

**WASTEWATER RECLAMATION AUTHORITY**  
**COMPARISON OF LAST YEAR AND CURRENT YEAR CIP SHEETS**  
 FY2023-2029 6(7) Yr Plan + other WRA commitments

**Capital Improvement Projects by Type of Funding**

		[last year]	restated	[this year]		
		Budget Amount for each project	Budget Amount for each project	Budget Amount for each project	Chg of Estimate	
<u>Core Projects</u>		2023 CIP	2023 CIP	2024 new CIP		
wra 108	ESI Phase 27 Gravity Sewer	*	81,343,517	0		
wra 088	Ingersoll Run Sewer (CSO & Outlet)	P 25	24,842,102	24,842,102	11,228,000	
Wr 127	WRA So.Tier Interceptor (P10 Seg 6) Improv	P 10	6,751,480	6,751,480	1,275,520	
wra 089	Little Four Mile Interceptor (P15 Seg 1)	P 15	7,190,200	7,190,200	-	
Wr 112	WRF Phosphorus Recovery		31,341,400	31,341,400	10,858,600	
Wr 102	WRF Biogas Conditioning and Injection	*	19,268,900	0		
Wr 111	WRF Grit Removal Improvements		17,421,450	17,421,450	-	
Wr 115	WRF Clarifier Improvements		31,108,188	31,108,188	17,195,812	
Wr 123	WRF Eastside Wet Weather Treatment		65,815,350	65,815,350	-	
Wr 125	WRF Aeration Improvements		10,180,000	10,180,000	20,000	
Wr 124	WRF Effluent Pumping		19,996,580	19,996,580	22,334,620	
Wr 129	WRF Disinfection Improvements		15,978,400	15,978,400	-	
Wr 135	WRF Building 05 Rehabilitation		13,131,170	13,131,170	-	
Wr 122	WRA Birdland Pump Station Improvements		17,498,500	17,498,500	4,951,500	
Wr 119	WRF Trickling Filter Removal	*	3,900,000	3,900,000	(82,000)	
Wr 105	WRF Flood Improvements		20,132,461	20,132,461	640,063	
Wr 113	WRA Sewer Lining Projects		47,383,500	47,383,500	2,314,000	
<b>Subtotal Core Projects</b>			<b>433,283,198</b>	<b>332,670,781</b>	<b>403,406,896</b>	<b>70,736,115</b>
<u>Non Core Projects</u>						
wra 107	Southern Tier Interceptor (P10 Seg 1,4,7-8)	Expan	12,894,400	12,894,400	-	
wra 109	Sponsored FourMile Streambank	Spons	3,810,000	3,810,000	-	
wra 117	Sponsored SugarCreek Streambank	Spons	5,955,400	5,955,400	-	
<b>Subtotal 'Other than Core' Projects</b>			<b>22,659,800</b>	<b>22,659,800</b>	<b>22,659,800</b>	<b>-</b>
<u>Future Projects</u>						
core +	Westside Interceptor		12,300,000	12,300,000	-	
core	Secondary Treatment		76,000,000	76,000,000	-	
core	Parallel Pipe & Mixing Structure		5,156,200	5,156,200	-	
expan	Common Trunk		12,645,000	12,645,000	35,000	
expan	Joint Trunk		19,638,600	19,638,600	2,361,400	
<b>Subtotal Future Projects</b>			<b>125,739,800</b>	<b>125,739,800</b>	<b>128,136,200</b>	<b>2,396,400</b>
<b>Total Bonded Project Costs</b>			<b>581,682,798</b>	<b>481,070,381</b>	<b>554,202,896</b>	<b>73,132,515</b>
Sm CIP	<u>Non-Bonded / Plant &amp; System Projects</u>					
wr 69 91	Consulting, including Fac Plan & Studies (2021 forward)		1,582,138	1,582,138	2,450,463	868,325
wra 083	Sewer Maint, Levee & Streambank (2013-17)	*	2,106,000	0		
wra 074	WRF Maintenance (Digester #3)	#	1,125,000	1,125,000	1,470,000	345,000
wra 120	Sewer Maint, WDM Streambank (2018-21)	*	1,605,000	1,005,000	993,000	(12,000)
wra 120a	Sewer Maintenance contract work (2022 forward)			600,000	600,000	-
wra 069	Facilities Plan Update (2014 to 2020)	*	1,260,543	0		
wra 091	Small CIP projects & Studies (2014 to 2020)	*	382,093	0		
wra 093	Flow Monitoring Meter Replacements	*	1,521,910	0		
wra 104	Equalization Basin Improvements	*	100,000	0		
wra 114	Beaver Creek Sewer Stabilization	*	1,313,437	0		
wra 121	WRF Site Security, New Entrance		6,571,900	6,571,900	8,033,350	1,461,450
wra 118a	Facilities Rehabilitation (WRF 2020 forward)		2,152,500	2,152,500	4,172,920	2,020,420
wra 118b	Facilities Rehabilitation (Hvac 2018-2022)		5,300,000	5,300,000	5,300,000	-
wra 118c	Facilities Rehabilitation (Fuel Terminal)		1,602,500	1,602,500	1,602,500	-
wra 118d	Facilities Rehabilitation Generators (WRA/WRF)		6,000,000	6,000,000	6,355,000	355,000
wra 106	Small CIP, ProcEqRepl. 2013-2016	*	8,174,927	8,174,927	8,174,927	-
wra 110	Small CIP, ProcEqRepl. 2017-2022 (B70 Sludge & Aeration)		4,064,316	4,064,316	7,915,360	3,851,044
wra 116	Small CIP, ProcEqRepl. 2023-2024 (B70 Processing)			0	6,150,000	6,150,000
wra 126	Small CIP, ProcEqRepl. 2023-2024 & forward		17,003,825	17,003,825	15,172,751	(1,831,074)
<b>Total Non-Bonded Project Costs</b>			<b>61,866,089</b>	<b>55,182,106</b>	<b>68,390,271</b>	<b>13,208,165</b>
<b>WRA Total Expenses for Projects</b>			<b>643,548,887</b>	<b>536,252,487</b>	<b>622,593,167</b>	<b>86,340,680</b>
			Last year's total			

# Insurance Claim Settlement for part of funding. \* PROJECT CLOSED

## Summary

# Wastewater Reclamation Authority Improvements FY2023-F2024+

Col. 1                      2                      3                      4                      5                      6                      7                      8                      9                      10                      11                      12                      13

