

**5 YEAR FACILITIES REPLACEMENT PROGRAM**

**AND**

**5 YEAR CAPITAL IMPROVEMENT PROGRAM**

**FY 2011-2016**

ADOPTED June 9, 2011

## Introduction

The Mt. View Sanitary District was established in 1923 to provide sewer service to the unincorporated area east of the City of Martinez. The District began developing a system of sewers which initially discharged to a community septic tank. In 1951, the District constructed a primary treatment plant which discharged to Peyton Slough. In 1968, the plant was expanded to provide full secondary treatment. A marsh system (Moorhen Marsh) was developed in the 1970's and has met the District's disposal needs in lieu of a deep water outfall into the San Francisco Bay.

In 1986, ammonia removal facilities were installed. In 1994, the District became the first municipal agency in Northern California to install ultraviolet disinfection facilities and eliminate the need for chlorine as a disinfectant.

The District has a long history of planning for and meeting its capital and facilities replacement responsibilities. The District prepared a Long Range Plan in 1986 that identified the need for \$13 million of trunk sewer construction, pump station improvements, and enlargement and improvement of the District's treatment facilities. When the 1986 Long Range Plan was updated in 1998, all but five of the recommended sewer facilities had been constructed and all of the objectives of the recommended treatment plant improvements had been met.

The 1998 Long Range Plan identified \$4,000,000 recommended sewer system improvements, computerized mapping, pump station improvements, treatment plant improvements, and reclamation program improvements. The primary drivers for these projects were repair and replacement of aging facilities and the need for additional capacity to address anticipated growth. In the intervening years, collection system capacity was added as development occurred.

In 2009, the District adopted a Sewer System Management Plan (SSMP) that required condition inspection of the District's collection system, increased maintenance of collection system improvements, and repair and replacement of deficient facilities. Through implementation of the SSMP, the District has effectively reduced the number and severity of sanitary sewer overflows through a combination of increased maintenance of problem areas and cost effective replacement or repair of deficient sewers through the District's Facilities Replacement Program.

In 2011, the District completed a System Reliability Evaluation (SRE) to identify the condition and capacity of the Wastewater Treatment Plant. The SRE identified approximately \$31.7 million in improvements over the next 20 years. The SRE assumes growth, similar to the growth anticipated by the 1998 Long Range Plan and later years' projects (approximately \$11 million) are primarily driven by capacity required to address long-term future growth

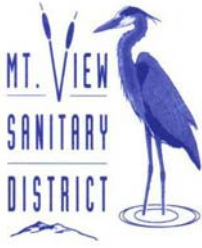
## Facilities Replacement and Capital Improvement Programs

The following pages provide a summary of both the Facilities Replacement and Capital Improvement Programs developed from Long Range Plan, the SSMP, and the SRE. In addition to these previous studies, the Capital Improvement Plan includes development of a collection system hydraulic model and marsh management plan updates that will likely identify additional repair and capital project needs.

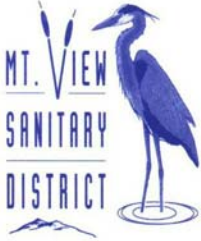
The FY 2011 – 2016 5-year Facilities Replacement and Capital Improvement Plans represent District management’s perceptions of the likely scenario with respect to growth within the District, available funding, and anticipated project costs. It is management’s intention to review this 5 year plan at least biennially and with any major change in the rate of development within the District.

Table 1 presents the 5-year Facilities Replacement Plan identifying project titles, timing and budgets.

Table 2 presents the District’s Capital Improvement Plan in four phases, with Phase 1 representing the FY 2011-2016 5 Year CIP.



## **FACILITIES REPLACEMENT PROGRAM PROJECT DESCRIPTIONS**



## FUND 3410 – REPAIR AND REPLACEMENT – PHASE 1

**Project Name:** Recirculation Pump / Secondary Clarifier Isolation Project

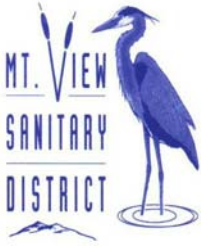
**Project Description:** Install valve or gate to reliably isolate the Recirculation Pump Station and the Secondary Clarifier to keep primary effluent flow from entering the Secondary Clarifier.

**Funded/Unfunded:** Funded

**Estimated Date of Completion:** June 30, 2012

**Justification:** Identified in 2010 System Reliability Evaluation

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem	30.0					30.0
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>		<b>\$30.0</b>					<b>\$30.0</b>
Expenses	Initiation	1.5					1.5
	Design	7.5					7.5
	Construction	18.0					18.0
	Closeout	3.0					3.0
<b>Expenses Total</b>		<b>\$30.0</b>					<b>\$30.0</b>



## FUND 3410 – REPAIR AND REPLACEMENT – PHASE 1

**Project Name:** Secondary Digester 3-way Pressure Relief Valves

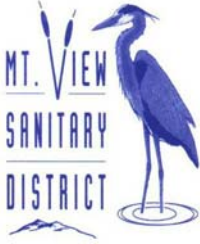
**Project Description:** Equip both digesters with an additional pressure relief valve (PRV) with three way plug valve to prevent the potential safety issue of isolating digester gas in the digester head space which could potentially cause structural failure of the digester roof.

