Cost Estimate Scenario 1B - Peirce Island Alternative TN 3
MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

PEIRCE ISLAND WWTF UPGRADE CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Headworks					
Structure	2500	SF	$ 300.00	$ 750,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Bar Screens	2	EA	$ 250,000.00	$ 725,000.00	
Screenings Washer & Compactor	2	EA	$ 50,000.00	$ 145,000.00	
Grit Pumps	3	EA	$ 35,000.00	$ 152,250.00	
Vortex Grit Removal	2	EA	$ 75,000.00	$ 217,500.00	
Grit Classifier & Washer	2	EA	$ 40,000.00	$ 116,000.00	
					$ 2,192,750.00
New Process Reactors (2 Aerobic and 2 Anoxic)					
Structure	1	EA	$ 800,000.00	$ 800,000.00	
Equipment Includes:	1	EA	$ 602,000.00	$ 872,900.00	
Blowers					
Fine Bubble Diffusers					
Mechanical Mixers					
Internal Recycle					
RAS Pumps (Centrifugal)					
WAS Pumps (Centrifugal)	2	EA	$ 20,000.00	$ 58,000.00	
					$ 1,730,900.00
MBR					
Pilot Testing	1	EA	$ 1,000,000.00	$ 1,000,000.00	
Structure					
Existing Filter Building Internal Demolition	1	EA	$ 200,000.00	$ 200,000.00	
Filter Building Modification	1	EA	$ 250,000.00	$ 250,000.00	
Equipment Includes:	1	SET	$ 5,387,000.00	$ 7,811,150.00	
Membrane System					
Pumps					
Blowers					
Cleaning System					
Valves and Headers					
PLC					
Chemical Addition Systems					
Methanol Storage Tanks 45 day Storage (gal)	21600	GAL	$ 1.00	$ 31,320.00	
					$ 9,292,470.00
Sanitary Disinfection					
Equipment:					
Pump System	1	EA	$ 100,000.00	$ 100,000.00	
UV Disinfection	1	EA	$ 200,000.00	$ 200,000.00	
					$ 300,000.00
Biosolids Processing					
Structure					
Rehab Existing Process Building	1	EA	$ 350,000.00	$ 350,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Rotary Drum Thickener	2	EA	$ 150,000.00	$ 435,000.00	
Dewatering Screw Press	2	EA	$ 400,000.00	$ 1,160,000.00	
Conveyors	2	EA	$ 50,000.00	$ 145,000.00	
					$ 2,177,000.00
PI Additional Structures and Modifications					
Methanol Storage Building	900	SF	$ 200.00	$ 180,000.00	
PE Splitter - Upstream - Rehab Existing	1	EA	$ 300,000.00	$ 300,000.00	
PE Splitter - Downstream	2200	SF	$ 300.00	$ 660,000.00	
Sludge Storage Tank	4360	SF	$ 175.00	$ 763,000.00	
					$ 1,903,000.00
PI ITEM TOTAL					**$ 17,596,120.00**
Yard Piping (12%)					$ 2,111,534.40
Electrical (22%)					$ 3,871,146.40
Instrumentation and Controls (6%)					$ 1,055,767.20
Site Work and Landscaping (7%)					$ 1,231,728.40
PI TOTAL CAPITAL					**$ 25,866,296.40**
Island Construction Premium (15%)					$ 3,879,944.46
Engineering (20%)					$ 5,173,259.28
Contingency (30%)					$ 7,759,888.92
TOTAL WWTF CAPITAL TO MEET CONSENT DECREE					**$ 42,700,000.00**

CSO CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Offline Storage Tank - 2.9 MG					
Structure Equipment and Installation	2900000	GAL	$ 7.00	$ 20,300,000.00	
Automatic flushing system (gates)	2	EA	Included		
Tank drain pumps	2	EA	Included		
Controls	1	LS	Included		
Odor control	1	LS	Included		
54" conduit from regulating structure	700	LF	Included		
Dewatering	300	DAY	Included		
Site Work			Included		
Regulating Structure Overflow Screen	1	LS	Included		
Regulating Structure Automated Gate	2	EA	Included		
					$ 20,300,000.00
CSO TOTAL CAPITAL					**$ 20,300,000.00**
Engineering (20%)				included above	
Contingency (30%)				included above	
TOTAL CSO CAPITAL TO MEET CONSENT DECREE					**$ 20,300,000.00**

COLLECTION SYSTEM CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
COLLECTION SYSTEM TOTAL CAPITAL					**$ -**
Engineering (20%)					$ -
Contingency (30%)					$ -
TOTAL COLLECTION SYSTEM CAPITAL					**$ -**

TOTAL CAPITAL TO MEET CONSENT DECREE	**$ 63,000,000**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 3

MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

PEIRCE ISLAND ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**Subtotal**
PI Additional Structures and Modifications					
Existing Headworks Mods (Reuse for CEPT Chemical Storag	1	EA	$ 100,000.00	$ 100,000.00	
Primary Clarifier Drive Replacement	2	EA	$ 175,000.00	$ 507,500.00	
Lab/Office - Reuse Existing w/expansion	1	EA	$ 500,000.00	$ 500,000.00	
Garage Rehab	2240	SF	$ 125.00	$ 280,000.00	
Outfall Modifications - Diffuser	1	EA	$ 3,000,000.00	$ 3,000,000.00	
					$ 4,387,500.00
PI ITEM TOTAL					**$ 4,387,500.00**
Site Work and Landscaping (7%)					$ 307,125.00
Island Construction Premium (15%)					$ 658,125.00
PI ADIITIONAL CAPITAL					**$ 5,352,750.00**
Engineering (20%)					$ 1,070,550.00
Contingency (30%)					$ 1,605,825.00
PEIRCE ISLAND CIP ADDITIONAL CAPITAL					**$ 8,000,000.00**

PEASE ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
PIT Headworks					
Structure	1500	SF	$ 300.00	$ 450,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Bar Screens	1	EA	$ 250,000.00	$ 362,500.00	
Screenings Washer & Compactor	1	EA	$ 50,000.00	$ 72,500.00	
Grit Pumps	2	EA	$ 35,000.00	$ 101,500.00	
Vortex Grit Removal	1	EA	$ 75,000.00	$ 108,750.00	
Grit Classifier & Washer	1	EA	$ 40,000.00	$ 58,000.00	
					$ 1,240,250.00
PIT SBR Secondary Treatment - WWTF Total Capacity 1.7 mgd					
Structure (includes Excavation, Backfill and Concrete)					
Additional 0.6 MGD Tanks	1	EA	$ 580,000.00	$ 580,000.00	
Equipment:					
Rehab Existing Basins	1	EA	$ 200,000.00	$ 290,000.00	
Additional 0.6 MGD Basin	1	SYS	$ 525,000.00	$ 761,250.00	
Post Eq Tank	1100	SF	$ 175.00	$ 192,500.00	
EQ Tank Pump	1	EA	$ 15,000.00	$ 15,000.00	
					$ 1,838,750.00
PIT Deep Bed Denitrification Filter					
Structure (includes Excavation, Backfill and Concrete)	1	EA	$ 360,000.00	$ 360,000.00	
Equipment:					
Internals	170000	GPD	$ 0.70	$ 172,550.00	
Methanol Storage Tanks 45 day Storage (gal)	700	GAL	$ 1.00	$ 1,015.00	
Methanol Feed Systems	4	EA	$ 4,000.00	$ 23,200.00	
					$ 556,765.00
PIT Additional Structures and Modifications					
Methanol Storage Building	900	SF	$ 200.00	$ 180,000.00	
Sludge Storage Tank	4360	SF	$ 175.00	$ 763,000.00	
Pump Building - Demo Existing	1	EA	$ 50,000.00	$ 50,000.00	
Pump Building - New	1848	SF	$ 200.00	$ 369,600.00	
Chemical Building	2500	SF	$ 250.00	$ 625,000.00	
Garage	2240	SF	$ 125.00	$ 280,000.00	
					$ 2,267,600.00
Pease Item Total					**$ 5,903,365.00**
Yard Piping (8%)					$ 472,269.20
Electrical (15%)					$ 885,504.75
Instrumentation and Controls (5%)					$ 295,168.25
Site Work and Landscaping (5%)					$ 295,168.25
PEASE ADIITIONAL CAPITAL					**$ 7,851,475.45**
Engineering (20%)					$ 1,570,295.09
Contingency (30%)					$ 2,355,442.64
PEASE CIP ADDITIONAL CAPITAL					**$ 11,800,000.00**

ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
Lafayette Rd PS					
Pump Station Upgrades	1	LS	$ 2,250,000.00	$ 2,250,000.00	
					$ 2,250,000.00
ADIITIONAL CAPITAL					**$ 2,250,000.00**
Engineering (20%)					$ 450,000.00
Contingency (30%)					$ 675,000.00
REDIRECTION CIP ADDITIONAL CAPITAL					**$ 3,400,000**

TOTAL CIP ADDITIONAL CAPITAL	**$ 23,200,000**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 3
MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

NEW PEIRCE ISLAND WWTF O&M COST - For Consent Decree								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**SUBTOTAL**
Headworks								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Bar Screens	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
Screenings Washer & Compactor	5	1	25%	8,166	KWH	$ 0.1395	$ 1,139.09	
Grit Pumps	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
Vortex Grit Removal	2	1	100%	13,065	KWH	$ 0.1395	$ 1,822.55	
Grit Classifier & Washer	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
								$ 21,402.95
New Process Reactors								
Blowers				1,152,700	KWH	$ 0.1395	$ 160,801.65	
Mechanical Mixers				144,500	KWH	$ 0.1395	$ 20,157.75	
Internal Recycle				57,700	KWH	$ 0.1395	$ 8,049.15	
WAS Pumps (Centrifugal)	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
								$ 192,425.83
MBR								
Permeate Pumps				174,100	KWH	$ 0.1395	$ 24,286.95	
Backpulse Pumps				600	KWH	$ 0.1395	$ 83.70	
Membrane Blowers				817,300	KWH	$ 0.1395	$ 114,013.35	
Membrane RAS				327,900	KWH	$ 0.1395	$ 45,742.05	
Replacement Membranes							$ 270,000.00	
Methanol				175200	GAL	$ 4.00	$ 700,800.00	
								$ 1,154,926.05
Disinfection								
UV Electricity	50	1	100%	326,622	KWH	$ 0.1395	$ 45,563.76	
								$ 45,563.76
Biosolids Processing								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Screw Press	3	2	15%	5,879	KWH	$ 0.1395	$ 820.15	
Compressor	1.5	1	15%	1,470	KWH	$ 1.1395	$ 1,674.84	
Sludge Feed Pump	10	2	15%	19,597	KWH	$ 2.1395	$ 41,928.46	
Polymer							$ 26,250.00	
Conveyors	2	1	15%	1,960	KWH	$ 3.1395	$ 6,152.58	
Sludge Disposal							$ 245,000.00	
								$ 335,938.77
Additional Loads								
Lights, Heating, Etc.								$ 1,099.82
NEW PI WWTF O&M YEARLY TOTAL								**$ 1,751,357.18**

NEW CSO O&M COST ESTIMATE								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**SUBTOTAL**
Regulating Structure								
Automated Gate	1.5	2	5.00%	980	KWH	$ 0.1395	136.6913	$ 136.69
Offline Storage Tank								
Flushing Gates	2	1	5.00%	653	KWH	$ 0.1395	91.1275	
Pumps	15	1	5.00%	4,899	KWH	$ 0.1395	683.4564	
Controls	10	1	5.00%	3,266	KWH	$ 0.1395	455.6376	
Odor Control	20	1	5.00%	6,532	KWH	$ 0.1395	911.2752	
Labor				240	HR	$ 30.0000	7,200.0000	
								$ 9,341.50
NEW CSO TREATMENT O&M YEARLY TOTAL								**$ 9,478**

NEW COLLECTION SYSTEM O&M COST ESTIMATE (Not Required)								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**SUBTOTAL**
NEW COLLECTION SYSTEM O&M YEARLY TOTAL								**$ -**

NEW CD O&M YEARLY TOTAL	**$ 1,760,835.37**
CONSENT DECREE O&M PRESENT VALUE (5%, 20 yrs)	**$22,000,000.00**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 3
MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

PEASE ADDITIONAL CAPITAL IMPROVEMENTS PLAN O&M COST								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**SUBTOTAL**
PIT Headworks								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Bar Screens	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
Screenings Washer & Compactor	5	1	25%	8,166	KWH	$ 0.1395	$ 1,139.09	
Grit Pumps	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
Vortex Grit Removal	2	1	100%	13,065	KWH	$ 0.1395	$ 1,822.55	
Grit Classifier & Washer	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
								$ 21,402.95
PIT SBR Secondary Treatment								
New SBR	67	1	100%	437,673	KWH	$ 0.1395	$ 61,055.44	$ 61,055.44
PIT Deep Bed Denitrification Filter								
Internals	50	1	50%	163,311	KWH	$ 0.1395	$ 22,781.88	
Methanol Feed Systems	0.5	2	100%	6,532	KWH	$ 0.1395	$ 911.28	
Methanol				5,677	GAL	$ 4.00	$ 22,708.00	
EQ Tank Pump	10	1	25%	16,331	KWH	$ 0.1395	$ 2,278.19	
								$ 46,401.15
ADDITIONAL CIP O&M YEARLY TOTAL								**$ 128,859.54**
ADDITIONAL CIP O&M PRESENT VALUE (5%, 20 yrs)								**$1,700,000.00**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 3
MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

EXISTING O&M COSTS FROM FY 2010								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	
Existing O&M Requirements (2010)								
REGULAR SALARIES							$ 435,359.00	
SALARIES - SLUDGE REMOVAL								
ON CALL MONITORING							$ 14,237.00	
PART TIME SALARIES								
OVERTIME							$ 49,318.00	
CERTIFICATION STIPEND								
SOCIAL SECURITY							$ 31,212.00	
MEDICARE							$ 7,323.00	
RETIREMENT							$ 48,077.00	
PROF SERVICES-ENGINEERING							$ 15,000.00	
PAGERS							$ 900.00	
TELEPHONE							$ 10,000.00	
CELLULAR PHONES							$ 4,500.00	
PROFESSIONAL SERVICES							$ 20,000.00	
SECURITY/ALARMS							$ 500.00	
PROF/SERVICES-CONTRACT								
ELECTRICITY							$ 240,000.00	
NATURAL GAS							$ 30,000.00	
HEATING OIL							$ 10,000.00	
PROPANE GAS							$ 2,400.00	
WATER /SEWER FEES							$ 46,000.00	
RUBBISH REMOVAL							$ 1,000.00	
SLUDGE DISPOSAL							$ 305,000.00	
GRIT AND GREASE REMOVAL							$ 62,000.00	
REPAIRS-STRUCTURAL							$ 3,000.00	
REPAIRS-ELECTRICAL							$ 500.00	
REPAIRS-PLUMBING							$ 5,000.00	
REPAIRS-EQUIPMENT							$ 150,000.00	
REPAIRS-FIRE ALARM SYS							$ 8,000.00	
REPAIRS-VEHICLE							$ 17,000.00	
REPAIRS-BLDINGS & GROUNDS							$ 30,000.00	
REPAIRS-COMPUTER EQUIP								
REPAIRS-OFFICE EQUIPMENT								
MAINTENANCE							$ 36,000.00	
SCADA EQUIPMENT							$ 40,000.00	
GENERATOR MAINTENANCE							$ 3,000.00	
RENTAL OTHER EQUIPMENT							$ 19,000.00	
PROPERTY INSURANCE								
ADVERTISING								
STATE CERTIFICATION							$ 1,000.00	
TRAINING-EDUCATION							$ 6,500.00	
PRINTING								
DUES PROFESSIONAL ORGANIZ							$ 1,200.00	
OPERATIONAL PERMITS								
TRAVEL AND CONFERENCE							$ 1,000.00	
TRAVEL REIMBURSEMENT							$ 2,500.00	
FIRST AID							$ 1,350.00	
OFFICE SUPPLIES							$ 3,200.00	
PRINTING SUPPLIES								
OPERATING SUPPLIES							$ 22,000.00	
GASOLINE								
DIESEL FUEL							$ 600.00	
MATERIALS-CHEMICALS							$ 858,000.00	
VEHICLE REPAIRS								
BOOKS & PERIODICALS								
CLOTHING ALLOWANCE								
CLOTHING							$ 7,500.00	
PROTECTIVE CLOTHING							$ 3,500.00	
TOOLS							$ 8,000.00	
OTHER IMPROVEMENTS							$ 25,000.00	
MACHINERY AND EQUIPMENT							$ 80,000.00	
DEPRECIATION							$ 585,552.00	
INTEREST-BONDED DEBT							$ 275,802.00	
INTEREST ON BOND,FROM PDA							$ 80,501.00	
EXISTING O&M YEARLY TOTAL								**$ 3,607,531**
EXISTING O&M PRESENT VALUE (5%, 20 yrs)								**$45,000,000.00**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 5

MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

PEIRCE ISLAND WWTF UPGRADE CAPITAL COST ESTIMATE - For Consent Decree					
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**SUBTOTAL**
Headworks					
Structure	2500	SF	$ 300.00	$ 750,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Bar Screens	2	EA	$ 250,000.00	$ 725,000.00	
Screenings Washer & Compactor	2	EA	$ 50,000.00	$ 145,000.00	
Grit Pumps	3	EA	$ 35,000.00	$ 152,250.00	
Vortex Grit Removal	2	EA	$ 75,000.00	$ 217,500.00	
Grit Classifier & Washer	2	EA	$ 40,000.00	$ 116,000.00	
					$ 2,192,750.00
New Process Reactors (2 Aerobic and 2 Anoxic)					
Structure	1	EA	$ 800,000.00	$ 800,000.00	
Equipment Includes:	1	EA	$ 602,000.00	$ 872,900.00	
Blowers					
Fine Bubble Diffusers					
Mechanical Mixers					
Internal Recycle					
RAS Pumps (Centrifugal)					
WAS Pumps (Centrifugal)	2	EA	$ 20,000.00	$ 58,000.00	
					$ 1,730,900.00
MBR					
Pilot Testing	1	EA	$ 1,000,000.00	$ 1,000,000.00	
Structure					
Existing Filter Building Internal Demolition	1	EA	$ 200,000.00	$ 200,000.00	
Filter Building Modification	1	EA	$ 250,000.00	$ 250,000.00	
Equipment Includes:	1	SET	$ 5,387,000.00	$ 7,811,150.00	
Membrane System					
Pumps					
Blowers					
Cleaning System					
Valves and Headers					
PLC					
Chemical Addition Systems					
Methanol Storage Tanks 45 day Storage (gal)	16650	GAL	$ 1.00	$ 24,142.50	
					$ 9,285,292.50
PI Sanitary Disinfection					
Equipment:					
Pump System	1	EA	$ 100,000.00	$ 100,000.00	
UV Disinfection	1	EA	$ 200,000.00	$ 200,000.00	
					$ 300,000.00
Biosolids Processing					
Structure					
Rehab Existing Process Building	1	EA	$ 350,000.00	$ 350,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Rotary Drum Thickener	2	EA	$ 150,000.00	$ 435,000.00	
Dewatering Screw Press	2	EA	$ 400,000.00	$ 1,160,000.00	
Conveyors	2	EA	$ 50,000.00	$ 145,000.00	
					$ 2,177,000.00
PI Additional Structures and Modifications					
Methanol Storage Building	900	SF	$ 200.00	$ 180,000.00	
PE Splitter - Upstream - Rehab Existing	1	EA	$ 300,000.00	$ 300,000.00	
PE Splitter - Downstream	2200	SF	$ 300.00	$ 660,000.00	
Sludge Storage Tank	4360	SF	$ 175.00	$ 763,000.00	
					$ 1,903,000.00
PI ITEM TOTAL					**$ 17,588,942.50**
Yard Piping (12%)					$ 2,110,673.10
Electrical (22%)					$ 3,869,567.35
Instrumentation and Controls (6%)					$ 1,055,336.55
Site Work and Landscaping (7%)					$ 1,231,225.98
PI TOTAL CAPITAL					**$ 25,855,745.48**
Island Construction Premium (15%)					$ 3,878,361.82
Engineering (20%)					$ 5,171,149.10
Contingency (30%)					$ 7,756,723.64
TOTAL WWTF CAPITAL TO MEET CONSENT DECREE					**$ 42,700,000.00**

CSO CAPITAL COST ESTIMATE - For Consent Decree					
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**SUBTOTAL**
Offline Storage Tank - 2.9 MG					
Structure Equipment and Installation	2900000	GAL	$ 7.00	$ 20,300,000.00	
Automatic flushing system (gates)	2	EA	Included		
Tank drain pumps	2	EA	Included		
Controls	1	LS	Included		
Odor control	1	LS	Included		
54" conduit from regulating structure	700	LF	Included		
Dewatering	300	DAY	Included		
Site Work			Included		
Regulating Structure Overflow Screen	1	LS	Included		
Regulating Structure Automated Gate	2	EA	Included		
					$ 20,300,000.00
CSO TOTAL CAPITAL					**$ 20,300,000.00**
Engineering (20%)				included above	
Contingency (30%)				included above	
TOTAL CSO CAPITAL TO MEET CONSENT DECREE					**$ 20,300,000.00**

COLLECTION SYSTEM CAPITAL COST ESTIMATE - For Consent Decree					
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**SUBTOTAL**
COLLECTION SYSTEM TOTAL CAPITAL					**$ -**
Engineering (20%)					$ -
Contingency (30%)					$ -
TOTAL COLLECTION SYSTEM CAPITAL					**$ -**

TOTAL CAPITAL TO MEET CONSENT DECREE	**$ 63,000,000**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 5
MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

PEIRCE ISLAND ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE								
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**		**AMOUNT**		**Subtotal**	
PI Additional Structures and Modifications								
Existing Headworks Mods (Reuse for CEPT Chemical Stora	1	EA	$	100,000.00	$	100,000.00		
Primary Clarifier Drive Replacement	2	EA	$	175,000.00	$	507,500.00		
Lab/Office - Reuse Existing w/expansion	1	EA	$	500,000.00	$	500,000.00		
Garage Rehab	2240	SF	$	125.00	$	280,000.00		
Outfall Modifications - Diffuser	1	EA	$	3,000,000.00	$	3,000,000.00		
							$	4,387,500.00
PI ITEM TOTAL							**$**	**4,387,500.00**
Site Work and Landscaping (7%)							$	307,125.00
Island Construction Premium (15%)							$	658,125.00
PI ADIITIONAL CAPITAL							**$**	**5,352,750.00**
Engineering (20%)							$	1,070,550.00
Contingency (30%)							$	1,605,825.00
PEIRCE ISLAND CIP ADDITIONAL CAPITAL							**$**	**8,000,000.00**

PEASE ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE								
PIT Headworks								
Structure	1500	SF	$	300.00	$	450,000.00		
Equipment:								
Carbon Odor Control	1	EA	$	60,000.00	$	87,000.00		
Bar Screens	1	EA	$	250,000.00	$	362,500.00		
Screenings Washer & Compactor	1	EA	$	50,000.00	$	72,500.00		
Grit Pumps	2	EA	$	35,000.00	$	101,500.00		
Vortex Grit Removal	1	EA	$	75,000.00	$	108,750.00		
Grit Classifier & Washer	1	EA	$	40,000.00	$	58,000.00		
							$	1,240,250.00
PIT SBR Secondary Treatment - WWTF Total Capacity 1.7 mgd								
Structure (includes Excavation, Backfill and Concrete)								
Additional 0.6 MGD Tanks	1	EA	$	580,000.00	$	580,000.00		
Equipment:								
Rehab Existing Basins	1	EA	$	200,000.00	$	290,000.00		
Additional 0.6 MGD Basin	1	SYS	$	525,000.00	$	761,250.00		
Post Eq Tank	1100	SF	$	175.00	$	192,500.00		
EQ Tank Pump	1	EA	$	15,000.00	$	15,000.00		
							$	1,838,750.00
PIT Additional Structures and Modifications								
Methanol Storage Building	900	SF	$	200.00	$	180,000.00		
Sludge Storage Tank	4360	SF	$	175.00	$	763,000.00		
Pump Building - Demo Existing	1	EA	$	50,000.00	$	50,000.00		
Pump Building - New	1848	SF	$	200.00	$	369,600.00		
Chemical Building	2500	SF	$	250.00	$	625,000.00		
Garage	2240	SF	$	125.00	$	280,000.00		
							$	2,267,600.00
Pease Item Total							**$**	**5,346,600.00**
Yard Piping (8%)							$	427,728.00
Electrical (15%)							$	801,990.00
Instrumentation and Controls (5%)							$	267,330.00
Site Work and Landscaping (5%)							$	267,330.00
PEASE ADIITIONAL CAPITAL							**$**	**7,110,978.00**
Engineering (20%)							$	1,422,195.60
Contingency (30%)							$	2,133,293.40
PEASE CIP ADDITIONAL CAPITAL							**$**	**10,700,000.00**

ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE								
Lafayette Rd PS								
Pump Station Upgrades	1	LS	$	2,250,000.00	$	2,250,000.00		
							$	2,250,000.00
ADIITIONAL CAPITAL							**$**	**2,250,000.00**
Engineering (20%)							$	450,000.00
Contingency (30%)							$	675,000.00
REDIRECTION CIP ADDITIONAL CAPITAL							**$**	**3,400,000**

TOTAL CIP ADDITIONAL CAPITAL	**$**	**22,100,000**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 5
MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

NEW PEIRCE ISLAND WWTF O&M COST - For Consent Decree

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Headworks								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Bar Screens	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
Screenings Washer & Compactor	5	1	25%	8,166	KWH	$ 0.1395	$ 1,139.09	
Grit Pumps	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
Vortex Grit Removal	2	1	100%	13,065	KWH	$ 0.1395	$ 1,822.55	
Grit Classifier & Washer	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
								$ 21,402.95
New Process Reactors								
Blowers				1,152,700	KWH	$ 0.1395	$ 160,801.65	
Mechanical Mixers				136,900	KWH	$ 0.1395	$ 19,097.55	
Internal Recycle				57,700	KWH	$ 0.1395	$ 8,049.15	
WAS Pumps (Centrifugal)	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
								$ 191,365.63
MBR								
Permeate Pumps				174,100	KWH	$ 0.1395	$ 24,286.95	
Backpulse Pumps				600	KWH	$ 0.1395	$ 83.70	
Membrane Blowers				817,300	KWH	$ 0.1395	$ 114,013.35	
Membrane RAS				327,900	KWH	$ 0.1395	$ 45,742.05	
Replacement Membranes							$ 270,000.00	
Methanol				135100	GAL	$ 4.00	$ 540,400.00	
								$ 994,526.05
Disinfection								
UV Electricity	50	1	100%	326,622	KWH	$ 0.1395	$ 45,563.76	
								$ 45,563.76
Biosolids Processing								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Screw Press	3	2	15%	5,879	KWH	$ 0.1395	$ 820.15	
Compressor	1.5	1	15%	1,470	KWH	$ 1.1395	$ 1,674.84	
Sludge Feed Pump	10	2	15%	19,597	KWH	$ 2.1395	$ 41,928.46	
Polymer							$ 26,250.00	
Conveyors	2	1	15%	1,960	KWH	$ 3.1395	$ 6,152.58	
Sludge Disposal							$ 245,000.00	
								$ 335,938.77
Additional Loads								
Lights, Heating, Etc.								$ 1,099.82
NEW PI WWTF O&M YEARLY TOTAL								**$ 1,589,896.98**

NEW CSO O&M COST ESTIMATE

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Regulating Structure								
Automated Gate	1.5	2	5.00%	980	KWH	$ 0.1395	136.6913	$ 136.69
Offline Storage Tank								
Flushing Gates	2	1	5.00%	653	KWH	$ 0.1395	91.1275	
Pumps	15	1	5.00%	4,899	KWH	$ 0.1395	683.4564	
Controls	10	1	5.00%	3,266	KWH	$ 0.1395	455.6376	
Odor Control	20	1	5.00%	6,532	KWH	$ 0.1395	911.2752	
Labor				240	HR	$ 30.0000	7,200.0000	
								$ 9,341.50
NEW CSO TREATMENT O&M YEARLY TOTAL								**$ 9,478**

NEW COLLECTION SYSTEM O&M COST ESTIMATE (Not Required)

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
NEW COLLECTION SYSTEM O&M YEARLY TOTAL								**$ -**

O&M YEARLY TOTAL	**$ 1,599,375.17**
CONSENT DECREE O&M PRESENT VALUE (5%, 20 yrs)	**$20,000,000.00**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 5
MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

ADDITIONAL CAPITAL IMPROVEMENTS PLAN O&M COST

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
PIT Headworks								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Bar Screens	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
Screenings Washer & Compactor	5	1	25%	8,166	KWH	$ 0.1395	$ 1,139.09	
Grit Pumps	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
Vortex Grit Removal	2	1	100%	13,065	KWH	$ 0.1395	$ 1,822.55	
Grit Classifier & Washer	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
								$ 21,402.95
PIT SBR Secondary Treatment								
New SBR	67	1	100%	437,673	KWH	$ 0.1395	$ 61,055.44	$ 61,055.44
PIT Deep Bed Denitrification Filter								
Internals	50	1	50%	163,311	KWH	$ 0.1395	$ 22,781.88	
Methanol Feed Systems	0.5	2	100%	6,532	KWH	$ 0.1395	$ 911.28	
Methanol				2,433	GAL	$ 4.00	$ 9,732.00	
								$ 33,425.15
ADDITIONAL CIP O&M YEARLY TOTAL								**$ 115,883.54**
ADDITIONAL CIP O&M PRESENT VALUE (5%, 20 yrs)								**$1,500,000.00**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 5
MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

EXISTING O&M COSTS FROM FY 2010								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	
Existing O&M Requirements (2010)								
REGULAR SALARIES							$ 435,359.00	
SALARIES - SLUDGE REMOVAL								
ON CALL MONITORING							$ 14,237.00	
PART TIME SALARIES								
OVERTIME							$ 49,318.00	
CERTIFICATION STIPEND								
SOCIAL SECURITY							$ 31,212.00	
MEDICARE							$ 7,323.00	
RETIREMENT							$ 48,077.00	
PROF SERVICES-ENGINEERING							$ 15,000.00	
PAGERS							$ 900.00	
TELEPHONE							$ 10,000.00	
CELLULAR PHONES							$ 4,500.00	
PROFESSIONAL SERVICES							$ 20,000.00	
SECURITY/ALARMS							$ 500.00	
PROF/SERVICES-CONTRACT								
ELECTRICITY							$ 240,000.00	
NATURAL GAS							$ 30,000.00	
HEATING OIL							$ 10,000.00	
PROPANE GAS							$ 2,400.00	
WATER /SEWER FEES							$ 46,000.00	
RUBBISH REMOVAL							$ 1,000.00	
SLUDGE DISPOSAL							$ 305,000.00	
GRIT AND GREASE REMOVAL							$ 62,000.00	
REPAIRS-STRUCTURAL							$ 3,000.00	
REPAIRS-ELECTRICAL							$ 500.00	
REPAIRS-PLUMBING							$ 5,000.00	
REPAIRS-EQUIPMENT							$ 150,000.00	
REPAIRS-FIRE ALARM SYS							$ 8,000.00	
REPAIRS-VEHICLE							$ 17,000.00	
REPAIRS-BLDINGS & GROUNDS							$ 30,000.00	
REPAIRS-COMPUTER EQUIP								
REPAIRS-OFFICE EQUIPMENT								
MAINTENANCE							$ 36,000.00	
SCADA EQUIPMENT							$ 40,000.00	
GENERATOR MAINTENANCE							$ 3,000.00	
RENTAL OTHER EQUIPMENT							$ 19,000.00	
PROPERTY INSURANCE								
ADVERTISING								
STATE CERTIFICATION							$ 1,000.00	
TRAINING-EDUCATION							$ 6,500.00	
PRINTING								
DUES PROFESSIONAL ORGANIZ							$ 1,200.00	
OPERATIONAL PERMITS								
TRAVEL AND CONFERENCE							$ 1,000.00	
TRAVEL REIMBURSEMENT							$ 2,500.00	
FIRST AID							$ 1,350.00	
OFFICE SUPPLIES							$ 3,200.00	
PRINTING SUPPLIES								
OPERATING SUPPLIES							$ 22,000.00	
GASOLINE								
DIESEL FUEL							$ 600.00	
MATERIALS-CHEMICALS							$ 858,000.00	
VEHICLE REPAIRS								
BOOKS & PERIODICALS								
CLOTHING ALLOWANCE								
CLOTHING							$ 7,500.00	
PROTECTIVE CLOTHING							$ 3,500.00	
TOOLS							$ 8,000.00	
OTHER IMPROVEMENTS							$ 25,000.00	
MACHINERY AND EQUIPMENT							$ 80,000.00	
DEPRECIATION							$ 585,552.00	
INTEREST-BONDED DEBT							$ 275,802.00	
INTEREST ON BOND,FROM PDA							$ 80,501.00	
EXISTING O&M YEARLY TOTAL								**$ 3,607,531**
EXISTING O&M PRESENT VALUE (5%, 20 yrs)								**$45,000,000.00**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 8
MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

