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The Environmental Services Department (ESD) ensures City of San Diego residents are provided with a clean and safe environment. The Department operates a full-service landfill and maintains eight closed landfills and eight inactive burn sites. The landfill sites require sustained improvements related to landfill gas systems, groundwater monitoring networks, grading and slope work. ESD also manages the City's energy use and implements a variety of innovative programs focused on increasing energy efficiency at City facilities.

2016 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.

- Awarded contract for the design of a compressed natural gas fueling station at the ESD Collections Yard.
- Awarded a solar power purchase agreement to install solar photovoltaic systems at 25 City sites.
- Constructed landfill improvements at the Chollas Operations Yard. The project included extensive improvements to the cover and landfill gas collection system, storm water controls, materials storage areas, and other site infrastructure.

2017 CIP Goals

The Department will continue to promote sustainability and public health through its effective delivery of capital improvement projects. The following are ESD's goals for Fiscal Year 2017:

- Award contract to begin construction of a compressed natural gas fueling station. This project will provide natural gas to the City's refuse and recycling fleet, which is being coverted from diesel to compressed natural gas.
- Award Multiple Award Construction Contract (MACC) to continue energy efficiency upgrades at City facilities such as lighting and air conditioning in order to reduce energy consumption and costs.
- Continue the installation of solar photovoltaic systems project.
- Award a power purchase agreement to install solar photovoltaic systems which may include energy storage systems at various City sites and landfills.
- Award contract to retrofit approximately 14,000 street lights with energy efficient LED fixtures with adaptive controls.
- Award contract using Community Development Block Grant (CDBG) funding for ADA improvements and energy efficiency measures, including retrofitting existing interior and exterior lights with LED alternatives, replacing HVAC units, and installing integrated controls at the City Heights Recreation Center; Martin Luther King Recreation Center; Mid-City Police Station and Southeastern Police Station.
- Award the design and construction of the Miramar Landfill storm water basin using best management practices for improvements to remain compliant with new National Pollutant Discharge Elimination System (NPDES) requirements.
- Award the design and construction of the infrastructure required to utilize aerated static piles at the West Miramar Landfill Greenery and Composting Facility. Assembly Bill AB-1826 and the City's Zero Waste Plan dictate significant increases in organic recycling. Stricter air emission and run-off water standards necessitate covered/indoor compost piles.

- Award the design for a consolidated blower/flare system and well field improvements to facilitate the development of energy utilization projects and help the City obtain the highest and best value for the Miramar Landfill gas.
- Complete energy efficiency projects to upgrade the HVAC systems at Fire Station 31, Fire Station 37 and the Rancho Bernardo Library.
- Begin planning for a new Resource Recovery Facility intended to serve self-haul customers at the West Miramar Landfill.
- Begin planning for a new Organic Diversion Facility at the West Miramar Landfill to accummulate increases in food waste and green organics expected to be diverted from the waste stream as a result of Assembly Bill 1826.

Environmental Services: Capital Improvement Projects

Project	F	Prior iscal Years	FY2017 Adopted	Future Fiscal Years	P	roject Total
Aerated Static Pile System / S16053	\$	500,000	\$ -	\$ -	\$	500,000
CNG Fueling Station for Refuse & Recycling / \$15000		2,100,000	1,720,000	1,230,000		5,050,000
Citywide Energy Improvements / ABT00003		522,246	300,000	1,625,547		2,447,793
Future Waste Mgmt Disposal & Pro Fac / S01088		4,064,658	-	-		4,064,658
Minor Improvements to Landfills / AFA00001		1,634,975	-	-		1,634,975
Miramar Landfill Gas Recovery Improvemen / \$16052		1,000,000	-	-		1,000,000
Miramar Landfill Greenery Expansion / \$00975		397,858	-	-		397,858
Miramar Landfill Storm Water Improvement / S16054		1,000,000	-	-		1,000,000
Miramar PubTipping/Resource Recovery Ctr / \$16056		9,612,262	-	-		9,612,262
South Chollas Landfill Improvements / S00684		15,828,624	-	-		15,828,624
West Miramar Landfill - Phase 2 / S00774		3,060,000	-	-		3,060,000
Environmental Services Total	\$	39,720,624	\$ 2,020,000	\$ 2,855,547	\$	44,596,171



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Aerated Static Pile System / S16053

Landfills

Council District: 1

Community Plan: University

Project Status: Continuing
Duration: 2016 - 2019
Improv Type: New

Priority Score: 93
Priority Category: High

Contact Information: Thompson, Michael

858-573-1275 mthompson@sandiego.gov

Description: This project provides for the design and construction of infrastructure required to utilize aerated static piles at West Miramar Landfill's Greenery and composting facility. This methodology would be used to

Justification: AB-1826 and the City's zero waste plan dictate significant increases in organic recycling. Stricter air emission and run-off water standards necessitate covered/in-door compost piles.

enhance production and throughput of clean source separated food scraps and yard waste being composted.

