

Des Moines Metropolitan Wastewater Reclamation Authority

2019+ Capital Improvements Program



2019

Project Number	Project Name	Funding	Page #
WRA069	Facility Plan Update - WRA	annual contrib	6
WRA078	Facilities Rehabilitation - WRF 2004-2018	annual contrib	7
WRA083	Contracted Sewer Maintenance (O&M) 2015	Operation funded	9
WRA086	DM River Outfall / New Main Outfall	Core Bond Funds	19
WRA087	Combined Sewer Solids Separation	Core Bond Funds	20
WRA088	Ingersoll Run Overflow	Core Bond Funds	21
WRA091	WRA Studies, Consulting	annual contrib	11
WRA093	Flow Monitoring System Improvements	annual contrib	12
WRA098	Plant Improvement Proj F10-F12 Team Serv	annual contrib	11
WRA099	Mud Creek Interceptor (P19)	Expansion Funds	22
WRA101	Sponsor Four Mile Buy out (Polk)	Interest amendment	23
WRA102	Biomethane Conditioning & Injection	Core Bond Funds	29
WRA103	Southern Tier (Pumping) Improvements	Bond Funds / SW	24
WRA104	Equalization Basin Improvements	annual contrib	15
WRA105	Flood Improvements	Sales tax funds	25
WRA106	Small CIP / Plant Improvement Proj F13-F16	annual contrib	13
WRA107	Southern Tier Improvements (Western)	Expansion Funds	26
WRA108	Eastside Interceptor (force main & gravity s)	Core Bonds, Special	30
WRA109	Sponsor Four Mile Streambank	Interest amendment	27
WRA110a	Small CIP / Plant Improvement Proj F17-F19	annual contrib	14
WRA110b	Small CIP / Plant Improvement Proj F20-F24	annual contrib	18
WRA111	Grit Removal Improvements	Core Bond Funds	31
WRA112	Phosphorus Recovery Facility	Core Bond Funds	32
WRA113	WRA Sewer Lining	Core Bond Funds	33
WRA114	Beaver Creek Sewer Stabilization	annual contrib	16
WRA115	Clarifier Improvements	Core Bond Funds	34
WRA116	Preliminary Treatment	Core Bond Funds	35
WRA117	Sponsor Sugar Creek Streambank	Interest amendment	28
WRA118	Facilities Rehabilitation - WRF 2019-2029	annual contrib	8
WRA119	WRF Trickling Filter removal	Core Bond Funds	36
WRA120	Contracted Sewer Maintenance (O&M) 2018	Operation funded	10
WRA121	Site Security & Access Improvements	annual contrib	17
WRA1xx	Chlorination & Effluent pumping	Core Bond Funds	37
WRA1xx	Birdland Improvements	Core Bond Funds	38
WRA1xx	Southern Tier Improvements (Core) Seg 6	Core Bond Funds	39
WRA 2_1	Little Four Mile Creek Improvements	Core Bond Funds	40
WRA 2_4	Final clarifiers	Core Bond Funds	41
WRA 2_5	Aeration basins	Core Bond Funds	42
WRA 2_7	Westside Interceptor	Core Bond Funds	43
WRA 1_1	Nutrient Removal - WRF	Core Bond Funds	44
WRA 1_2	Common Trunk	Expansion Funds	45
WRA 1_3	Joint Trunk	Expansion Funds	46

WASTEWATER RECLAMATION AUTHORITY
 COMPARISON OF LAST YEAR AND CURRENT YEAR CIP SHEETS
 FY2018-2024 6(7) Yr Plan + other WRA commitments

Capital Improvement Projects by Type of Funding

			(last year)	restated	(this year)		
		WRA New 28e Agreement Amt	Budget Amount for each project	Budget Amount for each project	Budget Amount for each project	Chg of Estimate	
Core Projects			2018 CIP	2018 CIP	2019 FILE		
wra 086	DM River Outfall / New Main Outfall	P 17	64,399,635	64,399,635	65,199,635	800,000	
wra 087	Combined Sewer Solids Separation Design	*	51,961,995	51,961,995	51,961,995	-	
wra 108	ESI Phase 27 Gravity Sewer	P 27	67,400,000	71,020,000	76,708,250	5,688,250	
wra 088	Ingersoll Run Sewer (CSO & Outlet)	Flood M	12,800,000	12,862,275	13,175,400	313,125	
wra 093	Flow Monitoring System & Meter Replc		6,783,433	6,783,433	8,231,650	1,448,217	
wra 074	Digester Gas System	*	23,368,095	0			
Wr 1xx	Southern Tier Interceptor (P10 Seg 6)	P 10	5,850,000	6,922,600	6,745,440	(177,160)	
Wr 112	Phosphorus Recovery	2018	19,860,000	19,860,000	20,000,000	140,000	
Wr 102	WRF Biomethane Conditioning and Injection	2018	13,970,250	13,970,250	17,147,058	3,176,808	
Wr 111	WRF Grit Removal Improvements	2018	8,200,000	9,441,400	12,338,100	2,896,700	
Wr 1xx	WRF Clarifier Improvements	2019	19,900,000	20,040,000	20,040,000	-	
Wr 1xx	WRF Preliminary Treatment	2021	30,500,000	30,600,000	30,600,000	-	
Wr 1xx	WRF Trickling Filter Removal	NEW		0	6,733,600	6,733,600	
Wr 105	WRF Flood Improvements	2018	5,300,000	8,002,750	14,224,746	6,221,996	
Wr 113	WRA Southwest Outfall Lining	2019	26,150,000	26,225,000	26,225,000	-	
Subtotal Core Projects			108,700,000	365,457,433	342,089,338	369,330,874	27,241,536
Non Core Projects							
wra 085	Four Mile Interceptor Ext. (Phase 24)	*	20,487,132	0		-	
wra 099	Mud Creek Interceptor (Phase 19)	*	20,568,500	20,568,500	20,208,500	(360,000)	
wra 100	Corridor Preservation	*	325,728	0			
wra 107	Southern Tier Interceptor (P10 Seg 1,4,7-8)	2015	9,500,000	9,620,000	9,478,700	(141,300)	
Subtotal Expansion Projects			9,500,000	51,001,360	30,188,500	29,687,200	(501,300)
wra 081	South West Area Diversion Facilities	*		97,140,786	0		
wra 103	Southern Tier Interceptor (P10 Seg 14,15-17)	P 10	7,000,000	17,218,730	17,218,730	-	
wra 101	Sponsored Project [Polk] (Sw SRF loans)	*		3,251,300	3,251,300	(50,000)	
wra 109	Sponsored Project [Streambank] (So Tier loan)		4,281,400	4,281,400	4,281,400	-	
South West Area Diversion Facilities			7,000,000	121,892,216	24,751,430	24,701,430	(50,000)
Future Projects & Projects w comnty contrib.							
core +	Westside Interceptor	2030	12,300,000	12,300,000	12,300,000	-	
core	Little Four Mile Interceptor (P15 Seg 1)	2025	7,100,000	7,190,000	7,190,000	-	
core	Nutrient Removal	2032	105,500,000	105,500,000	105,500,000	-	
core	Birdland Pump Stn	2023	13,500,000	13,500,000	13,747,830	247,830	
core	Common Trunk	2026	11,100,000	11,100,000	11,100,000	-	
expan	Joint Trunk (w Common last year)	2027	20,800,000	20,800,000	20,800,000	-	
core	WRF Chlorination & Effluent pumping	Flood M	25,500,000	25,345,000	25,345,000	-	
core	WRF Final clarifiers	2024	41,600,000	41,900,000	41,900,000	-	
core	WRF Aeration basins	2028	96,600,000	96,600,000	96,600,000	-	
Subtotal Future Projects			401,400,000	334,235,000	334,235,000	334,482,830	247,830
Total Project Costs (Bonded and Basins)			526,600,000	872,586,009	731,264,268	758,202,334	26,938,066
Sm CIP	Non-Bonded / Plant & System Projects						
wra 069	Facilities Plan Update (2014 forward)			1,562,761	1,572,761	10,000	
wra 078	Facilities Rehabilitation			2,601,402	4,226,400	1,624,998	
wra 083	Sewer Maint, Levee & Streambank (2013-17)			2,100,000	1,720,000	220,000	
wra 083	Sewer Maintenance contract work (2018 forward)				600,000	-	
wra 091	Small CIP projects & Studies (2014 forward)			667,612	627,612	(40,000)	
Wr 1xx	WRF Site Security, New Entrance	NEW		0	3,455,120	3,455,120	
wra 104	Equalization Basin Improvements			300,000	300,000	-	
wra 098	Small CIP projects & ProcEqRepl. 2010-2012			5,875,000	0	-	
wra 106	Small CIP projects & ProcEqRepl. 2013-2016			10,268,532	7,965,248	(2,303,284)	
wra 110	Small CIP projects & ProcEqRepl. 2017-2019				9,684,182	(2,496,244)	
wra 110	Small CIP future projects (2017-19, 2020-23)			23,744,182	16,593,590	2,533,590	
wra 114	Beaver Creek Sewer Stabilization			1,235,575	1,235,575	-	
Total Non-Bonded Project Costs				48,355,064	42,480,064	45,484,244	3,004,180
WRA Total Expenses for Projects				920,941,073	773,744,332	803,686,578	29,942,246
Preliminary total as Draft copy for Tech mtg		new		Last year's total		803,686,578	SUMMARY TODAY
		* PROJECT CLOSED					