**Funded/Unfunded:** Funded

**Estimated Date of Completion:** June 30, 2012 :Note must follow Digester Cleaning Project

**Justification:** Identified in 2010 System Reliability Evaluation

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem	30.0					30.0
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>		<b>\$30.0</b>					<b>\$30.0</b>
Expenses	Initiation	1.5					1.5
	Design	7.5					7.5
	Construction	18.0					18.0
	Closeout	3.0					3.0
<b>Expenses Total</b>		<b>\$30.0</b>					<b>\$30.0</b>



## FUND 3410 – REPAIR AND REPLACEMENT – PHASE 1

**Project Name:** Annual Collection System Rehabilitation Projects

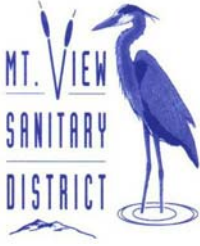
**Project Description:** Identify and perform collection system spot repairs, line replacements and manhole rehabilitations as informed by District Sanitary Sewer Management Plan (SSMP) and inflow and infiltration studies to be performed by the Capital Fund.

**Funded/Unfunded:** Funded

**Estimated Date of Completion:** Annually.

**Justification:** Reduce overflows from District Collection System

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem	200	200	200	200	200	1,000
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>		<b>\$200.0</b>	<b>\$200.0</b>	<b>\$200.0</b>	<b>\$200.0</b>	<b>\$200.0</b>	<b>\$1,000.0</b>
Expenses	Initiation	20.0	20.0	20.0	20.0	20.0	100.0
	Design	50.0	50.0	50.0	50.0	50.0	250.0
	Construction	120.0	120.0	120.0	120.0	120.0	600.0
	Closeout	10.0	10.0	10.0	10.0	10.0	50.0
<b>Expenses Total</b>		<b>\$200.0</b>	<b>\$200.0</b>	<b>\$200.0</b>	<b>\$200.0</b>	<b>\$200.0</b>	<b>\$1,000.0</b>



## FUND 3410 – REPAIR AND REPLACEMENT – PHASE 1

**Project Name:** Manhole Corrosion Lining Project

**Project Description:** Project to repair corrosion damaged manholes in collection system and protect against further corrosion by application of a protective lining system.

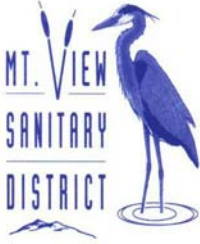
**Funded/Unfunded:** Funded

**Estimated Date of Completion:** June 30, 2012

**Justification:** Avoids potential catastrophic failure of collection system manhole structures.

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem	150					150
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>		<b>\$150.0</b>					<b>\$150.0</b>
Expenses	Initiation	7.5					100.0
	Design	37.5					250.0
	Construction	90.0					600.0
	Closeout	15.0					50.0
<b>Expenses Total</b>		<b>\$150.0</b>					<b>\$150.0</b>





## FUND 3410 – REPAIR AND REPLACEMENT – PHASE 1

**Project Name:** Pump Station No. 4 Improvements (VFD and Valve Replacements)

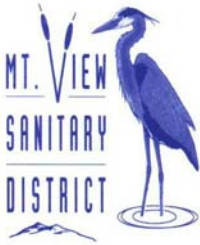
**Project Description:** Replace existing VFDs and install valve on pump station discharge to facilitate future forcemain by-pass capabilities.

**Funded/Unfunded:** Funded

**Estimated Date of Completion:** June 30, 2012

**Justification:** VFDs are approaching the end of their useful lives. Valve required to be able to by-pass pump station forcemain in event of major failure of pump station.

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem	35					35
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>		<b>\$35.0</b>					<b>\$35.0</b>
Expenses	Initiation	1.8					1.8
	Design	8.7					8.7
	Construction	21.0					21.0
	Closeout	3.5					3.5
<b>Expenses Total</b>		<b>\$35.0</b>					<b>\$35.0</b>



## FUND 3410 – REPAIR AND REPLACEMENT – PHASE 1

**Project Name:** Security Fencing at Pump Station No. 3

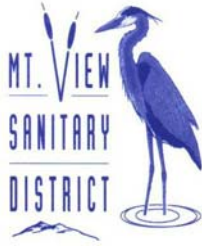
**Project Description:** Install security fencing around Pump Station No. 3..

**Funded/Unfunded:** Funded

**Estimated Date of Completion:** June 30, 2012

**Justification:** Identified by Operations and Maintenance. Increased vandalism, attempted intrusion and evidence of vagrant activity prompt need to secure pump station site.

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem	15					15
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>		<b>\$15.0</b>					<b>\$15.0</b>
Expenses	Initiation						
	Design	5.0					5.0
	Construction	10.0					10.0
	Closeout						
<b>Expenses Total</b>		<b>\$15.0</b>					<b>\$15.0</b>



## FUND 3410 – REPAIR AND REPLACEMENT – PHASE 1

**Project Name:** Install Float Controls on Biofilter and Biotower Pumps

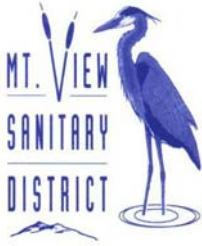
**Project Description:** Install separate and parallel flow control system to ensure the pump station will remain working in event of PLC or other instrumentation failure.

**Funded/Unfunded:** Funded

**Estimated Date of Completion:** June 30, 2012

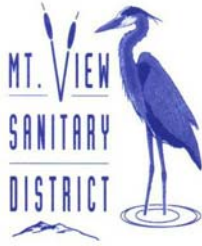
**Justification:** Identified in 2011 System Reliability Study. Existing control system has potential for single point of failure should Biofilter and Biotower Pump Station MCCs fail.