	TOTAL ESTIMATED COST	COST THROUGH F22	COST ESTIMATE F23	TOTAL ESTIMATED COST THROUGH	COST FOR SIX-YEAR PERIOD	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
						F24	F25	F26	F27	F28	F29	
<b>Expenses, detail on following page</b>	622,593,167	89,226,107	41,469,044	130,695,151	474,473,016	99,142,593	145,371,253	106,884,620	27,048,600	14,155,950	81,870,000	17,425,000
<b>Resources:</b>												
Beginning Balance	0	0	1,120,458	0		31,740,916	75,253,198	66,047,082	24,987,040	12,323,940	2,143,990	0
Interest Earnings	65,591	55,000	10,591	65,591	0	0	0	0	0	0	0	0
Renewal & Replacement Fund	0	0	0	0	0	0	0	0	0	0	0	0
Communities	70,145,755	23,667,805	5,210,000	28,877,805	41,267,950	7,500,000	9,475,400	12,474,050	6,227,500	3,076,000	2,515,000	0
Future Funding	424,855,577	194,653	26,875,347	27,070,000	372,805,577	112,040,000	126,382,520	49,225,057	8,358,000	800,000	76,000,000	24,980,000
Bond Proceeds	0	0	0	0	0	0	0	0	0	0	0	0
SRF Drawdowns	90,205,500	45,290,800	34,977,700	80,268,500	10,617,000	14,917,000	(3,500,000)	(500,000)	(300,000)	0	0	(680,000)
Other (Flood Mit Rev & Oper)	36,209,734	21,138,307	5,015,864	26,154,171	16,930,563	8,197,875	3,807,217	4,625,471	100,000	100,000	100,000	(6,875,000)
<b>Total Resources</b>	<b>621,482,157</b>	<b>90,346,565</b>	<b>73,209,960</b>	<b>162,436,067</b>	<b>441,621,090</b>	<b>174,395,791</b>	<b>211,418,335</b>	<b>131,871,660</b>	<b>39,372,540</b>	<b>16,299,940</b>	<b>80,758,990</b>	<b>17,425,000</b>
Flood/Sales tax revenue \$36.6M for construction, then debt service		18,095,933	1,861,693			3,774,875	3,707,217	4,525,471	-	-	-	0

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

WRA 2024

Expenditures from CIP sheets

		2023	2024	2025	2026	2027	2028	2029	subtotal Spending
<u>WRA Projects &amp; WRF Projects (R&amp;R or Special Funding)</u>									
120 oper	Sewer Maintenance Contracts	1,310.0	100,000.0	100,000.0	100,000.0	100,000.0	100,000.0	100,000.0	601,310.0
69 91 smCip	Facility Plan, Consulting & Studies	582,100.0	200,000.0	200,000.0	200,000.0	150,000.0	150,000.0	150,000.0	1,632,100.0
118 smCip	Facilities Rehabilitation HVAC projects	1,241,846.0	1,050,000.0						2,291,846.0
106 smCip	WRF Fuel Terminal Upgrade	134,348.0	1,153,600.0	300,000.0					1,587,948.0
118 smCip	Facilities Rehabilitation New Improv projects	55,763.0	776,800.0	739,280.0	1,550,000.0	536,720.0	212,240.0	50,000.0	3,920,803.0
70 smCip	B70 Belter Filter Press & Rotating Drum	820,160.0	1,751,840.0	2,262,000.0	1,316,000.0				6,150,000.0
74 smCip	Digester #3 Repair and Improvements	914,561.0	450,000.0						1,364,561.0
126 smCip	WRF Generator Improvement/Replacement	15,000.0	430,000.0	1,095,000.0	4,015,000.0	800,000.0			6,355,000.0
121 R&R	Site Security, Access Improvements	352,228.0	3,390,150.0	3,485,250.0					7,227,628.0
110 16 smCip	Plant/System Projects (Eq Repl, sm CIP)	2,900,549.0	742,610.0	2,318,763.0	3,169,000.0	2,903,280.0	2,437,760.0	2,300,000.0	16,771,962.0
107 Expan	Southern Tier Improvements	2,938,321.0	550,000.0		110,000.0	453,600.0	4,655,950.0	3,270,000.0	11,977,871.0
135 Expan	Joint & Common Trunk Sewer Improvements	800,000.0	987,850.0	3,677,150.0	10,180,000.0	7,035,000.0			22,680,000.0
109 spons	Sponsor'd Four Mile Streambank	112,460.0	458,600.0	1,181,400.0					1,752,460.0
117 spons	Sponsor'd Sugar Creek Streambank	547,407.0	2,800,000.0	1,048,000.0					4,395,407.0
									-
	Small CIP & Sponsored Total	\$ 11,416,053.0	\$ 14,841,450.0	\$ 16,406,843.0	\$ 20,640,000.0	\$ 11,978,600.0	\$ 7,555,950.0	\$ 5,870,000.0	\$ 88,708,896.0

WRA Projects & WRF Projects (Core or other Funding)

									-
88 Ph 25	Ingersoll Run CSO	9,192,243.0	13,445,000.0	18,860,000.0	285,000.0				41,782,243.0
127 Ph 10	Southern Tier Improv, Seg 6	110,000.0	291,040.0	4,750,440.0	2,875,520.0				8,027,000.0
105 WRF	Flood Improvements	1,971,235.0	740,063.0				800,000.0		3,511,298.0
111 WRF	Grit Basin Improvements	1,035,318.0							1,035,318.0
112 WRF	Phosphorus Recovery Facility	66,664.0	19,731,390.0	19,725,000.0					39,523,054.0
115 WRF	Clarifier Improvements	1,348,466.0	17,700,000.0	16,600,000.0	4,000,000.0				39,648,466.0
119 WRF	Trickling Filter Removal	35.0							35.0
123 WRF	Eastside Wet Weather Treatment	6,792.0	1,723,350.0	32,520,000.0	31,565,000.0				65,815,142.0
124 WRF	Effluent pumping	924,877.0	9,837,100.0	20,460,000.0	10,640,000.0				41,861,977.0
129 WRF	Disinfection		323,400.0	2,265,000.0	9,945,000.0	3,445,000.0			15,978,400.0
125 WRF	Aeration Improv		150,000.0	1,200,000.0	4,825,000.0	4,025,000.0			10,200,000.0
135 WRF	Building 05 Improv		404,000.0	6,582,170.0	6,145,000.0				13,131,170.0
TBD WRF	Parallel Pipe & Mixing Structure			131,800.0	5,024,400.0				5,156,200.0

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

TBD WRF	Secondary Treatment Improv								76,000,000.0	76,000,000.0
113 WRA	Sewer Lining Projects	4,481,365.0	10,455,500.0	5,500,000.0	5,879,500.0	5,900,000.0	5,800,000.0			38,016,365.0
122 WRA	Birdland Pump Stn Improv	10,915,996.0	9,440,300.0							20,356,296.0
89 WRA	Little Four Mile Improv		60,000.0	370,000.0	5,060,200.0	1,700,000.0				7,190,200.0
										-
	WRA & WRA Project Total	\$ 30,052,991.0	\$ 84,301,143.0	\$ 128,964,410.0	\$ 86,244,620.0	\$ 15,070,000.0	\$ 6,600,000.0	\$ 76,000,000.0	\$	427,233,164.0

