

# WASTE MANAGEMENT & RECYCLING

## EXECUTIVE SUMMARY

The Department of Waste Management and Recycling (DWMR) Five-Year Capital Improvement Plan (CIP) includes department-wide equipment replacements and projects at the Kiefer Landfill and North Area Recovery Station. Kiefer Landfill projects are required for ongoing landfill operations and are prescribed by various state regulations and permit conditions. Ongoing Kiefer Landfill projects include expansion of the landfill gas collection system and construction of final cover. North Area Recovery Station capital projects will improve and repair the site as mandated by state regulations and permit conditions. The DWMR continues to replace fully-depreciated equipment for solid waste and recycling collection, recovery, and disposal operations. All DWMR capital projects are funded through the Solid Waste Enterprise Fund without any contributions from the County General Fund. The projects proposed to be completed in the 2018-19 Fiscal Year Capital Budget include an "Operating Budget Impact" statement.

The following is a representative sample of the Kiefer Landfill and the North Area Recovery Station projects in the DWMR 5-year CIP.

- **Kiefer Landfill – Gas and Leachate Management Systems Improvements** – This project involves the expansion of the landfill gas collection system into current and planned modules. This will allow the landfill operation to remain in compliance with regulatory requirements. Work will include the replacement of various flare station and energy plant items. **Estimated Total Cost: \$12,375,305**
- **North Area Recovery Station – Equipment Maintenance Facility** – This project involves the design and construction to replace the existing equipment maintenance and repair facility. The existing facility is undersized and would require extensive improvements for ongoing use. **Estimated Total Cost: \$4,109,002**

# WASTE MANAGEMENT & RECYCLING

## PROJECT SUMMARY

Projects Not Appearing on Previous 5-Year CIP are Highlighted								
PROJ. #	PROJECT	Prior Years	FISCAL YEAR 2018-19	FISCAL YEAR 2019-20	FISCAL YEAR 2020-21	FISCAL YEAR 2021-22	FISCAL YEAR 2022-23	TOTAL
1	Can Yard - Cart Delivery Vehicles (2)	0	201,571	0	0	0	0	\$201,571
2	Collections - Automated Collection Truck 2-Axle	0	451,855	0	0	0	0	\$451,855
3	Collections - Automated Collection Trucks 3-Axle (7)	0	3,262,000	0	0	0	0	\$3,262,000
4	Collections - Knuckle Boom Truck	0	275,000	0	0	0	0	\$275,000
5	Collections - RFID / GPS System	0	600,000	0	0	0	0	\$600,000
6	Equipment Replacements	0	0	5,531,657	3,159,303	4,061,169	9,643,183	\$22,395,312
7	Kiefer Landfill - Backhoe	0	180,000	0	0	0	0	\$180,000
8	Kiefer Landfill - Frontage Road Improvements	0	250,000	0	0	0	0	\$250,000
9	Kiefer Landfill - Gas and Leachate Management Systems Improvements	7,663,657	726,020	1,142,815	1,298,498	718,693	825,622	\$12,375,305
10	Kiefer Landfill - Groundwater Remediation	670,909	618,000	0	0	0	0	\$1,288,909
11	Kiefer Landfill - Liner and Ancillary Features	246,566	6,363,498	18,569,268	0	110,000	17,632,026	\$42,921,358
12	Kiefer Landfill - Stormwater Improvements	0	325,467	0	0	0	0	\$325,467
13	North Area Recovery Station - Asphalt Pavement Rehabilitation	0	886,000	0	0	0	0	\$886,000
14	North Area Recovery Station - Equipment Maintenance Facility	109,002	4,000,000	0	0	0	0	\$4,109,002
15	North Area Recovery Station - Land Transfer	2,502,225	250,278	250,278	0	0	0	\$3,002,781
16	North Area Recovery Station - Transfer Tractors (4)	0	827,500	0	0	0	0	\$827,500
17	North Area Recovery Station - Transfer Trailers (3)	0	272,121	0	0	0	0	\$272,121
	<b>TOTAL</b>	<b>\$11,192,359</b>	<b>\$19,489,310</b>	<b>\$25,494,018</b>	<b>\$4,457,801</b>	<b>\$4,889,862</b>	<b>\$28,100,831</b>	<b>\$93,624,181</b>