PEIRCE ISLAND WWTF UPGRADE CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
PI Headworks					
Structure	2500	SF	$ 300.00	$ 750,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Bar Screens	2	EA	$ 250,000.00	$ 725,000.00	
Screenings Washer & Compactor	2	EA	$ 50,000.00	$ 145,000.00	
Grit Pumps	3	EA	$ 35,000.00	$ 152,250.00	
Vortex Grit Removal	2	EA	$ 75,000.00	$ 217,500.00	
Grit Classifier & Washer	2	EA	$ 40,000.00	$ 116,000.00	
					$ 2,192,750.00
New Process Reactors (2 Aerobic and 2 Anoxic)					
Structure	1	EA	$ 750,000.00	$ 750,000.00	
Equipment:	1	EA	$ 602,000.00	$ 872,900.00	
Blowers					
EDI Fine Bubble Aeration					
Mechanical Mixers					
Internal Recycle					
RAS Pumps (Centrifugal)					
WAS Pumps (Centrifugal)	2	EA	$ 20,000.00	$ 58,000.00	
					$ 1,680,900.00
MBR					
Pilot Testing	1	EA	$ 1,000,000.00	$ 1,000,000.00	
Structure					
Existing Filter Building Internal Demolition	1	EA	$ 200,000.00	$ 200,000.00	
Filter Building Modification	1	EA	$ 250,000.00	$ 250,000.00	
Equipment Includes:	1	SET	$ 5,387,000.00	$ 5,387,000.00	
Membranes					
Pumps					
Blowers					
Cleaning System					
Valves and Headers					
PLC					
					$ 6,837,000.00
PI Sanitary Disinfection					
Equipment:					
Pump System	1	EA	$ 100,000.00	$ 100,000.00	
UV Disinfection	1	EA	$ 200,000.00	$ 200,000.00	
					$ 300,000.00
Biosolids Processing					
Structure					
Rehab Existing Process Building	1	EA	$ 350,000.00	$ 350,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Rotary Drum Thickener	2	EA	$ 150,000.00	$ 435,000.00	
Dewatering Screw Press	2	EA	$ 400,000.00	$ 1,160,000.00	
Conveyors	2	EA	$ 50,000.00	$ 145,000.00	
					$ 2,177,000.00
PI Additional Structures and Modifications					
Structure					
PE Splitter - Upstream - Rehab Existing	1	EA	$ 500,000.00	$ 500,000.00	
PE Splitter - Downstream	2200	SF	$ 300.00	$ 660,000.00	
Sludge Storage Tank	4360	SF	$ 175.00	$ 763,000.00	
					$ 1,923,000.00
PI ITEM TOTAL					**$ 15,110,650.00**
Yard Piping (12%)					$ 1,813,278.00
Electrical (22%)					$ 3,324,343.00
Instrumentation and Controls (6%)					$ 906,639.00
Site Work and Landscaping (7%)					$ 1,057,745.50
PI TOTAL CAPITAL					**$ 22,212,655.50**
Island Construction Premium (15%)					$ 3,331,898.33
Engineering (20%)					$ 4,442,531.10
Contingency (30%)					$ 6,663,796.65
TOTAL WWTF CAPITAL TO MEET CONSENT DECREE					**$ 36,700,000**

CSO CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Offline Storage Tank - 2.9 MG					
Structure Equipment and Installation	2900000	GAL	$ 7.00	$ 20,300,000.00	
Automatic flushing system (gates)	2	EA	Included		
Tank drain pumps	2	EA	Included		
Controls	1	LS	Included		
Odor control	1	LS	Included		
54" conduit from regulating structure	700	LF	Included		
Dewatering	300	DAY	Included		
Site Work			Included		
Regulating Structure Overflow Screen	1	LS	Included		
Regulating Structure Automated Gate	2	EA	Included		
					$ 20,300,000.00
CSO TOTAL CAPITAL					**$ 20,300,000.00**
Engineering (20%)				included above	
Contingency (30%)				included above	
TOTAL CSO CAPITAL TO MEET CONSENT DECREE					**$ 20,300,000.00**

COLLECTION SYSTEM CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
COLLECTION SYSTEM TOTAL CAPITAL					**$ -**
Engineering (20%)					$ -
Contingency (30%)					$ -
TOTAL COLLECTION SYSTEM CAPITAL					**$ -**

TOTAL CAPITAL TO MEET CONSENT DECREE	**$ 57,000,000**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 8

MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

PEIRCE ISLAND ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**Subtotal**
PI Additional Structures and Modifications					
Existing Headworks Mods (Reuse for CEPT Chemical Storag	1	EA	$ 100,000.00	$ 100,000.00	
Primary Clarifier Drive Replacement	2	EA	$ 175,000.00	$ 507,500.00	
Lab/Office - Reuse Existing w/expansion	1	EA	$ 500,000.00	$ 500,000.00	
Garage Rehab	2240	SF	$ 125.00	$ 280,000.00	
Outfall Modifications - Diffuser	1	EA	$ 3,000,000.00	$ 3,000,000.00	
					$ 4,387,500.00
PI ITEM TOTAL					**$ 4,387,500.00**
Site Work and Landscaping (7%)					$ 307,125.00
Island Construction Premium (15%)					$ 658,125.00
PI ADIITIONAL CAPITAL					**$ 5,352,750.00**
Engineering (20%)					$ 1,070,550.00
Contingency (30%)					$ 1,605,825.00
PEIRCE ISLAND CIP ADDITIONAL CAPITAL					**$ 8,000,000.00**

PEASE ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
PIT Headworks					
Structure	1500	SF	$ 300.00	$ 450,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Bar Screens	1	EA	$ 250,000.00	$ 362,500.00	
Screenings Washer & Compactor	1	EA	$ 50,000.00	$ 72,500.00	
Grit Pumps	2	EA	$ 35,000.00	$ 101,500.00	
Vortex Grit Removal	1	EA	$ 75,000.00	$ 108,750.00	
Grit Classifier & Washer	1	EA	$ 40,000.00	$ 58,000.00	
					$ 1,240,250.00
PIT SBR Secondary Treatment - WWTF Total Capacity 1.7 mgd					
Structure (includes Excavation, Backfill and Concrete)					
Additional 0.6 MGD Tanks	1	EA	$ 580,000.00	$ 580,000.00	
Equipment:					
Rehab Existing Basins	1	EA	$ 200,000.00	$ 290,000.00	
Additional 0.6 MGD Basin	1	SYS	$ 490,000.00	$ 710,500.00	
Post Eq Tank	1100	SF	$ 175.00	$ 192,500.00	
EQ Tank Pump	1	EA	$ 15,000.00	$ 15,000.00	
					$ 1,788,000.00
Additional Structures and Modifications					
Sludge Storage Tank	4360	SF	$ 175.00	$ 763,000.00	
Pump Building - Demo Existing	1	EA	$ 50,000.00	$ 50,000.00	
Pump Building - New	1848	SF	$ 200.00	$ 369,600.00	
Chemical Building	2500	SF	$ 250.00	$ 625,000.00	
Garage	2240	SF	$ 125.00	$ 280,000.00	
					$ 2,087,600.00
Pease Item Total					**$ 5,115,850.00**
Yard Piping (8%)					$ 409,268.00
Electrical (15%)					$ 767,377.50
Instrumentation and Controls (5%)					$ 255,792.50
Site Work and Landscaping (5%)					$ 255,792.50
PEASE ADDITIONAL CAPITAL					**$ 6,804,080.50**
Engineering (20%)					$ 1,360,816.10
Contingency (30%)					$ 2,041,224.15
PEASE CIP ADDITIONAL CAPITAL					**$ 10,200,000.00**

ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
Lafayette Rd PS					
Pump Station Upgrades	1	LS	$ 2,250,000.00	$ 2,250,000.00	
					$ 2,250,000.00
ADDITIONAL CAPITAL					**$ 2,250,000.00**
Engineering (20%)					$ 450,000.00
Contingency (30%)					$ 675,000.00
REDIRECTION CIP ADDITIONAL CAPITAL					**$ 3,400,000**

TOTAL CIP ADDITIONAL CAPITAL	**$ 21,600,000**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 8
MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

NEW PEIRCE ISLAND WWTF O&M COST - For Consent Decree

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Headworks								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Bar Screens	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
Screenings Washer & Compactor	5	1	25%	8,166	KWH	$ 0.1395	$ 1,139.09	
Grit Pumps	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
Vortex Grit Removal	2	1	100%	13,065	KWH	$ 0.1395	$ 1,822.55	
Grit Classifier & Washer	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
								$ 21,402.95
New Process Reactors								
Blowers				1,152,700	KWH	$ 0.1395	$ 160,801.65	
Mechanical Mixers				136,900	KWH	$ 0.1395	$ 19,097.55	
Internal Recycle				57,700	KWH	$ 0.1395	$ 8,049.15	
WAS Pumps (Centrifugal)	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
								$ 191,365.63
MBR								
Permeate Pumps				174,100	KWH	$ 0.1395	$ 24,286.95	
Backpulse Pumps				600	KWH	$ 0.1395	$ 83.70	
Membrane Blowers				817,300	KWH	$ 0.1395	$ 114,013.35	
Membrane RAS				327,900	KWH	$ 0.1395	$ 45,742.05	
Replacement Membranes							$ 270,000.00	
								$ 454,126.05
Disinfection								
UV Electricity	50	1	100%	326,622	KWH	$ 0.1395	$ 45,563.76	
								$ 45,563.76
Biosolids Processing								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Screw Press	3	1	15%	2,940	KWH	$ 0.1395	$ 410.07	
Compressor	1.5	1	15%	1,470	KWH	$ 1.1395	$ 1,674.84	
Sludge Feed Pump	10	2	15%	19,597	KWH	$ 2.1395	$ 41,928.46	
Polymer							$ 26,250.00	
Conveyors	2	1	15%	1,960	KWH	$ 3.1395	$ 6,152.58	
Sludge Disposal							$ 245,000.00	
								$ 335,528.69
Additional Loads								
Lights, Heating, Etc.								$ 1,099.82
NEW PI WWTF O&M YEARLY TOTAL								**$ 1,049,086.91**

NEW CSO O&M COST ESTIMATE

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Regulating Structure								
Automated Gate	1.5	2	5.00%	980	KWH	$ 0.1395	136.6913	$ 136.69
Offline Storage Tank								
Flushing Gates	2	1	5.00%	653	KWH	$ 0.1395	91.1275	
Pumps	15	1	5.00%	4,899	KWH	$ 0.1395	683.4564	
Controls	10	1	5.00%	3,266	KWH	$ 0.1395	455.6376	
Odor Control	20	1	5.00%	6,532	KWH	$ 0.1395	911.2752	
Labor				240	HR	$ 30.0000	7,200.0000	
								$ 9,341.50
NEW CSO TREATMENT O&M YEARLY TOTAL								**$ 9,478**

NEW COLLECTION SYSTEM O&M COST ESTIMATE (Not Required)

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
NEW COLLECTION SYSTEM O&M YEARLY TOTAL								**$ -**

O&M YEARLY TOTAL	**$ 1,058,565.09**
CONSENT DECREE O&M PRESENT VALUE (5%, 20 yrs)	**$13,200,000.00**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 8
MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

ADDITIONAL CAPITAL IMPROVEMENTS PLAN O&M COST

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
PIT Headworks								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Bar Screens	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
Screenings Washer & Compactor	5	1	25%	8,166	KWH	$ 0.1395	$ 1,139.09	
Grit Pumps	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
Vortex Grit Removal	2	1	100%	13,065	KWH	$ 0.1395	$ 1,822.55	
Grit Classifier & Washer	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
								$ 21,402.95
PIT SBR Secondary Treatment								
New SBR	66	1	100%	431,141	KWH	$ 0.1395	$ 60,144.16	$ 60,144.16
ADDITIONAL CIP O&M YEARLY TOTAL								**$ 81,547.11**
ADDITIONAL CIP O&M PRESENT VALUE (5%, 20 yrs)								**$1,100,000.00**

Cost Estimate Scenario 1B - Peirce Island Alternative TN 8
MBR Secondary Treatment at PI Site (6.2 MGD), PIT Site (1.7 MGD)

EXISTING O&M COSTS FROM FY 2010

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
Existing O&M Requirements (2010)								
REGULAR SALARIES							$ 435,359.00	
SALARIES - SLUDGE REMOVAL								
ON CALL MONITORING							$ 14,237.00	
PART TIME SALARIES								
OVERTIME							$ 49,318.00	
CERTIFICATION STIPEND								
SOCIAL SECURITY							$ 31,212.00	
MEDICARE							$ 7,323.00	
RETIREMENT							$ 48,077.00	
PROF SERVICES-ENGINEERING							$ 15,000.00	
PAGERS							$ 900.00	
TELEPHONE							$ 10,000.00	
CELLULAR PHONES							$ 4,500.00	
PROFESSIONAL SERVICES							$ 20,000.00	
SECURITY/ALARMS							$ 500.00	
PROF/SERVICES-CONTRACT								
ELECTRICITY							$ 240,000.00	
NATURAL GAS							$ 30,000.00	
HEATING OIL							$ 10,000.00	
PROPANE GAS							$ 2,400.00	
WATER /SEWER FEES							$ 46,000.00	
RUBBISH REMOVAL							$ 1,000.00	
SLUDGE DISPOSAL							$ 305,000.00	
GRIT AND GREASE REMOVAL							$ 62,000.00	
REPAIRS-STRUCTURAL							$ 3,000.00	
REPAIRS-ELECTRICAL							$ 500.00	
REPAIRS-PLUMBING							$ 5,000.00	
REPAIRS-EQUIPMENT							$ 150,000.00	
REPAIRS-FIRE ALARM SYS							$ 8,000.00	
REPAIRS-VEHICLE							$ 17,000.00	
REPAIRS-BLDINGS & GROUNDS							$ 30,000.00	
REPAIRS-COMPUTER EQUIP								
REPAIRS-OFFICE EQUIPMENT								
MAINTENANCE							$ 36,000.00	
SCADA EQUIPMENT							$ 40,000.00	
GENERATOR MAINTENANCE							$ 3,000.00	
RENTAL OTHER EQUIPMENT							$ 19,000.00	
PROPERTY INSURANCE								
ADVERTISING								
STATE CERTIFICATION							$ 1,000.00	
TRAINING-EDUCATION							$ 6,500.00	
PRINTING								
DUES PROFESSIONAL ORGANIZ							$ 1,200.00	
OPERATIONAL PERMITS								
TRAVEL AND CONFERENCE							$ 1,000.00	
TRAVEL REIMBURSEMENT							$ 2,500.00	
FIRST AID							$ 1,350.00	
OFFICE SUPPLIES							$ 3,200.00	
PRINTING SUPPLIES								
OPERATING SUPPLIES							$ 22,000.00	
GASOLINE								
DIESEL FUEL							$ 600.00	
MATERIALS-CHEMICALS							$ 858,000.00	
VEHICLE REPAIRS								
BOOKS & PERIODICALS								
CLOTHING ALLOWANCE								
CLOTHING							$ 7,500.00	
PROTECTIVE CLOTHING							$ 3,500.00	
TOOLS							$ 8,000.00	
OTHER IMPROVEMENTS							$ 25,000.00	
MACHINERY AND EQUIPMENT							$ 80,000.00	
DEPRECIATION							$ 585,552.00	
INTEREST-BONDED DEBT							$ 275,802.00	
INTEREST ON BOND,FROM PDA							$ 80,501.00	
EXISTING O&M YEARLY TOTAL								**$ 3,607,531**
EXISTING O&M PRESENT VALUE (5%, 20 yrs)								**$45,000,000.00**