Summary

Wastewater Reclamation Authority Improvements FY2018-F2019+

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	TOTAL ESTIMATED COST	COST THROUGH F17	COST ESTIMATE F18	TOTAL ESTIMATED COST THROUGH	COST FOR SIX-YEAR PERIOD	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
						F19	F20	F21	F22	F23	F24	
Expenses , detail on following page	803,686,578	191,010,517	31,099,067	222,109,584	298,616,994	72,083,469	69,319,525	52,568,370	37,044,155	43,936,015	23,665,460	282,960,000
Resources:												
Beginning Balance	0	0	46,475,615	0		87,554,517	38,730,558	32,160,330	22,362,050	4,542,578	22,843,110	0
Interest Earnings	662,038	567,038	20,000	587,038	75,000	15,000	15,000	15,000	10,000	10,000	10,000	0
Renewal & Replacement Fund	0	0	0	0	0	0	0	0	0	0	0	0
Communities	47,102,321	18,621,321	4,000,000	22,621,321	24,481,000	4,169,000	4,116,000	4,225,000	4,048,000	3,988,000	3,935,000	0
Future Funding	478,922,599	0	27,725,029	27,725,029	181,207,570	14,789,300	60,050,000	33,680,000	13,592,830	59,095,440	0	269,990,000
Bond Proceeds	100,864,443	63,664,443	38,700,000	102,364,443	(1,500,000)	(1,500,000)	0	0	0	0	0	0
SRF Drawdowns	138,604,130	141,788,606	(699,476)	141,089,130	(2,085,000)	2,440,000	(2,936,500)	1,300,000	(468,500)	(2,820,000)	400,000	(400,000)
Other (Flood Mit Rev & Oper)	37,531,047	12,844,724	2,432,416	15,277,140	14,281,432	3,346,210	1,504,797	3,550,090	2,042,353	1,963,107	1,874,875	7,972,475
Total Resources	803,686,578	237,486,132	118,653,584	309,664,101	216,460,002	110,814,027	101,479,855	74,930,420	41,586,733	66,779,125	29,062,985	277,562,475
Flood/Sales tax revenue \$36.6M		9,805,773	2,110,466			1,387,610	1,823,397	2,050,090	1,942,353	1,863,107	1,774,875	7,972,475

**Wastewater Reclamation Authority
CIP Spending by Project and Category**

WRA 2019

Expenditures from CIP sheets

	2018	2019	2020	2021	2022	2023	2024	subtotal Spending
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WRA Projects - Expansion Category

107 Ph 10	Southern Tier Improvements	\$	12,969.0		110,000.0	1,550,000.0	650,000.0	90,000.0	2,412,969.0
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WRA Projects & WRF Projects (R&R or Special Funding)

83 oper	Sewer Maintenance Contracts	\$	87,299.0	100,000.0	100,000.0	100,000.0	100,000.0	100,000.0	100,000.0	687,299.0
69 smCip	Facility Plan update		302,298.0	150,000.0	125,000.0	125,000.0	125,000.0	125,000.0	125,000.0	1,077,298.0
78 smCip	Facilities Rehabilitation		563,380.0	625,000.0	1,000,000.0	300,000.0	300,000.0	300,000.0	300,000.0	3,388,380.0
91 smCip	Studies (small CIP)		50,473.0	50,000.0	40,000.0	30,000.0	30,000.0	30,000.0	30,000.0	260,473.0
93 smCip	Flow Monitoring (Meter Repl)		154,657.0	413,800.0	430,350.0	447,560.0	3,500.0			1,449,867.0
114 R&R	Beaver Creek Stabilization		40,265.0	1,150,575.0						1,190,840.0
121 smCip	Site Security, Access Improvements		10,120.0	152,600.0	687,400.0	2,605,000.0				3,455,120.0
104 smCip	Equalization Basin Improvements			300,000.0						300,000.0
106 smCip	Plant Projects (Eq Repl, sm CIP)		1,453,372.0	2,400,000.0	(1,000,000.0)	(1,400,000.0)				1,453,372.0
110 smCip	Plant Projects (Eq Repl, sm CIP)		4,000,000.0	2,436,110.0	5,419,650.0	1,312,440.0	3,451,500.0	3,455,000.0	3,455,000.0	23,529,700.0
101 spons	Sponsored Project w Polk Co		2,789.0							2,789.0
109 spons	Sponsor'd Four Mile Streambank		72,366.0	1,058,600.0	981,400.0					2,112,366.0
117 spons	Sponsor'd Sugar Creek Streambank		224,584.0	800,000.0						1,024,584.0
	Small CIP & Sponsored Total	\$	6,961,603.0	\$ 9,636,685.0	\$ 7,783,800.0	\$ 3,520,000.0	\$ 4,010,000.0	\$ 4,010,000.0	\$ 4,010,000.0	\$ 39,932,088.0

WRA Projects & WRF Projects (Core or other Funding)

86 Ph 17	DM River Outfall / Main Outfall		805,941.0							805,941.0
87 Ph 17	CSSS Facility		337,926.0							337,926.0
88 Ph 25	Ingersoll Run CSO		144,799.0	644,020.0	1,191,290.0	4,162,790.0	3,715,000.0	3,224,740.0		13,082,639.0
102 WRF	Biomethane Conditioning, Injection		1,518,190.0	12,465,404.0	\$ 2,275,005.0	\$ 600.0				16,259,199.0
103 Ph 10	Southern Tier for SW ADF		211,474.0							211,474.0
105 WRF	Flood Improvements		582,074.0	4,378,200.0	6,825,200.0	1,290,600.0	\$ 92,400.0	\$ 875,990.0		14,044,464.0
108 Ph 27	Eastside Interceptor		15,764,141.0	30,180,000.0	17,200,000.0					63,144,141.0
111 WRF	Grit Basin Improvements		1,503,671.0	4,275,000.0	4,343,400.0	1,510,000.0				11,632,071.0
112 WRF	Phosphorus Recovery Facility		473,598.0	840,000.0	8,000,000.0	10,475,000.0				19,788,598.0
113 WRA	Sewer Lining		1,762,681.0	657,200.0	4,161,800.0	5,088,800.0	4,302,200.0			15,972,681.0
115 WRF	Clarifier Improvements		10,000.0	545,000.0	6,125,000.0	2,900,000.0	25,000.0	6,425,000.0	4,010,000.0	20,040,000.0
116 WRF	Primary Treatment		1,000,000.0	1,240,000.0	9,680,000.0	13,180,000.0	5,500,000.0			30,600,000.0
119 WRF	Trickling Filter Removal		10,000.0	6,723,600.0						6,733,600.0
2x3 WRF	Chlorination & Effluent pumping			450,000.0	1,395,000.0	7,580,000.0	11,780,000.0	4,140,000.0		25,345,000.0
2x7 Ph 10	Southern Tier Improv, Seg 6					2,250.0	420,000.0	3,967,730.0	2,355,460.0	6,745,440.0
1x4 WRA	Birdland Pump station			48,360.0	229,030.0	658,330.0	4,619,555.0	8,192,555.0		13,747,830.0
2x4 WRF	Final Clarifiers					650,000.0	1,930,000.0	13,100,000.0	13,110,000.0	28,790,000.0
2x1 WRA	Little Four Mile Improv							90,000.0		90,000.0
	WRA & WRF Project Total	\$	24,124,495.0	\$ 62,446,784.0	\$ 61,425,725.0	\$ 47,498,370.0	\$ 32,384,155.0	\$ 39,926,015.0	\$ 19,565,460.0	\$ 287,371,004.0
	Revised Estimate for F18	\$	31,099,067.0	\$ 72,083,469.0	\$ 69,319,525.0	\$ 52,568,370.0	\$ 37,044,155.0	\$ 43,936,015.0		
			2019	\$ 72,083,469.0	\$ 69,319,525.0	\$ 52,568,370.0	\$ 37,044,155.0	\$ 43,936,015.0		
			2020							
			2021							
			2022							
			2023							
			2024					\$ 23,665,460.0		
	Summary of Costs, Six-Year-Period									\$ 298,616,994.0

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Facility Plan Update & Consulting								WR809855 WR069	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	1,572,761	386,267	109,196	495,463	302,298	797,761	150,000	125,000	125,000	125,000	125,000	125,000	
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other /Commtty funds SmCIP	1,572,761	386,267	109,196	495,463	302,298	797,761	150,000	125,000	125,000	125,000	125,000	125,000	
Total Resources	1,572,761	386,267	109,196	495,463	302,298	797,761	150,000	125,000	125,000	125,000	125,000	125,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description:

This project provide funding for financial planning, bond council, and engineering consultants. Included are updates to Facility Planning needs through the future.

Justification:

The WRA Facility Plan Update - 2012 identified the needs of the WRA through 2040. Studies will continually be needed to evaluate changes in growth, conveyance and wastewater treatment needs of the WRA through 2040.

Scheduling:

Ongoing.

Relationship to General Plan and Other Projects:

Small CIP funds

Operating Budget Effect:

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY			PROJECT TITLE					ACCOUNT					
Wastewater Reclamation Authority Improvements			WRF Facilities Rehabilitation [Sm CIP, 2002-2018]					AG267 WRA990000 WRA078					
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	1,401,400	665,096	172,924	838,020	563,380	1,401,400							
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / Commtty funds SmCIP	1,401,400	665,096	172,924	838,020	563,380	1,401,400							
Total Resources	1,401,400	665,096	172,924	838,020	563,380	1,401,400							
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description:
 These projects are for non-process repair and replacement projects at the WRF and off-site WRA facilities.
 All HVAC Improvements and Roof replacements are budgeted in the project number.