**summary total** **\$ 515,942,060.0**

Revised Estimate for F23	\$	41,469,044.0								\$	41,469,044.0
2019											
2024	\$	99,142,593.0									
2025			\$	145,371,253.0							
2026					\$	106,884,620.0					
2027							\$	27,048,600.0			
2028								\$	14,155,950.0		
2029									\$	81,870,000.0	
Summary of Costs, Six-Year-Period										\$	474,473,016.0

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY							PROJECT TITLE						ACCOUNT
<b>Wastewater Reclamation Authority Improvements</b>							<b>WRA Consulting, Facility Planning and Studies [ Sm CIP, 2021 forward ]</b>						<b>WR809855 WR69 91</b>
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	2,450,463	241,217	577,146	818,363	582,100	1,400,463	200,000	200,000	200,000	150,000	150,000	150,000	
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / Commty funds SmCIP	2,450,463	241,217	577,146	818,363	582,100	1,400,463	200,000	200,000	200,000	150,000	150,000	150,000	
Total Resources	2,450,463	241,217	577,146	818,363	582,100	1,400,463	200,000	200,000	200,000	150,000	150,000	150,000	
<b>ENDING BALANCE</b>	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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY							PROJECT TITLE						ACCOUNT
Wastewater Reclamation Authority Improvements							WRF Facilities Rehabilitation [ Sm CIP, FY202 forward ] HVAC, Roof, & Other Improvements						AG267 WRA809 WR118a
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	4,172,920	227,500	24,617	252,117	55,763	307,880	776,800	739,280	1,550,000	536,720	212,240	50,000	
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / Commty funds SmCIP	4,172,920	227,500	24,617	252,117	55,763	307,880	776,800	739,280	1,550,000	536,720	212,240	50,000	
Total Resources	4,172,920	227,500	24,617	252,117	55,763	307,880	776,800	739,280	1,550,000	536,720	212,240	50,000	
<b>ENDING BALANCE</b>	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.

Building 75 Boiler and Heat Loop work

**Justification:**

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

**Scheduling:**

FY23-FY24 Roof replacement and HVAC replacement,  
 FY25-FY26 Building 75 Heat Loop improvement,  
 FY25-FY26 Roof replacement and HVAC replacement,  
 FY27 and Beyond: 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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE						ACCOUNT			
Wastewater Reclamation Authority Improvements				WRF Facilities Rehabilitation   Sm CIP, 2020-2023   HVAC, Roof, & Other Building Improvements						AG267 WRA809 WR118			
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	5,300,000	2,894,130	114,024	3,008,154	1,241,846	4,250,000	1,050,000						
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other /Commty funds SmCIP	5,300,000	2,894,130	114,024	3,008,154	1,241,846	4,250,000	1,050,000						
Total Resources	5,300,000	2,894,130	114,024	3,008,154	1,241,846	4,250,000	1,050,000						
<b>ENDING BALANCE</b>	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:**

FY21 and Beyond: HVAC Replacements as needed.

B05 and B91 work in FY21/FY22.

B96 and B05 Electrical work in F23/F24.

**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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Facilities Rehabilitation   Sm CIP   Structure 95-11 Fuel Terminal Improvements								AG267 WRA809 WR106	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	1,602,500		14,552	14,552	134,348	148,900	1,153,600	300,000					
Beginning Balance					48								
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / Commty funds SmCIP	1,602,500		14,600	14,600	134,300	148,900	1,153,600	300,000					
Total Resources	1,602,500		14,600	14,600	134,348	148,900	1,153,600	300,000					
<b>ENDING BALANCE</b>	0	0	48	48	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.

**Justification:**

The existing fuel terminal used to provide WRA vehicles fuel was installed in the late 1980's. The fuel terminal aged is beyond an expected useful life and requires replacement.

**Scheduling:**

Fuel terminal island is end of life and requires replacement, FY23 Design begins,

Construction in FY24-FY25.

**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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Process Equipment Replacement   sm CIP   Building 70 Process Improvements								AG267 WRA809 WR13x	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	6,150,000				820,160	820,160	1,751,840	2,262,000	1,316,000				
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / Commy funds SmCIP	6,150,000				820,160	820,160	1,751,840	2,262,000	1,316,000				
Total Resources	6,150,000				820,160	820,160	1,751,840	2,262,000	1,316,000				
<b>ENDING BALANCE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0

**Description:**

Several projects are proposed for the solids handling process and include refurbishment of the belt filter presses and replacement of the existing rotating drum thickeners.

**Justification:**

The belt filter presses and rotating drum thickeners were installed in 2004-2005 and require refurbishment or replacement.

**Scheduling:**

Belt Filter Press rehabilitation FY23-FY24

Rotating Drum Thickener replacement FY25-26

**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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY					PROJECT TITLE								ACCOUNT
<b>Wastewater Reclamation Authority Improvements</b>					<b>WRF / WRA Generator Replacements &amp; Improvements (Sm CIP)</b>								<b>AG267 WRA809 WR126</b>
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	<b>6,355,000</b>				<b>15,000</b>	15,000	<b>430,000</b>	<b>1,095,000</b>	<b>4,015,000</b>	<b>800,000</b>			
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / Commty funds SmCIP	6,355,000				15,000	15,000	430,000	1,095,000	4,015,000	800,000			
Total Resources	<b>6,355,000</b>				<b>15,000</b>	15,000	430,000	1,095,000	4,015,000	800,000			
<b>ENDING BALANCE</b>	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.

**Justification:**

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

**Scheduling:**

FY 23 and beyond: Additional standby power generators are needed for future plant processes.

**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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Site Security and Access Improvements (Sm CIP)</b>								<b>AG267 WRA809 WR121</b>	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	8,033,350	533,322	272,400	805,722	352,228	1,157,950	3,390,150	3,485,250					
Beginning Balance					(2)								
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / from Small CIP	8,033,350	533,320	272,400	805,720	352,230	1,157,950	3,390,150	3,485,250					
<b>Total Resources</b>	<b>8,033,350</b>	<b>533,320</b>	<b>272,400</b>	<b>805,720</b>	<b>352,228</b>	<b>1,157,950</b>	<b>3,390,150</b>	<b>3,485,250</b>					
<b>ENDING BALANCE</b>	<b>0</b>	<b>(2)</b>	<b>0</b>	<b>(2)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**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 FY21-23, Construction in FY23-25

**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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE				ACCOUNT						
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Plant Maintenance (Repair and Upgrade of Digester 3)</b>				<b>AG267 WRA809855 WR074</b>						
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29	
							F24	F25	F26	F27	F28	F29		
Expenses	1,470,000	10,293	95,146	105,439	914,561	1,020,000	450,000							
Beginning Balance							225,000							
Interest Earnings														
Repair and Replacement Fund Communities														
Funding, INSURANCE reimb	770,000				770,000	770,000								
Bond Proceeds														
SRF Drawdowns														
Funding small CIP R&R	700,000	10,293	95,146	105,439	369,561	475,000	225,000							
Total Resources	1,470,000	10,293	95,146	105,439	1,139,561	1,245,000	450,000							
<b>ENDING BALANCE</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>225,000</b>	<b>225,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Description:**

This project provides funding source tracking for specific maintenance/repairs at the WRF.

