

Summary

Wastewater Reclamation Authority Improvements FY2020-F2021+

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	TOTAL ESTIMATED COST	COST THROUGH F19	COST ESTIMATE F20	TOTAL ESTIMATED COST THROUGH	COST FOR SIX-YEAR PERIOD	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
						F21	F22	F23	F24	F25	F26	
Expenses, detail on following page	617,959,518	103,914,653	59,350,457	163,265,110	415,094,408	40,122,188	65,205,450	79,879,750	73,703,210	44,204,360	111,979,450	39,600,000
Resources:												
Beginning Balance	0	0	58,560,741	0		45,443,981	49,252,633	29,590,036	72,352,943	34,548,793	1,983,250	0
Interest Earnings	670,000	126,430	178,570	305,000	365,000	100,000	15,000	115,000	110,000	10,000	15,000	0
Renewal & Replacement Fund	0	0	0	0	0	0	0	0	0	0	0	0
Communities	57,251,779	26,584,029	4,567,750	31,151,779	26,100,000	4,200,000	4,500,000	4,400,000	4,400,000	4,300,000	4,300,000	0
Future Funding	350,838,673	0	0	0	328,275,285	24,936,250	36,317,500	119,164,550	30,254,185	5,221,600	112,381,200	22,563,388
Bond Proceeds	670,800	670,800	0	670,800	0	0	0	0	0	0	0	0
SRF Drawdowns	158,867,000	118,702,500	33,240,000	151,942,500	6,924,500	11,044,500	(380,000)	(3,000,000)	(740,000)	300,000	(300,000)	0
Other (Flood Mit Rev & Oper)	49,661,266	16,391,635	8,247,377	24,639,012	14,485,642	3,650,090	5,090,353	1,963,107	1,874,875	1,807,217	100,000	10,536,612
Total Resources	617,959,518	162,475,394	104,794,438	208,709,091	376,150,427	89,374,821	94,795,486	152,232,693	108,252,003	46,187,610	118,479,450	33,100,000
Flood/Sales tax revenue \$36.6M		13,300,635	1,823,397			2,050,090	1,942,353	1,863,107	1,774,875	1,707,217	-	10,536,612

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE									ACCOUNT
Wastewater Reclamation Authority Improvements				WRA Facility Plan Update & Consulting									WR809855 WR 069
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	2,021,467	991,467	156,993	1,148,460	123,007	1,271,467	125,000	125,000	125,000	125,000	125,000	125,000	
Beginning Balance					(4)								
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / Commty funds SmCIP	2,021,467	991,463	156,993	1,148,456	123,011	1,271,467	125,000	125,000	125,000	125,000	125,000	125,000	
Total Resources	2,021,467	991,463	156,993	1,148,456	123,007	1,271,467	125,000	125,000	125,000	125,000	125,000	125,000	
ENDING BALANCE	0	(4)	0	(4)	0	0	0	0	0	0	0	0	0

Description:

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

Justification:

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

Scheduling:

Ongoing.

Relationship to General Plan and Other Projects:

Small CIP funds

Operating Budget Effect:

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE						ACCOUNT			
Wastewater Reclamation Authority Improvements				WRF Facilities Rehabilitation [Sm CIP, 2002-2018]						AG267 WRA809 WR078			
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	1,531,400	1,373,894	97,194	1,471,088	60,312	1,531,400							last time in CIP
Beginning Balance					6								
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / Commy funds SmCIP	1,531,400	1,373,900	97,194	1,471,094	60,306	1,531,400							
Total Resources	1,531,400	1,373,900	97,194	1,471,094	60,312	1,531,400							
ENDING BALANCE	0	6	0	6	0	0	0	0	0	0	0	0	

Description:

These projects are for non-process repair and replacement projects at the WRF and off-site WRA facilities.

All HVAC Improvements and Roof replacements are budgeted in the project number.

Justification:

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

Scheduling:

F17: HVAC Replacements; Building 12 HVAC Replacement.

F18: HVAC Replacements; Building 35 Roof replacement, Building 5 Boiler replacement, Building 93 Boiler replacement.

Relationship to General Plan and Other Projects:

small cip funding

Operating Budget Effect:

These projects will reduce operations and maintenance costs in future years.

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Facilities Rehabilitation [Sm CIP]								AG267 WRA809 WR118	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	3,125,000		6,819	6,819	558,181	565,000	630,000	630,000	400,000	300,000	300,000	300,000	
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / Commty funds SmCIP	3,125,000		6,819	6,819	558,181	565,000	630,000	630,000	400,000	300,000	300,000	300,000	
Total Resources	3,125,000		6,819	6,819	558,181	565,000	630,000	630,000	400,000	300,000	300,000	300,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description:

These projects are for non-process repair and replacement projects at the WRF and off-site WRA facilities.

All HVAC Improvements and Roof replacements are budgeted in the project number.

Justification:

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

Scheduling:

F19: HVAC Replacements; Building 05 heat recovery ventilator replacement, Building 05 MAU replacement

F20: HVAC Replacements; Building 75 boiler replacements

F21 and Beyond: HVAC Replacements and Continued Roof Replacements as needed.