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem	10.0					
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>		<b>\$10.0</b>					
Expenses	Initiation	.5					
	Design	2.5					
	Construction	6.0					
	Closeout	1.0					
<b>Expenses Total</b>		<b>\$10.0</b>					



# **CAPITAL IMPROVEMENT PROGRAM PROJECT DESCRIPTIONS**

## **PHASE 1**



## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Clean, inspect, and re-coat Primary Digester

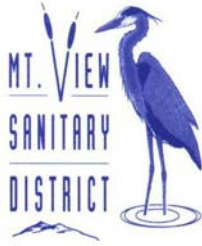
**Project Description:** Clean primary digester to remove accumulated inert material. Inspect digester coatings, walls, and roof for evidence of failure, with particular attention to domed roof where external evidence of corrosion is visible. Re-coat digester interior as needed to protect concrete from potential corrosion.

**Funded/Unfunded:** Funded

**Estimated Date of Completion:** June 30, 2012.

**Justification:** Identified in 2011 System Reliability Evaluation

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC	135.0	15.0				150.0
	Bonds						
	Grants						
<b>Resources Total</b>		<b>\$135.0</b>	<b>15.0</b>				<b>\$150.0</b>
Expenses	Initiation	7.5					7.5
	Design						0.0
	Construction	127.5					127.5
	Closeout		15.0				15.0
<b>Expenses Total</b>		<b>\$135.0</b>	<b>15.0</b>				<b>\$150.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Collection System Flow Monitoring and Hydraulic Study

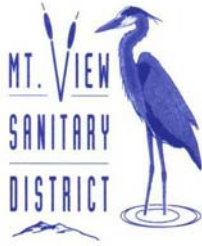
**Project Description:** Perform smoke testing and wet and dry weather flow monitoring in collection system to establish local average to peak flow ratios and to establish current wastewater generation factors. Develop computerized hydraulic model of collection system to identify capacity related deficiencies and possible solutions.

**Funded/Unfunded:** Funded

**Estimated Date of Completion:** June 30, 2012.

**Justification:** Peak wet weather flows to treatment plant indicate significant contribution of flow from rainfall dependent inflow and infiltration (RDI/I). Removing RDI/I reduces need for capacity at plant and minimizes risk of SSO. Will help determine whether capacity related collection system projects (Long-range Plan) are still warranted.

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC	150.0					150.0
	Bonds						
	Grants						
<b>Resources Total</b>		<b>\$150.0</b>					<b>\$150.0</b>
Expenses	Initiation	7.5					7.5
	Design	127.5					127.5
	Construction						0.0
	Closeout	15.0					15.0
<b>Expenses Total</b>		<b>\$150.0</b>					<b>\$150.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Replace Ultra Violet (UV) Disinfection Controls

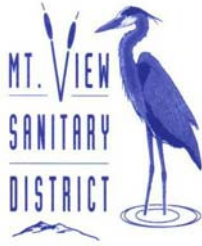
**Project Description:** Install new UV control system to utilize both UV transmittance and effluent flow rate to automatically determine and operate the number of UV banks needed to meet disinfection standards.

**Funded/Unfunded:** Funded

**Estimated Date of Completion:** November 2013.

**Justification:** Identified in 2011 System Reliability Evaluation to improve performance of UV system and potentially reduce energy costs through greater use of automation

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC	150.0	300.0	50.0			500.0
	Bonds						
	Grants						
<b>Resources Total</b>		<b>\$150.0</b>	<b>\$300.0</b>	<b>\$50.0</b>			<b>\$500.0</b>
Expenses	Initiation	25.0					25.0
	Design	125.0					125.0
	Construction		300.0				300.0
	Closeout			50.0			50.0
<b>Expenses Total</b>		<b>\$150.0</b>	<b>\$300.0</b>	<b>\$50.0</b>			<b>\$500.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Treatment Plant Alternatives Study – Preliminary Design

**Project Description:** Starting with results of 2011 System Reliability Evaluation identify, evaluate, and recommend project alternatives to address in-plant deficiencies identified in SRE. Prepare business case evaluations of each alternative and determine most cost effective project.

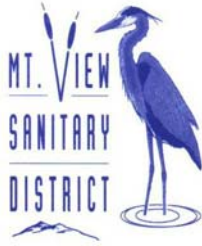
**Funded/Unfunded:** Funded

**Estimated Date of Completion:** June 30, 2012.

**Justification:** Identifying and evaluating project alternatives to address risks identified in the 2011 System Reliability Evaluation will result in overall CIP cost savings.

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC	250.0					250.0
	Bonds						
	Grants						
<b>Resources Total</b>		<b>\$250.0</b>					<b>\$250.0</b>
Expenses	Initiation	12.5					12.5
	Design	212.5					212.5
	Construction						0.0
	Closeout	25.0					25.0
<b>Expenses Total</b>		<b>\$250.0</b>					<b>\$250.0</b>





## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Grease Receiving Station

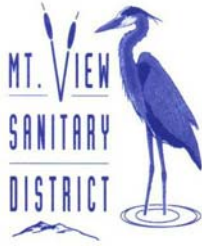
**Project Description:** Install Grease Receiving Station to accept grease from local grease haulers to improve digester gas production for driving the District’s micro-turbine co-generation facility.

**Funded/Unfunded:** Funded

**Estimated Date of Completion:** March 2014

**Justification:** Identified in System Reliability Study to improve performance of micro-turbine. Projected revenues from grease tipping fees and avoided power cost yield an estimated 3-year payback on capital.