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

Schedule: Advertisement and award to begin in Fiscal Year 2017. Construction is anticipated to begin in calendar year 2018.

Summary of Project Changes: This is a newly published project for Fiscal Year 2017.

Operating Budget Impact: None.

Fund Name	Fund No	Exp/Enc	Con Appn	FY 2017	FY 2017 Anticipated	FY 2018	FY 2019	FY 2020	FY 2021	l Future FY	Inidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$ -	\$ 500,000 \$	- (- \$	- \$	- \$	- \$	- \$	- \$	- \$	500,000
Total		\$ -	\$ 500,000 \$	- 9	- \$	- \$	- \$	- \$	- \$	- \$	- \$	500,000

New

CNG Fueling Station for Refuse & Recycling / S15000

Council District: 1

Improv Type:

Community Plan: University Project Status: Continuing Duration: 2015 - 2021

: 1

Landfills - Supporting Fac / Struct

Priority Score: 55
Priority Category: Low

Contact Information: Fergusson, Craig 858-627-3311

cfergusson@sandiego.gov

crergusson@sandiego.gov

Description: This project provides for the design and construction of a compressed natural gas (CNG) fueling station at the Environmental Services Operations Station located at 8353 Miramar Place. In conjunction with 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 sulphur 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.

Operating Budget Impact: Provides for a positive operating budget impact by saving fuel costs to the General Fund and Recycling Enterprise Fund.

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 2017 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 \$1.7 million has been added to this project of which \$900,000 from General Fund CIP and \$820,000 from Recycling Fund CIP in Fiscal Year 2017. In Fiscal Year 2018 total project cost increased by \$300,000 to \$1.2 million from the General Fund CIP.

Fund Name	Fund No	Exp/Enc	Con Appn	FY 2017	FY 2017 Anticipated	FY 2018	FY 2019	FY 2020	FY 2021	Future FY	Unidentified Funding	Project Total
CIP Contributions from General Fund	400265	\$ 463,350 \$	436,650 \$	900,000 \$	- \$	1,230,000 \$	- \$	- \$	- \$	- \$	- \$	3,030,000
Recycling Fund CIP Fund	700049	416,089	783,911	820,000	-	=	Ē	=	=	=	-	2,020,000
Tota	l	\$ 879,439 \$	1,220,561 \$	1,720,000 \$	- \$	1,230,000 \$	- \$	- \$	- \$	- \$	- \$	5,050,000

Citywide Energy Improvements / ABT00003

Annual Council District: Citywide Priority Score: Community Plan: Citywide **Priority Category:** Annual Project Status: Continuing Contact Information: Olson, Bryan **Duration:** 2010 - 2024 858-492-5059 Improv Type: **Betterment** olsonb@sandiego.gov

Description: This annual allocation will provide for energy efficiency improvements in City facilities. Projects typically address lighting, air conditioning, chiller, pumping and fan systems, invertors, and City-owned nity plans and are in conformance with the City's General Plan. solar systems. Newer, more efficient technologies greatly reduce energy consumption.

Justification: Energy efficiency improvements repay capital costs in one to nine years, depending upon the project. The energy savings continue each year thereafter. Energy audits are performed in a variety of Cityowned facilities to identify opportunities for energy savings.

Operating Budget Impact: There will be energy cost savings related to the energy efficiency projects for various City departments.

Relationship to General and Community Plans: These projects are consistent with applicable commu-

Schedule: Projects will be scheduled on a priority basis.

Bldg - Other City Facility / Structures

Summary of Project Changes: \$300,000 of Energy Conservation funding was added in Fiscal Year 2017 due to San Diego Gas & Electric rebates and incentives. Additionally, \$1.6 million is anticipated to be added in Fiscal Year 2017 for CDBG funded projects.

Fund Name	Fund No	,	Exp/Enc	Con Appn	1	FY 2017	FY 2017 Anticipated	FY 2018	FY 2019	FY 2020	FY 2021	Future FY	Unidentified Funding	Project Total
Energy Conservation Program CIP Fund	200225	\$	- \$	\$ 522,246	\$	300,000 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	822,246
Grant Fund - Federal	600000		-	=		-	1,625,547	=	=	÷	=	=	-	1,625,547
Tota	ı	\$	- \$	522,246	\$	300,000 \$	1,625,547 \$	- \$	- \$	- \$	- \$	- \$	- \$	2,447,793

Future Waste Mgmt Disposal & Pro Fac / S01088

Landfills - Supporting Fac / Struct

Council District: Citywide Priority Score: Community Plan: Citywide **Priority Category:** High

Contact Information: Fergusson, Craig Project Status: Continuing **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.

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 residue from other solid waste disposal facilities.