# WASTE MANAGEMENT & RECYCLING

## PRIOR-YEAR COMPLETED/CANCELLED PROJECTS SUMMARY

PROJ #	PROJECT	PRIOR YEARS	FISCAL YEAR 2017-18	FISCAL YEAR 2018-19	FISCAL YEAR 2019-20	FISCAL YEAR 2020-21	FISCAL YEAR 2021-22	TOTAL	REASON DROPPED
1	Collections - Automated Collections Trucks 3-Axle with Tag	0	3,440,200	0	0	0	0	\$3,440,200	Completed
6	Kiefer Landfill - Eastside Electrical Supply	0	386,000	0	0	0	0	\$386,000	Completed
7	Kiefer Landfill - Fuel Truck	0	360,500	0	0	0	0	\$360,500	Completed
9	Kiefer Landfill - Groundwater Treatment Plant Wireless Communications System	0	150,000	0	0	0	0	\$150,000	Completed
11	Kiefer Landfill - Regenerative Air Sweeper	0	206,000	0	0	0	0	\$206,000	Completed
14	North Area Recovery Station - Loaded Trailer Parking Rehabilitation	0	886,800	0	0	0	0	\$886,800	Completed
15	North Area Recovery Station - Transfer Tractors	0	364,620	0	0	0	0	\$364,620	Completed
16	North Area Recovery Station - Transfer Trailers	0	253,380	0	0	0	0	\$253,380	Completed
1 New*	Collections - Boom Truck	0	275,000	0	0	0	0	\$275,000	Completed
	<b>TOTAL</b>	<b>\$0</b>	<b>\$6,322,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,322,500</b>	

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## Can Yard – Cart Delivery Vehicles (2)

4450 Roseville Road, North Highlands, CA 95660

Project #1

**Department:** Waste Management & Recycling

**Estimated Project Cost:** \$ 201,571

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise Fund Capital Outlay

### **Project Description:**

This project is for the purchase of two cart delivery trucks. These vehicles will be used to deliver and pick up garbage, recycling, and green waste carts to curbside customers. This purchase will replace two fully-depreciated vehicle in current use.



# WASTE MANAGEMENT & RECYCLING

## Can Yard - Cart Delivery Vehicles (2)

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	0	0	0	0	0	0
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	201,571	0	0	0	0	201,571
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>201,571</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>201,571</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund							
Capital Outlay	0	201,571	0	0	0	0	201,571
<b>TOTAL</b>	<b>0</b>	<b>201,571</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>201,571</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project will result in a decrease in operating costs due to less maintenance for new equipment.

## Collections- Automated Collection Truck 2- Axle

4450 Roseville Road, North Highlands, CA. 95660

Project #2

**Department:** Waste Management & Recycling

**Estimated Project Cost:** \$451,855

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise Fund Capital Outlay

### Project Description:

This project is for the purchase of one fully-automated side-loading collection truck. This will be a 2-axle truck, with tag axle, powered by compressed natural gas fuel with right-hand drive. This vehicle will be used primarily for dead-end street routes and as a backup vehicle. This purchase will replace a fully-depreciated vehicle in current use.



# WASTE MANAGEMENT & RECYCLING

## Collections – Automated Collection Truck 2-Axle

Estimated Project Costs	Prior Years	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21	Fiscal Year 2021-22	Fiscal Year 2022-23	Total
	Expenses	Budget	Budget	Budget	Budget	Budget	
Construction Costs	0	0	0	0	0	0	0
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/ Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	451,855	0	0	0	0	451,855
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>451,855</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>451,855</b>

Funding Sources	Prior Years	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21	Fiscal Year 2021-22	Fiscal Year 2022-23	Total
	Expenses	Budget	Budget	Budget	Budget	Budget	
Solid Waste Enterprise Fund							
Capital Outlay	0	451,855	0	0	0	0	451,855
<b>TOTAL</b>	<b>0</b>	<b>451,855</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>451,855</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project will result in a decrease in operating costs due to less maintenance for new equipment.

## Collections – Automated Collection Trucks 3-Axle (7)

4450 Roseville Road, North Highlands, CA. 95660

Project #3

**Department:** Waste Management and Recycling **Estimated Project Cost:** \$3,262,000

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise  
Fund Capital Outlay

### **Project Description:**

This project is for the purchase of seven fully-automated side-loading collection trucks. These vehicles will be 3-axle trucks, with tag axle, powered by compressed natural gas fuel with right-hand drive. This purchase will replace fully-depreciated vehicles in current use.





# WASTE MANAGEMENT & RECYCLING

## Collections – Automated Collection Trucks 3-Axle (7)

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	0	0	0	0	0	0
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	3,262,000	0	0	0	0	3,262,000
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>3,262,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,262,000</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund							
Capital Outlay	0	3,262,000	0	0	0	0	3,262,000
<b>TOTAL</b>	<b>0</b>	<b>3,262,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,262,000</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project will result in a decrease in operating costs due to less maintenance for new equipment.