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC	20.5	225.0	164.5			410.0
	Bonds						
	Grants						
<b>Resources Total</b>		<b>\$20.5</b>	<b>\$225.0</b>	<b>\$164.5</b>			<b>\$410.0</b>
Expenses	Initiation	20.0					20.5
	Design		102.5				102.5
	Construction		122.5	123.5			246.0
	Closeout			41.0			41.0
<b>Expenses Total</b>		<b>\$20.5</b>	<b>\$225.0</b>	<b>\$164.5</b>			<b>\$410.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Biofilter Seismic Retrofit

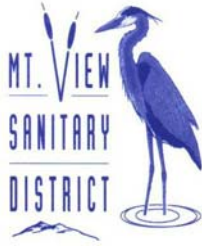
**Project Description:** Make necessary seismic retrofits to existing Biofilter to minimize the potential for a code-level earthquake to occur.

**Funded/Unfunded:** Funded

**Estimated Date of Completion:** June 2013.

**Justification:** Identified in 2011 System Reliability Study. Biofilter originally constructed prior to current code. Cost effective to perform seismic retrofit.

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC		100.0				100.0
	Bonds						
	Grants						
<b>Resources Total</b>			<b>\$100.0</b>				<b>\$100.0</b>
Expenses	Initiation		5.0				5.0
	Design		25.0				25.0
	Construction		60.0				60.0
	Closeout		10.0				10.0
<b>Expenses Total</b>			<b>\$100.0</b>				<b>\$100.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Replace and Relocate PLC System

**Project Description:** Replace Programmable Logic Controllers (PLCs) with new commonly used PLC model to allow support from multiple companies, complete with engineering design and documentation to simplify future upgrades and maintenance. Connect all existing PLCs to updated Supervisory Control and Data Acquisition (SCADA) system. Project Schedule allows for treatment unit by treatment unit replacement over a period of 6 to 7 years.

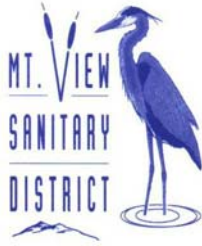
**Funded/Unfunded:** Funded

**Estimated Date of Completion:** November 2019

**Justification:** Identified in 2011 System Reliability Study.

Fiscal Year (\$ in 000's)							
Revenues	Description	201	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC		40	226.7	226.7	226.6	720.0
	Bonds						
	Grants						
<b>Resources Total</b>			<b>\$40.0</b>	<b>\$226.7</b>	<b>\$226.7</b>	<b>\$226.6</b>	<b>\$720.0</b>
Expenses	Initiation		40				40.0
	Design			200.0			200.0
	Construction			26.7	226.7	226.6	480.0
	Closeout						
<b>Expenses Total</b>			<b>\$40.0</b>	<b>\$226.7</b>	<b>\$22.7</b>	<b>\$226.7</b>	<b>\$720.0</b>

Note: Remainder project expense is \$80,000.



## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Replace and Update SCADA System

**Project Description:** Replace the existing SCADA System with an updated system adequately sized to meet all control system needs including:

- Remote monitoring and control capabilities by on-call staff
- Remote monitoring and control capabilities by administrative staff
- Remote monitoring and control capabilities for all pump stations including remote operation of collection system pump stations

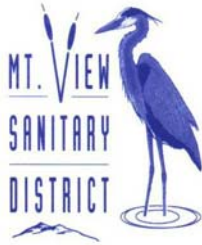
**Funded/Unfunded:** Funded

**Estimated Date of Completion:** November 2019

**Justification:** Identified in 2011 System Reliability Study.

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC		90.0	90.0	90.0	90.0	360.0
	Bonds						
	Grants						
<b>Resources Total</b>			<b>\$90.0</b>	<b>\$90.0</b>	<b>\$90.0</b>	<b>\$90.0</b>	<b>\$360.0</b>
Expenses	Initiation		4.5	4.5	4.5	4.5	18.0
	Design		22.5	22.5	22.5	22.5	90.0
	Construction		54.0	54.0	54.0	54.0	216.0
	Closeout		9.0	9.0	9.0	9.0	36.0
<b>Expenses Total</b>			<b>\$90.0</b>	<b>\$90.0</b>	<b>\$90.0</b>	<b>\$90.0</b>	<b>\$360.0</b>

Note: Remainder project expense is \$180,000.



## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** UV System Stand-by Equipment

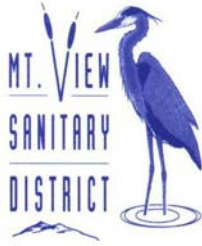
**Project Description:** Purchase back-up UV system equipment to be kept on site for use in the event of failure of operating equipment, reducing down time of UV disinfection system.

**Funded/Unfunded:** Funded

**Estimated Date of Completion:** December 2013

**Justification:** Identified in 2011 System Reliability Study.

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC		100.0				100.0
	Bonds						
	Grants						
<b>Resources Total</b>			<b>\$100.0</b>				<b>\$100.0</b>
Expenses	Initiation		5.0				5.0
	Design		25.0				25.0
	Construction		60.0				60.0
	Closeout		10.0				10.0
<b>Expenses Total</b>			<b>\$100.0</b>				<b>100.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Construct Wet Weather Storage Facility

**Project Description:** Construct peak wet weather storage facilities to divert and store excessive incoming flow from the treatment process until flows recede sufficiently to return the diverted flows back to the treatment process.

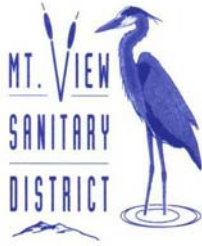
**Funded/Unfunded:** Funded

**Estimated Date of Completion:** July 2019

**Justification:** Rainfall dependent inflow and infiltration to the collection system results in extremely high peak flows to the treatment plant during periods of high rainfall. Storage to shave peak flows from wet weather events will reduce need for future capacity related capital projects including need for additional secondary clarification or another Biotower.