Relationship to General Plan and Other Projects:

small cip funding

Operating Budget Effect:

These projects will reduce operations and maintenance costs in future years.

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRA Sewer Maintenance (Repair of Levee Gates and Stream banks)							AG267 WRA809 WR083		
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	2,106,000	1,786,524	269,617	2,056,141	49,859	2,106,000							
Beginning Balance					(141)								
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Funding O&M budget (803 9)	2,106,000	1,849,000	207,000	2,056,000	50,000	2,106,000							
Total Resources	2,106,000	1,849,000	207,000	2,056,000	49,859	2,106,000							
ENDING BALANCE	0	62,476	(62,617)	(141)	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 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Sewer Maintenance (Inspections & Repairs)								AG267 WRA809 WR120	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	1,275,000		280,111	280,111	394,889	675,000	100,000	100,000	100,000	100,000	100,000	100,000	
Beginning Balance					(255,111)		0	0	0	0	0	0	
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Funding O&M budget (803 19)	1,275,000		25,000	25,000	650,000	675,000	100,000	100,000	100,000	100,000	100,000	100,000	
Total Resources	1,275,000		25,000	25,000	394,889	675,000	100,000	100,000	100,000	100,000	100,000	100,000	
ENDING BALANCE	0	0	(255,111)	(255,111)	0	0	0	0	0	0	0	0	0

Description:

This project provides funding for annual engineering investigation for portions of the WRA interceptor sewer system and for specific maintenance/repairs of those sewers.

Maintenance and repairs will include: Sewer televising, sewer cleaning, sewer lining, manhole rehabilitation and rebuilding, sewer spot repairs, sinkhole repairs, replacement of manhole lids, castings, gates, etc.

Justification:

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

Scheduling:

Relationship to General Plan and Other Projects:

This project is funded with Operating Money.

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY		PROJECT TITLE										ACCOUNT	
Wastewater Reclamation Authority Improvements					WRA Studies [Sm CIP consulting]							AG267 WRA809 WR091	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	637,600	359,090	21,817	380,907	46,705	427,612	34,988	35,000	35,000	35,000	35,000	35,000	
Beginning Balance							(12)						
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other /Commty funds SmCIP	637,600	367,127	13,780	380,907	46,693	427,600	35,000	35,000	35,000	35,000	35,000	35,000	
Total Resources	637,600	367,127	13,780	380,907	46,693	427,600	34,988	35,000	35,000	35,000	35,000	35,000	
ENDING BALANCE	0	8,037	(8,037)	0	(12)	(12)	0	0	0	0	0	0	0

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

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

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

Relationship to General Plan and Other Projects:
small cip funding

Operating Budget Effect:

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRA Flow Monitoring System Improvements and Meter Replacements							AG267 WRA809 WR093		
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	1,546,910	251,070	400,723	651,793	409,997	1,061,790	485,120						
Beginning Balance					117		120						
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds (reallocated)													
SRF Drawdowns													
Other (R&R commty)	1,546,910	251,070	400,840	651,910	410,000	1,061,910	485,000						
Total Resources	1,546,910	251,070	400,840	651,910	410,117	1,061,910	485,120						
ENDING BALANCE	0	0	117	117	120	120	0	0	0	0	0	0	0

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

Justification:

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

Scheduling:

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

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

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE						ACCOUNT			
Wastewater Reclamation Authority Improvements				WRF Small Projects, & Process Equipment Repl for 2013, 2014, 2015, 2016						AG267 WRA809 WR106			
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	8,174,927	7,174,597	131,905	7,306,502	868,425	8,174,927							
Beginning Balance					5,413,425		3,800,000	2,400,000					
Interest Earnings	40,000	40,000		40,000		40,000							
Repair and Replacement Fund Communities	14,200,000	14,200,000		14,200,000		14,200,000							
Future Funding Bond Proceeds													
SRF Drawdowns													
Other (tsfr out)	(6,065,073)	(1,520,073)		(1,520,073)	(745,000)	(2,265,073)	(1,400,000)	(2,400,000)					
Total Resources	8,174,927	12,719,927		12,719,927	4,668,425	11,974,927	2,400,000						
ENDING BALANCE	0	5,545,330	(131,905)	5,413,425	3,800,000	3,800,000	2,400,000	0	0	0	0	0	0

Description:

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

Justification:

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

Scheduling:

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

WRA Ankeny Pump Station Improvements, WRA Equalization Basin Electrical Improvements

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRF Small Projects, & Process Equipment Repl for 2017, 2018, 2019, 2020							AG267 WRA809 WR110		
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	9,761,951	1,405,696	1,117,583	2,523,279	7,238,672	9,761,951							
Beginning Balance					5,309,681								
Interest Earnings	25,000	15,000		15,000	10,000	25,000							
Repair and Replacement Fund Communities	14,727,812	7,290,130	3,736,887	11,027,017	3,700,795	14,727,812							
Future Funding Bond Proceeds SRF Drawdowns Other (tsfr out)	(4,990,861)	(1,528,166)	(1,680,891)	(3,209,057)	(1,781,804)	(4,990,861)							
Total Resources	9,761,951	5,776,964	2,055,996	7,832,960	7,238,672	9,761,951							
ENDING BALANCE	0	4,371,268	938,413	5,309,681	0	0	0	0	0	0	0	0	0