Justification:
 As buildings and infrastructure age, capital projects will be required to preserve facilities in a serviceable condition.

Scheduling:
 F17: HVAC Replacements; Building 12 HVAC Replacement.
 F18: HVAC Replacements; Building 35 Roof replacement, Building 5 Boiler replacement, Building 93 Boiler replacement.

Relationship to General Plan and Other Projects:
 small cip funding

Operating Budget Effect:
 These projects will reduce operations and maintenance costs in future years.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY		PROJECT TITLE										ACCOUNT	
Wastewater Reclamation Authority Improvements		WRF Facilities Rehabilitation [Sm CIP]										AG267 WRA990000 WRA078b	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	2,825,000						625,000	1,000,000	300,000	300,000	300,000	300,000	
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / Commtty funds SmCIP	2,825,000						625,000	1,000,000	300,000	300,000	300,000	300,000	
Total Resources	2,825,000						625,000	1,000,000	300,000	300,000	300,000	300,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description:
 These projects are for non-process repair and replacement projects at the WRF and off-site WRA facilities.
 All HVAC Improvements and Roof replacements are budgeted in the project number.

Justification:
 As buildings and infrastructure age, capital projects will be required to preserve facilities in a serviceable condition.

Scheduling:
 F19: HVAC Replacements; Building 05 heat recovery ventilator replacement, Building 05 MAU replacement
 F20: HVAC Replacements; Building 75 boiler replacements
 F21 and Beyond: HVAC Replacements and Continued Roof Replacements as needed.

Relationship to General Plan and Other Projects:
 small cip funding

Operating Budget Effect:
 These projects will reduce operations and maintenance costs in future years.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRA Sewer Maintenance (Repair of Levee Gates and Stream banks)							AG267 WRA990000 WRA083a		
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	1,720,000	1,358,263	274,438	1,632,701	87,299	1,720,000							
Beginning Balance					62,299								
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Funding O&M budget (803 9)	1,720,000	1,421,000	274,000	1,695,000	25,000	1,720,000							
Total Resources	1,720,000	1,421,000	274,000	1,695,000	87,299	1,720,000							
ENDING BALANCE	0	62,737	(438)	62,299	0	0	0	0	0	0	0	0	0

Description:

This project provides funding for annual engineering investigation for portions of the WRA interceptor sewer system and for specific maintenance/repairs of those sewers. Maintenance and repairs will include: Sewer televising, sewer cleaning, sewer lining, manhole rehabilitation and rebuilding, sewer spot repairs, sinkhole repairs, replacement of manhole lids, castings, gates, etc.

Justification:

Portions of the WRA Conveyance system are over fifty years old and there is a need to investigate, evaluate and determine maintenance on the overall interceptor sewer system. This project sets aside funding for planned and unanticipated sewer repairs in the conveyance system.

Scheduling:

F11, Investigate southwest outfall and four mile interceptor. F12, Investigate the Westside/Beaver Creek interceptor sewer. F13, Investigate the western portion of the So Tier interceptor. F13/14 Southside Des Moines River Interceptor Investigation.

Relationship to General Plan and Other Projects:

This project is funded with Operating Money.

Operating Budget Effect:

These investigations will identify repairs that will increase operating costs in future budgets on a proactive basis rather than reactive spending.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Sewer Maintenance (Inspections & Repairs)								AG267 WRA990000 WRA083b	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	600,000						100,000	100,000	100,000	100,000	100,000	100,000	
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Funding O&M budget (803 19)	600,000						100,000	100,000	100,000	100,000	100,000	100,000	
Total Resources	600,000						100,000	100,000	100,000	100,000	100,000	100,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description:

This project provides funding for annual engineering investigation for portions of the WRA interceptor sewer system and for specific maintenance/repairs of those sewers. Maintenance and repairs will include: Sewer televising, sewer cleaning, sewer lining, manhole rehabilitation and rebuilding, sewer spot repairs, sinkhole repairs, replacement of manhole lids, castings, gates, etc.

Justification:

Portions of the WRA Conveyance system are over fifty years old and there is a need to investigate, evaluate and determine maintenance on the overall interceptor sewer system. This project sets aside funding for planned and unanticipated sewer repairs in the conveyance system.

Scheduling:

Relationship to General Plan and Other Projects:

This project is funded with Operating Money.

Operating Budget Effect:

These investigations will identify repairs that will increase operating costs in future budgets on a proactive basis rather than reactive spending.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Studies [Sm CIP consulting]								AG267 WRA990000 WRA091	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	627,612	325,278	41,861	367,139	50,473	417,612	50,000	40,000	30,000	30,000	30,000	30,000	
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / Commty funds SmCIP	627,612	325,278	41,861	367,139	50,473	417,612	50,000	40,000	30,000	30,000	30,000	30,000	
Total Resources	627,612	325,278	41,861	367,139	50,473	417,612	50,000	40,000	30,000	30,000	30,000	30,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description:
This project funds process and safety improvement studies at the WRF and WRA conveyance system.

Justification:
These studies are necessary to reduce operations and maintenance costs and facilitate a safer working environment at the WRF.

Scheduling:
F11-15: WRA Operating Plan development; WRF Flood Inundation study. Biogas to grid injection evaluation.
F16-17: Studies, as needed Phosphorus recovery study, Biogas to Grid injection evaluation.
F18: Rate study, Main pump study, Site evaluation.
F19-23: Studies, as needed

Relationship to General Plan and Other Projects:
small cip funding

Operating Budget Effect:

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Flow Monitoring System Improvements and Meter Replacements								AG267 WRA990000 WRA093	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	8,231,650	6,683,075	98,708	6,781,783	154,657	6,936,440	413,800	430,350	447,560	3,500			
Beginning Balance					1,650								
Interest Earnings	110,269	110,269		110,269		110,269							
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds (reallocated)	6,574,464	6,574,464		6,574,464		6,574,464							
SRF Drawdowns													
Other (R&R commty)	1,546,917		98,700	98,700	153,007	251,707	413,800	430,350	447,560	3,500			
Total Resources	8,231,650	6,684,733	98,700	6,783,433	154,657	6,936,440	413,800	430,350	447,560	3,500			
ENDING BALANCE	0	1,658	(8)	1,650	0	0	0	0	0	0	0	0	0

Description: Core Project. This project upgraded the existing system and implement new meters for flow metering and real time operational control. Flow meters will be used for flow allocation to communities and for operating the collection system during wet weather events. Flow meters were installed to meter the majority of Des Moines flow into the conveyance system. Replacement of meters at end of useful life begins F16.

Justification:

Previous flow monitors were replaced in 2010-2013 with best technology available for order in 2009 (Hach). As the hach meters reach end of useful life they are being replaced with better laser technology. WRA has more than 100 meters in the collection system.

Scheduling:

Design in F08/09, Replacement of very old meters in F09 through F11. Installation continued through F13 as interceptor sewers were completed.

Replacement F16 (3), F17 (7), F18 (12), F19 (31), F20 (31), F21 (31)

Relationship to General Plan and Other Projects:

Bond funds were used for purchase and installation in 2009-2013. Small CIP funds will be used for replacements.

Operating Budget Effect:

This project will increase operation and maintenance cost of the WRA Flow Monitoring System.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Small Projects, & Process Equipment Repl for 2013, 2014, 2015, 2016								WR809855 WR106	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	7,965,248	5,988,047	523,829	6,511,876	1,453,372	7,965,248	2,400,000	(1,000,000)	(1,400,000)				
Beginning Balance					5,044,212		3,550,575		(1,400,000)				
Interest Earnings	40,000	40,000		40,000		40,000							
Repair and Replacement Fund Communities	14,200,000	14,200,000		14,200,000		14,200,000							
Future Funding Bond Proceeds													
SRF Drawdowns													
Other (tsfr out)	(6,274,752)	(2,540,477)	(143,435)	(2,683,912)	(40,265)	(2,724,177)	(1,150,575)	(2,400,000)					
Total Resources	7,965,248	11,699,523	(143,435)	11,556,088	5,003,947	11,515,823	2,400,000	(2,400,000)	(1,400,000)				
ENDING BALANCE	0	5,711,476	(667,264)	5,044,212	3,550,575	3,550,575	0	(1,400,000)	0	0	0	0	0

Description:

Renewal and replacement of existing process equipment, includes small plant projects.

Justification:

Annual plant maintenance over \$5,000 in amount that reduces operating repair costs and extends the useful life of the asset.

Scheduling:

Bar screen replacement in F13 - F14 (\$1,400,000)

W3 improvements in F13 (\$1,300,000)

Relationship to General Plan and Other Projects:

This project will be funded with community contributions. Transfers out will provide funding to other R&R projects. Remaining FY2019 funds can be moved to new Site Security project.