Cost Estimate Scenario 3B - Pease Alternative TN 3 w/ Effluent PS
SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

PEASE WWTF UPGRADE CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Headworks					
Structure	2500	SF	$ 300.00	$ 750,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Bar Screens	2	EA	$ 250,000.00	$ 725,000.00	
Screenings Washer & Compactor	2	EA	$ 50,000.00	$ 145,000.00	
Grit Pumps	3	EA	$ 35,000.00	$ 152,250.00	
Vortex Grit Removal	2	EA	$ 75,000.00	$ 217,500.00	
Grit Classifier & Washer	2	EA	$ 40,000.00	$ 116,000.00	
					$ 2,192,750.00
Primary Clarifiers					
Structure (includes Excavation, Backfill and Concrete)	1	EA	$ 1,140,000.00	$ 1,140,000.00	
Equipment:					
Longitudinal Sludge Collector	4	EA	47,200	$ 273,760.00	
Cross Collector	4	EA	8,375	$ 48,575.00	
Scum Pipes	4	EA	11,575	$ 67,135.00	
					$ 1,529,470.00
PIT Biosolids Processing					
Structure	0	SF	$ 200.00	$ -	Reuse Existing
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Rotary Drum Thickener	2	EA	$ 150,000.00	$ 435,000.00	
Dewatering Screw Press	2	EA	$ 400,000.00	$ 1,160,000.00	
Conveyors	2	EA	$ 50,000.00	$ 145,000.00	
					$ 1,827,000.00
Sanitary Disinfection					
Equipment:					
Pump System	1	EA	$ 130,000.00	$ 130,000.00	
UV Disinfection	1	EA	$ 260,000.00	$ 260,000.00	
					$ 390,000.00
SBR Secondary Treatment					
Structure (includes Excavation, Backfill and Concrete)					
Additional 0.6 MGD Tanks	2	EA	$ 580,000.00	$ 1,160,000.00	
New 4-Tank System	2	EA	$ 1,800,000.00	$ 3,600,000.00	
Equipment:					
Rehab Existing Basins	1	EA	$ 200,000.00	$ 290,000.00	
First Additional 0.6 MGD Basin	1	SYS	$ 525,000.00	$ 761,250.00	
Second Additional 0.6 MGD Basin	1	SYS	$ 410,000.00	$ 594,500.00	
First New 2.25 MGD Basins	1	SYS	$ 1,137,000.00	$ 1,648,650.00	
Second New 2.25 MGD Basins	1	SYS	$ 1,137,000.00	$ 1,648,650.00	
					$ 9,703,050.00
Deep Bed Denitrification Filter					
Structure (includes Excavation, Backfill and Concrete)	1	EA	$ 570,000.00	$ 570,000.00	
Equipment:					
Internals	7900000	GPD	$ 0.70	$ 8,018,500.00	
Methanol Storage Tanks 45 day Storage (gal)	4637	GAL	$ 1.00	$ 6,723.59	
Methanol Feed Systems	4	EA	$ 4,000.00	$ 23,200.00	
					$ 8,618,423.59
Additional Structures and Modifications					
Equipment Building	10000	SF	$ 200.00	$ 2,000,000.00	
Methanol Storage Building	900	SF	$ 200.00	$ 180,000.00	
Sludge Storage Tank	4360	SF	$ 175.00	$ 763,000.00	
Outfall Modifications				$ 1,000,000.00	
					$ 3,943,000.00
ITEM TOTAL					**$ 28,203,693.59**
Yard Piping (12%)					$ 3,384,443.23
Electrical (22%)					$ 6,204,812.59
Instrumentation and Controls (6%)					$ 1,692,221.62
Site Work and Landscaping (7%)					$ 1,974,258.55
TOTAL CAPITAL					**$ 41,459,429.57**
Engineering (20%)					$ 8,291,885.91
Contingency (30%)					$ 12,437,828.87
TOTAL WWTF CAPITAL TO MEET CONSENT DECREE					**$ 62,200,000**

CSO CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	Subtotal
Debottlenecking					
Parrot Ave	2700	LF	$ 1,000.00	$ 2,700,000.00	
					$ 2,700,000.00
ITEM TOTAL					**$ 2,700,000.00**
Engineering (20%)					$ 540,000.00
Contingency (30%)					$ 810,000.00
TOTAL CSO CAPITAL TO MEET CONSENT DECREE					**$ 4,100,000.00**

COLLECTION SYSTEM CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	Subtotal
Deer St					
Pump Station Upgrades including Automated Flow Redire	1	LS	$ 300,000.00	$ 300,000.00	
Two 20" Force Mains	9650	LF	$ 250.00	$ 2,412,500.00	
Directional Drilling - Two Locations	1200	LF	$ 250.00	$ 300,000.00	
					$ 3,012,500.00
Mechanic St Pump Station					
New Dry Weather Pump Station	1	LS	$ 5,000,000.00	$ 5,000,000.00	
New Flow Diversion Structure	1	LS	$ 500,000.00	$ 500,000.00	
New 12" Force Main	2100	LF	$ 200.00	$ 420,000.00	
					$ 5,920,000.00
Piece Island Newcastle and CSO Washdown Pump Station					
Rehab Dewatering	1	LS	$ 25,000.00	$ 25,000.00	
New 6" Force Main	3200	LF	$ 100.00	$ 320,000.00	
New 6" Force Main - Bridge Crossing	300	LF	$ 300.00	$ 90,000.00	
					$ 435,000.00
Pease Effluent Pump Station and Forcemain					
Pump Station	1	LS	$ 1,500,000.00	$ 1,500,000.00	
36" Forcemain	6750	LF	$ 800.00	$ 5,400,000.00	
36" Forcemain Trench	9400	LF	$ 250.00	$ 2,350,000.00	
36" Forcemain Directional Drilling	850	LF	$ 500.00	$ 425,000.00	
					$ 9,675,000.00
COLLECTION SYSTEM CAPITAL					**$ 19,042,500.00**
Engineering (20%)					$ 3,808,500.00
Contingency (30%)					$ 5,712,750.00
TOTAL COLLECTION SYSTEM MODIFICATIONS CAPITAL					**$ 28,600,000.00**

TOTAL CAPITAL TO MEET CONSENT DECREE	**$ 94,900,000**

Cost Estimate Scenario 3B - Pease Alternative TN 3 w/ Effluent PS
SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

PEASE ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**Subtotal**
PIT Additional Structures and Modifications					
Lab/Office Expansion	1	EA	$ 100,000.00	$ 100,000.00	
Pump Building - Demo Existing	1	EA	$ 50,000.00	$ 50,000.00	
Pump Building - New	1848	SF	$ 200.00	$ 369,600.00	
Rehabilitate Shop Building	1	EA	$ 500,000.00	$ 500,000.00	
Garage	2240	SF	$ 125.00	$ 280,000.00	
					$ 1,299,600.00
Pease Item Total					**$ 1,299,600.00**
Site Work and Landscaping (5%)					$ 90,972.00
PEASE ADIITIONAL CAPITAL					**$ 1,390,572.00**
Engineering (20%)					$ 278,114.40
Contingency (30%)					$ 417,171.60
PEASE CIP ADDITIONAL CAPITAL					**$ 2,100,000**

PEIRCE ISLAND ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
PI Additional Structures and Modifications - CSO Treatment					
Primary Clarifier Drive Replacement	1	EA	$ 175,000.00	$ 253,750.00	
					$ 253,750.00
PI ITEM TOTAL					**$ 253,750.00**
Site Work and Landscaping (7%)					$ 17,762.50
Island Construction Premium (15%)					$ 38,062.50
PI ADDITIONAL CAPITAL					**$ 309,575.00**
Engineering (20%)					$ 61,915.00
Contingency (30%)					$ 92,872.50
PEIRCE ISLAND CIP ADDITIONAL CAPITAL					**$ 500,000**

ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
Lafayette Rd PS					
Pump Station Upgrades	1	LS	$ 2,250,000.00	$ 2,250,000.00	
					$ 2,250,000.00
ADIITIONAL CAPITAL					**$ 2,250,000.00**
Engineering (20%)					$ 450,000.00
Contingency (30%)					$ 675,000.00
REDIRECTION CIP ADDITIONAL CAPITAL					**$ 3,400,000**

TOTAL CIP ADDITIONAL CAPITAL	**$ 6,000,000**

Cost Estimate Scenario 3B - Pease Alternative TN 3 w/ Effluent PS
SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

NEW PIT WWTF O&M COST - For Consent Decree

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
PIT Headworks								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Bar Screens	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
Screenings Washer & Compactor	5	1	25%	8,166	KWH	$ 0.1395	$ 1,139.09	
Grit Pumps	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
Vortex Grit Removal	2	1	100%	13,065	KWH	$ 0.1395	$ 1,822.55	
Grit Classifier & Washer	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
								$ 21,402.95
PIT Primary Clarifiers								
Longitudinal Sludge Collector	2	4	100%	52,260	KWH	$ 0.1395	$ 7,290.20	
								$ 7,290.20
PIT Disinfection								
UV Electricity	70	1	100%	457,271	KWH	$ 0.1395	$ 63,789.26	
								$ 63,789.26
PIT SBR Secondary Treatment								
First Additional 0.6 MGD Basin	67	1	100%	437,673	KWH	$ 0.1395	$ 61,055.44	
Second Additional 0.6 MGD Basin	67	1	100%	437,673	KWH	$ 0.1395	$ 61,055.44	
First New 2.25 MGD Basins	155	1	100%	1,012,528	KWH	$ 0.1395	$ 141,247.65	
Second New 2.25 MGD Basins	155	1	100%	1,012,528	KWH	$ 0.1395	$ 141,247.65	
								$ 404,606.17
Deep Bed Denitrification Filter								
Internals	50	1	50%	163,311	KWH	$ 0.1395	$ 22,781.88	
Methanol Feed Systems	0.5	2	100%	6,532	KWH	$ 0.1395	$ 911.28	
Methanol				37611	GAL	$ 4.00	$ 150,443.48	
								$ 174,136.63
PIT Biosolids Processing								
Polymer							$ 26,250.00	
Sludge Disposal							$ 245,000.00	
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Rotary Drum Thickener	5	1	75%	24,497	KWH	$ 0.1395	$ 3,417.28	
								$ 288,780.03
PIT Additional Loads								
Lights, Heating, Etc.								$ 20,401.04
NEW PIT WWTF O&M YEARLY TOTAL								**$ 980,406.29**

NEW CSO O&M COST ESTIMATE

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
NEW CSO TREATMENT O&M YEARLY TOTAL								

NEW COLLECTION SYSTEM O&M COST ESTIMATE

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Mechanic St Pump Station								
Pumps	10.1	1	50%	32,989	KWH	$ 0.1395	$ 4,601.94	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 4,856.53
Piece Island Newcastle and CSO Washdown Pump Station								
Pumps	10.8	1	50%	35,275	KWH	$ 0.1395	$ 4,920.89	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 5,175.47
Pease Effluent PS								
New PS	82.4	1	50%	269,136	KWH	$ 0.1395	$ 37,544.54	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 37,799.12
NEW COLLECTION SYSTEM O&M YEARLY TOTAL								**$ 47,831**

NEW CD O&M YEARLY TOTAL	**$ 1,028,237.42**
CONSENT DECREE O&M PRESENT VALUE (5%, 20 yrs)	**$12,900,000.00**

Cost Estimate Scenario 3B - Pease Alternative TN 3 w/ Effluent PS
SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

ADDITIONAL CAPITAL IMPROVEMENTS PLAN O&M COST

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
ADDITIONAL CIP O&M YEARLY TOTAL								**$ -**
ADDITIONAL CIP O&M PRESENT VALUE (5%, 20 yrs)								**$0.00**

Cost Estimate Scenario 3B - Pease Alternative TN 3 w/ Effluent PS

SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

EXISTING O&M COSTS FROM FY 2010								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	
Existing O&M Requirements (2010)								
REGULAR SALARIES							$ 435,359.00	
SALARIES - SLUDGE REMOVAL								
ON CALL MONITORING							$ 14,237.00	
PART TIME SALARIES								
OVERTIME							$ 49,318.00	
CERTIFICATION STIPEND								
SOCIAL SECURITY							$ 31,212.00	
MEDICARE							$ 7,323.00	
RETIREMENT							$ 48,077.00	
PROF SERVICES-ENGINEERING							$ 15,000.00	
PAGERS							$ 900.00	
TELEPHONE							$ 10,000.00	
CELLULAR PHONES							$ 4,500.00	
PROFESSIONAL SERVICES							$ 20,000.00	
SECURITY/ALARMS							$ 500.00	
PROF/SERVICES-CONTRACT								
ELECTRICITY							$ 240,000.00	
NATURAL GAS							$ 30,000.00	
HEATING OIL							$ 10,000.00	
PROPANE GAS							$ 2,400.00	
WATER /SEWER FEES							$ 46,000.00	
RUBBISH REMOVAL							$ 1,000.00	
SLUDGE DISPOSAL							$ 305,000.00	
GRIT AND GREASE REMOVAL							$ 62,000.00	
REPAIRS-STRUCTURAL							$ 3,000.00	
REPAIRS-ELECTRICAL							$ 500.00	
REPAIRS-PLUMBING							$ 5,000.00	
REPAIRS-EQUIPMENT							$ 150,000.00	
REPAIRS-FIRE ALARM SYS							$ 8,000.00	
REPAIRS-VEHICLE							$ 17,000.00	
REPAIRS-BLDINGS & GROUNDS							$ 30,000.00	
REPAIRS-COMPUTER EQUIP								
REPAIRS-OFFICE EQUIPMENT								
MAINTENANCE							$ 36,000.00	
SCADA EQUIPMENT							$ 40,000.00	
GENERATOR MAINTENANCE							$ 3,000.00	
RENTAL OTHER EQUIPMENT							$ 19,000.00	
PROPERTY INSURANCE								
ADVERTISING								
STATE CERTIFICATION							$ 1,000.00	
TRAINING-EDUCATION							$ 6,500.00	
PRINTING								
DUES PROFESSIONAL ORGANIZ							$ 1,200.00	
OPERATIONAL PERMITS								
TRAVEL AND CONFERENCE							$ 1,000.00	
TRAVEL REIMBURSEMENT							$ 2,500.00	
FIRST AID							$ 1,350.00	
OFFICE SUPPLIES							$ 3,200.00	
PRINTING SUPPLIES								
OPERATING SUPPLIES							$ 22,000.00	
GASOLINE								
DIESEL FUEL							$ 600.00	
MATERIALS-CHEMICALS							$ 858,000.00	
VEHICLE REPAIRS								
BOOKS & PERIODICALS								
CLOTHING ALLOWANCE								
CLOTHING							$ 7,500.00	
PROTECTIVE CLOTHING							$ 3,500.00	
TOOLS							$ 8,000.00	
OTHER IMPROVEMENTS							$ 25,000.00	
MACHINERY AND EQUIPMENT							$ 80,000.00	
DEPRECIATION							$ 585,552.00	
INTEREST-BONDED DEBT							$ 275,802.00	
INTEREST ON BOND,FROM PDA							$ 80,501.00	
EXISTING O&M YEARLY TOTAL								**$ 3,607,531**
EXISTING O&M PRESENT VALUE (5%, 20 yrs)								**$45,000,000.00**

Cost Estimate Scenario 3B - Pease Alternative TN 5 w/ Effluent PS
SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