Description:

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

Justification:

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

Scheduling:

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

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

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 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Equalization Basin Improvements								AG267 WRA809 WR104	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	300,000		4,980	4,980	295,020	300,000							
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other, (tsfr from Small CIP)	300,000		4,980	4,980	295,020	300,000							
Total Resources	300,000		4,980	4,980	295,020	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: F20

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

This project will increase revenues and operations and maintenance costs.

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE						ACCOUNT			
Wastewater Reclamation Authority Improvements				WRA Beaver Creek Sewer Stabilization						AG267 WRA809 WR114			
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	1,243,437	64,679	367,188	431,867	811,570	1,243,437							
Beginning Balance					632,812								
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other (small CIP)	1,243,437	64,679	1,000,000	1,064,679	178,758	1,243,437							
Total Resources	1,243,437	64,679	1,000,000	1,064,679	811,570	1,243,437							
ENDING BALANCE	0	0	632,812	632,812	0	0	0	0	0	0	0	0	0

Description: Core Project.

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

Justification:

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

Scheduling:

Construction of stabilization improvements in FY19

Relationship to General Plan and Other Projects:

New project in FY18.

Operating Budget Effect:

This project will have no effect on the operating budget.

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Plant & Basin Equipment Replacement & WRA/WRF Small CIP projects								AG267 WRA809 WR116	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	19,843,000				100,000	100,000	2,108,000	3,284,000	3,321,000	3,570,000	3,650,000	3,810,000	
Beginning Balance													
Interest Earnings	65,000							15,000	15,000	10,000	10,000	15,000	
Repair and Replacement Fund Communities	23,683,000						3,383,000	4,059,000	3,866,000	4,020,000	4,100,000	4,255,000	
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other (tsfr out)	(3,905,000)				100,000	100,000	(1,275,000)	(790,000)	(560,000)	(460,000)	(460,000)	(460,000)	
Total Resources	19,843,000				100,000	100,000	2,108,000	3,284,000	3,321,000	3,570,000	3,650,000	3,810,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

Description:

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

Justification:

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

Scheduling:

F20-23: Renewals & replacements, as needed

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT
Wastewater Reclamation Authority Improvements				WRF Building 05 Rehabilitation								AG267 WRA 809 WR xx
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST BEYOND F26
							F21	F22	F23	F24	F25	
Expenses	12,278,100						244,500	301,100	7,711,500	4,021,000		
Beginning Balance								180,500	(70,600)	4,086,400		
Interest Earnings												
Repair and Replacement Fund Communities	140,000						5,000	50,000	50,000	35,000		
Future Funding (12.3M)	12,138,100								12,238,500	(100,400)		
Bond Proceeds												
SRF Drawdowns							420,000		(420,000)			
Other												
Total Resources	12,278,100						425,000	230,500	11,797,900	4,021,000		
ENDING BALANCE	0	0	0	0	0	0	0	180,500	(70,600)	4,086,400	0	0

Description: Core Project.

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

Justification:

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

Scheduling:

Design F22-23; Construction in F24-25.

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				Ingersoll Run [Combined Sewer Overflow, Outlet] Phase 25								AG267 WRA809 WR088	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	23,786,730	133,141	83,853	216,994	603,586	820,580	3,042,400	11,442,150	8,481,600				
Beginning Balance							(305,000)	8,143,100	8,343,450				
Interest Earnings	100,000	71,430		71,430	28,570	100,000							
Repair and Replacement Fund Communities	404,656	1,710		1,710	4,946	6,656	48,000	200,000	150,000				
Future Funding (11.5M)	11,430,650							11,442,500	(11,850)				
Bond Proceeds													
SRF Drawdowns (11.5M)	11,442,500						11,442,500						
Other (revenues Flood Mit)	408,924	60,001	83,853	143,854	265,070	408,924							
Total Resources	23,786,730	133,141	83,853	216,994	298,586	515,580	11,185,500	19,785,600	8,481,600				
ENDING BALANCE	0	0	0	0	(305,000)	(305,000)	8,143,100	8,343,450	0	0	0	0	0

Description: Core Project.

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

Justification:

Needed to conform to NPDES requirements.

Scheduling:

Project is scheduled to be constructed in FY21-FY23

Relationship to General Plan and Other Projects:

This project is included in the WRA Facility Plan Update. Funding will include some flood mitigation funds and SRF loans.