Operating Budget Effect:

This project will maintain the current level of service and reduce operations and maintenance costs.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Small Projects, & Process Equipment Repl for 2017, 2018, 2019								AG267 WRA990000 WRA110a	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	7,187,938		251,828	251,828	4,000,000	4,251,828	2,436,110	2,000,000	(1,500,000)				
Beginning Balance					3,279,188		2,104,910	2,000,000					
Interest Earnings	25,000		5,000	5,000	5,000	10,000	15,000						
Repair and Replacement Fund Communities	11,750,000		3,850,000	3,850,000	3,900,000	7,750,000	4,000,000						
Future Funding Bond Proceeds													
SRF Drawdowns													
Other (tsfr out)	(4,587,062)		(323,984)	(323,984)	(1,079,278)	(1,403,262)	(1,683,800)		(1,500,000)				
Total Resources	7,187,938		3,531,016	3,531,016	6,104,910	6,356,738	4,436,110	2,000,000	(1,500,000)				
ENDING BALANCE	0	0	3,279,188	3,279,188	2,104,910	2,104,910	2,000,000	0	0	0	0	0	0

Description:

Renewal and replacement of existing process equipment, includes small plant projects.

Justification:

Annual plant maintenance over \$5,000 in amount that reduces operating repair costs and extends the useful life of the asset.

Scheduling:

F18: Repair Building 05 gate, Scum modifications, RDT rebuild, Aeration PRV replacement, Aeration Basin monitoring equipment.

F19: Primary Sludge improvements, Aeration PRV replacement, RSL improvements, Building 70 Piping improvement.

Relationship to General Plan and Other Projects:

This project will be funded with interest earnings from R&R reserve fund and community contributions. Transfers out will provide funding to other R&R projects.

Operating Budget Effect:

This project will maintain the current level of service and reduce operations and maintenance costs.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT		
Wastewater Reclamation Authority Improvements				WRA Equalization Basin Improvements								AG267 WRA99000 WR 104		
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24	
							F19	F20	F21	F22	F23	F24		
Expenses	300,000						300,000							
Beginning Balance														
Interest Earnings														
Repair and Replacement Fund														
Communities														
Future Funding														
Bond Proceeds														
SRF Drawdowns														
Other, (tsfr from Small CIP)	300,000						300,000							
Total Resources	300,000						300,000							
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Description:

Improvements/Modifications/Abandonment of existing WRA equalization basins. This project will modify and upgrade the existing Area C and Beaver Creek Equalization Basins in order to begin utilizing these facilities in the conveyance system.

Justification:

An equalization utilization study was done in F09 indicating a benefit to WRA conveyance system would be achieved by utilizing Beaver Creek and Area C equalization basins.

Scheduling:

Improvements in AreaC: F11/12

Improvements in Beaver Creek: F11/12

Abandonment of Highland Hills: F19

Relationship to General Plan and Other Projects:

These improvements will be funded from Small CIP R&R collections.

Operating Budget Effect:

This project will increase revenues and operations and maintenance costs.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE						ACCOUNT			
Wastewater Reclamation Authority Improvements				WRA Beaver Creek Sewer Stabilization						AG267 WRA99000 WR 114			
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	1,235,575		44,735	44,735	40,265	85,000	1,150,575						
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other (small CIP)	1,235,575		44,735	44,735	40,265	85,000	1,150,575						
Total Resources	1,235,575		44,735	44,735	40,265	85,000	1,150,575						
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description: Core Project.

The WRA Beaver Creek Interceptor Streambank Stabilization consists of stabilizing the southerly bank of the Des Moines River for a distance of approximately 2,500 feet in the area where the WRA Beaver Creek Interceptor Sewer is located in close proximity to a portion of the river bank that is generally eroding toward the WRA sewer. The project location is approximately one-third mile south of Interstate 35/80.

Justification:

The WRA Beaver Creek Interceptor is located in close proximity to a portion of the river bank that is generally eroding toward the WRA sewer. The streambank requires stabilization in order to protect one of the WRA's existing sewers.

Scheduling:

Construction of stabilization improvements in FY19

Relationship to General Plan and Other Projects:

New project in FY18.

Operating Budget Effect:

This project will have no effect on the operating budget.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Site Security and Access Improvements								WR809855 WR121	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	3,455,120				10,120	10,120	152,600	687,400	2,605,000				
Beginning Balance								(7,600)	(695,000)				
Interest Earnings													
Repair and Replacement Fund Communities	1,900,000								1,900,000				
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / from Small CIP	1,555,120				10,120	10,120	145,000		1,400,000				
Total Resources	3,455,120				10,120	10,120	145,000	(7,600)	2,605,000				
ENDING BALANCE	0	0	0	0	0	0	(7,600)	(695,000)	0	0	0	0	0

Description:

A study was performed in 2017 to evaluate ways to improve WRF site access, minimize traffic queuing on Vandalia Road, improve circulation of trucks within the WRF, and to improve security opportunities for the WRF.

Justification:

The department of Homeland Security categorizes the WRF as critical infrastructure, and as such security within the facility and access to the facility should be prioritized. The site security and access improvements will provide the benefit of improving site security and safety for vehicular traffic entering and exiting the facility.

Scheduling:

Design in F19-F20, Construction in F20-F21

Relationship to General Plan and Other Projects:

Small CIP funding.

Operating Budget Effect:

This project will increase operational cost in future years with additional contract security staffing.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Plant & Basin Equipment Replacement & WRA/WRF Small CIP projects								AG267 WR809855 WR 110 b	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	16,593,590							3,419,650	2,812,440	3,451,500	3,455,000	3,455,000	
Beginning Balance													
Interest Earnings	60,000							15,000	15,000	10,000	10,000	10,000	
Repair and Replacement Fund Communities	17,900,000							4,000,000	2,200,000	3,900,000	3,900,000	3,900,000	
Future Funding Bond Proceeds													
SRF Drawdowns													
Other (tsfr out)	(1,366,410)							(595,350)	597,440	(458,500)	(455,000)	(455,000)	
Total Resources	16,593,590							3,419,650	2,812,440	3,451,500	3,455,000	3,455,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description:

Renewal and replacement of existing process equipment, includes small plant projects.

Justification:

Process equipment installed between 1987 and 1993 is nearing the end of its useful life and will require replacement. Other major replacements are budgeted individually.

Scheduling:

F20-23: Renewals & replacements, as needed

Relationship to General Plan and Other Projects:

This project will be funded with interest earnings from R&R reserve fund and community contributions. Transfers out will provide funding to other R&R projects.

Operating Budget Effect:

This project will maintain the current level of service and reduce operations and maintenance costs.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY		PROJECT TITLE										ACCOUNT	
Wastewater Reclamation Authority Improvements		Des Moines River Outfall / New Main Outfall Phase 17										AG267 WRA990000 WRA086	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses, net of CDM DMWW	65,199,635	63,902,705	493,227	64,395,932	803,703	65,199,635							
Beginning Balance					3,703								
Interest Earnings	329,774	326,364	3,410	329,774		329,774							
Repair and Replacement Fund Communities	54,642	10,992	43,650	54,642		54,642							
Future Funding													
Bond Proceeds	12,503,279	11,703,279		11,703,279	800,000	12,503,279							
SRF Drawdowns	51,948,600	51,948,600		51,948,600		51,948,600							
Other	363,340	363,340		363,340		363,340							
Total Resources	65,199,635	64,352,575	47,060	64,399,635	803,703	65,199,635							
ENDING BALANCE	0	449,870	(446,167)	3,703	0	0	0	0	0	0	0	0	0

Description: Core Project.
 This project provides for construction of a large outfall sewer along the west side of the Des Moines River from 3rd Street and Watson Powell Drive to south of Elm Street and along the east side of the Des Moines River from Raccoon Street to the south side of Scott Avenue. This will help to meet the nine minimum requirements in the current NPDES permit.

The Main Outfall project begins at the DM River Outfall sewer siphon structure and proceeds east/southeasterly across the DM River and continues in a southeasterly direction. It will replact the existing Main Outfall terminating upstream of the WRF at a proposed CSSFacility (see WRA087).

Justification:
 This project is included in the long term control plan presented to the IDNR.

Scheduling:
 Stage 1: Design-F04, Construction F04/05. Stage 2: Design-F05, Construction-F06/09.
 Main Outfall Design: F08/09, Construction of six segments F10/14 and P17seg. 8 to connect completed segments.

Relationship to General Plan and Other Projects:
 This project is included in the WRA Facility Plan Update.

Operating Budget Effect:
 This project will increase operations and maintenance costs.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE				ACCOUNT					
Wastewater Reclamation Authority Improvements				Combined Sewer Solids Separation Facility Phase 17				AG267 WRA990000 WRA087					
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	51,961,995	50,552,397	1,071,672	51,624,069	337,926	51,961,995							last time in book
Beginning Balance					322,926								
Interest Earnings	96,995	74,995	7,000	81,995	15,000	96,995							
Repair and Replacement Fund Communities	8,000	74	7,926	8,000		8,000							
Future Funding													
Bond Proceeds	550,000	550,000		550,000		550,000							
SRF Drawdowns	51,307,000	51,307,000		51,307,000		51,307,000							
Other													
Total Resources	51,961,995	51,932,069	14,926	51,946,995	337,926	51,961,995							
ENDING BALANCE	0	1,379,672	(1,056,746)	322,926	0	0	0	0	0	0	0	0	0

Description: Core Project.
 This project provides for solids separation of wet weather combined sewer flow at the Wastewater Reclamation Facility. Flow will be discharged to the Des Moines River after primary treatment and disinfection.

Justification:
 This project is included in the long term control plan presented to the IDNR and will be required to meet the nine minimum requirements in the long term control plan.

Scheduling:
 Design-F08 through F10, Construction F10 through F14. Project is reaching completion.

Relationship to General Plan and Other Projects:
 This project is included in the WRA Facility Plan Update.

