

Des Moines Metropolitan Wastewater Reclamation Authority

2017+ Capital Improvements Program



2017

Project Number	Project Name	Funding	Page #
WRA069	Facility Plan Update - WRA	annual contrib	6
WRA074	Digester Improvements - WRF	Core Bond Funds	12
WRA078	Facilities Rehabilitation - WRF	annual contrib	11
WRA081	SouthWest Area Diversion Facilities	Bond Funds / SW	13
WRA083	Contracted Sewer Maintenance (O&M)	Operation funded	14
WRA085	Four Mile Interceptor Extension (P24)	Expansion Funds	15
WRA086	DM River Outfall / New Main Outfall	Core Bond Funds	16
WRA087	Combined Sewer Solids Separation	Core Bond Funds	17
WRA088	Ingersoll Run Overflow	Core Bond Funds	18
WRA091	Small CIP [thru 2009] & Studies	annual contrib	10
WRA093	Flow Monitoring System Improvements	Core Bond Funds	19
WRA096	Transition Costs - WRA	annual contrib	20
WRA098	Small CIP / Plant Improvement Proj F10-F12	annual contrib	7
WRA099	Mud Creek Interceptor (P19)	Expansion Funds	21
WRA100	Corridor Preservation	Expansion Funds	22
WRA101	Sponsor Four Mile Buy out (Polk)	Interest amendment	23
WRA103	Southern Tier (Pumping) Improvements	Bond Funds / SW	28
WRA104	Equalization Basin Utilization Improv (1a Jobs)	Core Bond Funds	25
WRA105	Flood Improvements	Core Bond Funds	26
WRA106a	Small CIP / Plant Improvement Proj F13-F16	annual contrib	8
WRA106b	Small CIP / Plant Improvement Proj F17-F22	annual contrib	9
WRA107	Southern Tier Improvements (Western)	Expansion Funds	29
WRA108	Eastside Interceptor (force main & gravity s)	Core Bonds / contrib	30
WRA109	Sponsor Four Mile Streambank	Interest amendment	31
WRA110	Southern Tier Improvements (Core)	Core Bond Funds	27
WRA111	Grit basins	Core Bond Funds	32
WRA 2_1	Southwest Outfall Relining	Core Bond Funds	35
WRA 1_1	Nutrient Removal - WRF	Core Bond Funds	42
WRA 1xx	Little Four Mile Creek Improvements	Core Bond Funds	34
WRA 1_2	Common Trunk	Expansion Funds	43
WRA 1_3	Joint Trunk	Expansion Funds	44
WRA 1_4	Birdland Improvements	Core Bond Funds	45
WRA 2_2	Preliminary Treatment	Core Bond Funds	36
WRA 2_3	Chlorination & Effluent pumping	Core Bond Funds	37
WRA 2_4	Final clarifiers	Core Bond Funds	38
WRA 2_5	Aeration basin improvements	Core Bond Funds	39
WRA 2_6	Clarifier Improvements	Core Bond Funds	40
WRA 2_7	Westside Interceptor	Core Bond Funds	41
WRA 102	Biomethane Conditioning & Injection	Core Bond Funds	24
WRA 1xx	Phosphorus Recovery	Core Bond Funds	33