## Collections – Knuckle Boom Truck

4450 Roseville Road, North Highlands, CA 95660

Project #4

**Department:** Waste Management and Recycling **Estimated Project Cost:** \$275,000

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise Fund Capital Outlay

### Project Description:

This project is for the purchase of one knuckle boom collection truck. This will be a 2 – axle truck, powered by compressed natural gas fuel. This vehicle will be used primarily for our Appointment Based Neighborhood Clean Up (ABNCU) routes. It will also be used to pick up illegally dumped rubbish piles in unincorporated Sacramento County. This purchase will replace a fully-depreciated vehicle in current use.



# WASTE MANAGEMENT & RECYCLING

## Collections – Knuckle Boom Truck

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	0	0	0	0	0	0
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	275,000	0	0	0	0	275,000
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>275,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>275,000</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund							
Capital Outlay	0	275,000	0	0	0	0	275,000
<b>TOTAL</b>	<b>0</b>	<b>275,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>275,000</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project will result in a decrease in operating costs due to less maintenance for new equipment.

# WASTE MANAGEMENT & RECYCLING

## Collections – RFID / GPS System

4450 Roseville Road, North Highlands, CA 95660

Project #5

**Department:** Waste Management & Recycling

**Estimated Project Cost:** \$ 600,000

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise Fund Capital Outlay

**Project Description:**

This project is to replace existing collection, transfer, and light vehicle GPS systems, and purchase radio frequency identification (RFID) readers in residential collection vehicles. These readers will be used to read the RFID tags assembled in the trash containers. This will allow the department to manage the individual container and customer accounts.

### Collections - RFID / GPS System

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	0	0	0	0	0	0
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	600,000	0	0	0	0	600,000
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>600,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>600,000</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund Capital Outlay	0	600,000	0	0	0	0	600,000
<b>TOTAL</b>	<b>0</b>	<b>600,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>600,000</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project will result in a decrease in operating costs due to less maintenance for new equipment.

# WASTE MANAGEMENT & RECYCLING

## Equipment Replacements

12701 Kiefer Boulevard, Sloughouse, CA 95683  
 4450 Roseville Road, North Highlands, CA 95660  
 9611 Conservation Road, Sacramento, CA 95827

Project #6

**Department:** Waste Management & Recycling      **Estimated Project Cost:** \$22,395,312

**Expected Completion Date:** 2023      **Funding Sources:** Solid Waste Enterprise Fund Capital Outlay

**Project Description:**

This project displays the amounts of anticipated equipment purchases to replace older equipment for various Collections, Landfill, Transfer, Engineering, and Special Waste programs.

### Equipment Replacements

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	0	0	0	0	0	0
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	5,531,657	3,159,303	4,061,169	9,643,183	22,395,312
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>5,531,657</b>	<b>3,159,303</b>	<b>4,061,169</b>	<b>9,643,183</b>	<b>22,395,312</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund Capital Outlay	0	0	5,531,657	3,159,303	4,061,169	9,643,183	22,395,312
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>5,531,657</b>	<b>3,159,303</b>	<b>4,061,169</b>	<b>9,643,183</b>	<b>22,395,312</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project will result in a decrease in operating costs due to less maintenance for new equipment.

## Kiefer Landfill – Backhoe

12701 Kiefer Boulevard, Sloughouse, CA 95683

Project #7

**Department:** Waste Management and Recycling **Estimated Project Cost:** \$180,000

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise  
Fund Capital Outlay

### Project Description:

This project is for a backhoe for Kiefer Landfill operations. This equipment will be powered by a Tier 4 or higher diesel engine to comply with CARB rules. This purchase will replace a fully-depreciated unit in current use.



# WASTE MANAGEMENT & RECYCLING

## Kiefer Landfill – Backhoe

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	0	0	0	0	0	0
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	180,000	0	0	0	0	180,000
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>180,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>180,000</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund							
Capital Outlay	0	180,000	0	0	0	0	180,000
<b>TOTAL</b>	<b>0</b>	<b>180,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>180,000</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project will result in a decrease in operation costs due to less maintenance for new equipment and a cleaner tier 4 or higher unit.

