

Scenario:	Annual Budget	FY start	FY end	# Type 1 and Type 2 Projects
	\$1,800,000	FY2017	FY2031	94

Capital distribution and risk assessment:

Total Net Present Value (NPV), all Type 1 and 2 capital expenditures: \$ 34,146,887

Risk Levels 4-5

Project	WWTP	Name	NPV	Type	Risk
WW1	i	Sequence Batch Reactors Tanks and Aeration Maintenance(O&M - Annual)	14,784,625	1	4.60
WW41	i	Splitter Box Cleaning and Resurfacing O&M	319,377	1	4.60
WW66	d	Influent Pumping System: Vault reline/coat every 10 years	25,524	1	4.60
WW70	d	Anaerobic Digester Study	75,000	2	4.21
WW35	i	Sequence Batch Reactor Maintenance	993,048	1	4.21
WW89	d	Waste Storage Tank: TWAS & FOG inlet valves replacement	51,000	2	4.21
Total			16,248,573		
WWTP benefitting from projects in Risk Levels 4-5					
	Industrial \$	Industrial %	Domestic \$	Domestic %	
	16,097,050	99.07%	151,524	0.93%	

Risk Levels 3-4

Project	WWTP	Name	NPV	Type	Risk
WW64	d	Influent Pumping System: Revamp influent meter to permit at least 3 pipe diams. U.S.	30,300	2	3.81
WW60	d	Influent Pumping System - Four Split Case Pump and Motor Rehab	156,860	2	3.81
WW43	i	Wet Well and Discharge Pit Cleaning and Resurfacing	21,786	2	3.81
WW9	i	Blower System Rehabilitation	225,486	2	3.81
WW8	d	Aeration Piping and Valve Rehabilitation	786,989	1	3.81
WW96	d/i	Roadway/access surface: Repave vehicle access, raise vault & MH lids	584,165	1	3.81
WW56	i	Sequence Bath Reactor - Aeration Piping and Valve Rehabilitation	782,730	1	3.81
WW54	i	Aeration Lagoon Resurfacing	135,291	2	3.81
WW93	i	Generator Power Seven Units on Site: Replace UFDs every 5 years	214,396	1	3.81
WW68	d	Primary Clarifiers: Seal grout cracks around clarifiers	7,900	2	3.81
WW14	i	Total Bar Rake Overhaul	18,039	2	3.75
WW39	d	Return and Waste Activated Sludge Pumps and Valves	102,821	2	3.41
WW37	d	Primary Scum and Sludge Pump Rehab	72,155	2	3.41
WW15	i	Blower System Rehabilitation	112,743	2	3.41
WW77	i	Industrial Treatment Facility Influent Structure: Replace BVF PS pumps 1 and 2	428,300	2	3.41
WW79	d/i	BVF System: RANS pumps replacement	16,200	2	3.41
WW62	d/i	Replace Solids Meters	22,404	2	3.41
WW52	i	Industrial Digesters - Internal Mixing Pumps, Motors and Piping Rehab	9,335	2	3.41
WW17	i	Aeration - Decanting System Rehab	56,011	2	3.41
WW30	d/i	Maintenance Management System	70,013	2	3.41
WW88	d	Denitrification Filter System: ER5 expansion to increase electrical capacity	287,900	2	3.41
WW36	d/i	Scada - Replace Hardware and Software	169,082	2	3.41
WW90	d	Generator Power Seven Units on Site: Pull Modicon/upgrade, remove ER1/ER1A to ER6	1,772,800	2	3.41
WW86	i	Denitrification Filter System: Replace/upgrade mudwell pumps	8,900	2	3.81
WW92	d/i	Generator Power Seven Units on Site: SOP for generator/wiring system	88,700	2	3.75
WW69	d	Primary Clarifiers: Replace 24" Pipe (2° Flow, ML channel to 1° clarifier)	8,800	2	3.35
WW38	i	Septage State Station Lining	77,625	2	3.35
WW6	d/i	Lagoon Aerator Rehabilitation	242,845	1	3.35
Total			6,510,576		
WWTP benefitting from projects in Risk Levels 3-4					
	Industrial \$	Industrial %	Domestic \$	Domestic %	
	2,687,346	41.28%	3,823,230	58.72%	