WASTEWATER RECLAMATION AUTHORITY
 COMPARISON OF LAST YEAR AND CURRENT YEAR CIP SHEETS
 FY2016-2022 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	Last Amount	2016 CIP	2016 CIP	2016 FILE		
wra 086	DM River Outfall / New Main Outfall	P 17	64,399,635	64,399,635	64,399,635	-
wra 087	Combined Sewer Solids Separation Design	P 17	51,911,995	51,911,995	51,961,995	50,000
wra 088	Ingersoll Run Sewer (CSO & Outlet)	2021	12,800,000	116,311,630	116,311,630	116,361,630 (740,000)
wra 093	Flow Monitoring System			15,397,954	12,800,000	12,060,000 40,000
wra 077	Power Generation System	*		6,743,433	6,743,433	6,783,433
wra 074	Digester Gas System			3,721,094	closed	
wra 104	Equalization Basin (I-Jobs project)	*		23,878,000	23,878,000	23,578,000 (300,000)
wra 110	Southern Tier Interceptor (P10 Seg 6)	P 10	5,850,000	5,978,870	5,978,870	6,938,600 959,730
Wr 1xx	Phosphorus Recovery				new	19,860,000 19,860,000
wra 102	WRF Biomethane Conditioning and Injection				new	12,080,000 12,080,000
wra 111	WRF Grit Removal Improvements	2018	8,200,000	8,200,000	8,200,000	8,900,000 700,000
Wr 1xx	WRF Clarifier Improvements	2019	19,900,000	19,900,000	19,900,000	19,930,000 30,000
Wr 1xx	WRF Preliminary Treatment	2021	30,500,000	30,500,000	30,500,000	30,600,000 100,000
Wr 1xx	WRF Flood Improvements	2018	5,300,000	5,975,010	5,975,010	8,001,000 2,025,990
Wr 1xx	WRA Southwest Outfall Lining	2019	26,150,000	26,150,000	26,150,000	26,225,000 75,000
Subtotal Core Projects			108,700,000	264,666,507	256,436,943	291,317,663 34,880,720
Expansion Projects						
wra 085	Four Mile Interceptor Ext. (Phase 24)	P 24		20,551,073	20,551,073	20,541,073 (10,000)
wra 097	Four Mile Interceptor Improv (Phase 23)	*		26,481,052	closed	
wra 099	Mud Creek Interceptor	P 19		20,603,500	20,603,500	20,568,500 (35,000)
wra 100	Corridor Preservation			317,632	317,632	317,632 -
wra 107	Southern Tier Interceptor (P10 Seg 1,4,7-8)	2015	9,500,000	9,770,000	9,770,000	9,770,000 -
wra 082	WDM Outfall (Phase 13)	*		16,436,175	closed	
Subtotal Expansion Projects			9,500,000	94,159,432	51,242,205	51,197,205 (45,000)
wra 081	South West Area Diversion Facilities	P 22		97,504,505	97,504,505	97,504,505 -
wra 103	Southern Tier Interceptor (P10 Seg 14,15-17)	P 10	7,000,000	17,418,730	17,418,730	17,418,730 (200,000)
wra 101	Sponsored Project [Polk] (Sw SRF loans)			3,248,300	3,248,300	3,251,300 3,000
wra 109	Sponsored Project [Streambank] (So Tier loan)			1,160,000	1,160,000	3,000,000 1,840,000
South West Area Diversion Facilities			7,000,000	119,331,535	119,331,535	120,974,535 1,643,000
Future Projects & Projects w comnty contrib.						
core +	Eastside Interceptor	2018	67,400,000	67,400,000	67,400,000	67,400,000 -
core +	Westside Interceptor	2030	12,300,000	12,300,000	12,300,000	12,300,000 -
core	Little Four Mile Interceptor (P15 Seg 1)	2025	7,100,000	7,100,000	7,100,000	7,100,000 -
core	Nutrient Removal	2032	105,500,000	105,500,000	105,500,000	105,500,000 -
core	Birdland Pump Stn	2023	13,500,000	13,500,000	13,500,000	13,500,000 -
core	Common Trunk	2026	11,100,000	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	20,800,000 -
core	WRF Chlorination & Effluent pumping	2022	25,500,000	25,500,000	25,500,000	25,500,000 -
core	WRF Final clarifiers	2024	41,600,000	41,900,000	41,900,000	41,900,000 -
core	WRF Aeration basins	2028	96,600,000	96,600,000	96,600,000	96,600,000 -
Subtotal Future Projects			401,400,000	401,700,000	401,700,000	401,700,000 -
Total Project Costs (Bonded and Basins)			526,600,000	879,857,474	828,710,683	865,189,403 36,478,720
Sm CIP Non-Bonded / Plant & System Projects						
wra 096	Transition / RE Transfer Costs (see note below)			334,000	334,000	334,000 -
wra 069	Facilities Plan Update (2014 forward)			2,093,217	1,137,761	1,162,761 25,000
wra 078	Facilities Rehabilitation (2014 forward)			3,413,190	1,551,402	1,576,402 25,000
wra 083	Sewer Maintenance contract work (2013 forward)			2,000,000	1,950,000	2,100,000 150,000
wra 091	Small CIP projects & Studies (2014 forward)			2,516,351	396,461	467,612 71,151
wra 104	Equalization Basin Improvements			300,000	300,000	300,000 -
wra 079	WRF Energy Efficiency projects (I-Jobs, no current)			869,906	closed	
wra 098	Small CIP projects & ProcEqRepl. 2010-2012			5,878,323	5,878,323	5,875,000 (3,323)
wra 106	Small CIP projects & ProcEqRepl. 2013-2016			11,513,584	11,513,584	11,504,107 (9,477)
wra 1xx	Small CIP future projects & future (3 to 4 years)			17,650,000	17,650,000	21,410,000 3,760,000
Total Non-Bonded Project Costs			46,568,571	40,711,531	44,729,882	4,018,351
WRA Total Expenses for Projects			926,426,045	869,422,214	909,919,285	40,497,071

RE = Real Estate (after 2004 WRA listed as title holder)

* PROJECT CLOSED
 new

Last year's total

909,919,285 SUMMARY TOTAL

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

WRA 2017

<u>Expenditures from CIP sheets</u>		2016	2017	2018	2019	2020	2021	2022	subtotal Spending
<u>WRA Projects - Expansion Category</u>									
85 Ph 24	Four Mile Interceptor Ext.	\$ 55,888.0							\$ 55,888.0
99 Ph 19	Mud Creek	837,510.0							837,510.0
107 Ph 10	Southern Tier Improvements	168,401.0	\$ 480,000.0		\$ 110,000.0	\$ 1,460,000.0	\$ 810,000.0		3,028,401.0
	Expansion Funding Ttl	\$ 1,061,799.0	\$ 480,000.0	\$ -	\$ 110,000.0	\$ 1,460,000.0	\$ 810,000.0	\$ -	\$ 3,921,799.0
<u>WRA Projects & WRF Projects (Core or other Funding)</u>									
83	Sewer Maintenance Contracts	518,964.0	150,000.0	150,000.0	150,000.0	150,000.0	150,000.0	150,000.0	1,418,964.0
69	Facility Plan update	103,559.0	150,000.0	125,000.0	125,000.0	125,000.0	125,000.0	125,000.0	878,559.0
74	Digester Improvements	212,657.0							212,657.0
78	Facilities Rehabilitation	196,159.0	175,000.0	250,000.0	200,000.0	200,000.0	200,000.0	200,000.0	1,421,159.0
81 P21,22	SW Area Diversion Project	380,258.0							380,258.0
86 Ph 17	DM River Outfall / Main Outfall	398,452.0							398,452.0
87 Ph 17	CSSS Facility	1,567,012.0							1,567,012.0
88 Ph 25	Ingersoll Run CSO	-	650,000.0	4,010,000.0	3,910,000.0	3,490,000.0			12,060,000.0
91	Studies (sm CIP)	50,000.0	40,000.0	40,000.0	30,000.0	30,000.0	30,000.0	30,000.0	250,000.0
93 Ph 25	Flow Monitoring Seg 3	244,958.0							244,958.0
96	Transition Costs	1,117.0							1,117.0
98	Plant Projects (Eq Repl, sm CIP)	19,397.0							19,397.0
101 a / b	Sponsored Project w Polk Co	846,654.0	\$ 648,300.0						1,494,954.0
102	Biomethane Conditioning, Injection	795,600.0	\$ 9,523,500.0	\$ 1,760,900.0					12,080,000.0
103 Ph 10	Southern Tier for SW ADF	104,878.0	\$ 530,000.0						634,878.0
104	Equalization Basin Improvements		300,000.0						300,000.0
105	Flood Improvements	110,000.0	475,000.0	5,066,000.0	2,350,000.0				8,001,000.0
106	Plant Projects (Eq Repl, sm CIP)	4,055,537.0	\$ 7,085,523.0	\$ 3,635,000.0	\$ 3,560,000.0	\$ 3,560,000.0	\$ 3,665,000.0	\$ 3,665,000.0	29,226,060.0
108 Ph 27	Eastside Interceptor	2,446,073.0	16,330,000.0	38,650,000.0	8,880,000.0				66,306,073.0
109	Sponsor'd Four Mile Acquisition	68,281.0	2,858,600.0						2,926,881.0
110 Ph 10	Southern Tier Improvements						2,430.0	453,930.0	456,360.0
111	Grit Basin Improvements	600,163.0	1,315,600.0	5,890,300.0	1,090,000.0				8,896,063.0
1xx	Phosphorus Recovery Facility		1,525,000.0	7,970,000.0	10,365,000.0				19,860,000.0
2x6	Clarifier Improvements		10,000.0	705,000.0	6,045,000.0	2,870,000.0	800,000.0	5,940,000.0	16,370,000.0
2x1	Southwest Outfall relining	75,000.0	500,000.0	1,871,000.0	3,420,000.0	4,125,000.0	5,484,000.0		15,475,000.0
2x2	Primary Treatment			700,000.0	1,440,000.0	12,080,000.0	12,980,000.0	3,400,000.0	30,600,000.0
2x3	Chlorination & Effluent pumping				450,000.0	1,450,000.0	7,870,000.0	11,800,000.0	21,570,000.0
1x4	Birdland Pump station						350,000.0	400,000.0	750,000.0
2x4	Final Clarifiers						650,000.0	1,930,000.0	2,580,000.0
		\$ 12,794,719.0	\$ 42,266,523.0	\$ 70,823,200.0	\$ 42,015,000.0	\$ 28,080,000.0	\$ 32,306,430.0	\$ 28,093,930.0	\$ 256,379,802.0
	Revised Estimate for F16	\$ 13,856,518.0							
	2017	\$ 42,746,523.0							
	2018		\$ 70,823,200.0						
	2019				\$ 42,125,000.0				
	2020					\$ 29,540,000.0			
	2021						\$ 33,116,430.0		
	2022							\$ 28,093,930.0	
	Summary of Costs, Six-Year-Period								\$ 246,445,083.0