# WASTE MANAGEMENT & RECYCLING

## Kiefer Landfill - Frontage Road Improvements

12701 Kiefer Boulevard, Sloughouse, CA 95683

Project # 8

**Department:** Waste Management & Recycling

**Estimated Project Cost:** \$250,000

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise Fund Capital Outlay

**Project Description:**

This project seeks to regrade the land around the existing wells along Kiefer Blvd., relocate existing fence, apply a rock surface for all weather access, and install culverts to maintain drainage while expanding the parking area. The project will allow landfill staff space to park a vehicle along Kiefer Blvd while servicing water wells and other pipeline features.

### Kiefer Landfill - Frontage Road Improvements

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	200,000	0	0	0	0	200,000
Project Management/ Design (In-House)	0	50,000	0	0	0	0	50,000
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>250,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>250,000</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund Capital Outlay	0	250,000	0	0	0	0	250,000
<b>TOTAL</b>	<b>0</b>	<b>250,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>250,000</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget analysis	Project will cause no change to the operating budget.



## Kiefer Landfill – Gas and Leachate Management Systems Improvements

12701 Kiefer Boulevard, Sloughouse, CA 95683

Project #9

**Department:** Waste Management & Recycling

**Estimated Project Cost:** \$12,375,305

**Expected Completion Date:** 2023

**Funding Sources:** Solid Waste Enterprise Fund Capital Outlay

### Project Description:

This project includes expansion of the Kiefer Landfill gas collection system into Module 3 (M3) and installation of additional gas and leachate infrastructure in and around modules M1, M1-L, and M2. Additional gas collectors are required to maintain compliance with regulatory requirements. The project will involve the installation of new and replacement wells, horizontal gas collectors, and new piping. Leachate recirculation system components will be installed in module M3. This budget also includes costs for scheduled replacement of various flare station and energy plant equipment items.



# WASTE MANAGEMENT & RECYCLING

## Kiefer Landfill – Gas and Leachate Management Systems Improvements

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	7,663,657	413,930	298,100	646,520	385,820	522,280	9,930,307
Project Management/ Design (In-House)	0	41,393	29,810	64,652	38,582	52,228	226,665
Project Management/ Design (Consultant)	0	20,697	14,905	32,326	19,291	26,114	113,333
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	250,000	800,000	555,000	275,000	225,000	2,105,000
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>7,663,657</b>	<b>726,020</b>	<b>1,142,815</b>	<b>1,298,498</b>	<b>718,693</b>	<b>825,622</b>	<b>12,375,305</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund							
Capital Outlay	7,663,657	726,020	1,142,815	1,298,498	718,693	825,622	12,375,305
<b>TOTAL</b>	<b>7,663,657</b>	<b>726,020</b>	<b>1,142,815</b>	<b>1,298,498</b>	<b>718,693</b>	<b>825,622</b>	<b>12,375,305</b>

### Project Analysis:

Analysis Done	Analysis Results
Operating budget impact analyzed	The project will result in an increase in operating costs due to installation of new facilities.
Age of existing facility/system/equipment	The original Module M1 landfill gas extraction wells were installed during 1997. System expansion has been ongoing. Wells require replacement when no longer effectively collecting landfill gas.

# WASTE MANAGEMENT & RECYCLING

## Kiefer Landfill - Groundwater Remediation

12701 Kiefer Boulevard, Sloughouse, CA 95683

Project #10

**Department:** Waste Management and Recycling    **Estimated Project Cost:** \$1,288,909

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise Fund Capital Outlay

**Project Description:**

This project includes design and construction to replace an extraction well that is no longer functional. Due to migrating groundwater contamination, the new well will be larger than the old well, and be relocated based on consultant studies.

### Kiefer Landfill - Groundwater Remediation

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	550,000	0	0	0	0	550,000
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	68,000	0	0	0	0	68,000
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	670,909	0	0	0	0	0	670,909
<b>TOTAL</b>	<b>670,909</b>	<b>618,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,288,909</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-21 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund Capital Outlay	670,909	618,000	0	0	0	0	1,288,909
<b>TOTAL</b>	<b>670,909</b>	<b>618,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,288,909</b>

# WASTE MANAGEMENT & RECYCLING

## Project Analysis:

<b>Analysis Done</b>	<b>Analysis Results</b>
Operating budget impact analyzed	This project will result in an increase in current operating costs, but future long term operating costs will be minimized due to earlier capture of migrating groundwater contamination.
Age of existing facility/system/equipment	Existing well is 25 years old.