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC		100.0	450.0	450.0	450.0	1,450.0
	Bonds						
	Grants						
<b>Resources Total</b>			<b>\$100.0</b>	<b>\$450.0</b>	<b>\$450.0</b>	<b>\$450.0</b>	<b>\$1,450.0</b>
Expenses	Initiation		100.0				100.0
	Design			450.0	50.0		500.0
	Construction				400.0	450.0	850.0
	Closeout						
<b>Expenses Total</b>			<b>\$100.0</b>	<b>\$450.0</b>	<b>\$450.0</b>	<b>\$450.0</b>	<b>\$1,450.0</b>

Note: Remainder project expense is \$550,000.



## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Morello at Arnold Sewer Bypass Project

**Project Description:** Project to replace corroded manhole and realign sewers through the intersection of Morello and Arnold.

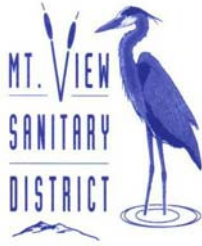
**Funded/Unfunded:** Funded

**Estimated Date of Completion:** November 2016

**Justification:** Identified by District Engineer

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC			100.0	250.0	600.0	950.0
	Bonds						
	Grants						
<b>Resources Total</b>				<b>\$100.0</b>	<b>\$250.0</b>	<b>\$600.0</b>	<b>\$950.0</b>
Expenses	Initiation			50.0			50.0
	Design			50.0	200.0		250.0
	Construction				50.0	550.0	600.0
	Closeout					50.0	50.0
<b>Expenses Total</b>				<b>\$100.0</b>	<b>\$250.0</b>	<b>\$600.0</b>	<b>\$950.0</b>

Note: Remainder project expense is \$50,000.



## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Replace Main Plant MCC, Biotower MCC, and Biotower & Biofilter VFDs – Phase I

**Project Description:** Replace main plant motor control center (MCC) with a new unit to be located in a centralized, indoor, climate-controlled building/room (new MCC center). Replace Biotower MCC with new unit located in new MCC center. Replace Biofilter and Biotower Variable Frequency Drive (VFD) control panels with new units located in new MCC center.

**Funded/Unfunded:** Funded

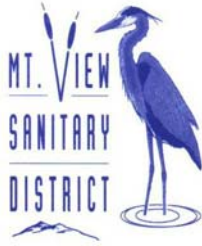
**Estimated Date of Completion:** July 2019

**Justification:** Identified in the 2011 System Reliability Study

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC				71.0	100.0	170.0
	Bonds						
	Grants						
<b>Resources Total</b>					<b>\$71.0</b>	<b>\$100.0</b>	<b>\$170.0</b>
Expenses	Initiation				35.5		35.5
	Design				35.5	100.0	135.5
	Construction						
	Closeout						
<b>Expenses Total</b>					<b>\$70.0</b>	<b>\$100.0</b>	<b>\$170.0</b>

Note: Remainder project expense is \$539,000.





## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Moorhen Marsh Miscellaneous Projects – Unidentified

**Project Description:** Allowance for anticipated projects to be identified in the 2011-2012 Moorhen Marsh Management Plan Update

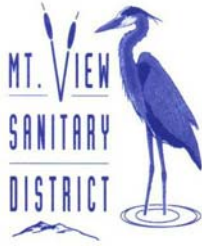
**Funded/Unfunded:** Funded

**Estimated Date of Completion:** November 2019

**Justification:** The updated of the Moorhen Marsh Management Plan is expected to identify projects required to maintain and enhance marsh environmental habitat values.

Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC				60.0	150.0	210.0
	Bonds						
	Grants						
<b>Resources Total</b>					<b>\$60.0</b>	<b>\$100.0</b>	<b>\$210.0</b>
Expenses	Initiation				30.0		30.0
	Design				30.0	120.0	150.0
	Construction					30.0	30.0
	Closeout						
<b>Expenses Total</b>					<b>\$60.0</b>	<b>\$150.0</b>	<b>\$210.0</b>

Note: Remainder project expense is \$390,000.



## FUND 3412 – CAPITAL OUTLAY – PHASE 1

**Project Name:** Raw Sewage Pump Station Replacement/Rehabilitation – Phase 1

**Project Description:** Budget for improvements to main plant Raw Sewage Pump Station to be identified in Treatment Plant Alternatives Study – Preliminary Design Project

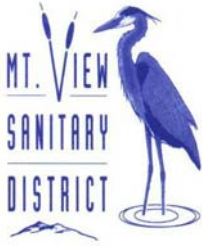
**Funded/Unfunded:** Funded

**Estimated Date of Completion:** November 2019

**Justification:** Identified in the 2011 System Reliability Evaluation.

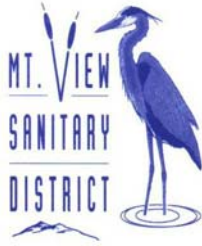
Fiscal Year (\$ in 000's)							
Revenues	Description	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	Ad Valorem						
	USC					100.0	100.0
	Bonds						
	Grants						
<b>Resources Total</b>						<b>\$100.0</b>	<b>\$100.0</b>
Expenses	Initiation					62.5	62.5
	Design					37.5	37.5
	Construction						
	Closeout						
<b>Expenses Total</b>						<b>\$100.0</b>	<b>\$100.0</b>

Note: Remainder project expense is \$1,150,000.