Operating Budget Effect:
 This project will increase operations and maintenance costs.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY		PROJECT TITLE										ACCOUNT	
Wastewater Reclamation Authority Improvements		Ingersoll Run [Combined Sewer Overflow, Outlet] Phase 25										AG267 WRA990000 WRA088	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	13,175,400		92,761	92,761	144,799	237,560	644,020	1,191,290	4,162,790	3,715,000	3,224,740		
Beginning Balance					1,709		2,000	2,000	(910,470)	6,891,740	3,199,740		
Interest Earnings													
Repair and Replacement Fund													
Communities	75,000		1,710	1,710	290	2,000			25,000	23,000	25,000		
Future Funding	11,940,000								11,940,000				
Bond Proceeds													
SRF Drawdowns													
Other (revenues Flood Mit)	1,160,400		92,760	92,760	144,800	237,560	644,020	278,820					
Total Resources	13,175,400		94,470	94,470	146,799	239,560	646,020	280,820	11,054,530	6,914,740	3,224,740		
ENDING BALANCE	0	0	1,709	1,709	2,000	2,000	2,000	(910,470)	6,891,740	3,199,740	0	0	0

Description: Core Project.

This project provides for the relocation of a combined sewer overflow in the 2100 block of High Street in the Ingersoll Run Combined Sewer System. This will provide adequate sewer capacity in this reach of the combined sewer system to eventually eliminate the combined sewer overflow in the area of Eighth Street and Keo Way to help meet the minimum requirements included in the current NPDES permit.

Justification:

Needed to conform to NPDES requirements.

Scheduling:

Design in F17 moved forward to utilize Flood Mitigation funding.

Relationship to General Plan and Other Projects:

This project is included in the WRA Facility Plan Update.

Operating Budget Effect:

None.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY					PROJECT TITLE								ACCOUNT
Wastewater Reclamation Authority Improvements					Mud Creek Interceptor P 19								AG267 WRA990000 WRA099
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	20,208,500	20,177,628	28,634	20,206,262	2,238	20,208,500							last time in book
Beginning Balance					2,238								
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds	180,000	180,000		180,000		180,000							
SRF Drawdowns	19,028,500	17,511,500	1,517,000	19,028,500		19,028,500							
Other, Altoona	1,000,000	1,000,000		1,000,000		1,000,000							
Total Resources	20,208,500	18,691,500	1,517,000	20,208,500	2,238	20,208,500							
ENDING BALANCE	0	(1,486,128)	1,488,366	2,238	0	0	0	0	0	0	0	0	0

Description: Expansion project.

This project will provide service to the Mud Creek area in Altoona and serve as the Bondurant connection to the WRA system.

City of Altoona will provide funding to start the project

Justification:

Required to provide capacity for the Mud Creek area in Altoona and as an outlet for Bondurant.

Scheduling:

Phase 1: Design-F08 started under 28E expedite, Construction-F12/14.

Relationship to General Plan and Other Projects:

This project is included in the WRA Facility Plan Update.

Operating Budget Effect:

Revenues and expenses will increase as flows increase.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Sponsored / Polk County Sponsored / Four Mile Acquisition								AG267 WRA99000 WR 101	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	3,201,300	3,018,761	179,750	3,198,511	2,789	3,201,300							last time in book
Beginning Balance					(182,735)								
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns	3,201,300	1,753,284	1,262,492	3,015,776	185,524	3,201,300							
Other		2,985	(2,985)										
Total Resources	3,201,300	1,756,269	1,259,507	3,015,776	2,789	3,201,300							
ENDING BALANCE	0	(1,262,492)	1,079,757	(182,735)	0	0	0	0	0	0	0	0	0

Description:
 This project was awarded funding in the fall of 2013 through the Clean Water SRF Water Resource Restoration Sponsored Project Program.
 The project includes the acquisition of 20 properties from Easton Boulevard to Hubbell Avenue in Des Moines. The scope includes the acquisition, demolition, grading, and vegetation of the properties. These properties represent the highest risk to flood damage and also are situated to develop a continuous stream corridor. These buyouts, coupled with the 153 properties previously acquired by Des Moines, will also create a continuous stream corridor to improve the conveyance of flow, provide a larger stream buffer for water quality, and ultimately create an educational and recreational component to the Four Mile Creek Watershed.

Justification:
 This project includes the voluntary acquisition of properties along Four Mile Creek to restore the riparian buffer and flood plain. The acquisitions would eliminate point sources of contaminants, particularly during storm events when pollutant levels are elevated.

Scheduling:
 To begin spring 2014 and continue for 15-18 months.

Relationship to General Plan and Other Projects:
 Total Debt Service on SRF Loan 2012G and 2012D will not change. WRA will ask for an amendment to increase Principal, reduce Rate & lower Interest payments.

Operating Budget Effect:
 Revenues and operations and maintenance costs will not be impacted with this additional project as Polk County will help sponsor.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRA Southern Tier Improvements for SW Area Diversion							AG267 WRA99000 WR 103		
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	17,218,730	16,673,486	333,770	17,007,256	211,474	17,218,730							
Beginning Balance					211,474								
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds realloc 81	4,100,000	4,100,000		4,100,000		4,100,000							
SRF Drawdowns	13,118,730	13,118,730		13,118,730		13,118,730							
Other / Commty funds SmCIP													
Total Resources	17,218,730	17,218,730		17,218,730	211,474	17,218,730							
ENDING BALANCE	0	545,244	(333,770)	211,474	0	0	0	0	0	0	0	0	0

Description: Part of SWADF Project.

This project will increase the capacity of the Southern Tier Interceptor. F12 improvements will increase the pipe line capacity from the Souther Tier pump station to the Area C equalization basin. This project also includes the construction of a high lift pump station at the existing Southern Tier pump station site.

Justification:

The high lift pump station and parrallel force main will be used to accommodate the flow from the SWADF Equalization Basin at the old Norwalk treatment plant site.

Scheduling:

This project has been re-scheduled to begin F11 from F19. Design in F11/12. Construction in F13/14.

Relationship to General Plan and Other Projects:

This project is included in the WRA Facility Plan Update as an Expansion project but is now categorized as part of the SW Area Diversion Faciltiy (SWADF).

Operating Budget Effect:

This project will increase operations and maintenance costs.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Flood Improvements								AG267 WRA99000 WR 105	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	14,224,746	41,326	138,956	180,282	582,074	762,356	4,378,200	6,825,200	1,290,600	92,400	875,990		
Beginning Balance					9,532,731		10,916,323	7,281,713	2,001,090	1,760,580	875,990		
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other (Revenue Flood Mit)	14,224,746	5,996,430	3,716,583	9,713,013	1,965,666	11,678,679	743,590	1,544,577	1,050,090	(792,190)			
Total Resources	14,224,746	5,996,430	3,716,583	9,713,013	11,498,397	11,678,679	11,659,913	8,826,290	3,051,180	968,390	875,990		
ENDING BALANCE	0	5,955,104	3,577,627	9,532,731	10,916,323	10,916,323	7,281,713	2,001,090	1,760,580	875,990	0	0	0

Description: Core Project.

The project will construct multiple improvements to the WRF to reduce flood vulnerability and to provide improved protection against elevated river levels.

Justification:

The WRF currently located adjacent to the Des Moines River, and as such, is vulnerable to elevated river levels. Many of the facilities electrical transformers and buildings are at an elevation that is vulnerable to inundation. The purpose of the project is to reduce the flood vulnerability of the WRF, and to protect the WRA's existing assets located within the WRF.

Scheduling:

Project Design F18; Construction in F19-20.

Construction can be moved forward as this project was in the Flood Mitigation Application.

Relationship to General Plan and Other Projects:

This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs for the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Southern Tier Improvements - Western (Expansion Debt)								AG267 WRA99000 WR 107	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	9,478,700	76,368	589,363	665,731	12,969	678,700		110,000	1,550,000	650,000		90,000	6,400,000
Beginning Balance					26,096		15,000	15,000	(95,000)	660,000	10,000	10,000	
Interest Earnings													
Repair and Replacement Fund Communities	72,000	2,072	33,055	35,127	1,873	37,000			5,000			30,000	
Future Funding	8,750,000								2,300,000				6,450,000
Bond Proceeds	656,700		656,700	656,700		656,700							
SRF Drawdowns													
Other													
Total Resources	9,478,700	2,072	689,755	691,827	27,969	693,700	15,000	15,000	2,210,000	660,000	10,000	40,000	6,450,000
ENDING BALANCE	0	(74,296)	100,392	26,096	15,000	15,000	15,000	(95,000)	660,000	10,000	10,000	(50,000)	0

Description: Expansion Project.

This project will increase capacity in the western portion of the Southern Tier Interceptor.

Justification:

To accommodate the flow in the western service area of the Southern Tier Interceptor.

Scheduling:

Segment 22 Design in F15/16. Construction in F16/17.

Relationship to General Plan and Other Projects:

This project was included in the WRA Facility Plan Update and also included in the New Facility Plan.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs to the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY		PROJECT TITLE										ACCOUNT	
Wastewater Reclamation Authority Improvements					WRA Sponsored [Four Mile Creek] Streambank Restoration Projects							AG267 WRA99000 WR 109	
	TOTAL	COST	ACTUAL	COST	Revised	ESTIMATED	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
	ESTIMATED	THROUGH	COST IN	THROUGH	BUDGET	COST THROUGH							BEYOND
	COST	F16	F17	F17	F18	F18	F19	F20	F21	F22	F23	F24	F24
Expenses	3,181,400	231,484	837,550	1,069,034	72,366	1,141,400	1,058,600	981,400					
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / sponsored project	3,181,400	231,484	837,550	1,069,034	72,366	1,141,400	1,058,600	981,400					
Total Resources	3,181,400	231,484	837,550	1,069,034	72,366	1,141,400	1,058,600	981,400					
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description:

This project was awarded funding in June of 2014 through the Clean Water SRF Water Resource Restoration Sponsored Project Program.