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY							PROJECT TITLE						ACCOUNT
Wastewater Reclamation Authority Improvements							WRF Flood Improvements						AG267 WRA809 WR105
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	19,182,250	997,861	84,207	1,082,068	2,310,182	3,392,250	9,150,000	5,920,000	720,000				
Beginning Balance					12,087,656		11,372,858	4,402,948	445,301				
Interest Earnings	100,000						100,000						
Repair and Replacement Fund Communities	100,000	3,862	9,081	12,943	37,057	50,000	30,000	20,000					
Future Funding Bond Proceeds													
SRF Drawdowns Other (Revenue Flood Mit)	18,982,250	11,854,738	1,302,043	13,156,781	1,558,327	14,715,108	2,050,090	1,942,353	274,699				
Total Resources	19,182,250	11,858,600	1,311,124	13,169,724	13,683,040	14,765,108	13,552,948	6,365,301	720,000				
ENDING BALANCE	0	10,860,739	1,226,917	12,087,656	11,372,858	11,372,858	4,402,948	445,301	0	0	0	0	0

Description: Core Project.

The project will construct multiple improvements to the WRF to reduce flood vulnerability and to provide improved protection against elevated river levels. The improvements include floodwall protection to Building 05, raising electrical transformers that serve Building 05, raising and relocating the incoming power to the WRF, and installing standby power generators to power the WRF in the event of a flood.

Justification:

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

Scheduling:

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

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

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE									ACCOUNT
Wastewater Reclamation Authority Improvements				WRA Southern Tier Improvements - Western (Expansion Debt)									AG267 WRA809 WR107
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	10,704,050	666,655	0	666,655	42,045	708,700	750,000	1,817,580	116,950	469,820	4,655,950	2,185,050	
Beginning Balance					41,145		614,100	2,080,350	292,770	180,820	(164,000)	2,170,050	
Interest Earnings													
Repair and Replacement Fund Communities	332,000	36,051	949	37,000	15,000	52,000	80,000	30,000	5,000	125,000	25,000	15,000	
Future Funding	9,701,250						2,736,250				6,965,000		
Bond Proceeds	670,800	656,700	14,100	670,800		670,800							
SRF Drawdowns					600,000	600,000	(600,000)						
Other													
Total Resources	10,704,050	692,751	15,049	707,800	656,145	1,322,800	2,830,350	2,110,350	297,770	305,820	6,826,000	2,185,050	
ENDING BALANCE	(0)	26,096	15,049	41,145	614,100	614,100	2,080,350	292,770	180,820	(164,000)	2,170,050	(0)	0

Description: Expansion Project.

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

Justification:

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

Scheduling:

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

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY		PROJECT TITLE										ACCOUNT	
Wastewater Reclamation Authority Improvements					WRA Sponsored [Four Mile Creek] Streambank Restoration Projects							AG267 WRA809 WR109	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	4,310,000	1,094,229	834,456	1,928,685	741,315	2,670,000	1,058,600	581,400					
Beginning Balance					(918,685)		140,000	581,400					
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / sponsored project	4,310,000	1,010,000		1,010,000	1,800,000	2,810,000	1,500,000						
Total Resources	4,310,000	1,010,000		1,010,000	881,315	2,810,000	1,640,000	581,400					
ENDING BALANCE	0	(84,229)	(834,456)	(918,685)	140,000	140,000	581,400	0	0	0	0	0	0

Description:

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

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

Justification:

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

Scheduling:

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

Phase 2 & 3 Construction F18-20.

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY		PROJECT TITLE										ACCOUNT	
Wastewater Reclamation Authority Improvements					WRA Sponsored [Sugar Creek] Streambank Restoration Projects							AG267 WRA809 WR117	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	5,955,400	167,850	30,464	198,314	1,909,086	2,107,400	800,000	3,048,000					
Beginning Balance					(198,314)		800,000						
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / sponsored project	5,955,400				2,907,400	2,907,400		3,048,000					
Total Resources	5,955,400				2,709,086	2,907,400	800,000	3,048,000					
ENDING BALANCE	0	(167,850)	(30,464)	(198,314)	800,000	800,000	0	0	0	0	0	0	0

Description:

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

Justification:

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

Scheduling:

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

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]													
PROJECT CATEGORY					PROJECT TITLE							ACCOUNT	
Wastewater Reclamation Authority Improvements					WRF Biomethane Gas Conditioning and Injection							AG267 WRA809 WR102	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	18,943,900	2,436,267	12,607,497	15,043,764	3,725,136	18,768,900	175,000						
Beginning Balance					3,060,521		(300,000)						
Interest Earnings	140,000				140,000	140,000							
Repair and Replacement Fund Communities	893,900	146,410	47,875	194,285	224,615	418,900	475,000						
Future Funding Bond Proceeds													
SRF Drawdowns (2018D)	17,910,000		17,910,000	17,910,000		17,910,000							
Other													
Total Resources	18,943,900	146,410	17,957,875	18,104,285	3,425,136	18,468,900	175,000						
ENDING BALANCE	0	(2,289,857)	5,350,378	3,060,521	(300,000)	(300,000)	0	0	0	0	0	0	0

Description: Core Project.