Summary

Wastewater Reclamation Authority Improvements FY2016-F2017+

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

	TOTAL ESTIMATED COST	COST THROUGH F15	REVISED ESTIMATE F16	TOTAL ESTIMATED COST THROUGH	COST FOR SIX-YEAR PERIOD	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
						F17	F18	F19	F20	F21	F22	
Expenses , detail on following page	909,919,285	312,725,444	13,856,518	326,581,962	246,445,083	42,746,523	70,823,200	42,125,000	29,540,000	33,116,430	28,093,930	336,892,240
Resources:												
Beginning Balance	0	0	7,753,134	0		4,593,423	10,116,200	35,889,000	7,839,000	22,364,000	15,127,570	0
Interest Earnings	3,943,464	3,701,404	147,060	3,848,464	95,000	10,000	15,000	15,000	15,000	20,000	20,000	0
Renewal & Replacement Fund	0	0	0	0	0	0	0	0	0	0	0	0
Communities	45,689,635	18,209,635	3,820,000	22,029,635	23,660,000	4,060,000	3,800,000	3,900,000	3,900,000	4,000,000	4,000,000	0
Future Funding	535,448,600	0	0	0	216,460,000	43,670,000	71,960,000	9,420,000	41,900,000	20,310,000	29,200,000	318,988,600
Bond Proceeds (Flood Mit Rev)	78,415,173	58,433,816	(79,643)	58,354,173	20,061,000	0	20,061,000	0	0	0	0	0
SRF Drawdowns	242,949,622	241,381,300	5,759,022	247,140,322	(1,260,700)	(2,390,700)	610,000	590,000	(1,900,000)	1,400,000	430,000	(2,930,000)
Other	3,472,791	(1,247,577)	1,050,368	(197,209)	3,670,000	2,920,000	150,000	150,000	150,000	150,000	150,000	0
Total Resources	909,919,285	320,478,578	18,449,941	331,175,385	262,685,300	52,862,723	106,712,200	49,964,000	51,904,000	48,244,000	48,927,570	316,058,600

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Facility Plan Update & Consulting								AG267 WRA990000 WRA069	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
Expenses	1,162,761	187,761	96,441	284,202	103,559	387,761	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 / comnty funds 098	1,162,761	187,761	96,441	284,202	103,559	387,761	150,000	125,000	125,000	125,000	125,000	125,000	
Total Resources	1,162,761	187,761	96,441	284,202	103,559	387,761	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 provides for an update of the original ICA Facility Plan in anticipation of needs through the year 2020. Core projects and expansion projects are included in the facility plan. Funding in years F05 through F11 are discretionary for use in funding special studies and special assistance to the authority in implementing the facility plan including cost updates and bond projections. Funding in F07 and beyond includes financial planning and bond council.

Justification:

The original 201 and 208 studies were completed in 1978 and 1982, respectively; the 2004 Facility Plan identified the needs of the WRA through 2020 and has mostly been implemented. The WRA Facility Plan Update - 2012 identified the needs of the WRA through 2040. To evaluate growth, conveyance and wastewater treatment needs of the WRA past 2020.

Scheduling:

The WRA Facility Plan update- 2012 was submitted to IDNR in January 2014; the WRA approved the plan in June 2014; plan implementation began in December 2014.

Relationship to General Plan and Other Projects:

Funded with Small CIP funds (WR106).