PEASE WWTF UPGRADE CAPITAL COST ESTIMATE - For Consent Decree					
ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Headworks					
Structure	2500	SF	$ 300.00	$ 750,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Bar Screens	2	EA	$ 250,000.00	$ 725,000.00	
Screenings Washer & Compactor	2	EA	$ 50,000.00	$ 145,000.00	
Grit Pumps	3	EA	$ 35,000.00	$ 152,250.00	
Vortex Grit Removal	2	EA	$ 75,000.00	$ 217,500.00	
Grit Classifier & Washer	2	EA	$ 40,000.00	$ 116,000.00	
					$ 2,192,750.00
Primary Clarifiers					
Structure (includes Excavation, Backfill and Concrete)	1	EA	$ 1,140,000.00	$ 1,140,000.00	
Equipment:					
Longitudinal Sludge Collector	4	EA	47,200	$ 273,760.00	
Cross Collector	4	EA	8,375	$ 48,575.00	
Scum Pipes	4	EA	11,575	$ 67,135.00	
					$ 1,529,470.00
PIT Biosolids Processing					
Structure	0	SF	$ 200.00	$ -	Reuse Existing
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Rotary Drum Thickener	2	EA	$ 150,000.00	$ 435,000.00	
Dewatering Screw Press	2	EA	$ 400,000.00	$ 1,160,000.00	
Conveyors	2	EA	$ 50,000.00	$ 145,000.00	
					$ 1,827,000.00
Sanitary Disinfection					
Equipment:					
Pump System	1	EA	$ 130,000.00	$ 130,000.00	
UV Disinfection	1	EA	$ 260,000.00	$ 260,000.00	
					$ 390,000.00
SBR Secondary Treatment					
Structure (includes Excavation, Backfill and Concrete)					
Additional 0.6 MGD Tanks	2	EA	$ 580,000.00	$ 1,160,000.00	
New 4-Tank System	2	EA	$ 1,800,000.00	$ 3,600,000.00	
Equipment:					
Rehab Existing Basins	1	EA	$ 200,000.00	$ 290,000.00	
First Additional 0.6 MGD Basin	1	SYS	$ 525,000.00	$ 761,250.00	
Second Additional 0.6 MGD Basin	1	SYS	$ 410,000.00	$ 594,500.00	
First New 2.25 MGD Basins	1	SYS	$ 1,137,000.00	$ 1,648,650.00	
Second New 2.25 MGD Basins	1	SYS	$ 1,137,000.00	$ 1,648,650.00	
					$ 9,703,050.00
Additional Structures and Modifications					
Equipment Building	10000	SF	$ 200.00	$ 2,000,000.00	
Methanol Storage Building	900	SF	$ 200.00	$ 180,000.00	
Sludge Storage Tank	4360	SF	$ 175.00	$ 763,000.00	
Outfall Modifications				$ 1,000,000.00	
					$ 3,943,000.00
ITEM TOTAL					**$ 19,585,270.00**
Yard Piping (12%)					$ 2,350,232.40
Electrical (22%)					$ 4,308,759.40
Instrumentation and Controls (6%)					$ 1,175,116.20
Site Work and Landscaping (7%)					$ 1,370,968.90
TOTAL CAPITAL					**$ 28,790,346.90**
Engineering (20%)					$ 5,758,069.38
Contingency (30%)					$ 8,637,104.07
TOTAL WWTF CAPITAL TO MEET CONSENT DECREE					**$ 43,200,000**

CSO CAPITAL COST ESTIMATE - For Consent Decree					
ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	Subtotal
Debottlenecking					
Parrot Ave	2700	LF	$ 1,000.00	$ 2,700,000.00	
					$ 2,700,000.00
ITEM TOTAL					**$ 2,700,000.00**
Engineering (20%)					$ 540,000.00
Contingency (30%)					$ 810,000.00
TOTAL CSO CAPITAL TO MEET CONSENT DECREE					**$ 4,100,000.00**

COLLECTION SYSTEM CAPITAL COST ESTIMATE - For Consent Decree					
ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	Subtotal
Deer St					
Pump Station Upgrades including Automated Flow Redire	1	LS	$ 300,000.00	$ 300,000.00	
Two 20" Force Mains	9650	LF	$ 250.00	$ 2,412,500.00	
Directional Drilling - Two Locations	1200	LF	$ 250.00	$ 300,000.00	
					$ 3,012,500.00
Mechanic St Pump Station					
New Dry Weather Pump Station	1	LS	$ 5,000,000.00	$ 5,000,000.00	
New Flow Diversion Structure	1	LS	$ 500,000.00	$ 500,000.00	
New 12" Force Main	2100	LF	$ 200.00	$ 420,000.00	
					$ 5,920,000.00
Piece Island Newcastle and CSO Washdown Pump Station					
Redhab Dewatering	1	LS	$ 25,000.00	$ 25,000.00	
New 6" Force Main	3200	LF	$ 100.00	$ 320,000.00	
New 6" Force Main - Bridge Crossing	300	LF	$ 300.00	$ 90,000.00	
					$ 435,000.00
Pease Effluent Pump Station and Forcemain					
Pump Station	1	LS	$ 1,500,000.00	$ 1,500,000.00	
36" Forcemain	6750	LF	$ 800.00	$ 5,400,000.00	
36" Forcemain Trench	9400	LF	$ 250.00	$ 2,350,000.00	
36" Forcemain Directional Drilling	850	LF	$ 500.00	$ 425,000.00	
					$ 9,675,000.00
COLLECTION SYSTEM CAPITAL					**$ 19,042,500.00**
Engineering (20%)					$ 3,808,500.00
Contingency (30%)					$ 5,712,750.00
TOTAL COLLECTION SYSTEM MODIFICATIONS CAPITAL					**$ 28,600,000.00**

TOTAL CAPITAL TO MEET CONSENT DECREE	**$ 75,900,000**

Cost Estimate Scenario 3B - Pease Alternative TN 5 w/ Effluent PS

SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

PEASE ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**Subtotal**
PIT Additional Structures and Modifications					
Lab/Office Expansion	1	EA	$ 100,000.00	$ 100,000.00	
Pump Building - Demo Existing	1	EA	$ 50,000.00	$ 50,000.00	
Pump Building - New	1848	SF	$ 200.00	$ 369,600.00	
Rehabilitate Shop Building	1	EA	$ 500,000.00	$ 500,000.00	
Garage	2240	SF	$ 125.00	$ 280,000.00	
					$ 1,299,600.00
Pease Item Total					**$ 1,299,600.00**
Site Work and Landscaping (5%)					$ 90,972.00
PEASE ADIITIONAL CAPITAL					**$ 1,390,572.00**
Engineering (20%)					$ 278,114.40
Contingency (30%)					$ 417,171.60
PEASE CIP ADDITIONAL CAPITAL					**$ 2,100,000**

PEIRCE ISLAND ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
PI Additional Structures and Modifications - CSO Treatment					
Primary Clarifier Drive Replacement	1	EA	$ 175,000.00	$ 253,750.00	
					$ 253,750.00
PI ITEM TOTAL					**$ 253,750.00**
Site Work and Landscaping (7%)					$ 17,762.50
Island Construction Premium (15%)					$ 38,062.50
PI ADDITIONAL CAPITAL					**$ 309,575.00**
Engineering (20%)					$ 61,915.00
Contingency (30%)					$ 92,872.50
PEIRCE ISLAND CIP ADDITIONAL CAPITAL					**$ 500,000**

ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
Lafayette Rd PS					
Pump Station Upgrades	1	LS	$ 2,250,000.00	$ 2,250,000.00	
					$ 2,250,000.00
ADIITIONAL CAPITAL					**$ 2,250,000.00**
Engineering (20%)					$ 450,000.00
Contingency (30%)					$ 675,000.00
REDIRECTION CIP ADDITIONAL CAPITAL					**$ 3,400,000**

TOTAL CIP ADDITIONAL CAPITAL	**$ 6,000,000**

Cost Estimate Scenario 3B - Pease Alternative TN 5 w/ Effluent PS
SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

NEW PIT WWTF O&M COST - For Consent Decree

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
PIT Headworks								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Bar Screens	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
Screenings Washer & Compactor	5	1	25%	8,166	KWH	$ 0.1395	$ 1,139.09	
Grit Pumps	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
Vortex Grit Removal	2	1	100%	13,065	KWH	$ 0.1395	$ 1,822.55	
Grit Classifier & Washer	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
								$ 21,402.95
PIT Primary Clarifiers								
Longitudinal Sludge Collector	2	4	100%	52,260	KWH	$ 0.1395	$ 7,290.20	
								$ 7,290.20
PIT Disinfection								
UV Electricity	70	2	100%	914,541	KWH	$ 0.1395	$ 127,578.52	
								$ 127,578.52
PIT SBR Secondary Treatment								
First Additional 0.6 MGD Basin	67	1	100%	437,673	KWH	$ 0.1395	$ 61,055.44	
Second Additional 0.6 MGD Basin	67	1	100%	437,673	KWH	$ 0.1395	$ 61,055.44	
First New 2.25 MGD Basins	155	1	100%	1,012,528	KWH	$ 0.1395	$ 141,247.65	
Second New 2.25 MGD Basins	155	1	100%	1,012,528	KWH	$ 0.1395	$ 141,247.65	
Methanol Feed Systems	0.5	2	100%	6,532	KWH	$ 0.1395	$ 911.28	
Methanol				15671	GAL	$ 4.00	$ 62,684.78	
								$ 468,202.23
PIT Biosolids Processing								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Rotary Drum Thickener	5	1	75%	24,497	KWH	$ 0.1395	$ 3,417.28	
Polymer							$ 26,250.00	
Sludge Disposal							$ 245,000.00	
								$ 288,780.03
PIT Additional Loads								
Lights, Heating, Etc.								$ 20,401.04
NEW PIT WWTF O&M YEARLY TOTAL								**$ 933,654.98**

NEW CSO O&M COST ESTIMATE

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
NEW CSO TREATMENT O&M YEARLY TOTAL								

NEW COLLECTION SYSTEM O&M COST ESTIMATE

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Mechanic St Pump Station								
Pumps	10.1	1	50%	32,989	KWH	$ 0.1395	$ 4,601.94	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 4,856.53
Piece Island Newcastle and CSO Washdown Pump Station								
Pumps	10.8	1	50%	35,275	KWH	$ 0.1395	$ 4,920.89	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 5,175.47
Pease Effluent PS								
New PS	82.4	1	50%	269,136	KWH	$ 0.1395	$ 37,544.54	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 37,799.12
NEW COLLECTION SYSTEM O&M YEARLY TOTAL								**$ 47,831**

NEW CD O&M YEARLY TOTAL	**$ 981,486.11**
CONSENT DECREE O&M PRESENT VALUE (5%, 20 yrs)	**$12,300,000.00**

Cost Estimate Scenario 3B - Pease Alternative TN 5 w/ Effluent PS
SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

ADDITIONAL CAPITAL IMPROVEMENTS PLAN O&M COST

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
PI Biosolids Upgrade								
ADDITIONAL CIP O&M YEARLY TOTAL								**$ -**
ADDITIONAL CIP O&M PRESENT VALUE (5%, 20 yrs)								**$0.00**

Cost Estimate Scenario 3B - Pease Alternative TN 5 w/ Effluent PS
SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

EXISTING O&M COSTS FROM FY 2010								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	
Existing O&M Requirements (2010)								
REGULAR SALARIES							$ 435,359.00	
SALARIES - SLUDGE REMOVAL								
ON CALL MONITORING							$ 14,237.00	
PART TIME SALARIES								
OVERTIME							$ 49,318.00	
CERTIFICATION STIPEND								
SOCIAL SECURITY							$ 31,212.00	
MEDICARE							$ 7,323.00	
RETIREMENT							$ 48,077.00	
PROF SERVICES-ENGINEERING							$ 15,000.00	
PAGERS							$ 900.00	
TELEPHONE							$ 10,000.00	
CELLULAR PHONES							$ 4,500.00	
PROFESSIONAL SERVICES							$ 20,000.00	
SECURITY/ALARMS							$ 500.00	
PROF/SERVICES-CONTRACT								
ELECTRICITY							$ 240,000.00	
NATURAL GAS							$ 30,000.00	
HEATING OIL							$ 10,000.00	
PROPANE GAS							$ 2,400.00	
WATER /SEWER FEES							$ 46,000.00	
RUBBISH REMOVAL							$ 1,000.00	
SLUDGE DISPOSAL							$ 305,000.00	
GRIT AND GREASE REMOVAL							$ 62,000.00	
REPAIRS-STRUCTURAL							$ 3,000.00	
REPAIRS-ELECTRICAL							$ 500.00	
REPAIRS-PLUMBING							$ 5,000.00	
REPAIRS-EQUIPMENT							$ 150,000.00	
REPAIRS-FIRE ALARM SYS							$ 8,000.00	
REPAIRS-VEHICLE							$ 17,000.00	
REPAIRS-BLDINGS & GROUNDS							$ 30,000.00	
REPAIRS-COMPUTER EQUIP								
REPAIRS-OFFICE EQUIPMENT								
MAINTENANCE							$ 36,000.00	
SCADA EQUIPMENT							$ 40,000.00	
GENERATOR MAINTENANCE							$ 3,000.00	
RENTAL OTHER EQUIPMENT							$ 19,000.00	
PROPERTY INSURANCE								
ADVERTISING								
STATE CERTIFICATION							$ 1,000.00	
TRAINING-EDUCATION							$ 6,500.00	
PRINTING								
DUES PROFESSIONAL ORGANIZ							$ 1,200.00	
OPERATIONAL PERMITS								
TRAVEL AND CONFERENCE							$ 1,000.00	
TRAVEL REIMBURSEMENT							$ 2,500.00	
FIRST AID							$ 1,350.00	
OFFICE SUPPLIES							$ 3,200.00	
PRINTING SUPPLIES								
OPERATING SUPPLIES							$ 22,000.00	
GASOLINE								
DIESEL FUEL							$ 600.00	
MATERIALS-CHEMICALS							$ 858,000.00	
VEHICLE REPAIRS								
BOOKS & PERIODICALS								
CLOTHING ALLOWANCE								
CLOTHING							$ 7,500.00	
PROTECTIVE CLOTHING							$ 3,500.00	
TOOLS							$ 8,000.00	
OTHER IMPROVEMENTS							$ 25,000.00	
MACHINERY AND EQUIPMENT							$ 80,000.00	
DEPRECIATION							$ 585,552.00	
INTEREST-BONDED DEBT							$ 275,802.00	
INTEREST ON BOND,FROM PDA							$ 80,501.00	
EXISTING O&M YEARLY TOTAL								**$ 3,607,531**
EXISTING O&M PRESENT VALUE (5%, 20 yrs)								**$45,000,000.00**

Cost Estimate Scenario 3B - Pease Alternative TN 8 w/ Effluent PS

SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

PEASE WWTF UPGRADE CAPITAL COST ESTIMATE - For Consent Decree					
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**SUBTOTAL**
Headworks					
Structure	2500	SF	$ 300.00	$ 750,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Bar Screens	2	EA	$ 250,000.00	$ 725,000.00	
Screenings Washer & Compactor	2	EA	$ 50,000.00	$ 145,000.00	
Grit Pumps	3	EA	$ 35,000.00	$ 152,250.00	
Vortex Grit Removal	2	EA	$ 75,000.00	$ 217,500.00	
Grit Classifier & Washer	2	EA	$ 40,000.00	$ 116,000.00	
					$ 2,192,750.00
Primary Clarifiers					
Structure (includes Excavation, Backfill and Concrete)	1	EA	$ 1,140,000.00	$ 1,140,000.00	
Equipment:					
Longitudinal Sludge Collector	4	EA	47,200	$ 273,760.00	
Cross Collector	4	EA	8,375	$ 48,575.00	
Scum Pipes	4	EA	11,575	$ 67,135.00	
					$ 1,529,470.00
PIT Biosolids Processing					
Structure	0	SF	$ 200.00	$ -	Reuse Existing
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Rotary Drum Thickener	2	EA	$ 150,000.00	$ 435,000.00	
Dewatering Screw Press	2	EA	$ 400,000.00	$ 1,160,000.00	
Conveyors	2	EA	$ 50,000.00	$ 145,000.00	
					$ 1,827,000.00
Sanitary Disinfection					
Equipment:					
Pump System	1	EA	$ 130,000.00	$ 130,000.00	
UV Disinfection	1	EA	$ 260,000.00	$ 260,000.00	
					$ 390,000.00
SBR Secondary Treatment					
Structure (includes Excavation, Backfill and Concrete)					
Additional 0.6 MGD Tanks	2	EA	$ 580,000.00	$ 1,160,000.00	
New 4-Tank System	2	EA	$ 1,800,000.00	$ 3,600,000.00	
Equipment:					
Rehab Existing Basins	1	EA	$ 200,000.00	$ 290,000.00	
First Additional 0.6 MGD Basin	1	SYS	$ 490,000.00	$ 710,500.00	
Second Additional 0.6 MGD Basin	1	SYS	$ 390,000.00	$ 565,500.00	
First New 2.25 MGD Basins	1	SYS	$ 1,037,000.00	$ 1,503,650.00	
Second New 2.25 MGD Basins	1	SYS	$ 1,037,000.00	$ 1,503,650.00	
					$ 9,333,300.00
Additional Structures and Modifications					
Equipment Building	10000	SF	$ 200.00	$ 2,000,000.00	
Sludge Storage Tank	4360	SF	$ 175.00	$ 763,000.00	
Outfall Modifications				$ 1,000,000.00	
					$ 3,763,000.00
ITEM TOTAL					**$ 19,035,520.00**
Yard Piping (12%)					$ 2,284,262.40
Electrical (22%)					$ 4,187,814.40
Instrumentation and Controls (6%)					$ 1,142,131.20
Site Work and Landscaping (7%)					$ 1,332,486.40
TOTAL CAPITAL					**$ 27,982,214.40**
Engineering (20%)					$ 5,596,442.88
Contingency (30%)					$ 8,394,664.32
TOTAL WWTF CAPITAL TO MEET CONSENT DECREE					**$ 42,000,000**