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: Ongoing efforts are being made to identify solid waste processing and disposal options. The project is scheduled to continue through Fiscal Year 2018.

Summary of Project Changes: In Fiscal Year 2016 Council approved the deappropriation of \$9.5 million (R-310504).

Fund Name	Fund No	,	Exp/Enc	Con Appn	FY 2017	FY 2017 Anticipated	FY 2018	FY 2019	FY 2020	FY 2021	Future FY	Unidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$	3,676,522	\$ 388,136 \$	- (- \$	- \$	- \$	- \$	- \$	- :	\$ - \$	4,064,658
Tota		\$	3,676,522	\$ 388,136 \$	-	- \$	- \$	- \$	- \$	- \$	- :	- \$	4,064,658

Minor Improvements to Landfills / AFA00001

Council District: Citywide Priority Score: Annual Community Plan: Citywide **Priority Category:** Annual Project Status: Continuing Contact Information: Fergusson, Craig **Duration:** 2010 - 2024 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 monitoring programs.

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.

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: No significant change has been made to this project for Fiscal Year 2017.

Expenditure by Funding Source

Landfills

Fund Name	Fund No	Ex	xp/Enc	Con Appn	FY 2017	FY 2017 Anticipated	FY 2018	FY 2019	FY 2020	FY 2021	l Future FY	Inidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$	- \$	1,634,975 \$	- 9	- \$	- \$	- \$	- \$	- \$	- \$	- \$	1,634,975
Tota	al	\$	- \$	1,634,975 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	1,634,975

Miramar Landfill Gas Recovery Improvemen / S16052

Landfills

Council District:	1	Priority Score:	88
Community Plan:	: University	Priority Category:	Medium
Project Status:	Continuing	Contact Information:	Purtee, Ray
Duration:	2016 - 2019		858-573-1208
Improv Type:	New		rpurtee@sandiego.gov

all collectable landfill gas is extracted and distributable to energy utilization facilities. In 2019 the remaining no community planning area. This project is in conformance with the City's General Plan. privately owned portion of the well field will be purchased as the City takes back the gas rights.

Justification: This project is needed to ensure the landfill will meet regulatory requirements concerning gas and be completed by January 1, 2019. emissions and greenhouse gas reduction measures.

Description: This project provides for a consolidated blower system and well field improvements to ensure **Relationship to General and Community Plans:** This project is located on federal property and there is

Schedule: Design and permitting will begin in Fiscal Year 2017. Construction will begin in Fiscal Year 2018

Summary of Project Changes: This is a newly published project for Fiscal Year 2017.

Operating Budget Impact: None.

Fund Name	Fund No	Exp/Enc	Con Appn	FY 2017	FY 2017 Anticipated	FY 2018	FY 2019	FY 2020	FY 2021	U Future FY	nidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$ -	\$ 1,000,000 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	1,000,000
Tota		\$ -	\$ 1,000,000 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	1,000,000

Miramar Landfill Greenery Expansion / S00975

Landfills

Council District:	
Community Plan:	Citywide
Project Status:	Continuing
Duration:	2009 - 2018
Improv Type:	Betterment

Priority Score: 53
Priority Category: Low

Contact Information: Fergusson, Craig 858-292-6477

cfergusson@sandiego.gov

Description: This project provides for the expansion of the existing Miramar Greenery currently located at the Miramar Landfill. The expansion of curbside greens collection to additional neighborhoods in the City will 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.

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: 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 2017. An anaerobic digestion facility will allow the Miramar Greenery to intake and process food waste into commodities such as compost.

Summary of Project Changes: No significant change has been made to this project for Fiscal Year 2017.

Fund Name	Fund No	ا	Exp/Enc	Con Appn	FY 2017	FY 2017 Anticipated	FY 2018	FY 2019	FY 2020	FY 2021	Future FY	Unidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$	- \$	397,858 \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	\$ - \$	397,858
Tota		\$	- \$	397,858 \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	\$ - \$	397,858

Miramar Landfill Storm Water Improvement / S16054

Priority Score: 90 **Priority Category:** High

Landfills

Contact Information: Fergusson, Craig 858-627-3311

cfergusson@sandiego.gov

Project Status: Continuing **Duration:** 2016 - 2019 Improv Type: New

Community Plan: University

Council District: 1

Description: This project provides for the design and construction of Storm Water Basin and Best Management Practices (BMP) improvements. To remain in compliance with new Industrial National Pollutant Elimination System (NPDES) requirements.

Justification: The storm water basin and associated BMP engineered structures at the Miramar Landfill must be properly designed and constructed to ensure compliance with NPDES requirements and to avoid regulatory violations.

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 currently in the planning and design stage. Construction of basin and BMP improvements is expected to commence by Fiscal Year 2020.

Summary of Project Changes: This is a newly published project for Fiscal Year 2017.

