plans: This project is consistent with the Mid-City: Eastern

Schedule: The City is in the process of awarding the construction contract for the grading, drainage, and site improvements of the Chollas Operations Yard. Construction began in Fiscal Year 2015 and will be completed in Fiscal Year 2016.

Summary of Project Changes: No significant changes have been made to this project for Fiscal Year 2016.

Operating Budget Impact: None.

	Expenditure by Funding Source											
Fund Name	Fund No	Exp/End	Con Appn	FY 2016	FY 2016 Anticipated	FY 2017	FY 2018	FY 2019	FY 2020	U Future FY	Inidentified Funding	Project Total
Fleet Services CIP Fund	400676	\$ 338,822	\$ 1,315,206 \$	- \$	s - \$	- \$	- \$	- \$	- \$	5 - \$	- \$	1,654,028
CIP Contributions from General Fund	400265	4,636,144	497,856	-	-	-		-	-	-	-	5,134,000
Refuse Disposal CIP Fund	700040	6,191,599	120,103	-	-	-	-	-	-	-	-	6,311,702
Water Utility - CIP Funding Source	700010	1,964,289	764,605	-	-	-	-	-	-	-	-	2,728,894
	Total	\$ 13,130,854	\$ 2,697,770 \$	- \$	5 - \$	- \$	- \$	- \$	- \$	5 - \$	- \$	15,828,624

Underground Ta	ink Program / AFA00002	Landfills	
Council District:	Citywide	Priority Score:	Annual
Community Plan:	Citywide	Priority Category:	Annual
Project Status:	Continuing	Contact Information:	Fergusson, Craig
Duration:	2010 - 2020		858-627-3311
Improv Type:	New		cfergusson@sandiego.gov

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Description: This project provides for implementation of the Citywide Underground Hazardous Materials Storage Tank Master Plan. The plan addresses the removal, installation, closure, site assessment and mitigation, replacement, testing, and rehabilitation of the 69 City-owned underground storage tanks (USTs). Site assessment and mitigation activities related to 11 unauthorized releases are ongoing to maintain regulatory compliance, eligibility for State reimbursement, protection of groundwater, and public health and safety.

Operating Budget Impact: None.

Relationship to General and Community Plans: This project is consistent with applicable community plans and is in conformance with the City's General Plan.

Schedule: There are no regulatory mandate-driven projects forseen in Fiscal Year 2016. Future funding needs will be identified as new regulatory mandates arise.

Summary of Project Changes: No significant change has been made to this project for Fiscal Year 2016.

Justification: Title 23, California Code of Regulations, Chapter 16 and the California Health and Safety Code, Chapter 6.7 establish guidelines and regulations for the design, installation, rehabilitation, testing and maintenance, and monthly facility inspections by a Designated UST Operator. Non-compliance with UST laws or site assessment and mitigation (SA/M) requirements would expose the City to civil penalties of up to \$10,000 per day per UST.

	Expenditure by Funding Source												
Fund Name	Fund No)	Exp/Enc	Con Appn	FY 2016	FY 2016 Anticipated	FY 2017	FY 2018	FY 2019	FY 2020	Future FY	Unidentified Funding	Project Total
Gen Serv - Maint/Impr	400179	\$	- 5	\$ 368,961 \$	- 9	- \$	- \$	- \$	- \$	- 9	6 - \$	- \$	368,961
UST Cleanup Fd	400629		-	38,603	-	-	-	-	-	-	-	-	38,603
	Total	\$	- 9	\$ 407,565 \$	- \$	- \$	- \$	- \$	- \$	- \$	6 - \$	- \$	407,565

West Miramar La	andfill - Phase 2 / S00774	Bldg - Other City Fa	acility / Structures
Council District:	Citywide	Priority Score:	N/A
Community Plan:	Citywide	Priority Category:	N/A
Project Status:	Continuing	Contact Information:	Purtee, Ray
Duration:	1996 - 2024		858-573-1208
Improv Type:	Betterment		rpurtee@sandiego.gov

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Description: This project provides for a landfill gas collection system for the West Miramar Phase II Landfill. Bio-degradation of buried waste produces landfill gas. The landfill gas collection system consists of a network of gas extraction wells connected by piping.

Justification: This improvement is required to maintain compliance with various State and federal regulatory requirements. It will also prevent code violations and enhance public health and safety.

Operating Budget Impact: None.

Relationship to General and Community Plans: This project is located on federal property and there is no community planning area. This project is in conformance with the City's General Plan.

Schedule: Design and construction began in Fiscal Year 1996 and will continue through the life of the landfill which is anticipated to close in Fiscal Year 2024. The next scheduled project is the design and construction of the the landfill gas blower flare station. The station will mitigate landfill gas surface emissions and migration. Design was completed, construction began in Fiscal Year 2015 and is scheduled to be completed in Fiscal Year 2016.

Expenditure by Funding Source												
Fund Name	Fund No	Exp/Enc	Con Appn	FY 2016	FY 2016 Anticipated	FY 2017	FY 2018	FY 2019	FY 2020	U Future FY	nidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$ 1,183,261	\$ 1,876,739 \$	- 9	s - \$	- \$	- \$	- \$	- \$	- \$	- \$	3,060,000
	Total	\$ 1,183,261	\$ 1,876,739 \$	- \$; - \$	- \$	- \$	- \$	- \$	- \$	- \$	3,060,000

West Miramar R	efuse Disposal Fac Ph 2 / S01074	Landfills	
Council District:	Citywide	Priority Score:	89
Community Plan:	Citywide	Priority Category:	High
Project Status:	Continuing	Contact Information:	Thompson, Michael
Duration:	1988 - 2016		858-492-6151
Improv Type:	Betterment		mthompson@sandiego.gov

Description: This project provides for continuing development of the West Miramar Landfill, located southwest of Marine Corps Air Station Miramar. The facility will accommodate over 35 million cubic yards of refuse on 807 acres. Phase II will develop the second half of the facility, including design and construction of entry roads and drainage systems, excavation, federally-mandated liner systems, and stockpiling and spreading of earthen materials. This project also includes development of the General Development Plan elements for the entire site.

Justification: Improvements are required in order to ensure compliance with conditions set forth by the operations permit issued by the California Integrated Waste Management Board and the Regional Water Quality Control Board. In addition, the funding will provide for improvements related to drainage and stormwater runoff to ensure National Pollutant Discharge Elimination System regulatory compliance.

Operating Budget Impact: None.

Relationship to General and Community Plans: This project is located on federal property and there is no community planning area. This project is in conformance with the City's General Plan.

Schedule: This project is scheduled to be completed by the end of the Fiscal Year 2016.

Expenditure by Funding Source												
Fund Name	Fund No	Exp/Enc	Con Appn	FY 2016	FY 2016 Anticipated	FY 2017	FY 2018	FY 2019	FY 2020	U Future FY	nidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$ 37,775,016 \$	\$ 1,337,318 \$	- 4	- \$	- \$	- \$	- \$	- \$	- \$	- \$	39,112,334
	Total	\$ 37,775,016	\$ 1,337,318 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	39,112,334



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