## Kiefer Landfill – Liner and Ancillary Features

12701 Kiefer Boulevard, Sloughouse, CA 95683

Project #11

**Department:** Waste Management & Recycling

**Estimated Project Cost:** \$42,921,358

**Expected Completion Date:** 2023

**Funding Sources:** Solid Waste Enterprise  
Fund Capital Outlay

**Project Description:**

This project includes the planning, design, construction, construction management, inspections, reporting, and oversight associated with construction of prepared excavation, landfill liner, and leachate collection, landfill gas piping systems, infrastructure, drainage, and roadway for the Kiefer Landfill. The project will be constructed over multiple fiscal years. Liner and supporting infrastructure is planned to be constructed in module M4 during 2019-23.



# WASTE MANAGEMENT & RECYCLING

## Kiefer Landfill – Liner and Ancillary Features

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	6,060,474	17,685,017	0	0	16,792,406	40,537,897
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	246,566	0	0	0	110,000	0	356,566
Construction Fees and Services	0	303,024	884,251	0	0	839,620	2,026,895
Right-of-way / Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>246,566</b>	<b>6,363,498</b>	<b>18,569,268</b>	<b>0</b>	<b>110,000</b>	<b>17,632,026</b>	<b>42,921,358</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund							
Capital Outlay	246,566	6,363,498	18,569,268	0	110,000	17,632,026	42,921,358
<b>TOTAL</b>	<b>246,566</b>	<b>6,363,498</b>	<b>18,569,268</b>	<b>0</b>	<b>110,000</b>	<b>17,632,026</b>	<b>42,921,358</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	The project will result in an increase in operating costs due to installation of new facilities.

## Kiefer Landfill – Stormwater Improvements

12701 Kiefer Blvd., Sloughouse, CA 95683

Project #12

**Department:** Waste Management & Recycling

**Estimated Project Cost:** \$325,467

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise  
Fund Capital Outlay

**Project Description:**

This project includes the design, construction, construction management, inspections, and reporting associated with drainage improvements at the Kiefer Landfill site, including the Kiefer Treatment Plant sedimentation basin, culverts, and modified drainage inlets.



# WASTE MANAGEMENT & RECYCLING

## Kiefer Landfill – Stormwater Improvements

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	309,969	0	0	0	0	309,969
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	15,498	0	0	0	0	15,498
Right-of-way / Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>325,467</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>325,467</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund							
Capital Outlay	0	325,467	0	0	0	0	325,467
<b>TOTAL</b>	<b>0</b>	<b>325,467</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>325,467</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	The project will not result in a significant impact to existing operating costs.



## North Area Recovery Station – Asphalt Pavement Rehabilitation

4450 Roseville Road, North Highlands, CA 95660

Project #13

**Department:** Waste Management & Recycling

**Estimated Project Cost:** \$886,000

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise  
Fund Capital Outlay

**Project Description:**

This project is for the replacement of 65,000 square feet of asphalt surfaces at the North Area Recovery Station. This project is expected to result in a 10-15 year service life for the new pavement.

Future phases of this ongoing project include design, construction, construction management, and inspection for the repair and reconstruction of all asphalt pavement surfaces at the North Area Recovery Station.

# WASTE MANAGEMENT & RECYCLING

## North Area Recovery Station – Asphalt Pavement Rehabilitation

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	886,000	0	0	0	0	886,000
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way / Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>886,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>886,000</b>

  

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund							
Capital Outlay	0	886,000	0	0	0	0	886,000
<b>TOTAL</b>	<b>0</b>	<b>886,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>886,000</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	The operating cost of this project has no measureable impact on the operating budget.
Age of existing facility/system/equipment	Pavement replacement is planned in accordance with an engineered pavement management plan.

# WASTE MANAGEMENT & RECYCLING

## North Area Recovery Station - Equipment Maintenance Facility

4450 Roseville Road, North Highlands, CA 95660

Project #14

**Department:** Waste Management & Recycling

**Estimated Project Cost:** \$4,109,002

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise Fund Capital Outlay

**Project Description:**

This project includes design and construction to improve the existing Equipment Maintenance Facility, most of which was built in 1973. The existing facility lacks code-compliant features for the servicing of natural gas vehicles. Intended electrical and mechanical improvements include modified heating, lighting, ventilation, alarms/controls, and emergency power. Intended structural improvements include features to promote safer and more efficient work flow for staff.