# **CAPITAL IMPROVEMENT PROGRAM PROJECT DESCRIPTIONS**

## **PHASE 2**



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Replace Digester Heat Exchanger

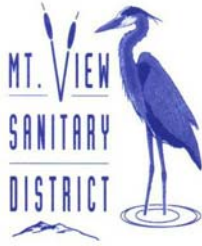
**Project Description:** Replace existing digester spiral heat exchanger with a 750 MBH spiral heat exchanger.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** January 2019

**Justification:** Identified in the 2011 System Reliability Evaluation.

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						4.0
	Design						20.0
	Construction						48.0
	Closeout						8.0
<b>Expenses Total</b>							<b>\$80.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Redundant Automatic Screening

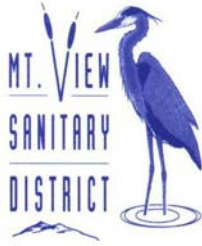
**Project Description:** Add second automatic screening unit in existing second channel at plant headworks. Project to be evaluated in Treatment Plant Alternatives Study performed in Phase 1 of this CIP.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** November 2019

**Justification:** Identified in the 2011 System Reliability Evaluation.

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						32.5
	Design						162.5
	Construction						390.0
	Closeout						65.0
<b>Expenses Total</b>							<b>\$650.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Palm, Merle, Monterey, Bella Vista to Leslie Collection System Repair or Replacement Project

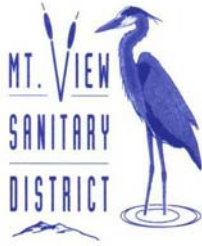
**Project Description:** Detailed project description needed. Project to be re-evaluated by Collection System Hydraulic Model Project to be performed in Phase 1 of this CIP.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** June 2019

**Justification:** Identified by District Engineer.

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						20.8
	Design						103.7
	Construction						249.0
	Closeout						41.5
<b>Expenses Total</b>							<b>\$415.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Kelly Avenue, Yale to Monterey

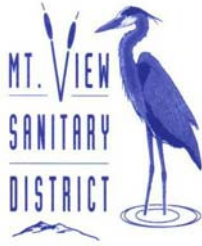
**Project Description:** Detailed project description needed. Project to be re-evaluated by Collection System Hydraulic Model Project to be performed in Phase 1 of this CIP.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** September 2019

**Justification:** Identified by District Engineer.

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						16.9
	Design						84.2
	Construction						202.2
	Closeout						33.7
<b>Expenses Total</b>							<b>\$337.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Rhodia Marsh Tidegate Telemetry

**Project Description:** Install telemetry on the Rhodia Marsh Tidegate to provide real time data on status of gate opening, flowrates, and other operational data to assist in managing tidal flows into and out of McNabney Marsh

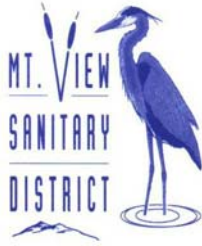
**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** May 2019

**Justification:** Improved / Enhanced Marsh Management

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						5.0
	Design						25.0
	Construction						60.0
	Closeout						10.0
<b>Expenses Total</b>							<b>\$100.0</b>





## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Long Range Plan Project #9 – West Service Zone Trunk Project

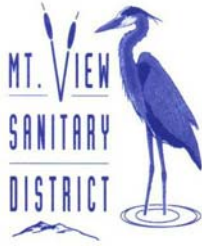
**Project Description:** The Long Range Plan identified capacity constraints that have not been evidenced in operation of the system. System is subject to potentially high I/I. Project to be re-evaluated by Collection System Hydraulic Model Project to be performed in Phase 1 of this CIP.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** June 2019

**Justification:** Identified in the Long Range Plan.

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						33.5
	Design						167.5
	Construction						402.0
	Closeout						67.0
<b>Expenses Total</b>							<b>\$670.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** McNabney Marsh Miscellaneous Projects – to be determined by Marsh Management Plan Update

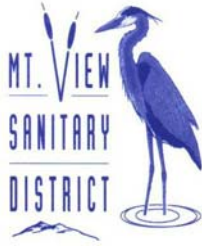
**Project Description:** Placeholder for projects anticipated to be identified in the McNabney Marsh Management Plan.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** April 2021

**Justification:** Marsh Management

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						12.5
	Design						62.5
	Construction						150.0
	Closeout						25.0
<b>Expenses Total</b>							<b>\$250.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Replace Main Plant MCC, Biotower MCC, and Biotower and Biofilter VFDs – Phase II

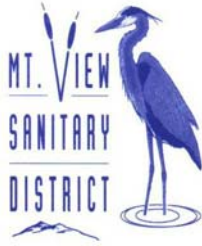
**Project Description:** Replace main plant motor control center (MCC) with a new unit to be located in a centralized, indoor, climate-controlled building/room (new MCC center). Replace Biotower MCC with new unit located in new MCC center. Replace Biofilter and Biotower Variable Frequency Drive (VFD) control panels with new units located in new MCC center.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** January 2024

**Justification:** Identified in 2011 System Reliability Evaluation

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						35.5
	Design						177.5
	Construction						426.0
	Closeout						71.0
<b>Expenses Total</b>							<b>\$710.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Enclose or Cover UV Disinfection System

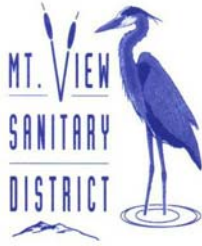
**Project Description:** Construct canopy and sidewall on existing monorail structure to provide minimal protection from weather to equipment panels.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** February 2020

**Justification:** Identified in the 2011 System Reliability Evaluation.

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						10.0
	Design						50.0
	Construction						120.0
	Closeout						20.0
<b>Expenses Total</b>							<b>\$200.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Replace Digester Boiler

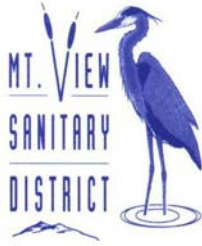
**Project Description:** Replace digester boiler with 840 MBH unit for future capacity. .