Operating Budget Effect:

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE				ACCOUNT					
Wastewater Reclamation Authority Improvements				WRF Small Projects, & Process Equipment Repl for 2010, 2011, 2012				AG267 WRA990000 WRA98					
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
Expenses	5,875,000	5,855,603		5,855,603	19,397	5,875,000							
Beginning Balance					19,397								
Interest Earnings	5,000	5,000		5,000		5,000							
Repair and Replacement Fund Communities	7,357,360	7,357,360		7,357,360		7,357,360							
Future Funding Bond Proceeds													
SRF Drawdowns													
Other (tsfr out)	(1,487,360)	(1,487,360)		(1,487,360)		(1,487,360)							
Total Resources	5,875,000	5,875,000		5,875,000	19,397	5,875,000							
ENDING BALANCE	0	19,397	0	19,397	0	0	0	0	0	0	0	0	0

Description:

Renewal and replacement of existing process equipment for certain fiscal years.

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:

F14-16: CNG/CBG Fueling or Injection to utilize biogas at the WRA.

F15: High mast light conversion to LED. BFP roller replacements.

F16: Grit basin upgrade study.

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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRF Small Projects, & Process Equipment Repl for 2013, 2014, 2015, 2016							AG267 WRA990000 WRA106 1		
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
Expenses	11,504,107	1,933,852	1,754,195	3,688,047	4,055,537	7,743,584	3,525,523	235,000					
Beginning Balance					4,896,060		3,995,523	235,000					
Interest Earnings	15,000		5,000	5,000	10,000	15,000							
Repair and Replacement Fund Communities	14,200,000	6,800,000	3,600,000	10,400,000	3,800,000	14,200,000							
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other (tsfr out)	(2,710,893)	(1,450,000)	(370,893)	(1,820,893)	(655,000)	(2,475,893)	(235,000)						
Total Resources	11,504,107	5,350,000	3,234,107	8,584,107	8,051,060	11,739,107	3,760,523	235,000					
ENDING BALANCE	0	3,416,148	1,479,912	4,896,060	3,995,523	3,995,523	235,000	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:

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

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

F15: Ferrous Chloride Feed System, Main pump repairs, BFP roller replacements.

F16: Structure 06 canopy, Pump station gate repairs, Hot water unit heater replacement.

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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Studies, Small Projects, & Process Equipment Replacement								AG267 WRA990000 WRA106 2	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
Expenses	21,410,000						3,560,000	3,400,000	3,560,000	3,560,000	3,665,000	3,665,000	
Beginning Balance													
Interest Earnings	95,000						10,000	15,000	15,000	15,000	20,000	20,000	
Repair and Replacement Fund Communities	23,600,000						4,000,000	3,800,000	3,900,000	3,900,000	4,000,000	4,000,000	
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other (tsfir out)	(2,285,000)						(450,000)	(415,000)	(355,000)	(355,000)	(355,000)	(355,000)	
Total Resources	21,410,000						3,560,000	3,400,000	3,560,000	3,560,000	3,665,000	3,665,000	
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:

Scheduling:

The engines burn the by-product gas produced by the digesters to produce electricity; engine overhauls are required every 25,000 hours. For budgeting purposes, the overhauls occur every 4 years at a cost of \$1,300,000.

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.

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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Studies [Sm CIP]								AG267 WRA990000 WRA091	
	TOTAL	COST	ACTUAL	COST	Revised	ESTIMATED	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
	ESTIMATED	THROUGH	COST IN	THROUGH	BUDGET	COST THROUGH	F17	F18	F19	F20	F21	F22	BEYOND
	COST	F14	F15	F15	F16	F16							F22
Expenses	467,612	143,613	73,999	217,612	50,000	267,612	40,000	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 / WRA098	467,612	146,461	71,151	217,612	50,000	267,612	40,000	40,000	30,000	30,000	30,000	30,000	
Total Resources	467,612	146,461	71,151	217,612	50,000	267,612	40,000	40,000	30,000	30,000	30,000	30,000	
ENDING BALANCE	0	2,848	(2,848)	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:

F11-12: WRA Operating Plan development; WRF Flood Inundation study.

F14-15: Studies, as needed Phosphorus recovery study, Biogas to Grid injection evaluation.

F16-17: Studies, as needed what is out there ?

F18-22: Studies, as needed

Relationship to General Plan and Other Projects:

small cip funding

Operating Budget Effect:

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Facilities Rehabilitation [Sm CIP]								AG267 WRA990000 WRA078	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
Expenses	1,576,402	26,402	128,841	155,243	196,159	351,402	175,000	250,000	200,000	200,000	200,000	200,000	
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / comnty funds 106	1,576,402	26,402	128,841	155,243	196,159	351,402	175,000	250,000	200,000	200,000	200,000	200,000	
Total Resources	1,576,402	26,402	128,841	155,243	196,159	351,402	175,000	250,000	200,000	200,000	200,000	200,000	
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:
 F15: HVAC Replacements; Buildings 12 & 93 Roof replacements.
 F16: HVAC Replacements; Biobarn repairs.
 F17: HVAC Replacements; plans for next year??

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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRF Digester Improvements							AG267 WRA990000 WRA074		
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
Expenses	23,578,000	23,249,763	115,580	23,365,343	212,657	23,578,000							
Beginning Balance					212,657								
Interest Earnings	203,000	203,000		203,000		203,000							
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds	210,000	210,000		210,000		210,000							
SRF Drawdowns	23,165,000	23,265,000	(100,000)	23,165,000		23,165,000							
Other / from Small CIP													
Total Resources	23,578,000	23,678,000	(100,000)	23,578,000	212,657	23,578,000							
ENDING BALANCE	0	428,237	(215,580)	212,657	0	0	0	0	0	0	0	0	0

Description:

F10 improvements will involve improving the mixing system, replacing the insulated covers with fixed concrete covers, and upgrading the digester gas system.

Justification:

Digester gas contains hydrogen sulfide which corrodes components necessitating replacement. The equipment must be replaced in order to maintain the current level of service and reduce maintenance costs. This project will result in delivery of higher quality gas to the engine generators. Some improvements are necessitated by the increase in gas production that will require larger piping and appurtenances.

Scheduling:

The study and design were completed in F09 with construction in F09 through F14. A study was done in F08 to investigate a method of increasing gas production and reducing solids with the results used in the design of these improvements. The project is reaching completion.

Relationship to General Plan and Other Projects:

Included in 28E bonding schedule and 2004 Agreement.