Maintenance and repairs will include: Major work on Digester #3 resulting after construction

**Justification:**

**Scheduling:**

Repairs complete in FY 23

**Relationship to General Plan and Other Projects:**

This project is funded primarily with Insurance money, balance from Operations.

**Operating Budget Effect:**

Insurance Reimbursement expected.

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE				ACCOUNT					
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRA Sewer Maintenance (Repair of Streambanks)</b>				<b>AG267 WRA809 WR120</b>					
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	993,000	991,690		991,690	1,310	993,000							last time in cip
Beginning Balance					30								
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Funding O&M budget (803 19)	993,000	691,720	300,000	991,720	1,280	993,000							
Total Resources	993,000	691,720	300,000	991,720	1,310	993,000							
<b>ENDING BALANCE</b>	0	(299,970)	300,000	30	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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRA Sewer Maintenance (Inspections &amp; Repairs)</b>							<b>AG267 WRA809 WR120</b>		
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
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	
<b>ENDING BALANCE</b>	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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Small Projects, &amp; Process Equipment Replacement [ prior years ]</b>								<b>AG267 WRA809 WR106</b>	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	<b>8,174,927</b>	8,064,555	110,372	<b>8,174,927</b>		8,174,927							last time in CIP
Beginning Balance					(1,111,010)		(1,111,010)	(1,111,010)	(1,111,010)	(1,111,010)	(1,111,010)	(1,111,010)	
Interest Earnings	40,000	40,000		40,000		40,000							
Repair and Replacement Fund Communities	10,900,000	10,900,000		10,900,000		10,900,000							
Future Funding Bond Proceeds													
SRF Drawdowns													
Other (tsfr out to WR121 Site)	(3,876,083)	(3,476,083)	(400,000)	(3,876,083)		(3,876,083)							
Total Resources	<b>7,063,917</b>	7,463,917	(400,000)	<b>7,063,917</b>	<b>(1,111,010)</b>	7,063,917	(1,111,010)	(1,111,010)	(1,111,010)	(1,111,010)	(1,111,010)	(1,111,010)	
<b>ENDING BALANCE</b>	<b>(1,111,010)</b>	<b>(600,638)</b>	<b>(510,372)</b>	<b>(1,111,010)</b>	<b>(1,111,010)</b>	<b>(1,111,010)</b>	<b>(1,111,010)</b>	<b>(1,111,010)</b>	<b>(1,111,010)</b>	<b>(1,111,010)</b>	<b>(1,111,010)</b>	<b>(1,111,010)</b>	<b>0</b>

**Description:**

Renewal and replacement of existing process equipment, includes small plant projects. FY2020 includes radio upgrades and software needs.

**Justification:**

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

**Scheduling:**

Equipment Replacement and repairs. WRF Ferrous Chloride Feed System Improvements, WRA 2nd and Forest Diversion Rehabilitation

WRA Ankeny Pump Station Improvements, WRA Equalization Basin Electrical Improvements

Balance of collected funds are being transferred to Site Security / new Entrance project WR121

**Relationship to General Plan and Other Projects:**

This project will be funded with community contributions. Transfers out provides 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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Small Projects, &amp; Process Equipment Replacement [ prior years ]</b>							<b>AG267 WRA809 WR110</b>		
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	7,915,360	3,419,455	2,896,567	6,316,022	1,599,338	7,915,360							
Beginning Balance					3,432,619								
Interest Earnings	25,591	15,000		15,000	10,591	25,591							
Repair and Replacement Fund Communities	12,312,352	7,290,130	4,022,222	11,312,352	1,000,000	12,312,352							
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other (tsfr out)	(4,422,583)	(864,098)	(714,613)	(1,578,711)	(2,843,872)	(4,422,583)							
Total Resources	7,915,360	6,441,032	3,307,609	9,748,641	1,599,338	7,915,360							
<b>ENDING BALANCE</b>	0	3,021,577	411,042	3,432,619	0	0	0	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.

Balance of collected funds are being transferred to HVAC improvements / Facility refab project WR118b

**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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE									ACCOUNT
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Small Projects, &amp; Process Equipment Replacement [ future years ]</b>									<b>AG267 WRA809 WR116</b>
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	15,172,751		127	127	1,301,211	1,301,338	742,610	2,318,763	3,169,000	2,903,280	2,437,760	2,300,000	
Beginning Balance					(127)		1,068,593	(2,159,707)	(3,560,000)	(1,810,000)	(200,000)		
Interest Earnings													
Repair and Replacement Fund Communities	42,894,653				3,677,953	3,677,953	6,716,700	9,000,000	12,000,000	6,000,000	3,000,000	2,500,000	
Future Funding Bond Proceeds													
SRF Drawdowns													
Other (tsfr out)	(27,721,902)				(1,308,022)	(1,308,022)	(9,202,390)	(8,081,530)	(7,081,000)	(1,486,720)	(362,240)	(200,000)	
Total Resources	15,172,751				2,369,804	2,369,931	(1,417,097)	(1,241,237)	1,359,000	2,703,280	2,437,760	2,300,000	
<b>ENDING BALANCE</b>	0	0	(127)	(127)	1,068,593	1,068,593	(2,159,707)	(3,560,000)	(1,810,000)	(200,000)	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:**

**F23-26:** 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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
<b>Wastewater Reclamation Authority Improvements</b>				<b>Ingersoll Run [Combined Sewer Overflow, Outlet] Phase 25</b>								<b>AG267 WRA809 WR088</b>	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	<b>36,070,102</b>	563,955	598,904	<b>1,162,859</b>	<b>9,192,243</b>	10,355,102	<b>13,445,000</b>	<b>18,860,000</b>	<b>285,000</b>				(6,875,000)
Beginning Balance					(885,618)		16,225,000	14,220,000	(2,600,000)				
Interest Earnings													
Repair and Replacement Fund Communities	160,000	26,249	40,890	67,139	2,861	70,000	40,000	40,000	10,000				
Future Funding	35,700,000				26,300,000	26,300,000	9,400,000						
Bond Proceeds													
SRF Drawdowns													
Other (Flood Mit & CDM share)	210,102	210,102		210,102		210,102	2,000,000	2,000,000	2,875,000				(6,875,000)
Total Resources	<b>36,070,102</b>	236,351	40,890	<b>277,241</b>	<b>25,417,243</b>	26,580,102	27,665,000	16,260,000	285,000				(6,875,000)
<b>ENDING BALANCE</b>	<b>0</b>	(327,604)	(558,014)	(885,618)	16,225,000	16,225,000	14,220,000	(2,600,000)	0	0	0	0	0

**Description: Core Project.**

This project provides for the elimination of a combined sewer overflow in the 2100 block of High Street in the Ingersoll Run Combined Sewer System and is a requirement of the consent decree and long term control plan.