CSO CAPITAL COST ESTIMATE - For Consent Decree					
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**Subtotal**
Debottlenecking					
Parrot Ave	2700	LF	$ 1,000.00	$ 2,700,000.00	
					$ 2,700,000.00
PI TOTAL CAPITAL					**$ 2,700,000.00**
Engineering (20%)					$ 540,000.00
Contingency (30%)					$ 810,000.00
TOTAL CSO CAPITAL TO MEET CONSENT DECREE					**$ 4,100,000.00**

COLLECTION SYSTEM CAPITAL COST ESTIMATE - For Consent Decree					
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**Subtotal**
Deer St					
Pump Station Upgrades including Automated Flow Redire	1	LS	$ 300,000.00	$ 300,000.00	
Two 20" Force Mains	9650	LF	$ 250.00	$ 2,412,500.00	
Directional Drilling - Two Locations	1200	LF	$ 250.00	$ 300,000.00	
					$ 3,012,500.00
Mechanic St Pump Station					
New Dry Weather Pump Station	1	LS	$ 5,000,000.00	$ 5,000,000.00	
New Flow Diversion Structure	1	LS	$ 500,000.00	$ 500,000.00	
New 12" Force Main	2100	LF	$ 200.00	$ 420,000.00	
					$ 5,920,000.00
Piece Island Newcastle and CSO Washdown Pump Station					
Rehab Dewatering	1	LS	$ 25,000.00	$ 25,000.00	
New 6" Force Main	3200	LF	$ 100.00	$ 320,000.00	
New 6" Force Main - Bridge Crossing	300	LF	$ 300.00	$ 90,000.00	
					$ 435,000.00
Pease Effluent Pump Station and Forcemain					
Pump Station	1	LS	$ 1,500,000.00	$ 1,500,000.00	
36" Forcemain - SubAq	6750	LF	$ 800.00	$ 5,400,000.00	
36" Forcemain Trench	9400	LF	$ 250.00	$ 2,350,000.00	
36" Forcemain Directional Drilling	850	LF	$ 500.00	$ 425,000.00	
					$ 9,675,000.00
COLLECTION SYSTEM CAPITAL					**$ 19,042,500.00**
Engineering (20%)					$ 3,808,500.00
Contingency (30%)					$ 5,712,750.00
TOTAL COLLECTION SYSTEM MODIFICATIONS CAPITAL					**$ 28,600,000.00**

TOTAL CAPITAL TO MEET CONSENT DECREE	**$ 74,700,000**

Cost Estimate Scenario 3B - Pease Alternative TN 8 w/ Effluent PS

SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

PEASE ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE						
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**Subtotal**	
PIT Additional Structures and Modifications						
Lab/Office Expansion	1	EA	$ 100,000.00	$ 100,000.00		
Pump Building - Demo Existing	1	EA	$ 50,000.00	$ 50,000.00		
Pump Building - New	1848	SF	$ 200.00	$ 369,600.00		
Rehabilitate Shop Building	1	EA	$ 500,000.00	$ 500,000.00		
Garage	2240	SF	$ 125.00	$ 280,000.00		
					$	1,299,600.00
Pease Item Total					**$**	**1,299,600.00**
Site Work and Landscaping (5%)					$	90,972.00
PEASE ADIITIONAL CAPITAL					**$**	**1,390,572.00**
Engineering (20%)					$	278,114.40
Contingency (30%)					$	417,171.60
PEASE CIP ADDITIONAL CAPITAL					**$**	**2,100,000**

PEIRCE ISLAND ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE						
PI Additional Structures and Modifications - CSO Treatment						
Primary Clarifier Drive Replacement	1	EA	$ 175,000.00	$ 253,750.00		
					$	253,750.00
PI ITEM TOTAL					**$**	**253,750.00**
Site Work and Landscaping (7%)					$	17,762.50
Island Construction Premium (15%)					$	38,062.50
PI ADDITIONAL CAPITAL					**$**	**309,575.00**
Engineering (20%)					$	61,915.00
Contingency (30%)					$	92,872.50
PEIRCE ISLAND CIP ADDITIONAL CAPITAL					**$**	**500,000**

ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE						
Lafayette Rd PS						
Pump Station Upgrades	1	LS	$ 2,250,000.00	$ 2,250,000.00		
					$	2,250,000.00
ADIITIONAL CAPITAL					**$**	**2,250,000.00**
Engineering (20%)					$	450,000.00
Contingency (30%)					$	675,000.00
REDIRECTION CIP ADDITIONAL CAPITAL					**$**	**3,400,000**

TOTAL CIP ADDITIONAL CAPITAL	**$**	**6,000,000**

Cost Estimate Scenario 3B - Pease Alternative TN 8 w/ Effluent PS
SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

NEW PIT WWTF O&M COST - For Consent Decree								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**SUBTOTAL**
PIT Headworks								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Bar Screens	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
Screenings Washer & Compactor	5	1	25%	8,166	KWH	$ 0.1395	$ 1,139.09	
Grit Pumps	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
Vortex Grit Removal	2	1	100%	13,065	KWH	$ 0.1395	$ 1,822.55	
Grit Classifier & Washer	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
								$ 21,402.95
PIT Primary Clarifiers								
Longitudinal Sludge Collector	2	4	100%	52,260	KWH	$ 0.1395	$ 7,290.20	
								$ 7,290.20
PIT Disinfection								
UV Electricity	140	1	100%	914,541	KWH	$ 0.1395	$ 127,578.52	
								$ 127,578.52
PIT SBR Secondary Treatment								
First Additional 0.6 MGD Basin	66	1	100%	431,141	KWH	$ 0.1395	$ 60,144.16	
Second Additional 0.6 MGD Basin	66	1	100%	431,141	KWH	$ 0.1395	$ 60,144.16	
First New 2.25 MGD Basins	150	1	100%	979,866	KWH	$ 0.1395	$ 136,691.28	
Second New 2.25 MGD Basins	150	1	100%	979,866	KWH	$ 0.1395	$ 136,691.28	
								$ 393,670.87
PIT Biosolids Processing								
Polymer							$ 26,250.00	
Sludge Disposal							$ 245,000.00	
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Rotary Drum Thickener	5	1	75%	24,497	KWH	$ 0.1395	$ 3,417.28	
								$ 288,780.03
PIT Additional Loads								
Lights, Heating, Etc.								$ 20,401.04
NEW PIT WWTF O&M YEARLY TOTAL								**$ 859,123.62**

NEW CSO O&M COST ESTIMATE								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**SUBTOTAL**
NEW CSO TREATMENT O&M YEARLY TOTAL								**$ -**

NEW COLLECTION SYSTEM O&M COST ESTIMATE								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**SUBTOTAL**
Mechanic St Pump Station								
Pumps	10.1	1	50%	32,989	KWH	$ 0.1395	$ 4,601.94	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 4,856.53
Piece Island Newcastle and CSO Washdown Pump Station								
Pumps	10.8	1	50%	35,275	KWH	$ 0.1395	$ 4,920.89	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 5,175.47
Pease Effluent PS								
New PS	82.4	1	50%	269,136	KWH	$ 0.1395	$ 37,544.54	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 37,799.12
NEW COLLECTION SYSTEM O&M YEARLY TOTAL								**$ 47,831**

NEW CD O&M YEARLY TOTAL	**$ 906,954.75**
CONSENT DECREE O&M PRESENT VALUE (5%, 20 yrs)	**$11,400,000.00**

Cost Estimate Scenario 3B - Pease Alternative TN 8 w/ Effluent PS
SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

ADDITIONAL CAPITAL IMPROVEMENTS PLAN O&M COST								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**SUBTOTAL**
ADDITIONAL CIP O&M YEARLY TOTAL								**$ -**
ADDITIONAL CIP O&M PRESENT VALUE (5%, 20 yrs)								**$0.00**

Cost Estimate Scenario 3B - Pease Alternative TN 8 w/ Effluent PS

SBR Secondary Treatment at PIT Site (7.9 MGD), PI Outfall

EXISTING O&M COSTS FROM FY 2010								
ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
Existing O&M Requirements (2010)								
REGULAR SALARIES							$ 435,359.00	
SALARIES - SLUDGE REMOVAL								
ON CALL MONITORING							$ 14,237.00	
PART TIME SALARIES								
OVERTIME							$ 49,318.00	
CERTIFICATION STIPEND								
SOCIAL SECURITY							$ 31,212.00	
MEDICARE							$ 7,323.00	
RETIREMENT							$ 48,077.00	
PROF SERVICES-ENGINEERING							$ 15,000.00	
PAGERS							$ 900.00	
TELEPHONE							$ 10,000.00	
CELLULAR PHONES							$ 4,500.00	
PROFESSIONAL SERVICES							$ 20,000.00	
SECURITY/ALARMS							$ 500.00	
PROF/SERVICES-CONTRACT								
ELECTRICITY							$ 240,000.00	
NATURAL GAS							$ 30,000.00	
HEATING OIL							$ 10,000.00	
PROPANE GAS							$ 2,400.00	
WATER /SEWER FEES							$ 46,000.00	
RUBBISH REMOVAL							$ 1,000.00	
SLUDGE DISPOSAL							$ 305,000.00	
GRIT AND GREASE REMOVAL							$ 62,000.00	
REPAIRS-STRUCTURAL							$ 3,000.00	
REPAIRS-ELECTRICAL							$ 500.00	
REPAIRS-PLUMBING							$ 5,000.00	
REPAIRS-EQUIPMENT							$ 150,000.00	
REPAIRS-FIRE ALARM SYS							$ 8,000.00	
REPAIRS-VEHICLE							$ 17,000.00	
REPAIRS-BLDINGS & GROUNDS							$ 30,000.00	
REPAIRS-COMPUTER EQUIP								
REPAIRS-OFFICE EQUIPMENT								
MAINTENANCE							$ 36,000.00	
SCADA EQUIPMENT							$ 40,000.00	
GENERATOR MAINTENANCE							$ 3,000.00	
RENTAL OTHER EQUIPMENT							$ 19,000.00	
PROPERTY INSURANCE								
ADVERTISING								
STATE CERTIFICATION							$ 1,000.00	
TRAINING-EDUCATION							$ 6,500.00	
PRINTING								
DUES PROFESSIONAL ORGANIZ							$ 1,200.00	
OPERATIONAL PERMITS								
TRAVEL AND CONFERENCE							$ 1,000.00	
TRAVEL REIMBURSEMENT							$ 2,500.00	
FIRST AID							$ 1,350.00	
OFFICE SUPPLIES							$ 3,200.00	
PRINTING SUPPLIES								
OPERATING SUPPLIES							$ 22,000.00	
GASOLINE								
DIESEL FUEL							$ 600.00	
MATERIALS-CHEMICALS							$ 858,000.00	
VEHICLE REPAIRS								
BOOKS & PERIODICALS								
CLOTHING ALLOWANCE								
CLOTHING							$ 7,500.00	
PROTECTIVE CLOTHING							$ 3,500.00	
TOOLS							$ 8,000.00	
OTHER IMPROVEMENTS							$ 25,000.00	
MACHINERY AND EQUIPMENT							$ 80,000.00	
DEPRECIATION							$ 585,552.00	
INTEREST-BONDED DEBT							$ 275,802.00	
INTEREST ON BOND,FROM PDA							$ 80,501.00	
EXISTING O&M YEARLY TOTAL								**$ 3,607,531**
EXISTING O&M PRESENT VALUE (5%, 20 yrs)								**$45,000,000.00**

Cost Estimate Scenario 3B - Pease Alternative TN 3
SBR Secondary Treatment at PIT Site (7.9 MGD)

PEASE WWTF UPGRADE CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Headworks					
Structure	2500	SF	$ 300.00	$ 750,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Bar Screens	2	EA	$ 250,000.00	$ 725,000.00	
Screenings Washer & Compactor	2	EA	$ 50,000.00	$ 145,000.00	
Grit Pumps	3	EA	$ 35,000.00	$ 152,250.00	
Vortex Grit Removal	2	EA	$ 75,000.00	$ 217,500.00	
Grit Classifier & Washer	2	EA	$ 40,000.00	$ 116,000.00	
					$ 2,192,750.00
Primary Clarifiers					
Structure (includes Excavation, Backfill and Concrete)	1	EA	$ 1,140,000.00	$ 1,140,000.00	
Equipment:					
Longitudinal Sludge Collector	4	EA	47,200	$ 273,760.00	
Cross Collector	4	EA	8,375	$ 48,575.00	
Scum Pipes	4	EA	11,575	$ 67,135.00	
					$ 1,529,470.00
PIT Biosolids Processing					
Structure	0	SF	$ 200.00	$ -	Reuse Existing
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Rotary Drum Thickener	2	EA	$ 150,000.00	$ 435,000.00	
Dewatering Screw Press	2	EA	$ 400,000.00	$ 1,160,000.00	
Conveyors	2	EA	$ 50,000.00	$ 145,000.00	
					$ 1,827,000.00
Sanitary Disinfection					
Equipment:					
Pump System	1	EA	$ 130,000.00	$ 130,000.00	
UV Disinfection	1	EA	$ 260,000.00	$ 260,000.00	
					$ 390,000.00
SBR Secondary Treatment					
Structure (includes Excavation, Backfill and Concrete)					
Additional 0.6 MGD Tanks	2	EA	$ 580,000.00	$ 1,160,000.00	
New 4-Tank System	2	EA	$ 1,800,000.00	$ 3,600,000.00	
Equipment:					
Rehab Existing Basins	1	EA	$ 200,000.00	$ 290,000.00	
First Additional 0.6 MGD Basin	1	SYS	$ 525,000.00	$ 761,250.00	
Second Additional 0.6 MGD Basin	1	SYS	$ 410,000.00	$ 594,500.00	
First New 2.25 MGD Basins	1	SYS	$ 1,137,000.00	$ 1,648,650.00	
Second New 2.25 MGD Basins	1	SYS	$ 1,137,000.00	$ 1,648,650.00	
					$ 9,703,050.00
Deep Bed Denitrification Filter					
Structure (includes Excavation, Backfill and Concrete)	1	EA	$ 570,000.00	$ 570,000.00	
Equipment:					
Internals	7900000	GPD	$ 0.70	$ 8,018,500.00	
Methanol Storage Tanks 45 day Storage (gal)	4637	GAL	$ 1.00	$ 6,723.59	
Methanol Feed Systems	4	EA	$ 4,000.00	$ 23,200.00	
					$ 8,618,423.59
Additional Structures and Modifications					
Equipment Building	10000	SF	$ 200.00	$ 2,000,000.00	
Methanol Storage Building	900	SF	$ 200.00	$ 180,000.00	
Sludge Storage Tank	4360	SF	$ 175.00	$ 763,000.00	
Outfall Modifications				$ 1,000,000.00	
					$ 3,943,000.00
ITEM TOTAL					**$ 28,203,693.59**
Yard Piping (12%)					$ 3,384,443.23
Electrical (22%)					$ 6,204,812.59
Instrumentation and Controls (6%)					$ 1,692,221.62
Site Work and Landscaping (7%)					$ 1,974,258.55
TOTAL CAPITAL					**$ 41,459,429.57**
Engineering (20%)					$ 8,291,885.91
Contingency (30%)					$ 12,437,828.87
TOTAL WWTF CAPITAL TO MEET CONSENT DECREE					**$ 62,200,000**

CSO CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	Subtotal
Debottlenecking					
Parrot Ave	2700	LF	$ 1,000.00	$ 2,700,000.00	
					$ 2,700,000.00
ITEM TOTAL					**$ 2,700,000.00**
Engineering (20%)					$ 540,000.00
Contingency (30%)					$ 810,000.00
TOTAL CSO CAPITAL TO MEET CONSENT DECREE					**$ 4,100,000.00**