Operating Budget Effect:

This project will result in a decrease in long term operations and maintenance costs with potential increased revenues.

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE						ACCOUNT			
Wastewater Reclamation Authority Improvements				Southwest Area Diversion Facilities Phase 21 and 22						AG267 WRA990000 WRA081			
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
Expenses	97,504,505	96,035,884	1,088,363	97,124,247	380,258	97,504,505							
Beginning Balance					380,258								
Interest Earnings	2,447,620	2,447,620		2,447,620		2,447,620							
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds	23,623,085	23,623,085		23,623,085		23,623,085							
SRF Drawdowns Available	71,433,800	71,433,800		71,433,800		71,433,800							
Other													
Total Resources	97,504,505	97,504,505		97,504,505	380,258	97,504,505							
ENDING BALANCE	0	1,468,621	(1,088,363)	380,258	0	0	0	0	0	0	0	0	0

Description: Core/expansion project.

Two thirds of the facilities support core communities and one third supports expansion communities. This project will divert flows from the Southwest Outfall Interceptor Sewer during wet weather and store in an equalization facility. Peak wet weather flows will be stored and then treated during low flow periods. Equalization will reduce the impact of wet weather events at the WRF. This project will also provide a connection for the City of Norwalk. Phase 21, segments 1 and 2, North River Interceptor will convey wastewater from the Norwalk wastewater treatment plant to the Southern Tier pump station. Phase 22, segments 1 through 6, will pump, convey, and store wastewater from the westside of the WRA service area.

Justification:

This project is necessary to provide flow equalization for the central and western WRA conveyance system.

Scheduling:

The time sensitive reach was designed in F08 and constructed in F08/F09. The North River Interceptor (Phase 21) was constructed in F08, and F09. The diversion sewer was constructed in F10, F11, and F12. The pump station, force main, flow equalization and interceptors have been constructed and have reached completion.

Phase 22, Segment 1 - F10, P22seg. 2 - F08/09, P22seg. 3 - F11/12, P22seg. 4 - F13/14, P22seg. 6 - F11/12.

Phase 22, Segment 5 - F13/15

Relationship to General Plan and Other Projects:

This project is included in the WRA Facility Plan Update. Two thirds of these facilities support core communities and one third supports expansion communities.

Operating Budget Effect:

This project will increase operations and maintenance costs.

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Sewer Maintenance (Inspections & Repairs)								AG267 WRA990000 WRA083	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F19
							F17	F18	F19	F20	F21	F22	
Expenses	2,100,000	118,947	562,089	681,036	518,964	1,200,000	150,000	150,000	150,000	150,000	150,000	150,000	
Beginning Balance					(220,436)								
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Funding O&M budget (803 9)	2,100,000	5,600	455,000	460,600	739,400	1,200,000	150,000	150,000	150,000	150,000	150,000	150,000	
Total Resources	2,100,000	5,600	455,000	460,600	518,964	1,200,000	150,000	150,000	150,000	150,000	150,000	150,000	
ENDING BALANCE	0	(113,347)	(107,089)	(220,436)	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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE				ACCOUNT					
Wastewater Reclamation Authority Improvements				WRA Four Mile Interceptor Extension Phase 24				AG267 WRA990000 WRA085					
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST BEYOND F22	
							F17	F18	F19	F20	F21		F22
Expenses	20,541,073	20,438,639	46,546	20,485,185	55,888	20,541,073							
Beginning Balance					292,056								
Interest Earnings	445,464	445,464		445,464		445,464							
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds	10,467,988	10,467,988		10,467,988		10,467,988							
SRF Drawdowns	9,599,692	8,415,000	1,420,860	9,835,860	(236,168)	9,599,692							
Other / POLK CO. & Core97	27,929	27,929		27,929		27,929							
Total Resources	20,541,073	19,356,381	1,420,860	20,777,241	55,888	20,541,073							
ENDING BALANCE	0	(1,082,258)	1,374,314	292,056	0	0	0	0	0	0	0	0	0

Description: Expansion Project.

Segment 1: Construction of an interceptor sewer from Broadway to NE 29th Street south of Oralabor Road.

Segment 2: Construction of an interceptor sewer from NE 29th Street south of Oralabor Road to Southeast Ankeny wastewater pollution control plant.

Justification:

This project is necessary to provide service to the City of Ankeny.

Scheduling:

Segment 1&2: Design-F04/05, Construction-F05/06. Segment 3&4: Design-F09/10, Construction-F10/13.

Relationship to General Plan and Other Projects:

The Four Mile Interceptor Extension will provide a full size downstream connection for Ankeny. This project is included in the WRA Facility Plan Update.

Operating Budget Effect:

Revenues and operations and maintenance costs will increase.

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

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 F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
Expenses	64,399,635	61,816,357	2,184,826	64,001,183	398,452	64,399,635							
Beginning Balance					118,542								
Interest Earnings	384,416	337,356		337,356	47,060	384,416							
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds	11,703,279	11,703,279		11,703,279		11,703,279							
SRF Drawdowns	51,948,600	44,489,500	7,459,100	51,948,600		51,948,600							
Other / Utility credits, CDM	363,340	130,490		130,490	232,850	363,340							
Total Resources	64,399,635	56,660,625	7,459,100	64,119,725	398,452	64,399,635							
ENDING BALANCE	0	(5,155,732)	5,274,274	118,542	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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				Combined Sewer Solids Separation Facility Phase 17								AG267 WRA990000 WRA087	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
Expenses	51,961,995	48,989,656	1,405,327	50,394,983	1,567,012	51,961,995							
Beginning Balance					1,517,012								
Interest Earnings	104,995	54,995		54,995	50,000	104,995							
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds	550,000	550,000		550,000		550,000							
SRF Drawdowns	51,307,000	47,322,000	3,985,000	51,307,000		51,307,000							
Other													
Total Resources	51,961,995	47,926,995	3,985,000	51,911,995	1,567,012	51,961,995							
ENDING BALANCE	0	(1,062,661)	2,579,673	1,517,012	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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