**Justification:**

Needed to conform to NPDES requirements.

**Scheduling:**

Project is scheduled to be constructed in FY23-FY26

**Relationship to General Plan and Other Projects:**

This project is included in the WRA Facility Plan Update. Funding will include some flood mitigation funds and SRF loans; also the City of DSM will participate in project work including street paving.

**Operating Budget Effect:**

This project will increase in flow sent to the CSSSF and WRF and will have an increase in operational expenses.

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Little Four Mile Phase 15								AG267 WRA99000 WR089	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	7,190,200						60,000	370,000	5,060,200	1,700,000			
Beginning Balance								245,000	(110,000)	1,675,000			
Interest Earnings													
Repair and Replacement Fund Communities	75,000						5,000	15,000	30,000	25,000			
Future Funding (7.2M)	7,115,200								7,115,200				
Bond Proceeds													
SRF Drawdowns							300,000		(300,000)				
Other													
Total Resources	7,190,200						305,000	260,000	6,735,200	1,700,000			
<b>ENDING BALANCE</b>	0	0	0	0	0	0	245,000	(110,000)	1,675,000	0	0	0	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 F25; Construction in 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 D M Metropolitan Reclamation Authority (2014 28e)

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE						ACCOUNT		
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Flood Improvements</b>						<b>AG267 WRA809 WR105</b>		
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST BEYOND F29
							F24	F25	F26	F27	F28	
Expenses	20,772,524	4,556,784	12,704,442	17,261,226	1,971,235	19,232,461	740,063				800,000	
Beginning Balance					787,401	715,063						
Interest Earnings												
Repair and Replacement Fund Communities	225,000	101,852	60,944	162,796	37,204	200,000	25,000				800,000	
Future Funding	800,000											
Bond Proceeds												
SRF Drawdowns												
Other (Revenue Flood Mit)	19,747,524	16,056,197	1,829,634	17,885,831	1,861,693	19,747,524						
Total Resources	20,772,524	16,158,049	1,890,578	18,048,627	2,686,298	19,947,524	740,063				800,000	
<b>ENDING BALANCE</b>	0	11,601,265	(10,813,864)	787,401	715,063	715,063	0	0	0	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. The improvements include floodwall protection to Building 05, raising electrical transformers that serve Building 05, raising and relocating the incoming power to the WRF, and installing standby power generators to power the WRF in the event of a flood.

**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 F18-19; Construction in F20-25.  
 Construction can be moved forward as this project was in the Flood Mitigation Application.

**Relationship to General Plan and Other Projects:**  
 Funding for improvements was included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the D M Metropolitan Reclamation Authority (2014 28e)

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRA Southern Tier Improvements - Western (Expansion Debt)</b>								<b>AG267 WRA809 WR107</b>	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	12,894,400	779,605	136,924	916,529	2,938,321	3,854,850	550,000		110,000	453,600	4,655,950	3,270,000	
Beginning Balance							524,000			200,050	7,885,950	3,255,000	
Interest Earnings													
Repair and Replacement Fund Communities	319,400	34,583	52,293	86,876	74,974	161,850	26,000		10,050	81,500	25,000	15,000	
Future Funding (3.6 + 8.4)	8,358,000	110,022	84,631	194,653	(194,653)					8,358,000			
Bond Proceeds													
SRF Drawdowns	4,217,000	635,000		635,000	3,582,000	4,217,000			300,000	(300,000)			
Other													
Total Resources	12,894,400	779,605	136,924	916,529	3,462,321	4,378,850	550,000		310,050	8,339,550	7,910,950	3,270,000	
<b>ENDING BALANCE</b>	0	0	0	0	524,000	524,000	0	0	200,050	7,885,950	3,255,000	0	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 24 Design in F22. Construction in F22-23

**Relationship to General Plan and Other Projects:**

This project was included in the WRA Facility Plan Update and also included in the WRA Facility Plan Update - 2012.

**Operating Budget Effect:**

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRA Southern Tier Interceptor Improvements - Phase 10 Segment 6</b>								<b>AG267 WRA809 WR 127</b>	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	<b>8,027,000</b>				110,000	110,000	<b>291,040</b>	<b>4,750,440</b>	<b>2,875,520</b>				
Beginning Balance							(105,000)	(81,040)	2,853,520				
Interest Earnings													
Repair and Replacement Fund Communities	67,000				5,000	5,000	15,000	25,000	22,000				
Future Funding (6.7M)	7,960,000							7,960,000					
Bond Proceeds													
SRF Drawdowns							300,000	(300,000)					
Other													
Total Resources	<b>8,027,000</b>				<b>5,000</b>	5,000	210,000	7,603,960	2,875,520				
<b>ENDING BALANCE</b>	0	0	0	0	(105,000)	(105,000)	(81,040)	2,853,520	0	0	0	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 F22-23; Construction F24-25

**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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY		PROJECT TITLE										ACCOUNT	
Wastewater Reclamation Authority Improvements					WRA Sponsored [Four Mile Creek] Streambank Restoration Projects							AG267 WRA809 WR109	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	3,810,000	2,032,040	25,500	2,057,540	112,460	2,170,000	458,600	1,181,400					
Beginning Balance					(944,185)		140,000	1,181,400					
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / sponsored project	3,810,000	1,010,000	103,355	1,113,355	1,196,645	2,310,000	1,500,000						
Total Resources	3,810,000	1,010,000	103,355	1,113,355	252,460	2,310,000	1,640,000	1,181,400					
<b>ENDING BALANCE</b>	0	(1,022,040)	77,855	(944,185)	140,000	140,000	1,181,400	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 additional principal 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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRA Sponsored [Sugar Creek] Streambank Restoration Projects</b>								<b>AG267 WRA809 WR117</b>	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	5,955,400	1,161,053	398,940	1,559,993	547,407	2,107,400	2,800,000	1,048,000					
Beginning Balance					(283,993)		800,000	1,048,000					
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / sponsored project	5,955,400		1,276,000	1,276,000	1,631,400	2,907,400	3,048,000						
Total Resources	5,955,400		1,276,000	1,276,000	1,347,407	2,907,400	3,848,000	1,048,000					
<b>ENDING BALANCE</b>	0	(1,161,053)	877,060	(283,993)	800,000	800,000	1,048,000	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 - Phase 1: Design F17-18. Construction F18-20.