Risk Levels 2-3

Project	WWTP	Name	NPV	Type	Risk
WW18	d/i	Facility Digesters Rehabilitation	233,378	2	2.56
WW16	d/i	Data Acquisition and Management	338,164	2	2.56
WW49	i	Indust. Treatment Facility - Electrical System Rehabilitation	7,763	2	2.96
WW4	i	Denitrification Filter System	4,302	2	2.96
WW51	d	Influent Headworks - Sandblast and Paint grit pumps and piping	31,050	2	2.56
WW45	i	Anaerobic Digesters - Solids Removal, Pressure Washer, Resurface Digester Tanks	362,250	2	2.56
WW3	d/i	Maintain Slopes Around Ponds	241,572	1	2.96
WW74	d	Return & Waste Activated Sludge Pumps and Valve: Replace 6x15HP WAS pumps	26,900	2	2.96
WW34	d	Aeration Basins - Replace Dissolved Oxygen Meters	7,245	2	2.56
WW13	i	Three Anaerobic Digesters	77,625	2	2.56
WW33	d	Primary Clarifier Floatable Collector Mechanisms	37,260	2	2.56
WW67	d	Primary Clarifiers: Remove O4VLV430 valve	4,500	2	2.56
WW57	i	Septage Station - Pump and Motors Rehab	160,684	2	2.56
WW48	d/i	Generator ER5 Rehabilitation	321,368	2	2.56
WW47	d	ER2 Generator Rehab	91,054	2	2.56
WW46	d	Influent Headworks - Independent Bar Screen Rehab	235,670	2	2.56
WW44	i	Aerated Lagoon Sluice Gate Replacement	192,821	2	2.56
WW29	i	Internal Weir system - Adjustment and Resurfacing	83,154	2	2.56
WW78	d/i	BVF System: BVF gas blower motors replacement every 15 years	14,500	2	2.56
WW55	i	Odor Control Instrumentation Upgrade	55,436	2	2.56
WW73	d	Aeration Basins: Replace temp. floating wasting pump w/permanent wasting pump	29,000	2	2.56
WW72	d	Primary Clarifiers: Replace samplers (4 samplers every 5 years)	7,514	1	2.50
WW98	d/i	Move outdoor equipment storage to non-flooding area	18,600	2	2.10
WW65	d	Influent Pumping System: Replace mag meter D.S. of screen w/open-channel meter or meter line to JWWTTP.	12,000	2	2.10
WW76	i	Industrial Treatment Facility Influent Structure: Repave access to septage dump	65,200	2	2.10
WW2	d/i	Percolation Ponds - Annual Project (O&M)	216,425	1	2.10
WW5	d/i	Work Trucks, Waste Water Treatment Plant	89,254	1	2.10
Total			2,964,687		
WWTP benefitting from projects in Risk Levels 2-3					
	Industrial \$	Industrial %	Domestic \$	Domestic %	
	1,745,864	58.89%	1,218,823	41.11%	

Risk Levels 1-2

Project	WWTP	Name	NPV	Type	Risk
WW85	i	SBR Tanks and Aeration and Control Systems: Install inline TSS meter at effluent, ea. basin	106,400	2	1.71
WW82	i	SBR Tanks and Aeration and Control Systems: Pumping system for emptying tanks	223,100	2	1.71
WW20	d	Instrumentation and Controls for Water Treatment Facility	77,625	2	1.71
WW81	i	Five Aerated Lagoons: Implement control system for individual aerators, put on SCADA	115,900	2	1.71
WW28	i	Instrumentation and Controls for Industrial Wastewater Treatment Facility	155,250	2	1.71
WW53	d	Internal Recycle Pumps - Sand Blasting and Painting	16,631	2	1.71
WW12	i	Anaerobic Digester - Pumps, Pipes and Valves Sandblasted and Painted	110,872	2	1.71
WW91	d/i	Generator Power Seven Units on Site: Paint IDs on buildings for quick, positive ID	800	2	1.71
WW23	i	Fog Daf System - Discharge System Resurfacing	22,174	2	1.71

\$1,800,000

FY2017

FY2031

94

Capital distribution and risk assessment:

Total Net Present Value (NPV), all Type 1 and 2 capital expenditures:

\$ 34,146,887

WW19	i	Dissolved Air Flootation System	284,386	2	1.71
WW75	i	Additional Solids Thickening System: Aqueous ammonia pump x 4 replace	4,300	2	1.71
WW59	i	Industrial Waste Storage Tank - Piping Sandblasting and Painting	22,174	2	1.71
WW42	i	Waste Storage Tank - Clean, Sandblast, Paint, Inspect	110,872	2	1.71
WW25	d/i	Production Gas Skid Maintenance	27,718	2	1.71
WW24	d/i	Gas Skid Equipment Rehab	38,805	2	1.71
WW22	d	Energy Systems Domestic Cogeneration System	55,436	2	1.71
WW26	d	Gravity Belt Control System Rehab	89,076	2	1.71
WW95	d/i	Roadway/access surface: Gravel unpaved vehicle access	373,999	1	1.25
WW87	i	Denitrification Filter System: Control system rehab/replacement study	239,300	2	1.25
WW71	d	Primary Clarifiers: Replace water spray system	10,900	2	1.25
WW61	d/i	Lab Refurbishment	2,115,898	2	1.25
WW99	d/i	Install additional secure records storage	28,500	2	1.25
Total			4,230,117		

WWTP benefitting from projects in Risk Levels 1-2			
Industrial \$	Industrial %	Domestic \$	Domestic %
2,687,589	63.53%	1,542,528	36.47%

Risk Levels 0-1

Project	WWTP	Name	NPV	Type	Risk
WW32	i	Addition of Polymer Mixing Skid System	33,262	2	0.85
WW31	i	Methanol Control System Upgrade	40,163	2	0.85
WW27	i	New High Solids System	803,266	2	0.85
WW21	i	Electrical Control Panels for Aerated Lagoons	103,277	2	0.85
WW50	d	Influent Headworks - Electrical System Inspection	5,738	2	0.85
WW40	i	Industrial Solar Panel Maintenance	118,769	2	0.85
WW94	d/i	Renovate laboratory	174,500	2	0.00
WW97	d/i	Study: Rehabilitate/replace administration building	279,100	2	0.00
WW84	i	SBR Tanks and Aeration and Control Systems: Install washdown system, water supply	922,300	2	0.00
WW63	d/i	SWR Equipment - Unit 921 Tractor with Spray Rig	89,060	2	0.85
WW83	i	SBR Tanks and Aeration and Control Systems: Install stairway access into basins	1,623,500	2	0.00
Total			4,192,934		

WWTP benefitting from projects in Risk Levels 0-1			
Industrial \$	Industrial %	Domestic \$	Domestic %
3,915,866	93.39%	277,067	6.61%

WWTP benefitting from projects in all Risk Levels				
Total NPV for all projects in CIP	Industrial \$	Industrial %	Domestic \$	Domestic %
34,146,887	27,133,715	79.46%	7,013,172	20.54%