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** December 2019

**Justification:** Identified in the 2011 System Reliability Evaluation

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						10.0
	Design						50.0
	Construction						120.0
	Closeout						20.0
<b>Expenses Total</b>							<b>\$190.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Replace Digester Mixing Pump

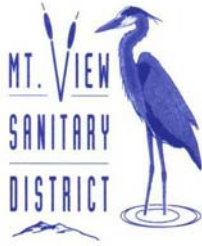
**Project Description:** Replace existing digester mixing pump with chopper style pump to improve reliability by reducing ragging and plugging of pump.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** January 2020

**Justification:** Identified in the 2011 System Reliability Evaluation

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						6.0
	Design						30.0
	Construction						72.0
	Closeout						12.0
<b>Expenses Total</b>							<b>\$120.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Long Range Plan Project No. 5. – South Service Zone Trunk Sewer

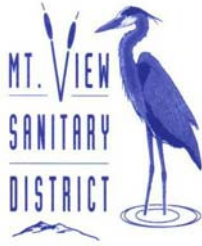
**Project Description:** Long Range Plan identified capacity constraints, many of which have been removed with previous projects. Area is also subject to potentially high I/I. Project to be re-evaluated by Collection System Hydraulic Model Project to be performed in Phase 1 of this CIP.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** December 2021

**Justification:** Identified in the Long Range Plan.

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						73.0
	Design						365.0
	Construction						876.0
	Closeout						146.0
<b>Expenses Total</b>							<b>\$1,460.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Enclose and Condition Filtration and UV MCCs

**Project Description:** Enclose filter and UV MCC and add air conditioning unit to prevent further potential failures due to overheating

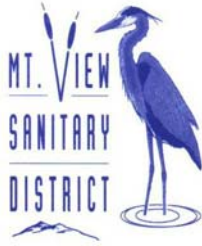
**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** December 2020

**Justification:** Identified in the 2011 System Reliability Evaluation

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						5.5
	Design						27.5
	Construction						66.0
	Closeout						11.0
<b>Expenses Total</b>							<b>\$110.0</b>





## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Long Range Project No. 13 – County Corporation Yard Sewer

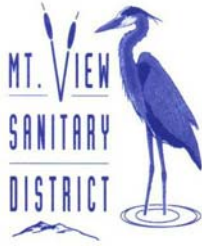
**Project Description:** Long Range Plan recommended bursting the remaining portions of this line that are still 6-inch diameter vitrified clay pipe sewer and replacing with 10-inch diameter replacement sewer. Project to be re-evaluated by Collection System Hydraulic Model Project to be performed in Phase 1 of this CIP.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** June 2021

**Justification:** Identified in the Long Range Plan

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						13.6
	Design						68.0
	Construction						163.2
	Closeout						27.2
<b>Expenses Total</b>							<b>\$272.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Increase Capacity of Plant Power Distribution System

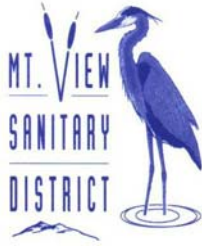
**Project Description:** As additional electrical loads are increased, a larger utility service, main breaker, and transfer switch will likely be needed. Detailed load analysis is required to define timing and recommended sizing of facilities.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** January 2022

**Justification:** Identified in the 2011 System Reliability Evaluation

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						10.0
	Design						50.0
	Construction						120.0
	Closeout						20.0
<b>Expenses Total</b>							<b>\$200.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Increase Plant Back-up Power Capacity

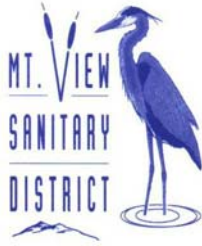
**Project Description:** As additional electrical loads are increased, a larger back-up power generator will likely be needed. Detailed load analysis is required to define timing and recommended sizing of facilities.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** May 2022

**Justification:** Identified in the 2011 System Reliability Evaluation

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						10.0
	Design						50.0
	Construction						120.0
	Closeout						20.0
<b>Expenses Total</b>							<b>\$200.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 2

**Project Name:** Long Range Plan Project No. 15 – Sewer Holiday Hills to Shadowbrook

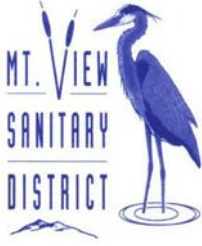
**Project Description:** Long Range Plan recommended replacing the existing sewer between Holiday Hills and Shadowbrook because it is located within a creek and potentially subject to elevated I/I. Project to be re-evaluated by Collection System Hydraulic Model Project to be performed in Phase 1 of this CIP.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** July 2022

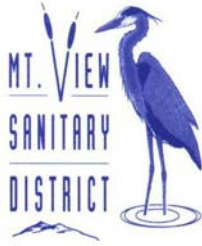
**Justification:** Identified in the Long Range Plan

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						5.4
	Design						27.3
	Construction						65.4
	Closeout						10.9
<b>Expenses Total</b>							<b>\$109.0</b>