Sugar Creek -Phase 2: Design F22. Construction F23-24

**Relationship to General Plan and Other Projects:**

Total debt service on SRF Loans will not change but additional principal 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 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY			PROJECT TITLE					ACCOUNT					
Wastewater Reclamation Authority Improvements			WRF Grit Removal Improvements					AG267 WRA809 WR111					
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST BEYOND F29	
							F24	F25	F26	F27	F28		F29
Expenses	17,421,450	13,967,746	2,418,386	16,386,132	1,035,318	17,421,450							
Beginning Balance					(447,826)		(1,138,300)						
Interest Earnings													
Repair and Replacement Fund Communities	1,198,950	434,318	81,488	515,806	344,844	860,650	338,300						
Future Funding	800,000						800,000						
Bond Proceeds													
SRF Drawdowns (2018A 18E)	15,422,500	15,422,500		15,422,500		15,422,500							
Other													
Total Resources	17,421,450	15,856,818	81,488	15,938,306	(102,982)	16,283,150							
<b>ENDING BALANCE</b>	0	1,889,072	(2,336,898)	(447,826)	(1,138,300)	(1,138,300)	0	0	0	0	0	0	0

**Description: Core Project.**  
 This project will improve grit removal by modifying the existing grit conveyance facilities.

**Justification:**  
 The WRF currently has six identical grit basins, and the original concept plan for the WRF included space for two additional grit basins. The WRA evaluated alternatives and it was determined that the installation of a stacked-tray vortex system would be most beneficial to the WRA. The project includes removal of the existing grit basins and installation of new basins designed for the stacked-tray system, modifications to the grit conveyance facilities, and associated electrical and mechanical upgrades.

**Scheduling:**  
 Project design in F17/18; Construction in F19-F22

**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 Metropolitan Wastewater Reclamation Authority (2014 28e)

**Operating Budget Effect:**  
 Operating and maintenance costs will increase with implementation of the facilities.

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Phosphorus Recovery Facility								AG267 WRA809 WR112	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	42,200,000	847,410	1,829,536	2,676,946	66,664	2,743,610	19,731,390	19,725,000					
Beginning Balance					(964,541)		(1,010,610)	19,690,000					
Interest Earnings													
Repair and Replacement Fund Communities	200,000	78,864	33,541	112,405	20,595	133,000	32,000	35,000					
Future Funding (31.3M to 42.1)	42,000,000						42,000,000						
Bond Proceeds		1,600,000		1,600,000		1,600,000	(1,600,000)						
SRF Drawdowns													
Other													
Total Resources	42,200,000	1,678,864	33,541	1,712,405	(943,946)	1,733,000	39,421,390	19,725,000					
<b>ENDING BALANCE</b>	0	831,454	(1,795,995)	(964,541)	(1,010,610)	(1,010,610)	19,690,000	0	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 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:**

Design FY21-22; Construction FY 23-25

**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 D M Metropolitan Reclamation Authority (2014 28e)

**Operating Budget Effect:**

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE									ACCOUNT
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRA Sewer Lining</b>									<b>AG267 WRA809 WR113</b>
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	49,697,500	10,822,059	859,076	11,681,135	4,481,365	16,162,500	10,455,500	5,500,000	5,879,500	5,900,000	5,800,000		
Beginning Balance					437,431		6,924,500	6,459,000		11,598,000	5,749,000		
Interest Earnings													
Repair and Replacement Fund Communities	450,000	124,159	54,407	178,566	23,434	202,000	40,000	41,000	65,000	51,000	51,000		
Future Funding	26,362,500						9,950,000	(1,000,000)	17,412,500				
Bond Proceeds													
SRF Drawdowns (12M)	22,885,000	11,940,000		11,940,000	10,945,000	22,885,000							
Other													
Total Resources	49,697,500	12,064,159	54,407	12,118,566	11,405,865	23,087,000	16,914,500	5,500,000	17,477,500	11,649,000	5,800,000		
<b>ENDING BALANCE</b>	0	1,242,100	(804,669)	437,431	6,924,500	6,924,500	6,459,000	0	11,598,000	5,749,000	0	0	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:**

Recent and past inspections of the Southwest Outfall have indicated significant deterioration to the concrete pipe. The damage to the concrete pipe is believed to be 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 1-2: Design F18-19; Construction in F20-21.

Phase 3-4: Design F22. Construction F23-24.

Phase 5-6: Design F23-24; Construction in F24-25.

Phase 7-8: Design F24-25; Construction in F26-28.

**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 D M Metropolitan Reclamation Authority (2014 28e)

**Operating Budget Effect:**

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Clarifier Improvements</b>								<b>AG267 WRA809 WR115</b>	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	48,304,000	5,183,899	3,471,635	8,655,534	1,348,466	10,004,000	17,700,000	16,600,000	4,000,000				
Beginning Balance					2,615,241		1,265,600	20,495,600	3,960,000				
Interest Earnings													
Repair and Replacement Fund Communities	300,000	76,325	50,450	126,775	(1,175)	125,600	70,000	64,400	40,000				
Future Funding (18M to 37M)	36,860,000						36,860,000						
Bond Proceeds													
SRF Drawdowns (12M)	11,144,000	11,144,000		11,144,000		11,144,000							
Other													
Total Resources	48,304,000	11,220,325	50,450	11,270,775	2,614,066	11,269,600	38,195,600	20,560,000	4,000,000				
<b>ENDING BALANCE</b>	0	6,036,426	(3,421,185)	2,615,241	1,265,600	1,265,600	20,495,600	3,960,000	0	0	0	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 FY19-21; Construction in FY21-26 in two Phases.

**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 D M Metropolitan Reclamation Authority (2014 28e)

**Operating Budget Effect:**

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY			PROJECT TITLE					ACCOUNT					
Wastewater Reclamation Authority Improvements			WRF Trickling Filter Removal					AG267 WRA809 WR119					
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST BEYOND F29	
							F24	F25	F26	F27	F28		F29
Expenses	3,818,000	3,816,397	1,568	3,817,965	35	3,818,000							last time in CIP
Beginning Balance					35								
Interest Earnings													
Repair and Replacement Fund Communities	88,000	87,216	784	88,000		88,000							
Future Funding													
Bond Proceeds													
SRF Drawdowns (6M) Other / from Small CIP	3,730,000	5,970,000	(2,240,000)	3,730,000		3,730,000							
Total Resources	3,818,000	6,057,216	(2,239,216)	3,818,000	35	3,818,000							
<b>ENDING BALANCE</b>	0	2,240,819	(2,240,784)	35	0	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 FY19-21

**Relationship to General Plan and Other Projects:**

Project to be funded with SRF funding.

**Operating Budget Effect:**

This project will have no effect on the operating budget.