COLLECTION SYSTEM CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	Subtotal
Deer St					
Pump Station Upgrades including Automated Flow Redire	1	LS	$ 300,000.00	$ 300,000.00	
Two 20" Force Mains	9650	LF	$ 250.00	$ 2,412,500.00	
Directional Drilling - Two Locations	1200	LF	$ 250.00	$ 300,000.00	
					$ 3,012,500.00
Mechanic St Pump Station					
New Dry Weather Pump Station	1	LS	$ 5,000,000.00	$ 5,000,000.00	
New Flow Diversion Structure	1	LS	$ 500,000.00	$ 500,000.00	
New 12" Force Main	2100	LF	$ 200.00	$ 420,000.00	
					$ 5,920,000.00
Piece Island Newcastle and CSO Washdown Pump Station					
Rehab Dewatering	1	LS	$ 25,000.00	$ 25,000.00	
New 6" Force Main	3200	LF	$ 100.00	$ 320,000.00	
New 6" Force Main - Bridge Crossing	300	LF	$ 300.00	$ 90,000.00	
					$ 435,000.00
COLLECTION SYSTEM CAPITAL					**$ 9,367,500.00**
Engineering (20%)					$ 1,873,500.00
Contingency (30%)					$ 2,810,250.00
TOTAL COLLECTION SYSTEM MODIFICATIONS CAPITAL					**$ 14,100,000.00**

TOTAL CAPITAL TO MEET CONSENT DECREE	**$ 80,400,000**

Cost Estimate Scenario 3B - Pease Alternative TN 3
SBR Secondary Treatment at PIT Site (7.9 MGD)

PEASE ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE							
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**		**AMOUNT**	**Subtotal**	
PIT Additional Structures and Modifications							
Lab/Office Expansion	1	EA	$ 100,000.00	$	100,000.00		
Pump Building - Demo Existing	1	EA	$ 50,000.00	$	50,000.00		
Pump Building - New	1848	SF	$ 200.00	$	369,600.00		
Rehabilitate Shop Building	1	EA	$ 500,000.00	$	500,000.00		
Garage	2240	SF	$ 125.00	$	280,000.00		
						$	1,299,600.00
Pease Item Total						**$**	**1,299,600.00**
Site Work and Landscaping (5%)						$	90,972.00
PEASE ADIITIONAL CAPITAL						**$**	**1,390,572.00**
Engineering (20%)						$	278,114.40
Contingency (30%)						$	417,171.60
PEASE CIP ADDITIONAL CAPITAL						**$**	**2,100,000**

PEIRCE ISLAND ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE							
PI Additional Structures and Modifications - CSO Treatment							
Primary Clarifier Drive Replacement	1	EA	$ 175,000.00	$	253,750.00		
						$	253,750.00
PI ITEM TOTAL						**$**	**253,750.00**
Site Work and Landscaping (7%)						$	17,762.50
Island Construction Premium (15%)						$	38,062.50
PI ADDITIONAL CAPITAL						**$**	**309,575.00**
Engineering (20%)						$	61,915.00
Contingency (30%)						$	92,872.50
PEIRCE ISLAND CIP ADDITIONAL CAPITAL						**$**	**500,000**

ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE							
Lafayette Rd PS							
Pump Station Upgrades	1	LS	$ 2,250,000.00	$	2,250,000.00		
						$	2,250,000.00
ADIITIONAL CAPITAL						**$**	**2,250,000.00**
Engineering (20%)						$	450,000.00
Contingency (30%)						$	675,000.00
REDIRECTION CIP ADDITIONAL CAPITAL						**$**	**3,400,000**

TOTAL CIP ADDITIONAL CAPITAL	**$**	**6,000,000**

Cost Estimate Scenario 3B - Pease Alternative TN 3
SBR Secondary Treatment at PIT Site (7.9 MGD)

NEW PIT WWTF O&M COST - For Consent Decree

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
PIT Headworks								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Bar Screens	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
Screenings Washer & Compactor	5	1	25%	8,166	KWH	$ 0.1395	$ 1,139.09	
Grit Pumps	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
Vortex Grit Removal	2	1	100%	13,065	KWH	$ 0.1395	$ 1,822.55	
Grit Classifier & Washer	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
								$ 21,402.95
PIT Primary Clarifiers								
Longitudinal Sludge Collector	2	4	100%	52,260	KWH	$ 0.1395	$ 7,290.20	
								$ 7,290.20
PIT Disinfection								
UV Electricity	70	1	100%	457,271	KWH	$ 0.1395	$ 63,789.26	
								$ 63,789.26
PIT SBR Secondary Treatment								
First Additional 0.6 MGD Basin	67	1	100%	437,673	KWH	$ 0.1395	$ 61,055.44	
Second Additional 0.6 MGD Basin	67	1	100%	437,673	KWH	$ 0.1395	$ 61,055.44	
First New 2.25 MGD Basins	155	1	100%	1,012,528	KWH	$ 0.1395	$ 141,247.65	
Second New 2.25 MGD Basins	155	1	100%	1,012,528	KWH	$ 0.1395	$ 141,247.65	
								$ 404,606.17
Deep Bed Denitrification Filter								
Internals	50	1	50%	163,311	KWH	$ 0.1395	$ 22,781.88	
Methanol Feed Systems	0.5	2	100%	6,532	KWH	$ 0.1395	$ 911.28	
Methanol				37611	GAL	$ 4.00	$ 150,443.48	
								$ 174,136.63
PIT Biosolids Processing								
Polymer							$ 26,250.00	
Sludge Disposal							$ 245,000.00	
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Rotary Drum Thickener	5	1	75%	24,497	KWH	$ 0.1395	$ 3,417.28	
								$ 288,780.03
PIT Additional Loads								
Lights, Heating, Etc.								$ 20,401.04
NEW PIT WWTF O&M YEARLY TOTAL								**$ 980,406.29**

NEW CSO O&M COST ESTIMATE

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
NEW CSO TREATMENT O&M YEARLY TOTAL								

NEW COLLECTION SYSTEM O&M COST ESTIMATE

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Mechanic St Pump Station								
Pumps	10.1	1	50%	32,989	KWH	$ 0.1395	$ 4,601.94	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 4,856.53
Piece Island Newcastle and CSO Washdown Pump Station								
Pumps	10.8	1	50%	35,275	KWH	$ 0.1395	$ 4,920.89	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 5,175.47
NEW COLLECTION SYSTEM O&M YEARLY TOTAL								**$ 10,032**

NEW CD O&M YEARLY TOTAL	**$ 990,438.30**
CONSENT DECREE O&M PRESENT VALUE (5%, 20 yrs)	**$12,400,000.00**

Cost Estimate Scenario 3B - Pease Alternative TN 3
SBR Secondary Treatment at PIT Site (7.9 MGD)

ADDITIONAL CAPITAL IMPROVEMENTS PLAN O&M COST

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
ADDITIONAL CIP O&M YEARLY TOTAL								$ -
ADDITIONAL CIP O&M PRESENT VALUE (5%, 20 yrs)								**$0.00**

Cost Estimate Scenario 3B - Pease Alternative TN 3
SBR Secondary Treatment at PIT Site (7.9 MGD)

EXISTING O&M COSTS FROM FY 2010

ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
Existing O&M Requirements (2010)								
REGULAR SALARIES							$ 435,359.00	
SALARIES - SLUDGE REMOVAL								
ON CALL MONITORING							$ 14,237.00	
PART TIME SALARIES								
OVERTIME							$ 49,318.00	
CERTIFICATION STIPEND								
SOCIAL SECURITY							$ 31,212.00	
MEDICARE							$ 7,323.00	
RETIREMENT							$ 48,077.00	
PROF SERVICES-ENGINEERING							$ 15,000.00	
PAGERS							$ 900.00	
TELEPHONE							$ 10,000.00	
CELLULAR PHONES							$ 4,500.00	
PROFESSIONAL SERVICES							$ 20,000.00	
SECURITY/ALARMS							$ 500.00	
PROF/SERVICES-CONTRACT								
ELECTRICITY							$ 240,000.00	
NATURAL GAS							$ 30,000.00	
HEATING OIL							$ 10,000.00	
PROPANE GAS							$ 2,400.00	
WATER /SEWER FEES							$ 46,000.00	
RUBBISH REMOVAL							$ 1,000.00	
SLUDGE DISPOSAL							$ 305,000.00	
GRIT AND GREASE REMOVAL							$ 62,000.00	
REPAIRS-STRUCTURAL							$ 3,000.00	
REPAIRS-ELECTRICAL							$ 500.00	
REPAIRS-PLUMBING							$ 5,000.00	
REPAIRS-EQUIPMENT							$ 150,000.00	
REPAIRS-FIRE ALARM SYS							$ 8,000.00	
REPAIRS-VEHICLE							$ 17,000.00	
REPAIRS-BLDINGS & GROUNDS							$ 30,000.00	
REPAIRS-COMPUTER EQUIP								
REPAIRS-OFFICE EQUIPMENT								
MAINTENANCE							$ 36,000.00	
SCADA EQUIPMENT							$ 40,000.00	
GENERATOR MAINTENANCE							$ 3,000.00	
RENTAL OTHER EQUIPMENT							$ 19,000.00	
PROPERTY INSURANCE								
ADVERTISING								
STATE CERTIFICATION							$ 1,000.00	
TRAINING-EDUCATION							$ 6,500.00	
PRINTING								
DUES PROFESSIONAL ORGANIZ							$ 1,200.00	
OPERATIONAL PERMITS								
TRAVEL AND CONFERENCE							$ 1,000.00	
TRAVEL REIMBURSEMENT							$ 2,500.00	
FIRST AID							$ 1,350.00	
OFFICE SUPPLIES							$ 3,200.00	
PRINTING SUPPLIES								
OPERATING SUPPLIES							$ 22,000.00	
GASOLINE								
DIESEL FUEL							$ 600.00	
MATERIALS-CHEMICALS							$ 858,000.00	
VEHICLE REPAIRS								
BOOKS & PERIODICALS								
CLOTHING ALLOWANCE								
CLOTHING							$ 7,500.00	
PROTECTIVE CLOTHING							$ 3,500.00	
TOOLS							$ 8,000.00	
OTHER IMPROVEMENTS							$ 25,000.00	
MACHINERY AND EQUIPMENT							$ 80,000.00	
DEPRECIATION							$ 585,552.00	
INTEREST-BONDED DEBT							$ 275,802.00	
INTEREST ON BOND,FROM PDA							$ 80,501.00	
EXISTING O&M YEARLY TOTAL								**$ 3,607,531**
EXISTING O&M PRESENT VALUE (5%, 20 yrs)								**$45,000,000.00**

Cost Estimate Scenario 3B - Pease Alternative TN 5

SBR Secondary Treatment at PIT Site (7.9 MGD)

PEASE WWTF UPGRADE CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Headworks					
Structure	2500	SF	$ 300.00	$ 750,000.00	
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Bar Screens	2	EA	$ 250,000.00	$ 725,000.00	
Screenings Washer & Compactor	2	EA	$ 50,000.00	$ 145,000.00	
Grit Pumps	3	EA	$ 35,000.00	$ 152,250.00	
Vortex Grit Removal	2	EA	$ 75,000.00	$ 217,500.00	
Grit Classifier & Washer	2	EA	$ 40,000.00	$ 116,000.00	
					$ 2,192,750.00
Primary Clarifiers					
Structure (includes Excavation, Backfill and Concrete)	1	EA	$ 1,140,000.00	$ 1,140,000.00	
Equipment:					
Longitudinal Sludge Collector	4	EA	47,200	$ 273,760.00	
Cross Collector	4	EA	8,375	$ 48,575.00	
Scum Pipes	4	EA	11,575	$ 67,135.00	
					$ 1,529,470.00
PIT Biosolids Processing					
Structure	0	SF	$ 200.00	$ -	Reuse Existing
Equipment:					
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00	
Rotary Drum Thickener	2	EA	$ 150,000.00	$ 435,000.00	
Dewatering Screw Press	2	EA	$ 400,000.00	$ 1,160,000.00	
Conveyors	2	EA	$ 50,000.00	$ 145,000.00	
					$ 1,827,000.00
Sanitary Disinfection					
Equipment:					
Pump System	1	EA	$ 130,000.00	$ 130,000.00	
UV Disinfection	1	EA	$ 260,000.00	$ 260,000.00	
					$ 390,000.00
SBR Secondary Treatment					
Structure (includes Excavation, Backfill and Concrete)					
Additional 0.6 MGD Tanks	2	EA	$ 580,000.00	$ 1,160,000.00	
New 4-Tank System	2	EA	$ 1,800,000.00	$ 3,600,000.00	
Equipment:					
Rehab Existing Basins	1	EA	$ 200,000.00	$ 290,000.00	
First Additional 0.6 MGD Basin	1	SYS	$ 525,000.00	$ 761,250.00	
Second Additional 0.6 MGD Basin	1	SYS	$ 410,000.00	$ 594,500.00	
First New 2.25 MGD Basins	1	SYS	$ 1,137,000.00	$ 1,648,650.00	
Second New 2.25 MGD Basins	1	SYS	$ 1,137,000.00	$ 1,648,650.00	
					$ 9,703,050.00
Additional Structures and Modifications					
Equipment Building	10000	SF	$ 200.00	$ 2,000,000.00	
Methanol Storage Building	900	SF	$ 200.00	$ 180,000.00	
Sludge Storage Tank	4360	SF	$ 175.00	$ 763,000.00	
Outfall Modifications				$ 1,000,000.00	
					$ 3,943,000.00
ITEM TOTAL					**$ 19,585,270.00**
Yard Piping (12%)					$ 2,350,232.40
Electrical (22%)					$ 4,308,759.40
Instrumentation and Controls (6%)					$ 1,175,116.20
Site Work and Landscaping (7%)					$ 1,370,968.90
TOTAL CAPITAL					**$ 28,790,346.90**
Engineering (20%)					$ 5,758,069.38
Contingency (30%)					$ 8,637,104.07
TOTAL WWTF CAPITAL TO MEET CONSENT DECREE					**$ 43,200,000**

CSO CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	Subtotal
Debottlenecking					
Parrot Ave	2700	LF	$ 1,000.00	$ 2,700,000.00	
					$ 2,700,000.00
ITEM TOTAL					**$ 2,700,000.00**
Engineering (20%)					$ 540,000.00
Contingency (30%)					$ 810,000.00
TOTAL CSO CAPITAL TO MEET CONSENT DECREE					**$ 4,100,000.00**

COLLECTION SYSTEM CAPITAL COST ESTIMATE - For Consent Decree

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	Subtotal
Deer St					
Pump Station Upgrades including Automated Flow Redire	1	LS	$ 300,000.00	$ 300,000.00	
Two 20" Force Mains	9650	LF	$ 250.00	$ 2,412,500.00	
Directional Drilling - Two Locations	1200	LF	$ 250.00	$ 300,000.00	
					$ 3,012,500.00
Mechanic St Pump Station					
New Dry Weather Pump Station	1	LS	$ 5,000,000.00	$ 5,000,000.00	
New Flow Diversion Structure	1	LS	$ 500,000.00	$ 500,000.00	
New 12" Force Main	2100	LF	$ 200.00	$ 420,000.00	
					$ 5,920,000.00
Piece Island Newcastle and CSO Washdown Pump Station					
Redhab Dewatering	1	LS	$ 25,000.00	$ 25,000.00	
New 6" Force Main	3200	LF	$ 100.00	$ 320,000.00	
New 6" Force Main - Bridge Crossing	300	LF	$ 300.00	$ 90,000.00	
					$ 435,000.00
COLLECTION SYSTEM CAPITAL					**$ 9,367,500.00**
Engineering (20%)					$ 1,873,500.00
Contingency (30%)					$ 2,810,250.00
TOTAL COLLECTION SYSTEM MODIFICATIONS CAPITAL					**$ 14,100,000.00**

TOTAL CAPITAL TO MEET CONSENT DECREE	**$ 61,400,000**

Cost Estimate Scenario 3B - Pease Alternative TN 5
SBR Secondary Treatment at PIT Site (7.9 MGD)