The project will include approximately 5000 feet of stream bank restoration along the banks of Four Mile Creek in locations where the WRA Four Mile Interceptor needs protection from stream bank erosion.

Justification:

The project will protect the WRA Four Mile Interceptor from stream bank erosion caused by Four Mile Creek. The project will improve the condition of the Four Mile Creek stream bank which in turn will stabilize the area in the vicinity of the interceptor to minimize the risk of having the pipeline compromised.

Scheduling:

Four Mile Creek: Design F16-17. Easement acquisition F15-17. Construction (a) winter 2016-2017 (b) F17-18.

Phase 2 & 3 Construction F18-20.

Relationship to General Plan and Other Projects:

Total debt service on SRF Loans will not change but addition prinipal allows draws for construction of a sponsored project.

Operating Budget Effect:

Revenues, operations and maintenance costs, and debt service will not be impacted with the addition of this project.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY		PROJECT TITLE										ACCOUNT	
Wastewater Reclamation Authority Improvements					WRA Sponsored [Sugar Creek] Streambank Restoration Projects							AG267 WRA99000 WR 117	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	1,100,000		75,416	75,416	224,584	300,000	800,000						
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / sponsored project	1,100,000		75,416	75,416	224,584	300,000	800,000						
Total Resources	1,100,000		75,416	75,416	224,584	300,000	800,000						
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description:

This project was awarded funding in June of 2016 through the Clean Water SRF Water Resource Restoration Sponsored Project Program.

Justification:

The project will protect WRA Interceptor from stream bank erosion caused by Sugar Creek. The project will improve the condition of the Sugar Creek stream bank which in turn will stabilize the area in the vicinity of the interceptor to minimize the risk of having the pipeline compromised.

Scheduling:

Sugar Creek: Design F17-18. Construction F18-20.

Relationship to General Plan and Other Projects:

Total debt service on SRF Loans will not change but addition prinipal allows draws for construction of a sponsored project.

Operating Budget Effect:

Revenues, operations and maintenance costs, and debt service will not be impacted with the addition of this project.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT		
Wastewater Reclamation Authority Improvements				WRF Biomethane Gas Conditioning and Injection								AG267 WRA99000 WR 102		
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24	
							F19	F20	F21	F22	F23	F24		
Expenses	17,147,058	503,819	384,040	887,859	1,518,190	2,406,049	12,465,404	2,275,005	600					
Beginning Balance					(117,859)		14,644,980	2,249,980	(25)					
Interest Earnings														
Repair and Replacement Fund Communities	136,029	3,000	17,000	20,000	20,000	40,000	70,404	25,000	625					
Future Funding	17,011,029				17,011,029	17,011,029								
Bond Proceeds														
SRF Drawdowns			750,000	750,000	(750,000)									
Other														
Total Resources	17,147,058	3,000	767,000	770,000	16,163,170	17,051,029	14,715,384	2,274,980	600					
ENDING BALANCE	0	(500,819)	382,960	(117,859)	14,644,980	14,644,980	2,249,980	(25)	0	0	0	0	0	0

Description: Core Project.

Currently, the WRA has an agreement with a firm with experience evaluating natural gas contracts including Biomethane conditioning and injection. The consultant has been tasked with evaluating whether a market for the purchase of Biomethane, a non-Greenhouse Gas (GHG) alternative fuel exists in Iowa or in other markets. A report evaluating the MidAmerican proposal and the potential markets would serve as a planning document for determining if there is a business case for constructing a biogas conditioning facility and selling Biomethane.

Justification:

The Wastewater Reclamation Facility (WRF) produces about 500,000,000 cubic feet of biogas annually. Of that amount, 170,000,000 is used beneficially to produce heat and electricity that WRF would otherwise purchase from the utility, and about 130,000,000 is sold to Cargill where it substitutes for natural gas. The remaining 200,000,000 is excess and flared using a waste gas burner. If the market exists for the conditioning and selling of Biomethane to another entity, the WRA will have a revenue source for the gas.

Scheduling:

The project design is near completion.

Relationship to General Plan and Other Projects:

This improvement was not included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014. WRA Finance Committee met in January 2016 to discuss the funding for this project.

Operating Budget Effect:

This project would increase revenue and reduce the operations and maintenance costs to the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT			
Wastewater Reclamation Authority Improvements				WRA Eastside Interceptor, Gravity Sewer & Force Main							AG267 WRA99000 WR 108			
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24	
							F19	F20	F21	F22	F23	F24		
Expenses	76,708,250	3,095,268	10,468,841	13,564,109	15,764,141	29,328,250	30,180,000	17,200,000						
Beginning Balance					28,144,141		48,880,000	17,200,000						
Interest Earnings														
Repair and Replacement Fund Communities	408,250		408,250	408,250		408,250								
Future Funding														
Bond Proceeds	76,300,000		39,900,000	39,900,000	37,900,000	77,800,000	(1,500,000)							
SRF Drawdowns		3,000,000	(1,600,000)	1,400,000	(1,400,000)									
Other / transfer from R&R														
Total Resources	76,708,250	3,000,000	38,708,250	41,708,250	64,644,141	78,208,250	47,380,000	17,200,000						
ENDING BALANCE	0	(95,268)	28,239,409	28,144,141	48,880,000	48,880,000	17,200,000	0	0	0	0	0	0	0

Description:

This project conveys wastewater flow from the existing WRA Westside Interceptor to the WRA Wastewater Reclamation Facility. The new Eastside Interceptor pipeline will be constructed through the eastside of Des Moines. The project will construct a force main and gravity sewer pipeline with pipe diameters of approximately 42" and 66" respectively. The project would start at the WRF and continue northwesterly to a point directly east of the existing Westside Pump Station. The project would include modifications to the existing Westside Pump Station to include an expansion for high flow pumping.

Justification:

The project provides relief to the overloaded Westside Interceptor that serves the Cities of Des Moines, Ankeny, Polk City and a portion of the Urbandale Sanitary Sewer District. As outlined in the 28E agreement for the Rock Creek Interceptor project the communities of Polk County, Polk City and Ankeny will contribute \$8,600,000 towards the funding of this project.

Scheduling:

Project design in F15-16; Construction in F17/F18/F19/20.

Relationship to General Plan and Other Projects:

This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs to the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY					PROJECT TITLE								ACCOUNT
Wastewater Reclamation Authority Improvements					WRF Grit Removal Improvements								AG267 WR809855 WR111
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	12,338,100	290,618	415,411	706,029	1,503,671	2,209,700	4,275,000	4,343,400	1,510,000				
Beginning Balance					306,968		2,001,700	5,829,400	1,502,000				
Interest Earnings													
Repair and Replacement Fund Communities	78,400	8,932	4,065	12,997	19,403	32,400	22,000	16,000	8,000				
Future Funding	12,259,700				4,179,000	4,179,000	8,080,700						
Bond Proceeds													
SRF Drawdowns		1,000,000		1,000,000	(1,000,000)								
Other													
Total Resources	12,338,100	1,008,932	4,065	1,012,997	3,505,371	4,211,400	10,104,400	5,845,400	1,510,000				
ENDING BALANCE	0	718,314	(411,346)	306,968	2,001,700	2,001,700	5,829,400	1,502,000	0	0	0	0	0

Description: Core Project.

This project will construct additional grit basins, modify the existing grit conveyance facilities, and optimize the grit removal system in the existing basin layout. The project also includes a chemical enhancement system for the existing primary clarifiers to enhance settling during elevated flow conditions through chemical augmentation.

Justification:

The WRF currently has six identical grit basins, and the original concept plan for the WRF included space for two additional grit basins. Ideally, more than two additional grit basins would be constructed, but space constraints will not allow for the construction of more than two additional basins. The hydraulic detention time at peak flows is too short for optimum grit removal, so the improvement will improve the hydraulic detention time in the existing grit basins, modify the grit conveyance facilities, and make modifications to optimize the grit removal in the existing basins.

Scheduling:

Project design in F17/18; Construction in F19-F21

Relationship to General Plan and Other Projects:

These improvements are included in the approved WRA Facility Plan Update-2012 and Second Amended and Restated Agreement for the DM Metro Wastewater Reclamation Authority.

Operating Budget Effect:

Operating and maintenance costs will increase with implementation of the facilities.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY		PROJECT TITLE										ACCOUNT	
Wastewater Reclamation Authority Improvements		WRF Phosphorus Recovery Facility										AG267 WRA99000 WR 112	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	20,000,000		211,402	211,402	473,598	685,000	840,000	8,000,000	10,475,000				
Beginning Balance					(195,777)		30,625	45,625	10,455,625				
Interest Earnings													
Repair and Replacement Fund Communities	80,000		15,625	15,625	15,000	30,625	15,000	15,000	19,375				
Future Funding	19,920,000							19,920,000					
Bond Proceeds													
SRF Drawdowns					685,000	685,000	840,000	(1,525,000)					
Other													
Total Resources	20,000,000		15,625	15,625	504,223	715,625	885,625	18,455,625	10,475,000				
ENDING BALANCE	0	0	(195,777)	(195,777)	30,625	30,625	45,625	10,455,625	0	0	0	0	0

Description: Core Project.