The WRA evaluated the business case for constructing a biogas conditioning facility and selling renewable natural gas to third parties. The results were favorable and the WRA elected to construct the facilities necessary for conditioning the biogas the WRF produces.

Justification:

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

Scheduling:

The project is under construction for FY19 and FY20

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 D M Metropolitan Reclamation Authority in 2014. The WRA elected to add this project in FY2016.

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE				ACCOUNT						
Wastewater Reclamation Authority Improvements				WRF Grit Removal Improvements				AG267 WRA809 WR111						
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26	
							F21	F22	F23	F24	F25	F26		
Expenses	15,696,491	1,590,879	7,055,110	8,645,989	4,170,042	12,816,031	2,880,460							
Beginning Balance					6,952,862		2,838,460							
Interest Earnings														
Repair and Replacement Fund Communities	273,991	70,880	105,471	176,351	55,640	231,991	42,000							
Future Funding														
Bond Proceeds														
SRF Drawdowns (2018A 18E)	15,422,500	4,179,000	11,243,500	15,422,500		15,422,500								
Other														
Total Resources	15,696,491	4,249,880	11,348,971	15,598,851	7,008,502	15,654,491	2,880,460							
ENDING BALANCE	0	2,659,001	4,293,861	6,952,862	2,838,460	2,838,460	0	0	0	0	0	0	0	0

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

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

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

Relationship to General Plan and Other Projects:
 These improvements are included in the approved WRA Facility Plan Update-2012 and Second Amended and Restated Agreement for the DM Metropolitan Wastewater Reclamation Authority (2014 28e)

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Phosphorus Recovery Facility								AG267 WRA809 WR112	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	22,276,400	367,410	67,818	435,228	586,572	1,021,800	3,090,600	13,494,000	4,670,000				
Beginning Balance					1,205,808		623,200	18,137,600	4,668,600				
Interest Earnings													
Repair and Replacement Fund Communities	90,000	31,410	9,626	41,036	3,964	45,000	5,000	25,000	15,000				
Future Funding (22.3)	22,186,400						22,200,000		(13,600)				
Bond Proceeds		1,600,000		1,600,000		1,600,000	(1,600,000)						
SRF Drawdowns													
Other													
Total Resources	22,276,400	1,631,410	9,626	1,641,036	1,209,772	1,645,000	21,228,200	18,162,600	4,670,000				
ENDING BALANCE	0	1,264,000	(58,192)	1,205,808	623,200	623,200	18,137,600	4,668,600	0	0	0	0	0

Description: Core Project.

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

Justification:

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

Scheduling:

The project design will take place in FY19-FY21

Relationship to General Plan and Other Projects:

The installation of a phosphorus recovery facility would be considered a portion of the WRF Nutrient Removal project which is an improvement included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the D M Metropolitan Reclamation Authority (2014 28e)

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Eastside Wet Weather Treatment								AG267 WRA809 WR123	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	65,630,000				130,000	130,000	1,670,700	700,000	15,644,000	31,210,300	16,275,000		
Beginning Balance							(125,000)	24,300	(655,700)	47,375,300	16,200,000		
Interest Earnings													
Repair and Replacement Fund Communities	270,000				5,000	5,000	20,000	20,000	75,000	75,000	75,000		
Future Funding (65.5M)	65,360,000								65,400,000	(40,000)			
Bond Proceeds													
SRF Drawdowns							1,800,000		(1,800,000)				
Other													
Total Resources	65,630,000				5,000	5,000	1,695,000	44,300	63,019,300	47,410,300	16,275,000		
ENDING BALANCE	0	0	0	0	(125,000)	(125,000)	24,300	(655,700)	47,375,300	16,200,000	0	0	0

Description: Core Project.

The project will construct a new wet weather treatment facility to handle flows conveyed through the WRA Eastside Interceptor and a connection to the WRA Four Mile Interceptor.

Justification:

The WRA Facility Plan Update – 2012 identified the need for additional treatment at the WRF and a project titled WRF Preliminary Treatment was included in the CIP. The facility was anticipated to handle flow the WRA Eastside Interceptor and the WRA Four Mile Interceptor and send the flow to another portion of the WRF. The WRA subsequently identified an alternative option through the WRF Secondary Treatment Alternatives Evaluation study

Scheduling:

Project Design FY21-22; Construction in FY23-25.

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY		PROJECT TITLE										ACCOUNT	
Wastewater Reclamation Authority Improvements		WRA Eastside Interceptor, Gravity Sewer & Force Main										AG267 WRA809 WR108	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	80,085,000	27,143,253	28,451,704	55,594,957	24,490,043	80,085,000							
Beginning Balance					23,027,293								
Interest Earnings													
Repair and Replacement Fund Communities	1,268,420	608,250	214,000	822,250	446,170	1,268,420							
Future Funding													
Bond Proceeds													
SRF Drawdowns (2016E 2017A)	77,800,000	77,800,000		77,800,000		77,800,000							
Other / CDM & DMWW	1,016,580				1,016,580	1,016,580							
Total Resources	80,085,000	78,408,250	214,000	78,622,250	24,490,043	80,085,000							
ENDING BALANCE	0	51,264,997	(28,237,704)	23,027,293	0	0	0	0	0	0	0	0	0