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRA Birdland Pump Station							AG267 WRA809 WR122		
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST BEYOND F29	
							F24	F25	F26	F27	F28		F29
Expenses	22,450,000	188,887	1,904,817	2,093,704	10,915,996	13,009,700	9,440,300						
Beginning Balance					(1,168,952)	7,375,300							
Interest Earnings													
Repair and Replacement Fund Communities	150,000	13,901	91,551	105,452	9,548	115,000	35,000						
Future Funding (2.5M SRF)	2,030,000						2,030,000						
Bond Proceeds													
SRF Drawdowns (20.3 SRF)	20,270,000		819,300	819,300	19,450,700	20,270,000							
Other SRF P&D		800,000	(800,000)										
Total Resources	22,450,000	813,901	110,851	924,752	18,291,296	20,385,000	9,440,300						
<b>ENDING BALANCE</b>	0	625,014	(1,793,966)	(1,168,952)	7,375,300	7,375,300	0	0	0	0	0	0	0

**Description: Core Project.**

This project will rebuild existing Birdland pump 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 Consent Decree and 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 FY20-22; Construction FY22-24.

**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 D M Metropolitan Reclamation Authority (2014 28e)

**Operating Budget Effect:**

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE									ACCOUNT
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Eastside Wet Weather Treatment (on hold)</b>									<b>AG267 WRA809 WR123</b>
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	<b>65,815,350</b>	208		208	6,792	7,000	<b>1,723,350</b>	<b>32,520,000</b>	<b>31,565,000</b>				
Beginning Balance							(6,600)	152,050	31,445,000				
Interest Earnings													
Repair and Replacement Fund													
Communities	262,400	208		208	192	400	82,000	60,000	120,000				
Future Funding (65.6M)	65,552,950							65,552,950					
Bond Proceeds													
SRF Drawdowns							1,800,000	(1,800,000)					
Other													
Total Resources	<b>65,815,350</b>	208		<b>208</b>	<b>192</b>	400	1,875,400	63,965,000	31,565,000				
<b>ENDING BALANCE</b>	0	0	0	0	(6,600)	(6,600)	152,050	31,445,000	0	0	0	0	0

**Description: Core Project.**

The project will construct a new wet weather treatment facility to handle flows conveyed through 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 and a project titled WRF Preliminary Treatment was included in the CIP. The facility was anticipated to handle flow the WRA Eastside Interceptor and the WRA Four Mile Interceptor and send the flow to another portion of the WRF. The WRA subsequently identified an alternative option through the WRF Secondary Treatment Alternatives Evaluation study completed in 2018.

**Scheduling:**

Project Design FY23-24; Construction in FY25-26.

**Relationship to General Plan and Other Projects:**

This improvement was identified in the WRA Secondary Treatment Alternatives Evaluation study and is being constructed in lieu of the WRF Preliminary Treatment project that was identified in the WRA Facility Plan Update - 2012

**Operating Budget Effect:**

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY							PROJECT TITLE						ACCOUNT
<b>Wastewater Reclamation Authority Improvements</b>							<b>WRF Effluent Pumping</b>						<b>AG267 WRA809 WR124</b>
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST BEYOND F29	
							F24	F25	F26	F27	F28		F29
Expenses	42,331,200		469,223	469,223	924,877	1,394,100	9,837,100	20,460,000	10,640,000				
Beginning Balance					(346,093)		(350,620)	4,144,155	426,372				
Interest Earnings													
Repair and Replacement Fund Communities	103,000		11,430	11,430	14,570	26,000	20,000	35,000	22,000				
Future Funding (after flood used)	23,541,157							15,000,000	8,541,157				
Bond Proceeds													
SRF Drawdowns (10yr Flood)	12,537,000						12,537,000						
Flood Mitigation, State Iowa	6,150,043		111,700	111,700	905,780	1,017,480	1,774,875	1,707,217	1,650,471				
Total Resources	42,331,200		123,130	123,130	574,257	1,043,480	13,981,255	20,886,372	10,640,000				
<b>ENDING BALANCE</b>	0	0	(346,093)	(346,093)	(350,620)	(350,620)	4,144,155	426,372	0	0	0	0	0

**Description: Core Project.**

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

**Justification:**

The WRF presently has difficulty discharging 200 MGD of flow to the Des Moines River under elevated river conditions. The WRA will need to construct an effluent pumping station to allow the discharge of flow 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 effluent pumping project it is necessary to replace the existing chlorination facility.

**Scheduling:**

Effluent Pumping Design FY22-23; Construction in FY24-26.

**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 D M Metropolitan Reclamation Authority (2014 28e) Funding from Flood Mitigation Sales Tax is available for about half of the project costs.

**Operating Budget Effect:**

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Aeration Improvements</b>							<b>AG267 WRA809 WR125</b>		
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST BEYOND F25	
							F24	F25	F26	F27	F28		F29
Expenses	10,200,000						150,000	1,200,000	4,825,000	4,025,000			
Beginning Balance								270,000	8,770,000	3,985,000			
Interest Earnings													
Repair and Replacement Fund Communities	160,000						20,000	60,000	40,000	40,000			
Future Funding (10M)	10,040,000							10,040,000					
Bond Proceeds													
SRF Drawdowns							400,000	(400,000)					
Other													
Total Resources	10,200,000						420,000	9,970,000	8,810,000	4,025,000			
<b>ENDING BALANCE</b>	0	0	0	0	0	0	270,000	8,770,000	3,985,000	0	0	0	0

**Description: Core Project.**

The project will convert the existing 4-pass nitrifying activated sludge process system to include an anoxic/anaerobic zone in pass one of each basin, and the project will replace corroded electrical conduits, replace existing membrane disc air diffusers and associated piping, and replace the existing four 2,000 HP process air blowers.

**Justification:**

Much of the WRF's aeration facility is approaching the end of its service lives and a rehabilitaton project will be required in the near future. Additionally, some of the improvements completed in the WRF Aeration Improvements will benefit the WRA with removing phosphorus and will help with sending that phosphorus to the Phosphorus Recovery Facility

**Scheduling:**

WRF Aeration Improvements: Design FY23-24; Construction in FY25-26.

**Relationship to General Plan and Other Projects:**

The project was identified in the WRF Secondary Treatment Alternatives Evaluation study and was added to the CIP in FY20.

**Operating Budget Effect:**

It is anticipated that the project will reduce operations and maintenance costs to the WRA.

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Disinfection Improvements (on hold)</b>							<b>AG267 WRA809 WR129</b>		
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	15,978,400						323,400	2,265,000	9,945,000	3,445,000			
Beginning Balance								196,600	13,260,000	3,415,000			
Interest Earnings													
Repair and Replacement Fund Communities	205,000						20,000	55,000	100,000	30,000			
Future Funding (15M)	15,773,400							15,773,400					
Bond Proceeds													
SRF Drawdowns / P&D							500,000	(500,000)					
Other													
Total Resources	15,978,400						520,000	15,525,000	13,360,000	3,445,000			
<b>ENDING BALANCE</b>	0	0	0	0	0	0	196,600	13,260,000	3,415,000	0	0	0	0

**Description: Core Project.**

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

**Justification:**

The WRF presently has difficulty discharging 200 MGD of flow to the Des Moines River under elevated river conditions. The WRA will need to construct an effluent pumping station to allow the discharge of flow 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 effluent pumping project it is necessary to replace the existing chlorination facility.