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 F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond F 2022
							F17	F18	F19	F20	F21	F22	
Expenses	12,060,000						650,000	4,010,000	3,910,000	3,490,000			
Beginning Balance								50,000	7,400,000	3,490,000			
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds Rev Flood	12,060,000							12,060,000					
SRF Drawdowns							700,000	(700,000)					
Other													
Total Resources	12,060,000						700,000	11,410,000	7,400,000	3,490,000			
ENDING BALANCE	0	0	0	0	0	0	50,000	7,400,000	3,490,000	0	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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY			PROJECT TITLE					ACCOUNT					
Wastewater Reclamation Authority Improvements			WRA Flow Monitoring System Improvements					AG267 WRA990000 WRA093					
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST BEYOND F22	
							F17	F18	F19	F20	F21		F22
Expenses	6,783,433	6,474,241	64,234	6,538,475	244,958	6,783,433							
Beginning Balance					204,958								
Interest Earnings	208,969	100,000	68,969	168,969	40,000	208,969							
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													
Total Resources	6,783,433	6,674,464	68,969	6,743,433	244,958	6,783,433							
ENDING BALANCE	0	200,223	4,735	204,958	0	0	0	0	0	0	0	0	0

Description: Core Project. This project will upgrade 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 will be installed to meter the majority of Des Moines flow into the conveyance system.

Justification:
Existing flow monitors will be in operation for fifteen years when replaced. New meters will be required as existing meters are not supported by the manufacturer.

Scheduling:
Design in F08/09, Replacement to begin in F09 and continue through F11. Installation continues through F13 as interceptor sewers are completed.

This project is included in the WRA Facility Plan Update. Real time flow information will be required to operate the Southwest Outfall Diversion Facilities

Relationship to General Plan and Other Projects:

Operating Budget Effect:
This project will increase operation and maintenance cost of the WRA Flow Monitoring System.

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE				ACCOUNT					
Wastewater Reclamation Authority Improvements				WRA Transition Costs				AG267 WRA99000 WRA096					
	TOTAL	COST	ACTUAL	COST	Revised	ESTIMATED	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
	ESTIMATED	THROUGH	COST IN	THROUGH	BUDGET	COST THROUGH	F17	F18	F19	F20	F21	F22	BEYOND
	COST	F14	F15	F15	F16	F16							F22
Expenses	334,000	318,994	13,889	332,883	1,117	334,000							last time in book
Beginning Balance					1,117								
Interest Earnings	34,000	34,000		34,000		34,000							
Repair and Replacement Fund													
Communities	430,000	430,000		430,000		430,000							
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / WRA091	(130,000)	(130,000)		(130,000)		(130,000)							
Total Resources	334,000	334,000		334,000	1,117	334,000							
ENDING BALANCE	0	15,006	(13,889)	1,117	0	0	0	0	0	0	0	0	0

Description: Core Project.

Costs associated with property transfer to the Wastewater Reclamation Authority. These include all costs associated with transferring deeds, easements to the WRA and creating easements necessitated by the legal status change on July 1, 2004.

Justification:

The legal status of the WRA changed on July 1, 2004. The new status allows the WRA to own property. All past property interests held through the City of Des Moines and other communities must be transferred to the WRA.

Scheduling:

F05: Transfer of easements and WRF property. F06/F07/F08: Grant easement in public rights of way.

Relationship to General Plan and Other Projects:

Operating Budget Effect:

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				Mud Creek Interceptor P 19							AG267 WRA990000 WRA099		
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
Expenses	20,568,500	18,413,784	1,317,206	19,730,990	837,510	20,568,500							
Beginning Balance					(419,490)								
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds	830,000	830,000		830,000		830,000							
SRF Drawdowns	19,128,500	12,238,500	5,373,000	17,611,500	1,517,000	19,128,500							
Other, Altoona	610,000	1,000,000	(130,000)	870,000	(260,000)	610,000							
Total Resources	20,568,500	14,068,500	5,243,000	19,311,500	837,510	20,568,500							
ENDING BALANCE	0	(4,345,284)	3,925,794	(419,490)	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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY		PROJECT TITLE										ACCOUNT	
Wastewater Reclamation Authority Improvements		WRA Corridor Preservation - last time in book										AG267 WRA990000 WRA100	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
Expenses	317,632	317,632		317,632		317,632							
Beginning Balance					79,643								
Interest Earnings													
Repair and Replacement Fund Communities	22,275	22,275		22,275		22,275							
Future Funding													
Bond Proceeds	295,357	375,000		375,000	(79,643)	295,357							
SRF Drawdowns													
Other / Small CIP													
Total Resources	317,632	397,275		397,275		317,632							
ENDING BALANCE	0	79,643	0	79,643	0	0	0	0	0	0	0	0	0

Description: Expansion project.

Funds collected for Small CIP will be temporarily used to purchase easements and/or land needed to preserve right-of-way for future sewer projects that are scheduled in the facility plan in a future bond issue with construction after F09.

Justification:

Land acquisition in advance of projects will be required to reduce future costs and provide corridor preservation.

Scheduling:

Relationship to General Plan and Other Projects:

Reimbursement from bonded project will be needed for any advance use of funds under this project number.

Operating Budget Effect:

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

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 F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
Expenses	3,251,300	36	1,756,310	1,756,346	846,654	2,603,000	648,300						
Beginning Balance					(36)		(411,000)						
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns	3,248,300		1,753,310	1,753,310	435,690	2,189,000	1,059,300						
Other	3,000	36	2,964	3,000		3,000							
Total Resources	3,251,300	36	1,756,274	1,756,310	435,654	2,192,000	648,300						
ENDING BALANCE	0	0	(36)	(36)	(411,000)	(411,000)	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.