Fund Name	Fund No	Exp/Enc	Con Appn	FY 2017	FY 2017 Anticipated	FY 2018	FY 2019	FY 2020	FY 2021	Future FY	Unidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$ - \$	1,000,000 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	1,000,000
To	tal	\$ - \$	1,000,000 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	1,000,000

Miramar PubTipping/Resource Recovery Ctr / S16056

Council District: 6 Community Plan: Kearny Mesa

Project Status: Continuing **Duration:** 2016 - 2019

Improv Type: New Landfills

Priority Score: 89 **Priority Category:** Medium

Contact Information: Fergusson, Craig

858-627-3311

cfergusson@sandiego.gov

Description: This project will establish a new refuse tipping, sorting, and transfer facility at Miramar Landfill. The facility will permit the ongoing collection of refuse within the City of San Diego once the Miramar Landfill reaches capacity and is put into permanent closure, currently anticipated to occur in 2030 with the implantation of the zero waste imitative. The facility will provide the most efficient management of refuse to ensure that incoming loads are processed/sorted to separate organic materials for renewable energy production, recyclables which had not been properly sorted/separated by City residents at the point of curbside collection, and waste streams to be hauled to off-site locations for disposal.

Justification: This project will help ensure the City meets its goals associated with the Zero Waste Initiative and the refuse collection can continue within the City of San Diego once the Miramar Landfill closes.

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 currently in the planning stage with facility construction targeted to commence by Fiscal Year 2020.

Summary of Project Changes: This is a newly published project for Fiscal Year 2017.

Fund Name	Fund No	Exp/En	Con Appn	FY 2017	FY 2017 Anticipated	FY 2018	FY 2019	FY 2020	FY 2021	U Future FY	Inidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$	- \$ 9,612,262	\$ -	- \$	- \$	- \$	- \$	- \$	- \$	- \$	9,612,262
Tota	l	\$	- \$ 9,612,262	\$ -	- \$	- \$	- \$	- \$	- \$	- \$	- \$	9,612,262

South Chollas Landfill Improvements / S00684

Council District: 4 Community Plan: Eastern Area (Mid-City)

Project Status: Continuing **Duration:** 2000 - 2017

Improv Type: Replacement Landfills - Supporting Fac / Struct

Priority Score: 85 **Priority Category:** Medium

Contact Information: Fergusson, Craig

858-627-3311

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 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.

Operating Budget Impact: None.

Relationship to General and Community Plans: This project is consistent with the Mid-City: Eastern Area Community Plan and it is in conformance with the City's General Plan.

Schedule: Construction is expected to be completed in Fiscal Year 2016.

Summary of Project Changes: Project schedule was updated for Fiscal Year 2017.

Fund Name	Fund No	Exp/Enc	Con Appn	FY 2017	FY 2017 Anticipated	FY 2018	FY 2019	FY 2020	FY 2021	U Future FY	nidentified Funding	Project Total
Fleet Services CIP Fund	400676	\$ 958,182	\$ 695,846 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	1,654,028
CIP Contributions from General Fund	400265	4,658,719	475,281	-	-	-	-	-	-	-	-	5,134,000
Refuse Disposal CIP Fund	700040	6,199,012	112,690	-	-	-	-	-	-	-	-	6,311,702
Water Utility - CIP Funding Source	700010	2,358,950	369,944	-	-	-	-	-	-	-	-	2,728,894
Total		\$ 14,174,863	\$ 1,653,761 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	15,828,624

West Miramar Landfill - Phase 2 / S00774

Council District:CitywidePriority Score:N/ACommunity Plan:CitywidePriority Category:N/AProject Status:ContinuingContact Information:Purtee, RayDuration:1996 - 2024858-573-1208Improv Type:Bettermentrpurtee@sandiego.gov

Bldg - Other City Facility / Structures

Description: This project provides for a landfill gas collection system for the West Miramar Landfill - Phase 2. 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 major project is the design and construction of a consolidated landfill gas blower flare station. The station will mitigate landfill gas surface emissions and migration. Design was completed and permitting is in progress. Construction will begin in Fiscal Year 2018 and is scheduled to be to be completed in Fiscal Year 2019.

Summary of Project Changes: Project schedule has been updated for Fiscal Year 2017.

Fund Name	Fund No	Exp/Enc	Con Appn	FY 2017	FY 2017 Anticipated	FY 2018	FY 2019	FY 2020	FY 2021	Future FY	Unidentified Funding	Project Total
Refuse Disposal CIP Fund	700040	\$ 1,183,261	\$ 1,876,739 \$	- (- \$	- \$	- \$	- \$	- \$	- (- \$	3,060,000
Tota		\$ 1,183,261	\$ 1,876,739 \$	- !	- \$	- \$	- \$	- \$	- \$	- \$	- \$	3,060,000



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