The Operating Contractor's Staff is evaluating whether there is a business case for the installation of a phosphorus recovery facility. There is a potential for the WRA to have a revenue stream through the removal of phosphorus from the wastewater treatment process, to reduce present and future operation and maintenance costs, and to reduce future capital expenditures for the WRF Nutrient Removal facility by installing a phosphorus recovery facility.

Justification:

Through the wastewater treatment process, a chemical known as struvite forms in the digestion facilities and post digestion facilities. Struvite is formed through the chemical interaction between magnesium, ammonia, and phosphorus, and the WRF has seen an increase in the formation of the struvite in piping, pumps, dewatering equipment, and digester equipment. The WRA currently spends a significant amount of money in chemical purchases, equipment purchases, and internal resources in removing struvite. Operating Contractor Staff is evaluating the installation of a phosphorus recovery system that would remove phosphorus from the wastewater treatment side-streams that lead to the digestion and post digestion facilities, thus minimizing the potential for struvite to form. The installation of a phosphorus recovery system would have the benefit of reducing the amount of struvite that forms in the digestion and post digestion facilities, and it would help reduce the future capital expenditure for the nutrient removal facility. The installation of a phosphorus recovery system would also have the benefit of a revenue stream through the sale of the removed phosphorus to a third party company who would blend the phosphorus into fertilizers.

Scheduling:

The project design contract has been awarded and design will take place in F18-F19

Relationship to General Plan and Other Projects:

The installation of a phosphorus recovery facility would be considered a portion of the WRF Nutrient Removal project which is an improvement included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs for the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Sewer Lining								AG267 WRA99000 WR113	
	TOTAL	COST	ACTUAL	COST	Revised	ESTIMATED	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
	ESTIMATED	THROUGH	COST IN	THROUGH	BUDGET	COST THROUGH	F19	F20	F21	F22	F23	F24	BEYOND
	COST	F16	F17	F17	F18	F18							F24
Expenses	26,225,000	46,195	156,124	202,319	1,762,681	1,965,000	657,200	4,161,800	5,088,800	4,302,200			10,050,000
Beginning Balance					32,651		4,625,000	4,002,800	(24,000)	4,267,200			
Interest Earnings													
Repair and Replacement Fund													
Communities	200,000		14,970	14,970	40,030	55,000	35,000	35,000	40,000	35,000			
Future Funding	26,025,000				6,535,000	6,535,000			9,440,000				10,050,000
Bond Proceeds													
SRF Drawdowns			220,000	220,000	(220,000)			100,000	(100,000)			100,000	(100,000)
Other													
Total Resources	26,225,000		234,970	234,970	6,387,681	6,590,000	4,660,000	4,137,800	9,356,000	4,302,200		100,000	9,950,000
ENDING BALANCE	0	(46,195)	78,846	32,651	4,625,000	4,625,000	4,002,800	(24,000)	4,267,200	0	0	100,000	0

Description:

Lining of the existing Southwest Outfall over its entire length of approximately 66,000 feet of sewer pipeline from the Southside Des Moines River Interceptor connection to Walnut Hill Drive. The project would be completed in three phases.

Justification:

caused from hydrogen sulfide released from the wastewater flow. The pipe needs to be lined before structural damage advances to a point where the pipe structure is compromised. During the development of the WRA facility Plan update – 2012 it was determined to be more cost effective to line the existing sewer than to replace it.

Scheduling:

Phase 1: Design F18-19; Construction in F19-20.

Phase 2: Design F20-21; Construction in F21-22.

Phase 3: Design F24-25; Construction in F25-26.

Relationship to General Plan and Other Projects:

This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:

The new facilities constructed for this project should decrease maintenance costs to the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Clarifier Improvements								AG267 WRA99000 WR 115	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	20,040,000				10,000	10,000	545,000	6,125,000	2,900,000	25,000	6,425,000	4,010,000	
Beginning Balance							(10,000)	(55,000)	2,850,000	(50,000)	(75,000)	4,010,000	
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding	20,040,000							9,530,000			10,510,000		
Bond Proceeds													
SRF Drawdowns							500,000	(500,000)					
Other													
Total Resources	20,040,000						490,000	8,975,000	2,850,000	(50,000)	10,435,000	4,010,000	
ENDING BALANCE	0	0	0	0	(10,000)	(10,000)	(55,000)	2,850,000	(50,000)	(75,000)	4,010,000	0	0

Description: Core Project.

The Phase 1 project will replace three primary clarifier mechanisms and six final clarifier mechanisms due to the fact that the mechanisms are nearing the end of their useful life.
 The Phase 2 project will replace the the remaining primary clarifier mechanisms and remaining six final clarifier mechanisms due to the fact that the mechanisms are nearing the end of their useful life.

Justification:

The existing primary and final clarifiers were constructed in the early to mid-1990s and both of the primary clarifier and final clarifier mechanisms are approximately 20 years of age. At this time, the clarifier mechanisms are deteriorating and are nearing the end of their useful life.

Scheduling:

Design F20; Construction in F21-22.

Relationship to General Plan and Other Projects:

This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs to the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Preliminary Treatment								AG267 WRA99000 WR 116	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	30,600,000				1,000,000	1,000,000	1,240,000	9,680,000	13,180,000	5,500,000			
Beginning Balance							800,000	(440,000)	18,680,000	5,500,000			
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	30,600,000							30,600,000					
Bond Proceeds													
SRF Drawdowns					1,800,000	1,800,000		(1,800,000)					
Other													
Total Resources	30,600,000				1,800,000	1,800,000	800,000	28,360,000	18,680,000	5,500,000			
ENDING BALANCE	0	0	0	0	800,000	800,000	(440,000)	18,680,000	5,500,000	0	0	0	0

Description: Core Project.

The project will construct a new preliminary treatment facility (including screening, pumping, and grit removal) for the treatment of an additional 100 MGD. The facility will be served by the WRA Eastside Interceptor and a connection to the WRA Four Mile Interceptor.

Justification:

The WRA Facility Plan Update – 2012 identified the need for additional treatment at the WRF. This project will serve the WRA Eastside Interceptor and the WRA Four Mile Interceptor and will provide an additional 100 MGD of treatment to be operated in parallel with the existing preliminary treatment.

Scheduling:

Project Design F18-19; Construction in F20-22.

Relationship to General Plan and Other Projects:

This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs for the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY					PROJECT TITLE								ACCOUNT
Wastewater Reclamation Authority Improvements					WRF Trickling Filter Removal								WR809855 WR119
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	6,733,600				10,000	10,000	6,723,600						
Beginning Balance							(6,596)						
Interest Earnings													
Repair and Replacement Fund Communities	25,000				3,404	3,404	21,596						
Future Funding	6,708,600						6,708,600						
Bond Proceeds													
SRF Drawdowns													
Other / from Small CIP													
Total Resources	6,733,600				3,404	3,404	6,723,600						
ENDING BALANCE	0	0	0	0	(6,596)	(6,596)	0	0	0	0	0	0	0

Description:

Six of the twelve Trickling Filters at the WRF will need to be removed for immediate capital improvement project needs. The filters are no longer used for process treatment.

Justification:

The WRA is improving the WRF with improvements identified as the WRF Phosphorus Recovery Project, WRF Flood Improvements Project, WRF Preliminary Treatment Project, and WRF Site Security and Access Improvements. All of these improvement will be in the vicinity of the trickling filters so the filters will need to be demolished to accomodate the improvements.

Scheduling:

Design and Demolition in F18-F19

Relationship to General Plan and Other Projects:

New project in F19 to be funded with SRF funding.

Operating Budget Effect:

This project will have no effect on the operating budget.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Chlorination & Effluent Pumping								AG267 WRA99000 WR 2x3	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	25,345,000						450,000	1,395,000	7,580,000	11,780,000	4,140,000		
Beginning Balance								650,000	(745,000)	1,575,000	(7,470,457)	(9,747,350)	
Interest Earnings													
Repair and Replacement Fund Communities									10,000,000				
Future Funding	10,000,000												
Bond Proceeds													
SRF Drawdowns / P&D							1,100,000		(1,100,000)				
Other (Flood money)	15,345,000								1,000,000	2,734,543	1,863,107	1,774,875	7,972,475
Total Resources	25,345,000						1,100,000	650,000	9,155,000	4,309,543	(5,607,350)	(7,972,475)	7,972,475
ENDING BALANCE	0	0	0	0	0	0	650,000	(745,000)	1,575,000	(7,470,457)	(9,747,350)	(7,972,475)	0

Description: Core Project.

The project will construct a new effluent pump station at the existing chlorination contact tanks to discharge 300 MGD from the WRF in high Des Moines River conditions. In addition, the project will construct a new chlorination facility at the east end of the WRF to provide disinfection for the future maximum capacity of the WRF.

Justification:

The WRF presently has difficulty discharging 200 MGD of flow to the Des Moines River under elevated river conditions. In order to allow the WRF to increase the capacity of the facility to 300 MGD, the WRA will need to construct an effluent pumping station to allow the discharge of 300 MGD under high Des Moines River conditions.

The existing chlorination facility at the WRF is designed for a capacity of less than 200 MGD and to accommodate the future 300 MGD capacity of the WRF it is necessary to replace the existing chlorination facility.

Scheduling:

Effluent Pumping Design F20; Construction in F21-23.