3,270,000

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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY					PROJECT TITLE								ACCOUNT
Wastewater Reclamation Authority Improvements					WRF Biomethane Conditioning and Injection								AG267 WRA99000 WR 102
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond F2021
							F17	F18	F19	F20	F21	F22	
Expenses	12,080,000				795,600	795,600	9,523,500	1,760,900					
Beginning Balance							(25,600)	(2,239,100)					
Interest Earnings													
Repair and Replacement Fund Communities	80,000				20,000	20,000	60,000						
Future Funding	12,000,000						8,000,000	4,000,000					
Bond Proceeds													
SRF Drawdowns					750,000	750,000	(750,000)						
Other													
Total Resources	12,080,000				770,000	770,000	7,284,400	1,760,900					
ENDING BALANCE	0	0	0	0	(25,600)	(25,600)	(2,239,100)	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 could potentially have a positive revenue source.

Scheduling:

The project economics are currently being evaluated.

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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRA Equalization Basin Improvements							AG267 WRA99000 WR 104		
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	
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

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: F14

Relationship to General Plan and Other Projects:

These improvements will be funded from I-Jobs Grant \$500,000 and Core bond funds.

Operating Budget Effect:

This project will increase revenues and operations and maintenance costs.

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Flood Improvements								AG267 WRA99000 WR 105	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond F20
							F17	F18	F19	F20	F21	F22	
Expenses	8,001,000				110,000	110,000	475,000	5,066,000	2,350,000				
Beginning Balance							390,000	(585,000)	2,350,000				
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds Rev Flood	8,001,000							8,001,000					
SRF Drawdowns					500,000	500,000	(500,000)						
Other													
Total Resources	8,001,000				500,000	500,000	(110,000)	7,416,000	2,350,000				
ENDING BALANCE	0	0	0	0	390,000	390,000	(585,000)	2,350,000	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.

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 F16-17; Construction in F18-19.

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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY					PROJECT TITLE								ACCOUNT
Wastewater Reclamation Authority Improvements					WRA Southern Tier Interceptor Improvements - Phase 10 Segment 6								AG267 WRA99000 WR 110
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond F 2021
							F17	F18	F19	F20	F21	F22	
Expenses	6,938,600										2,430	453,930	6,482,240
Beginning Balance												(2,430)	
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	6,938,600												6,938,600
Bond Proceeds												330,000	(330,000)
SRF Drawdowns													
Other													
Total Resources	6,938,600											327,570	6,608,600
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	(2,430)	(126,360)	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 F16/F17; Construction F18/F19.

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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

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 F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
							F17	F18	F19	F20	F21	F22	FY2020
Expenses	17,218,730	8,333,373	8,250,479	16,583,852	104,878	16,688,730	530,000						
Beginning Balance					834,878		530,000						
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	4,065,230	9,253,500	13,318,730	(200,000)	13,118,730							
Other													
Total Resources	17,218,730	8,165,230	9,253,500	17,418,730	634,878	17,218,730	530,000						
ENDING BALANCE	0	(168,143)	1,003,021	834,878	530,000	530,000	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 Facility (SWADF).

Operating Budget Effect:

This project will increase operations and maintenance costs.

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

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 F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST	
							F17	F18	F19	F20	F21	F22	F 2025
Expenses	9,770,000		41,599	41,599	168,401	210,000	480,000		110,000	1,460,000	810,000		6,700,000
Beginning Balance					1			(20,000)	(20,000)	(130,000)	810,000		
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding	9,770,000						670,000			2,400,000			6,700,000
Bond Proceeds													
SRF Drawdowns													
Other			41,600	41,600	168,400	210,000	(210,000)						
Total Resources	9,770,000		41,600	41,600	168,401	210,000	460,000	(20,000)	(20,000)	2,270,000	810,000		6,700,000
ENDING BALANCE	0	0	1	1	0	0	(20,000)	(20,000)	(130,000)	810,000	0	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:

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.

Phase 10 Segments 1, 4, 7-8

Operating Budget Effect:

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

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Eastside Interceptor								AG267 WRA99000 WR 108	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond F20
							F17	F18	F19	F20	F21	F22	
Expenses	67,400,000		1,093,927	1,093,927	2,446,073	3,540,000	16,330,000	38,650,000	8,880,000				
Beginning Balance					(86,427)		(140,000)	15,530,000	8,880,000				
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding	67,000,000						35,000,000	32,000,000					
Bond Proceeds													
SRF Drawdowns			1,007,500	1,007,500	1,992,500	3,000,000	(3,000,000)						
Other / transfer from R&R (1A)	400,000				400,000	400,000							
Total Resources	67,400,000		1,007,500	1,007,500	2,306,073	3,400,000	31,860,000	47,530,000	8,880,000				
ENDING BALANCE	0	0	(86,427)	(86,427)	(140,000)	(140,000)	15,530,000	8,880,000	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.

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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY		PROJECT TITLE											ACCOUNT
Wastewater Reclamation Authority Improvements					WRA Sponsored / Four Mile Creek Streambank Restoration Project							AG267 WRA99000 WR 109	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F22
							F17	F18	F19	F20	F21	F22	F22
Expenses	3,000,000		73,119	73,119	68,281	141,400	2,858,600						
Beginning Balance					(73,119)		(141,400)						
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / sponsored project	3,000,000						3,000,000						
Total Resources	3,000,000				(73,119)		2,858,600						
ENDING BALANCE	0	0	(73,119)	(73,119)	(141,400)	(141,400)	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:

Design summer 2014. Easement acquisition fall 2014. Construction winter 2014-2015.

Relationship to General Plan and Other Projects:

Total debt service on SRF Loans for P10 Seg 15-17 will not change. WRA will ask the Iowa Finance Authority for an amendment to increase principal, \$1,160,000, reduce interest rate and lower Interest payments WRA has received word that an additional \$1,800,000 can be added to this project.

Operating Budget Effect:

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

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Grit Removal Improvements								AG267 WR809855 WR111	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond F20
							F17	F18	F19	F20	F21	F22	
Expenses	8,900,000		3,937	3,937	600,163	604,100	1,315,600	5,890,300	1,090,000				
Beginning Balance					(3,937)		395,900	(919,700)	1,090,000				
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding	8,900,000							8,900,000					
Bond Proceeds					1,000,000	1,000,000		(1,000,000)					
SRF Drawdowns													
Other													
Total Resources	8,900,000				996,063	1,000,000	395,900	6,980,300	1,090,000				
ENDING BALANCE	0	0	(3,937)	(3,937)	395,900	395,900	(919,700)	1,090,000	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 F16; Construction in F17/F18/F19.