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

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

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

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

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Sewer Lining								AG267 WRA809 WR113	
	TOTAL	COST	ACTUAL	COST	Revised	ESTIMATED	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
	ESTIMATED	THROUGH	COST IN	THROUGH	BUDGET	COST THROUGH	F21	F22	F23	F24	F25	F26	BEYOND
	COST	F18	F19	F19	F20	F20							F26
Expenses	47,900,000	2,224,520	144,007	2,368,527	6,718,673	9,087,200	3,412,800	5,300,000	5,600,000	5,800,000	6,000,000	6,200,000	6,500,000
Beginning Balance					(2,338,521)		2,907,800	(475,000)	5,200,000	(375,000)	5,765,000	(235,000)	
Interest Earnings													
Repair and Replacement Fund													
Communities	140,000	22,888	7,118	30,006	24,994	55,000	30,000	30,000	25,000				
Future Funding	35,820,000							10,945,000		11,940,000		12,935,000	
Bond Proceeds													
SRF Drawdowns (12M)	11,940,000	2,420,000	(2,420,000)		11,940,000	11,940,000							
Other													
Total Resources	47,900,000	2,442,888	(2,412,882)	30,006	9,626,473	11,995,000	2,937,800	10,500,000	5,225,000	11,565,000	5,765,000	12,700,000	
ENDING BALANCE	0	218,368	(2,556,889)	(2,338,521)	2,907,800	2,907,800	(475,000)	5,200,000	(375,000)	5,765,000	(235,000)	6,500,000	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 1-2: Design F18-19; Construction in F20-21.
- Phase 3-4: Design F20-21; Construction in F22-23.
- Phase 5-6: Design F22-23; Construction in F24-25.
- Phase 7-8: Design F24-25; Construction in F26-27.

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Clarifier Improvements								AG267 WRA809 WR115	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	31,883,745	173,462	463,782	637,244	948,601	1,585,845	4,565,850	11,533,850	12,126,200	2,072,000			
Beginning Balance					(620,657)		18,349,155	13,808,305	2,319,455	2,178,255			
Interest Earnings													
Repair and Replacement Fund Communities	160,000	2,940	13,647	16,587	18,413	35,000	25,000	45,000	45,000	10,000			
Future Funding (12M)	11,823,745								11,940,000	(116,255)			
Bond Proceeds													
SRF Drawdowns (20M)	19,900,000	585,000	(585,000)		19,900,000	19,900,000							
Other													
Total Resources	31,883,745	587,940	(571,353)	16,587	19,297,756	19,935,000	18,374,155	13,853,305	14,304,455	2,072,000			
ENDING BALANCE	0	414,478	(1,035,135)	(620,657)	18,349,155	18,349,155	13,808,305	2,319,455	2,178,255	0	0	0	0

Description: Core Project.

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

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

Justification:

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

Scheduling:

Design FY19; Construction in FY20-24 in two Phases.

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Eastside Wet Weather Treatment								AG267 WRA809 WR123	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	65,630,000				130,000	130,000	1,670,700	700,000	15,644,000	31,210,300	16,275,000		
Beginning Balance							(125,000)	24,300	(655,700)	47,375,300	16,200,000		
Interest Earnings													
Repair and Replacement Fund Communities	270,000				5,000	5,000	20,000	20,000	75,000	75,000	75,000		
Future Funding (65.5M)	65,360,000								65,400,000	(40,000)			
Bond Proceeds													
SRF Drawdowns							1,800,000		(1,800,000)				
Other													
Total Resources	65,630,000				5,000	5,000	1,695,000	44,300	63,019,300	47,410,300	16,275,000		
ENDING BALANCE	0	0	0	0	(125,000)	(125,000)	24,300	(655,700)	47,375,300	16,200,000	0	0	

Description: Core Project.

The project will construct a new wet weather treatment facility to handle flows conveyed through the WRA Eastside Interceptor and a connection to the WRA Four Mile Interceptor.

Justification:

The WRA Facility Plan Update – 2012 identified the need for additional treatment at the WRF and a project titled WRF Preliminary Treatment was included in the CIP. The facility was anticipated to handle flow the WRA Eastside Interceptor and the WRA Four Mile Interceptor and send the flow to another portion of the WRF. The WRA subsequently identified an alternative option through the WRF Secondary Treatment Alternatives Evaluation study

Scheduling:

Project Design FY21-22; Construction in FY23-25.