**Scheduling:**

Effluent Pumping and Disinfection Design FY24-25; Construction in FY25-27.

**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 D M Metropolitan Reclamation Authority (2014 28e)

**Operating Budget Effect:**

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Parallel Pipe and Mixing Structure (on hold)</b>								<b>AG267 WRA809 WR xx</b>	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
							F24	F25	F26	F27	F28	F29	F 2026
Expenses	5,156,200							131,800	5,024,400				
Beginning Balance									(131,800)				
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	5,156,200								5,156,200				
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	5,156,200								5,024,400				
<b>ENDING BALANCE</b>	0	0	0	0	0	0	0	(131,800)	0	0	0	0	0

**Description: Core Project.**

The project consists of the installation of a parallel 60-inch pipeline between the roughing filter control chamber and the secondary treatment facilities along with a structure to connect and mix flows.

**Justification:**

In order to convey 200 MGD of plant flow from the primary treatment facilities to the secondary treatment facilities without pumping the flow the WRA must construct a parallel 60-inch pipeline between the roughing filter control chamber and the secondary influent distribution chamber.

**Scheduling:**

Design F25; Construction in F26.

**Relationship to General Plan and Other Projects:**

This project was identified in the WRF Secondary Treatment Alternatives Evaluation Study and is necessary to completely eliminate the use of the WRF's trickling filter and intermediate pump station during peak flow scenarios.

**Operating Budget Effect:**

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Building 05 Rehab (on hold)</b>								<b>AG267 WRA 809 WR135</b>	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	13,131,170						404,000	6,582,170	6,145,000				
Beginning Balance								111,000	6,130,000				
Interest Earnings													
Repair and Replacement Fund													
Communities	75,000						15,000	45,000	15,000				
Future Funding (13.1M)	13,056,170							13,056,170					
Bond Proceeds													
SRF Drawdowns							500,000	(500,000)					
Other													
Total Resources	13,131,170						515,000	12,712,170	6,145,000				
<b>ENDING BALANCE</b>	0	0	0	0	0	0	111,000	6,130,000	0	0	0	0	0

**Description: Core Project.**  
 This project will rehabilitate Building 05 (Preliminary Treatment Building) which contains the WRF's raw water pumps. It is anticipated that pumps, piping and other equipment will require replacement.

**Justification:**  
 Building 05 houses the WRF's raw water pumps and the pump station has a harsh, corrosive environment that is hard on equipment and materials. The pumps, piping, and other equipment is approaching the end of its service lives and a rehabilitaton project will be required in the near future.

**Scheduling:**  
 Design F24; Construction in F25-26.

**Relationship to General Plan and Other Projects:**  
 The project was identified in the WRF Secondary Treatment Alternatives Evaluation study and was added to the CIP in FY20.

**Operating Budget Effect:**  
 It is anticipated that the project will slightly reduce operations and maintenance costs to the WRA.

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRA Joint Trunk East &amp; West</b>								<b>AG267 WRA99000 WR130</b>	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST F2029-30
							F24	F25	F26	F27	F28	F29	
Expenses	22,000,000				800,000	800,000	534,850	3,450,150	10,180,000	7,035,000			
Beginning Balance							200,000	10,165,150	6,715,000	7,035,000			
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	22,000,000						11,000,000		11,000,000				
Bond Proceeds													
SRF Drawdowns					1,000,000	1,000,000	(500,000)		(500,000)				
Other													
Total Resources	22,000,000				1,000,000	1,000,000	10,700,000	10,165,150	17,215,000	7,035,000			
<b>ENDING BALANCE</b>	0	0	0	0	200,000	200,000	10,165,150	6,715,000	7,035,000	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 F23; Construction F26 and F27.

Joint Trunk West: Design F23; Construction F24 and F25.

**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 DM Metropolitan Reclamation Authority (2014 28e)

**Operating Budget Effect:**

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY					PROJECT TITLE								ACCOUNT
<b>Wastewater Reclamation Authority Improvements</b>					<b>WRA Common Trunk</b>								<b>AG267 WRA99000 WR 131</b>
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST FY29 & 2030	
							F24	F25	F26	F27	F28		F29
Expenses	12,680,000						453,000	227,000					12,000,000
Beginning Balance								227,000					
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding	12,680,000												12,680,000
Bond Proceeds							680,000						(680,000)
SRF Drawdowns													
Other													
Total Resources	12,680,000						680,000	227,000					12,000,000
<b>ENDING BALANCE</b>	0	0	0	0	0	0	227,000	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 F23-24; Construction F25-26 of Joint Trunk, F29-30 for Common Trunk.

**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 D M Metropolitan Reclamation Authority (2014 28e)

**Operating Budget Effect:**

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRA Westside Interceptor</b>								<b>AG267 WRA99000 WR xx</b>	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
							F24	F25	F26	F27	F28	F29	F 2030
Expenses	<b>12,300,000</b>												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	<b>12,300,000</b>												12,300,000
<b>ENDING BALANCE</b>	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 D M Metropolitan Reclamation Authority (2014 28e)

**Operating Budget Effect:**

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

**Fiscal 2022 Actual, Revised 2023, and Fiscal 2024-2029 WRA Capital Improvements Program ( Board Copy)**

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
<b>Wastewater Reclamation Authority Improvements</b>				<b>WRF Secondary Treatment</b>								<b>AG267 WRA 809 WR xx</b>	
	TOTAL ESTIMATED COST	COST THROUGH F21	ACTUAL COST IN F22	COST THROUGH F22	REVISED BUDGET F23	ESTIMATED COST THROUGH F23	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F29
							F24	F25	F26	F27	F28	F29	
Expenses	76,000,000											76,000,000	
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	76,000,000											76,000,000	
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	76,000,000											76,000,000	
<b>ENDING BALANCE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0

**Description: Core Project.**  
 This improvement includes adding two additional aeration basins and four final clarifiers, modifying existing aeration facilities, and all site facilities to enhance the existing conventional activated sludge process.

**Justification:**  
 The existing activated sludge basins were modeled at maximum month conditions. The modeling indicated that current facilities will need to be upgraded to treat maximum month conditions to prevent the peak solids loading rate on the final clarifiers from exceeding a recommended limiting rate. If future regulatory requirements change, this improvement could be adjusted to address those requirements.

**Scheduling:**  
 Design FY27-28; Construction in FY28-30.

**Relationship to General Plan and Other Projects:**  
 This project was identified in the WRF Secondary Treatment Alternatives Evaluation and was added to the CIP in FY20.

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