Chlorination Project Design F20-21; Construction in F21-23.

Relationship to General Plan and Other Projects:

This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs for the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Birdland Pump Station								AG267 WRA99000 WR 1x4	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	13,747,830						48,360	229,030	658,330	4,619,555	8,192,555		
Beginning Balance								(43,360)	541,110	(92,220)	8,142,555		
Interest Earnings													
Repair and Replacement Fund Communities	155,000						5,000	25,000	25,000	50,000	50,000		
Future Funding	13,592,830									13,592,830			
Bond Proceeds								788,500		(788,500)			
SRF Drawdowns													
Other													
Total Resources	13,747,830						5,000	770,140	566,110	12,762,110	8,192,555		
ENDING BALANCE	0	0	0	0	0	0	(43,360)	541,110	(92,220)	8,142,555	0	0	0

Description: Core Project.

This project will rebuild existing Birdland Bump Station at the same site which includes a new control building, electrical controls, pumps, wet well, yard piping, and other needed appurtenances.

Justification:

This project will eliminate the combined sewer overflow at this location which is required as part of the City of Des Moines Long Term Control Plan. The WRA agreed to replace the Birdland Pump Station after the City of Des Moines completed the sewer separation of the subsystems tributary to the Birdland Pump Station. The new Birdland Pump Station will pump the separate sanitary sewer flow to the new Eastside Interceptor sewer.

Scheduling:

Design F22; Construction F23-24.

Relationship to General Plan and Other Projects:

This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs to the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Southern Tier Interceptor Improvements - Phase 10 Segment 6								AG267 WRA99000 WR xx	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	6,745,440								2,250	420,000	3,967,730	2,355,460	
Beginning Balance										(250)	(60,250)	2,350,460	
Interest Earnings													
Repair and Replacement Fund Communities	60,000								2,000	40,000	13,000	5,000	
Future Funding	6,685,440										6,685,440		
Bond Proceeds													
SRF Drawdowns										320,000	(320,000)		
Other													
Total Resources	6,745,440								2,000	359,750	6,318,190	2,355,460	
ENDING BALANCE	0	0	0	0	0	0	0	0	(250)	(60,250)	2,350,460	0	0

Description: Expansion Project.

An approximately 10,000 foot 48-inch diameter sewer pipeline extending from the Southern Tier Equalization Basin (Area 'C') northwesterly and paralleling the existing 54-inch diameter interceptor sewer pipeline and connecting to the Southside Des Moines River Interceptor.

Justification:

To increase the flow capacity in this reach of the Southern Tier Interceptor to accommodate the peak flows from the tributary service areas as well as the release flows from the Southwest Area Diversion Facility Phase 22 Segment 6 equalization basin.

Scheduling:

Design F22; Construction F23/24

Relationship to General Plan and Other Projects:

This project was included in the WRA Facility Plan Update and also included in the New Facility Plan.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs to the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Little Four Mile Phase 15								AG267 WRA99000 WR 2 x 1	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	7,190,000											90,000	7,100,000
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	7,190,000												7,190,000
Bond Proceeds													
SRF Drawdowns												300,000	(300,000)
Other													
Total Resources	7,190,000											300,000	6,890,000
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	210,000	0

Description: Core Project.
 An approximately 16,200 foot 42-inch diameter sewer pipeline paralleling the original Little Four Mile Interceptor from Altoona through Pleasant Hill and into Des Moines.

Justification:
 To increase the capacity in the Little Four Mile Interceptor System because of increased flow caused by growth in the communities of Altoona, Bondurant and parts of Des Moines which are served by this interceptor.

Scheduling:
 Design F24; Construction in F25-26.

Relationship to General Plan and Other Projects:
 This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:
 The new facilities constructed for this project will increase operations and maintenance costs to the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Final Clarifiers								AG267 WRA99000 WR 2x4	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	41,900,000								650,000	1,930,000	13,100,000	13,110,000	13,110,000
Beginning Balance										1,850,000	(80,000)	26,220,000	
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	41,900,000										41,900,000		
Bond Proceeds													
SRF Drawdowns									2,500,000		(2,500,000)		
Other													
Total Resources	41,900,000								2,500,000	1,850,000	39,320,000	26,220,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	1,850,000	(80,000)	26,220,000	13,110,000	0

Description: Core Project.

The project will construct six additional final clarifiers to allow the WRF hydraulic capacity to be increased from 200 MGD to 300 MGD.

Justification:

The hydraulic capacity of the WRF will be increased from 200 MGD to 300 MGD which requires additional final clarifiers for treatment. The six additional final clarifiers would bring the rated capacity of the WRF with all clarifiers in service to 330 MGD, or slightly above 300 MGD with one clarifier out of service.

Scheduling:

Project Design F21-22; Construction in F23-25.

Relationship to General Plan and Other Projects:

This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs for the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Aeration Basins								AG267 WRA99000 WR 2x5	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
							F19	F20	F21	F22	F23	F24	2028 2030
Expenses	96,600,000												96,600,000
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	96,600,000												96,600,000
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	96,600,000												96,600,000
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description: Core Project.
 The project will construct additional aeration basins to increase the hydraulic capacity of the WRF. The project will install additional aeration basins and a new blower building.

Justification:
 The hydraulic capacity of the WRF will be increased from 200 MGD to 300 MGD which requires additional aeration basins for hydraulic and biological treatment.

Scheduling:
 Phase 1: Design F25-26; Construction in F27-29.
 Phase 2: Design F27-28; Construction in F29-31.

Relationship to General Plan and Other Projects:
 This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:
 The new facilities constructed for this project will increase operations and maintenance costs for the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Westside Interceptor								AG267 WRA99000 WR 2x7	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
							F19	F20	F21	F22	F23	F24	F 2030
Expenses	12,300,000												12,300,000
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding	12,300,000												12,300,000
Bond Proceeds													
SRF Drawdowns													
Other / future 28E agreement													
Total Resources	12,300,000												12,300,000
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description:

An approximately 3,300 foot 66-inch diameter sewer pipeline paralleling the original WRA Westside Interceptor from the Westside Interceptor Pump Station to the Saylor Creek Interceptor located in northern Des Moines.

Justification:

Increase the capacity in the existing Westside Interceptor because of increased flow caused by growth in the communities of Polk City, Polk County, Ankeny and Johnston which are served by the Westside Interceptor.

Scheduling:

Design F29; Construction F30-31.

Relationship to General Plan and Other Projects:

This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs to the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Nutrient Removal P 1								AG267 WRA99000 WR 1x1	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F24
							F19	F20	F21	F22	F23	F24	
Expenses	105,500,000												105,500,000
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	105,500,000												105,500,000
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	105,500,000												105,500,000
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description: Core Project.

This project will construct a nutrient removal facility based upon not finalized nutrient standards from the IDNR.

Justification:

The facility plan recognized that nutrient limitations would be implemented in the future and but at this time it is undetermined what those standards will be. The WRA Facility Plan Updated included a placeholder project to provide for nutrient removal to meet a total nitrogen and total phosphorus standard.

Scheduling:

Design F28-29; Construction in F30-33.

Relationship to General Plan and Other Projects:

This project was included in the WRA Facility Plan Update and also included in the New Facility Plan.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs to the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Common Trunk								AG267 WRA99000 WR 1x2	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST FY2026
							F19	F20	F21	F22	F23	F24	
Expenses	11,100,000												11,100,000
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	11,100,000												11,100,000
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	11,100,000												11,100,000
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description: Expansion Project.

An approximately 11,700 foot 54-inch diameter sewer pipeline paralleling the original WRA Common Trunk located in Windsor Heights, West Des Moines and Des Moines.

Justification:

Increase the capacity in the existing Common Trunk System because of increased flow caused by growth in the communities of Clive and Urbandale Sanitary Sewer District which are served by the Common Trunk.

Scheduling:

Design F25; Construction F26-27.

Relationship to General Plan and Other Projects:

This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs to the WRA.

Fiscal 2018/Fiscal 2024 WRA Capital Improvements Program- for Approval February 2018

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Joint Trunk East & West								AG267 WRA99000 WR 1x3	
	TOTAL ESTIMATED COST	COST THROUGH F16	ACTUAL COST IN F17	COST THROUGH F17	Revised BUDGET F18	ESTIMATED COST THROUGH F18	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
							F19	F20	F21	F22	F23	F24	2027 2030
Expenses	20,800,000												20,800,000
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding	20,800,000												20,800,000
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	20,800,000												20,800,000
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description: Expansion Project.

The Joint Trunk East sewer parallels the existing Joint Trunk and extends from 73rd Street in Windsor Heights through West Des Moines and Clive. The Joint Trunk East is an approximately 7,700 foot 48-inch diameter sewer.

The Joint Trunk West sewer parallels the existing Joint Trunk through the communities of Clive and Urbandale Sanitary Sewer District. The Joint Trunk West is an approximately 26,000 foot 36 & 48-inch diameter sewer.

Justification:

Increase the capacity in the existing Joint Trunk System because of increased flow caused by growth in the communities of Clive and Urbandale Sanitary Sewer District which are served by the Joint Trunk.

Scheduling:

Joint Trunk East: Design F26; Construction F27 and F28.

Joint Trunk West: Design F29; Construction F30 and F31.

Relationship to General Plan and Other Projects:

This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the Des Moines Metropolitan Reclamation Authority effective June 11, 2014.

Operating Budget Effect:

The new facilities constructed for this project will increase operations and maintenance costs to the WRA.