# **CAPITAL IMPROVEMENT PROGRAM PROJECT DESCRIPTIONS**

## **PHASE 3**



## FUND 3412 – CAPITAL OUTLAY – PHASE 3

**Project Name:** Replace UV Disinfection System

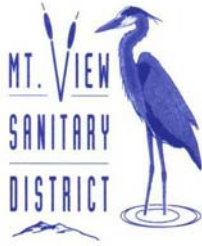
**Project Description:** Replace existing Trojan UV 3000 with new Trojan UV 3000Plus to improve ease of operation and increase treatment capacity

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** April 2024

**Justification:** Identified in the 2011 System Reliability Evaluation

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						121.0
	Design						605.0
	Construction						1,452.0
	Closeout						242.0
<b>Expenses Total</b>							<b>\$2,420.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 3

**Project Name:** Easement Sewer – Glen Street to Wyoming

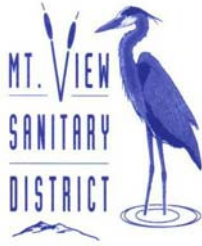
**Project Description:** Updated project description needed. Project to be re-evaluated by Collection System Hydraulic Model Project to be performed in Phase 1 of this CIP.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** May 2023

**Justification:** Identified by District Engineer

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						12.3
	Design						61.8
	Construction						148.2
	Closeout						24.7
<b>Expenses Total</b>							<b>\$247.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 3

**Project Name:** Replace Digester MCC

**Project Description:** Replace existing digester MCC with a new unit to be located in the new MCC Center to be constructed in Phase 1 of this CIP.

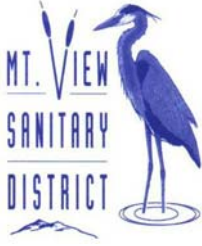
**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** July 2023

**Justification:** Identified in the 2011 System Reliability Study

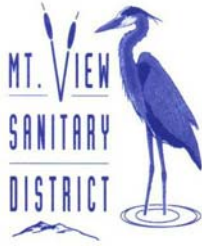
Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						10.5
	Design						52.5
	Construction						126.0
	Closeout						21.0
<b>Expenses Total</b>							<b>\$210.0</b>





# **CAPITAL IMPROVEMENT PROGRAM PROJECT DESCRIPTIONS**

## **PHASE 4**



## FUND 3412 – CAPITAL OUTLAY – PHASE 4

**Project Name:** Long Range Plan Project No. 3. – VA Line Upstream

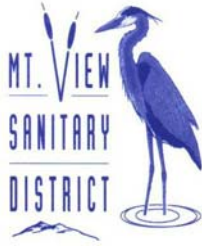
**Project Description:** The Long Range Plan identified a remaining potential capacity constraint on the VA sewer between Howe and John Muir Parkway. Project to be re-evaluated by Collection System Hydraulic Model Project to be performed in Phase 1 of this CIP.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** December 2032

**Justification:** Identified in the Long Range Plan

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						30.0
	Design						150.0
	Construction						360.0
	Closeout						60.0
<b>Expenses Total</b>							<b>\$600.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 4

**Project Name:** Long Range Plan Project No. 10 – North Pacheco Boulevard Sewer

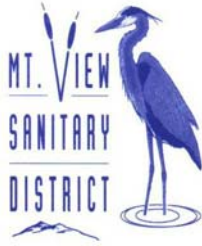
**Project Description:** Long Range Plan identified capacity constraints in the sewer line along Pacheco Boulevard from Arthur Road to Camino Del Sol. Project to be re-evaluated by Collection System Hydraulic Model Project to be performed in Phase 1 of this CIP.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** December 2032

**Justification:** Identified in the Long Range Plan

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						27.0
	Design						135.0
	Construction						324.0
	Closeout						54.0
<b>Expenses Total</b>							<b>\$540.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 4

**Project Name:** Replace Distributer Arms on Existing Biotower

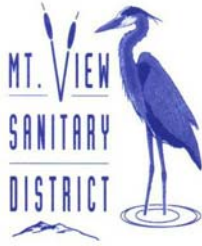
**Project Description:** Fit Biotower with new distributer arms with motorized drive units.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** December 2032

**Justification:** Identified in the Long Range Plan

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						25.5
	Design						127.5
	Construction						306.0
	Closeout						51.0
<b>Expenses Total</b>							<b>\$510.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 4

**Project Name:** Replace Distributer Arms on Existing Biofilter

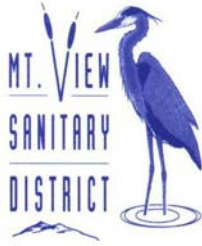
**Project Description:** Fit Biofilter with new distributer arms (possibly with motorized drive units).

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** December 2032

**Justification:** Identified in the 2011 System Reliability Evaluation

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						25.5
	Design						127.5
	Construction						306.0
	Closeout						51.0
<b>Expenses Total</b>							<b>\$510.0</b>



## FUND 3412 – CAPITAL OUTLAY – PHASE 4

**Project Name:** Replace Existing Biotower Media and Rehabilitate Biotower Walls

**Project Description:** Replace existing Biotower media with high-performance media, inspect Biotower walls and perform any repairs due to corrosion necessary.

**Funded/Unfunded:** Not Funded

**Estimated Date of Completion:** Dec 2032

**Justification:** Identified in the 2011 System Reliability Evaluation

Fiscal Year (\$ in 000's)							
Revenues	Description	2016-17	2017-18	2018-19	2019-20	2020-21	Total
	Ad Valorem						
	USC						
	Bonds						
	Grants						
<b>Resources Total</b>							
Expenses	Initiation						75.0
	Design						375.0
	Construction						900.0
	Closeout						150.0
<b>Expenses Total</b>							<b>\$1,500.0</b>