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT			
Wastewater Reclamation Authority Improvements				WRF Trickling Filter Removal							AG267 WRA809 WR119			
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26	
							F21	F22	F23	F24	F25	F26		
Expenses	4,530,000	11,722	822,274	833,996	1,366,004	2,200,000	2,330,000							
Beginning Balance					5,160,848		3,818,000							
Interest Earnings														
Repair and Replacement Fund Communities	78,000	498	24,346	24,844	23,156	48,000	30,000							
Future Funding														
Bond Proceeds														
SRF Drawdowns (6M)	4,452,000		5,970,000	5,970,000		5,970,000	(1,518,000)							
Other / from Small CIP														
Total Resources	4,530,000	498	5,994,346	5,994,844	5,184,004	6,018,000	2,330,000							
ENDING BALANCE	0	(11,224)	5,172,072	5,160,848	3,818,000	3,818,000	0	0	0	0	0	0	0	0

Description:

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

Justification:

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

Scheduling:

Design and Demolition in FY19-21

Relationship to General Plan and Other Projects:

Project to be funded with SRF funding.

Operating Budget Effect:

This project will have no effect on the operating budget.

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Site Security and Access Improvements								AG267 WRA809 WR121	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	4,555,120		285	285	362,435	362,720	1,787,400	2,405,000					
Beginning Balance							392,400	5,000					
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding													
Bond Proceeds													
SRF Drawdowns													
Other / from Small CIP	4,555,120		285	285	754,835	755,120	1,400,000	2,400,000					
Total Resources	4,555,120		285	285	754,835	755,120	1,792,400	2,405,000					
ENDING BALANCE	0	0	0	0	392,400	392,400	5,000	0	0	0	0	0	0

Description:

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

Justification:

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

Scheduling:

Design in FY20-21, Construction in FY21-22

Relationship to General Plan and Other Projects:

Small CIP funding.

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRF Disinfection & Effluent Pumping							AG267 WRA809 WR124		
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	35,732,500						1,252,670	667,420	14,910,400	12,436,860	6,465,150		
Beginning Balance								(47,670)	(681,090)	16,830,918	6,310,933	(30,000)	
Interest Earnings	200,000								100,000	100,000			
Repair and Replacement Fund Communities	205,000						5,000	34,000	34,000	42,000	60,000	30,000	
Future Funding (32M)	19,720,388								31,900,000		(1,643,000)		(10,536,612)
Bond Proceeds													
SRF Drawdowns / P&D							1,200,000		(1,200,000)				
Other (Flood money)	15,607,112								1,588,408	1,774,875	1,707,217		10,536,612
Total Resources	35,732,500						1,205,000	(13,670)	31,741,318	18,747,793	6,435,150		
ENDING BALANCE	0	0	0	0	0	0	(47,670)	(681,090)	16,830,918	6,310,933	(30,000)	0	0

Description: Core Project.

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

Justification:

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

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

Scheduling:

Effluent Pumping and Disinfection Design FY21-22; Construction in FY23-25.

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Birdland Pump Station								AG267 WRA809 WR122	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	13,561,500				290,100	290,100	512,600	3,625,300	6,463,500	2,670,000			
Beginning Balance							517,900	12,300	9,527,000	3,088,500			
Interest Earnings													
Repair and Replacement Fund Communities	85,000				8,000	8,000	7,000	10,000	25,000	35,000			
Future Funding (14M)	13,476,500							13,930,000		(453,500)			
Bond Proceeds													
SRF Drawdowns					800,000	800,000		(800,000)					
Other													
Total Resources	13,561,500				808,000	808,000	524,900	13,152,300	9,552,000	2,670,000			
ENDING BALANCE	0	0	0	0	517,900	517,900	12,300	9,527,000	3,088,500	0	0	0	0

Description: Core Project.

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

Justification:

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

Scheduling:

Design FY20-22; Construction FY22-24.

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRF Aeration Improvements							AG267 WRA809 WR125		
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F25
							F21	F22	F23	F24	F25	F26	
Expenses	10,090,000						160,000	250,000	6,445,000	3,235,000			
Beginning Balance								180,000	(50,000)	3,205,000			
Interest Earnings													
Repair and Replacement Fund Communities	140,000						20,000	20,000	70,000	30,000			
Future Funding (10M)	9,950,000								9,950,000				
Bond Proceeds													
SRF Drawdowns							320,000		(320,000)				
Other													
Total Resources	10,090,000						340,000	200,000	9,650,000	3,235,000			
ENDING BALANCE	0	0	0	0	0	0	180,000	(50,000)	3,205,000	0	0	0	0

Description: Core Project.

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

Justification:

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

Scheduling:

WRF Aeration Improvements: Design FY21-22; Construction in FY22-23.

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRA Southern Tier Interceptor Improvements - Phase 10 Segment 6							AG267 WRA809 WR 12x		
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26
							F21	F22	F23	F24	F25	F26	
Expenses	6,745,440						2,250	420,000	3,967,730	2,355,460			
Beginning Balance								(250)	(60,250)	2,350,460			
Interest Earnings													
Repair and Replacement Fund Communities	60,000						2,000	40,000	13,000	5,000			
Future Funding	6,685,440								6,685,440				
Bond Proceeds													
SRF Drawdowns								320,000	(320,000)				
Other													
Total Resources	6,745,440						2,000	359,750	6,318,190	2,355,460			
ENDING BALANCE	0	0	0	0	0	0	0	(250)	(60,250)	2,350,460	0	0	

Description: Expansion Project.