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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Phosphorus Recovery Facility								AG267 WRA99000 WR 1xx	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond F2022
							F17	F18	F19	F20	F21	F22	
Expenses	19,860,000						1,525,000	7,970,000	10,365,000				
Beginning Balance								(1,525,000)	10,365,000				
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding	19,860,000							19,860,000					
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	19,860,000							18,335,000	10,365,000				
ENDING BALANCE	0	0	0	0	0	0	(1,525,000)	10,365,000	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

Scheduling:

The project economics are currently being evaluated.

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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Little Four Mile Phase 15								AG267 WRA99000 WR 1xx	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond F 2022
							F17	F18	F19	F20	F21	F22	
Expenses	7,100,000												7,100,000
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	7,100,000												7,100,000
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	7,100,000												7,100,000
ENDING BALANCE	0	0	0	0	0	0	0	0	0	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 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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY					PROJECT TITLE								ACCOUNT
Wastewater Reclamation Authority Improvements					WRA Southwest Outfall Lining								AG267 WRA99000 WR 2x1
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond F 2022
							F17	F18	F19	F20	F21	F22	
Expenses	26,225,000				75,000	75,000	500,000	1,871,000	3,420,000	4,125,000	5,484,000		10,750,000
Beginning Balance								(400,000)	4,829,000	1,509,000	6,184,000	700,000	
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding	26,150,000							7,200,000		8,900,000			10,050,000
Bond Proceeds													
SRF Drawdowns							100,000	(100,000)	100,000	(100,000)		100,000	(100,000)
Other	75,000				75,000	75,000							
Total Resources	26,225,000				75,000	75,000	100,000	6,700,000	4,929,000	10,309,000	6,184,000	800,000	9,950,000
ENDING BALANCE	0	0	0	0	0	0	(400,000)	4,829,000	1,509,000	6,184,000	700,000	800,000	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:

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: 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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Preliminary Treatment								AG267 WRA99000 WR 2x2	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond F 2022
							F17	F18	F19	F20	F21	F22	
Expenses	30,600,000						700,000	1,440,000	12,080,000	12,980,000	3,400,000		
Beginning Balance								1,100,000	(340,000)	16,380,000	3,400,000		
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)				
Other													
Total Resources	30,600,000						1,800,000	1,100,000	28,460,000	16,380,000	3,400,000		
ENDING BALANCE	0	0	0	0	0	0	0	1,100,000	(340,000)	16,380,000	3,400,000	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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Chlorination & Effluent Pumping								AG267 WRA99000 WR 2x3	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST Beyond F 2022	
							F17	F18	F19	F20	F21		F22
Expenses	25,500,000								450,000	1,450,000	7,870,000	11,800,000	3,930,000
Beginning Balance										650,000	(800,000)	30,000	
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding	25,500,000										9,800,000	15,700,000	
Bond Proceeds													
SRF Drawdowns / P&D									1,100,000		(1,100,000)		
Other													
Total Resources	25,500,000								1,100,000	650,000	7,900,000	15,730,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	650,000	(800,000)	30,000	3,930,000	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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY					PROJECT TITLE							ACCOUNT	
Wastewater Reclamation Authority Improvements					WRF Final Clarifiers							AG267 WRA99000 WR 2x4	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond F2022
							F17	F18	F19	F20	F21	F22	
Expenses	41,900,000										650,000	1,930,000	39,320,000
Beginning Balance												1,850,000	
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	39,400,000
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	1,850,000	(80,000)	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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Aeration Basins								AG267 WRA99000 WR 2x5	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
							F17	F18	F19	F20	F21	F22	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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Clarifier Improvements								AG267 WRA99000 WR 2x6	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond F2022
							F17	F18	F19	F20	F21	F22	
Expenses	19,930,000						10,000	705,000	6,045,000	2,870,000	800,000	5,940,000	3,560,000
Beginning Balance								(10,000)	(105,000)	2,660,000	(210,000)	9,500,000	
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	19,930,000								9,420,000		10,510,000		
Bond Proceeds													
SRF Drawdowns								610,000	(610,000)				
Other													
Total Resources	19,930,000							600,000	8,705,000	2,660,000	10,300,000	9,500,000	
ENDING BALANCE	0	0	0	0	0	0	(10,000)	(105,000)	2,660,000	(210,000)	9,500,000	3,560,000	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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Westside Interceptor								AG267 WRA99000 WR 2x7	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
							F17	F18	F19	F20	F21	F22	F2030
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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Nutrient Removal P 1								AG267 WRA99000 WR 1x1	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST Beyond FY2022
							F17	F18	F19	F20	F21	F22	
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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE						ACCOUNT			
Wastewater Reclamation Authority Improvements				WRA Common Trunk						AG267 WRA99000 WR 1x2			
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST FY2026	
							F17	F18	F19	F20	F21		F22
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 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRA Joint Trunk East & West							AG267 WRA99000 WR 1x3		
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST 2027 2030
							F17	F18	F19	F20	F21	F22	
Expenses	20,800,000												20,800,000
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund Communities	20,800,000												20,800,000
Future Funding													
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.

Fiscal 2016/Fiscal 2022 WRA Capital Improvements Program - January & February Review 2016

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Birdland Pump Station								AG267 WRA99000 WR 1x4	
	TOTAL ESTIMATED COST	COST THROUGH F14	ACTUAL COST IN F15	COST THROUGH F15	Revised BUDGET F16	ESTIMATED COST THROUGH F16	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
							F17	F18	F19	F20	F21	F22	FY2022-24
Expenses	13,500,000										350,000	400,000	12,750,000
Beginning Balance												(350,000)	
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	13,500,000											13,500,000	
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	13,500,000											13,150,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	(350,000)	12,750,000	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.