### North Area Recovery Station - Equipment Maintenance Facility

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	2,880,000	0	0	0	0	2,880,000
Project Management/ Design (In-House)	0	160,000	0	0	0	0	160,000
Project Management/ Design (Consultant)	109,002	550,000	0	0	0	0	659,002
Construction Fees and Services	0	160,000	0	0	0	0	160,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other (9 mos. Temp. Shop)	0	250,000	0	0	0	0	250,000
<b>TOTAL</b>	<b>109,002</b>	<b>4,000,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,109,002</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund Capital Outlay	109,002	4,000,000	0	0	0	0	4,109,002
<b>TOTAL</b>	<b>109,002</b>	<b>4,000,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,109,002</b>

# WASTE MANAGEMENT & RECYCLING

## Project Analysis:

<b>Analysis Done</b>	<b>Analysis Results</b>
Operating budget impact analyzed	This project will result in a decrease in operating costs due to less maintenance and increased operational efficiency.
Age of existing facility/system/equipment	Existing facility is 31 to 44 years old.

## North Area Recovery Station – Land Transfer

4450 Roseville Road, North Highlands, CA 95660

Project #15

**Department:** Waste Management & Recycling

**Estimated Project Cost:** \$3,002,781

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise  
Fund Capital Outlay

**Project Description:**

The Sacramento County Department of Waste Management and Recycling (DWMR) has agreed to the transfer of land located at the North Area Recovery Station from the Sacramento County Department of Economic Development and Intergovernmental Affairs (Econ Dev), and to complete the financial obligation agreed to in the June 22, 1999 Informational Report to the Board of Supervisors and the approved July 20, 1999 Board action, Resolution 99-0917.

The price for the transfer of the asset shall be two million, five hundred thousand dollars (\$2,500,000 plus interest). DWMR made the initial payment to Econ Dev of \$500,000 on July 1, 2009, and will continue to make annual payments of \$250,278 for ten years through July 1, 2019.

# WASTE MANAGEMENT & RECYCLING

## North Area Recovery Station - Land Transfer

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	0	0	0	0	0	0
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Land Transfer	2,502,225	250,278	250,278	0	0	0	3,002,781
<b>TOTAL</b>	<b>2,502,225</b>	<b>250,278</b>	<b>250,278</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,002,781</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund							
Capital Outlay	2,502,225	250,278	250,278	0	0	0	3,002,781
<b>TOTAL</b>	<b>2,502,225</b>	<b>250,278</b>	<b>250,278</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,002,781</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	This project has no measurable impact on the operating budget once complete.

## North Area Recovery Station – Transfer Tractors (4)

4450 Roseville Road, North Highlands, CA 95660

Project #16

**Department:** Waste Management & Recycling

**Estimated Project Cost:** \$827,500

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise  
Fund Capital Outlay

### Project Description:

This project is for the purchase of four transfer tractors. These transfer tractors will be used primarily at the North Area Recovery Station to transfer waste material from the North Area Recovery Station to the Kiefer Landfill. This project will replace fully-depreciated units in current use.



# WASTE MANAGEMENT & RECYCLING

## North Area Recovery Station - Transfer Tractors (4)

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	0	0	0	0	0	0
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	827,500	0	0	0	0	827,500
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>827,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>827,500</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund							
Capital Outlay	0	827,500	0	0	0	0	827,500
<b>TOTAL</b>	<b>0</b>	<b>827,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>827,500</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operational Analysis	Project will result in a decrease in operating costs due to less maintenance for new equipment.



## North Area Recovery Station – Transfer Trailers (3)

4450 Roseville Road, North Highlands, CA 95660

Project #17

**Department:** Waste Management & Recycling

**Estimated Project Cost:** \$ 272,121

**Expected Completion Date:** 2019

**Funding Sources:** Solid Waste Enterprise  
Fund Capital Outlay

### **Project Description:**

This project is for the purchase of three transfer trailers. These transfer trailers will be used primarily at the North Area Recovery Station to transfer waste material from the North Area Recovery Station to the Kiefer Landfill. These units will replace fully-depreciated units in current use.



# WASTE MANAGEMENT & RECYCLING

## North Area Recovery Station - Transfer Trailers (3)

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Construction Costs	0	0	0	0	0	0	0
Project Management/ Design (In-House)	0	0	0	0	0	0	0
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	0	0
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	272,121	0	0	0	0	272,121
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>272,121</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>272,121</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Fiscal Year 2021-22 Budget	Fiscal Year 2022-23 Budget	Total
Solid Waste Enterprise Fund							
Capital Outlay	0	272,121	0	0	0	0	272,121
<b>TOTAL</b>	<b>0</b>	<b>272,121</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>272,121</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project will result in a decrease in operating costs due to less maintenance for new equipment.