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

Justification:

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

Scheduling:

Design F22; Construction F23/24

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT		
Wastewater Reclamation Authority Improvements				WRA Little Four Mile Phase 15								AG267 WRA99000 WR 2 x 1		
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST BEYOND F26	
							F21	F22	F23	F24	F25	F26		
Expenses	7,190,000											90,000	7,100,000	
Beginning Balance													210,000	
Interest Earnings														
Repair and Replacement Fund Communities														
Future Funding	7,190,000												7,190,000	
Bond Proceeds														
SRF Drawdowns												300,000	(300,000)	
Other														
Total Resources	7,190,000											300,000	7,100,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	210,000	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:
 Funding for improvements was included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the D M Metropolitan Reclamation Authority (2014 28e)

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRF Parallel Pipe and Mixing Structure							AG267 WRA809 WR xx		
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
							F21	F22	F23	F24	F25	F26	F 2026
Expenses	5,156,200										131,800	5,024,400	
Beginning Balance												(131,800)	
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	5,156,200											5,156,200	
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	5,156,200											5,024,400	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	(131,800)	0	0

Description: Core Project.

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

Justification:

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

Scheduling:

Design F25-26; Construction in F26-27.

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT
Wastewater Reclamation Authority Improvements				WRF Building 05 Rehabilitation								AG267 WRA 809 WR xx
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD					COST BEYOND F26
							F21	F22	F23	F24	F25	
Expenses	12,278,100						244,500	301,100	7,711,500	4,021,000		
Beginning Balance								180,500	(70,600)	4,086,400		
Interest Earnings												
Repair and Replacement Fund Communities	140,000						5,000	50,000	50,000	35,000		
Future Funding (12.3M)	12,138,100								12,238,500	(100,400)		
Bond Proceeds												
SRF Drawdowns							420,000		(420,000)			
Other												
Total Resources	12,278,100						425,000	230,500	11,797,900	4,021,000		
ENDING BALANCE	0	0	0	0	0	0	0	180,500	(70,600)	4,086,400	0	0

Description: Core Project.

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

Justification:

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

Scheduling:

Design F22-23; Construction in F24-25.

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Westside Interceptor								AG267 WRA99000 WR 2x7	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST F 2030
							F21	F22	F23	F24	F25	F26	
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:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Secondary Treatment								AG267 WRA 809 WR xx	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST starts F26
							F21	F22	F23	F24	F25	F26	
Expenses	76,000,000											76,000,000	
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	76,000,000											76,000,000	
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	76,000,000											76,000,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

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

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

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

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

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE							ACCOUNT		
Wastewater Reclamation Authority Improvements				WRF Parallel Pipe and Mixing Structure							AG267 WRA809 WR xx		
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
							F21	F22	F23	F24	F25	F26	F 2026
Expenses	5,156,200										131,800	5,024,400	
Beginning Balance												(131,800)	
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	5,156,200											5,156,200	
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	5,156,200											5,024,400	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	(131,800)	0	0

Description: Core Project.

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

Justification:

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

Scheduling:

Design F25-26; Construction in F26-27.

Relationship to General Plan and Other Projects:

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

Operating Budget Effect:

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRF Secondary Treatment								AG267 WRA 809 WR xx	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST starts F26
							F21	F22	F23	F24	F25	F26	
Expenses	76,000,000											76,000,000	
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund													
Communities													
Future Funding	76,000,000											76,000,000	
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	76,000,000											76,000,000	
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

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

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

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

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

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Joint Trunk East & West								AG267 WRA99000 WR 1x3	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST 2027 2030
							F21	F22	F23	F24	F25	F26	
Expenses	20,800,000												20,800,000
Beginning Balance													
Interest Earnings													
Repair and Replacement Fund Communities													
Future Funding	20,800,000												20,800,000
Bond Proceeds													
SRF Drawdowns													
Other													
Total Resources	20,800,000												20,800,000
ENDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0

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

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

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

Scheduling:
 Joint Trunk East: Design F26; Construction F27 and F28.
 Joint Trunk West: Design F29; Construction F30 and F31.

Relationship to General Plan and Other Projects:
 This improvement is included in the approved WRA Facility Plan Update - 2012 and Second Amended and Restated Agreement for the DM Metropolitan Reclamation Authority (2014 28e)

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

Fiscal 2020 and 2021-Fiscal 2026 WRA Capital Improvements Program [February]

PROJECT CATEGORY				PROJECT TITLE								ACCOUNT	
Wastewater Reclamation Authority Improvements				WRA Common Trunk								AG267 WRA99000 WR 1x2	
	TOTAL ESTIMATED COST	COST THROUGH F18	ACTUAL COST IN F19	COST THROUGH F19	Revised BUDGET F20	ESTIMATED COST THROUGH F20	RECOMMENDED AND SCHEDULED FOR SIX-YEAR PERIOD						COST
							F21	F22	F23	F24	F25	F26	FY2026
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:

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

Operating Budget Effect:

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