PEASE ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**Subtotal**
PIT Additional Structures and Modifications					
Lab/Office Expansion	1	EA	$ 100,000.00	$ 100,000.00	
Pump Building - Demo Existing	1	EA	$ 50,000.00	$ 50,000.00	
Pump Building - New	1848	SF	$ 200.00	$ 369,600.00	
Rehabilitate Shop Building	1	EA	$ 500,000.00	$ 500,000.00	
Garage	2240	SF	$ 125.00	$ 280,000.00	
					$ 1,299,600.00
Pease Item Total					**$ 1,299,600.00**
Site Work and Landscaping (5%)					$ 90,972.00
PEASE ADIITIONAL CAPITAL					**$ 1,390,572.00**
Engineering (20%)					$ 278,114.40
Contingency (30%)					$ 417,171.60
PEASE CIP ADDITIONAL CAPITAL					**$ 2,100,000**

PEIRCE ISLAND ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
PI Additional Structures and Modifications - CSO Treatment					
Primary Clarifier Drive Replacement	1	EA	$ 175,000.00	$ 253,750.00	
					$ 253,750.00
PI ITEM TOTAL					**$ 253,750.00**
Site Work and Landscaping (7%)					$ 17,762.50
Island Construction Premium (15%)					$ 38,062.50
PI ADDITIONAL CAPITAL					**$ 309,575.00**
Engineering (20%)					$ 61,915.00
Contingency (30%)					$ 92,872.50
PEIRCE ISLAND CIP ADDITIONAL CAPITAL					**$ 500,000**

ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
Lafayette Rd PS					
Pump Station Upgrades	1	LS	$ 2,250,000.00	$ 2,250,000.00	
					$ 2,250,000.00
ADIITIONAL CAPITAL					**$ 2,250,000.00**
Engineering (20%)					$ 450,000.00
Contingency (30%)					$ 675,000.00
REDIRECTION CIP ADDITIONAL CAPITAL					**$ 3,400,000**

TOTAL CIP ADDITIONAL CAPITAL	**$ 6,000,000**

Cost Estimate Scenario 3B - Pease Alternative TN 5

SBR Secondary Treatment at PIT Site (7.9 MGD)

NEW PIT WWTF O&M COST - For Consent Decree								
ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
PIT Headworks								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Bar Screens	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
Screenings Washer & Compactor	5	1	25%	8,166	KWH	$ 0.1395	$ 1,139.09	
Grit Pumps	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
Vortex Grit Removal	2	1	100%	13,065	KWH	$ 0.1395	$ 1,822.55	
Grit Classifier & Washer	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
								$ 21,402.95
PIT Primary Clarifiers								
Longitudinal Sludge Collector	2	4	100%	52,260	KWH	$ 0.1395	$ 7,290.20	
								$ 7,290.20
PIT Disinfection								
UV Electricity	70	2	100%	914,541	KWH	$ 0.1395	$ 127,578.52	
								$ 127,578.52
PIT SBR Secondary Treatment								
First Additional 0.6 MGD Basin	67	1	100%	437,673	KWH	$ 0.1395	$ 61,055.44	
Second Additional 0.6 MGD Basin	67	1	100%	437,673	KWH	$ 0.1395	$ 61,055.44	
First New 2.25 MGD Basins	155	1	100%	1,012,528	KWH	$ 0.1395	$ 141,247.65	
Second New 2.25 MGD Basins	155	1	100%	1,012,528	KWH	$ 0.1395	$ 141,247.65	
Methanol Feed Systems	0.5	2	100%	6,532	KWH	$ 0.1395	$ 911.28	
Methanol				15671	GAL	$ 4.00	$ 62,684.78	
								$ 468,202.23
PIT Biosolids Processing								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Rotary Drum Thickener	5	1	75%	24,497	KWH	$ 0.1395	$ 3,417.28	
Polymer							$ 26,250.00	
Sludge Disposal							$ 245,000.00	
								$ 288,780.03
PIT Additional Loads								
Lights, Heating, Etc.								$ 20,401.04
NEW PIT WWTF O&M YEARLY TOTAL								**$ 933,654.98**

NEW CSO O&M COST ESTIMATE								
ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
NEW CSO TREATMENT O&M YEARLY TOTAL								

NEW COLLECTION SYSTEM O&M COST ESTIMATE								
ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Mechanic St Pump Station								
Pumps	10.1	1	50%	32,989	KWH	$ 0.1395	$ 4,601.94	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 4,856.53
Piece Island Newcastle and CSO Washdown Pump Station								
Pumps	10.8	1	50%	35,275	KWH	$ 0.1395	$ 4,920.89	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 5,175.47
NEW COLLECTION SYSTEM O&M YEARLY TOTAL								**$ 10,032**

NEW CD O&M YEARLY TOTAL	**$ 943,686.98**
CONSENT DECREE O&M PRESENT VALUE (5%, 20 yrs)	**$11,800,000.00**

Cost Estimate Scenario 3B - Pease Alternative TN 5

SBR Secondary Treatment at PIT Site (7.9 MGD)

ADDITIONAL CAPITAL IMPROVEMENTS PLAN O&M COST								
ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
PI Biosolids Upgrade								
ADDITIONAL CIP O&M YEARLY TOTAL								**$ -**
ADDITIONAL CIP O&M PRESENT VALUE (5%, 20 yrs)								**$0.00**

Cost Estimate Scenario 3B - Pease Alternative TN 5

SBR Secondary Treatment at PIT Site (7.9 MGD)

EXISTING O&M COSTS FROM FY 2010								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	
Existing O&M Requirements (2010)								
REGULAR SALARIES							$ 435,359.00	
SALARIES - SLUDGE REMOVAL								
ON CALL MONITORING							$ 14,237.00	
PART TIME SALARIES								
OVERTIME							$ 49,318.00	
CERTIFICATION STIPEND								
SOCIAL SECURITY							$ 31,212.00	
MEDICARE							$ 7,323.00	
RETIREMENT							$ 48,077.00	
PROF SERVICES-ENGINEERING							$ 15,000.00	
PAGERS							$ 900.00	
TELEPHONE							$ 10,000.00	
CELLULAR PHONES							$ 4,500.00	
PROFESSIONAL SERVICES							$ 20,000.00	
SECURITY/ALARMS							$ 500.00	
PROF/SERVICES-CONTRACT								
ELECTRICITY							$ 240,000.00	
NATURAL GAS							$ 30,000.00	
HEATING OIL							$ 10,000.00	
PROPANE GAS							$ 2,400.00	
WATER /SEWER FEES							$ 46,000.00	
RUBBISH REMOVAL							$ 1,000.00	
SLUDGE DISPOSAL							$ 305,000.00	
GRIT AND GREASE REMOVAL							$ 62,000.00	
REPAIRS-STRUCTURAL							$ 3,000.00	
REPAIRS-ELECTRICAL							$ 500.00	
REPAIRS-PLUMBING							$ 5,000.00	
REPAIRS-EQUIPMENT							$ 150,000.00	
REPAIRS-FIRE ALARM SYS							$ 8,000.00	
REPAIRS-VEHICLE							$ 17,000.00	
REPAIRS-BLDINGS & GROUNDS							$ 30,000.00	
REPAIRS-COMPUTER EQUIP								
REPAIRS-OFFICE EQUIPMENT								
MAINTENANCE							$ 36,000.00	
SCADA EQUIPMENT							$ 40,000.00	
GENERATOR MAINTENANCE							$ 3,000.00	
RENTAL OTHER EQUIPMENT							$ 19,000.00	
PROPERTY INSURANCE								
ADVERTISING								
STATE CERTIFICATION							$ 1,000.00	
TRAINING-EDUCATION							$ 6,500.00	
PRINTING								
DUES PROFESSIONAL ORGANIZ							$ 1,200.00	
OPERATIONAL PERMITS								
TRAVEL AND CONFERENCE							$ 1,000.00	
TRAVEL REIMBURSEMENT							$ 2,500.00	
FIRST AID							$ 1,350.00	
OFFICE SUPPLIES							$ 3,200.00	
PRINTING SUPPLIES								
OPERATING SUPPLIES							$ 22,000.00	
GASOLINE								
DIESEL FUEL							$ 600.00	
MATERIALS-CHEMICALS							$ 858,000.00	
VEHICLE REPAIRS								
BOOKS & PERIODICALS								
CLOTHING ALLOWANCE								
CLOTHING							$ 7,500.00	
PROTECTIVE CLOTHING							$ 3,500.00	
TOOLS							$ 8,000.00	
OTHER IMPROVEMENTS							$ 25,000.00	
MACHINERY AND EQUIPMENT							$ 80,000.00	
DEPRECIATION							$ 585,552.00	
INTEREST-BONDED DEBT							$ 275,802.00	
INTEREST ON BOND,FROM PDA							$ 80,501.00	
EXISTING O&M YEARLY TOTAL								**$ 3,607,531**
EXISTING O&M PRESENT VALUE (5%, 20 yrs)								**$45,000,000.00**

Cost Estimate Scenario 3B - Pease Alternative TN 8
SBR Secondary Treatment at PIT Site (7.9 MGD)

PEASE WWTF UPGRADE CAPITAL COST ESTIMATE - For Consent Decree						
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**		**SUBTOTAL**
Headworks						
Structure	2500	SF	$ 300.00	$ 750,000.00		
Equipment:						
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00		
Bar Screens	2	EA	$ 250,000.00	$ 725,000.00		
Screenings Washer & Compactor	2	EA	$ 50,000.00	$ 145,000.00		
Grit Pumps	3	EA	$ 35,000.00	$ 152,250.00		
Vortex Grit Removal	2	EA	$ 75,000.00	$ 217,500.00		
Grit Classifier & Washer	2	EA	$ 40,000.00	$ 116,000.00		
					$	2,192,750.00
Primary Clarifiers						
Structure (includes Excavation, Backfill and Concrete)	1	EA	$ 1,140,000.00	$ 1,140,000.00		
Equipment:						
Longitudinal Sludge Collector	4	EA	47,200	$ 273,760.00		
Cross Collector	4	EA	8,375	$ 48,575.00		
Scum Pipes	4	EA	11,575	$ 67,135.00		
					$	1,529,470.00
PIT Biosolids Processing						
Structure	0	SF	$ 200.00	$ -	Reuse Existing	
Equipment:						
Carbon Odor Control	1	EA	$ 60,000.00	$ 87,000.00		
Rotary Drum Thickener	2	EA	$ 150,000.00	$ 435,000.00		
Dewatering Screw Press	2	EA	$ 400,000.00	$ 1,160,000.00		
Conveyors	2	EA	$ 50,000.00	$ 145,000.00		
					$	1,827,000.00
Sanitary Disinfection						
Equipment:						
Pump System	1	EA	$ 130,000.00	$ 130,000.00		
UV Disinfection	1	EA	$ 260,000.00	$ 260,000.00		
					$	390,000.00
SBR Secondary Treatment						
Structure (includes Excavation, Backfill and Concrete)						
Additional 0.6 MGD Tanks	2	EA	$ 580,000.00	$ 1,160,000.00		
New 4-Tank System	2	EA	$ 1,800,000.00	$ 3,600,000.00		
Equipment:						
Rehab Existing Basins	1	EA	$ 200,000.00	$ 290,000.00		
First Additional 0.6 MGD Basin	1	SYS	$ 490,000.00	$ 710,500.00		
Second Additional 0.6 MGD Basin	1	SYS	$ 390,000.00	$ 565,500.00		
First New 2.25 MGD Basins	1	SYS	$ 1,037,000.00	$ 1,503,650.00		
Second New 2.25 MGD Basins	1	SYS	$ 1,037,000.00	$ 1,503,650.00		
					$	9,333,300.00
Additional Structures and Modifications						
Equipment Building	10000	SF	$ 200.00	$ 2,000,000.00		
Sludge Storage Tank	4360	SF	$ 175.00	$ 763,000.00		
Outfall Modifications				$ 1,000,000.00		
					$	3,763,000.00
ITEM TOTAL					**$**	**19,035,520.00**
Yard Piping (12%)					$	2,284,262.40
Electrical (22%)					$	4,187,814.40
Instrumentation and Controls (6%)					$	1,142,131.20
Site Work and Landscaping (7%)					$	1,332,486.40
TOTAL CAPITAL					**$**	**27,982,214.40**
Engineering (20%)					$	5,596,442.88
Contingency (30%)					$	8,394,664.32
TOTAL WWTF CAPITAL TO MEET CONSENT DECREE					**$**	**42,000,000**

CSO CAPITAL COST ESTIMATE - For Consent Decree						
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**Subtotal**	
Debottlenecking						
Parrot Ave	2700	LF	$ 1,000.00	$ 2,700,000.00		
					$	2,700,000.00
PI TOTAL CAPITAL					**$**	**2,700,000.00**
Engineering (20%)					$	540,000.00
Contingency (30%)					$	810,000.00
TOTAL CSO CAPITAL TO MEET CONSENT DECREE					**$**	**4,100,000.00**

COLLECTION SYSTEM CAPITAL COST ESTIMATE - For Consent Decree						
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**Subtotal**	
Deer St						
Pump Station Upgrades including Automated Flow Redire	1	LS	$ 300,000.00	$ 300,000.00		
Two 20" Force Mains	9650	LF	$ 250.00	$ 2,412,500.00		
Directional Drilling - Two Locations	1200	LF	$ 250.00	$ 300,000.00		
					$	3,012,500.00
Mechanic St Pump Station						
New Dry Weather Pump Station	1	LS	$ 5,000,000.00	$ 5,000,000.00		
New Flow Diversion Structure	1	LS	$ 500,000.00	$ 500,000.00		
New 12" Force Main	2100	LF	$ 200.00	$ 420,000.00		
					$	5,920,000.00
Piece Island Newcastle and CSO Washdown Pump Station						
Rehab Dewatering	1	LS	$ 25,000.00	$ 25,000.00		
New 6" Force Main	3200	LF	$ 100.00	$ 320,000.00		
New 6" Force Main - Bridge Crossing	300	LF	$ 300.00	$ 90,000.00		
					$	435,000.00
COLLECTION SYSTEM CAPITAL					**$**	**9,367,500.00**
Engineering (20%)					$	1,873,500.00
Contingency (30%)					$	2,810,250.00
TOTAL COLLECTION SYSTEM MODIFICATIONS CAPITAL					**$**	**14,100,000.00**

TOTAL CAPITAL TO MEET CONSENT DECREE	**$**	**60,200,000**

Cost Estimate Scenario 3B - Pease Alternative TN 8
SBR Secondary Treatment at PIT Site (7.9 MGD)

PEASE ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
ITEM	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	**Subtotal**
PIT Additional Structures and Modifications					
Lab/Office Expansion	1	EA	$ 100,000.00	$ 100,000.00	
Pump Building - Demo Existing	1	EA	$ 50,000.00	$ 50,000.00	
Pump Building - New	1848	SF	$ 200.00	$ 369,600.00	
Rehabilitate Shop Building	1	EA	$ 500,000.00	$ 500,000.00	
Garage	2240	SF	$ 125.00	$ 280,000.00	
					$ 1,299,600.00
Pease Item Total					**$ 1,299,600.00**
Site Work and Landscaping (5%)					$ 90,972.00
PEASE ADIITIONAL CAPITAL					**$ 1,390,572.00**
Engineering (20%)					$ 278,114.40
Contingency (30%)					$ 417,171.60
PEASE CIP ADDITIONAL CAPITAL					**$ 2,100,000**

PEIRCE ISLAND ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
PI Additional Structures and Modifications - CSO Treatment					
Primary Clarifier Drive Replacement	1	EA	$ 175,000.00	$ 253,750.00	
					$ 253,750.00
PI ITEM TOTAL					**$ 253,750.00**
Site Work and Landscaping (7%)					$ 17,762.50
Island Construction Premium (15%)					$ 38,062.50
PI ADDITIONAL CAPITAL					**$ 309,575.00**
Engineering (20%)					$ 61,915.00
Contingency (30%)					$ 92,872.50
PEIRCE ISLAND CIP ADDITIONAL CAPITAL					**$ 500,000**

ADDITIONAL CAPITAL IMPROVEMENTS PLAN CAPITAL COST ESTIMATE					
Lafayette Rd PS					
Pump Station Upgrades	1	LS	$ 2,250,000.00	$ 2,250,000.00	
					$ 2,250,000.00
ADIITIONAL CAPITAL					**$ 2,250,000.00**
Engineering (20%)					$ 450,000.00
Contingency (30%)					$ 675,000.00
REDIRECTION CIP ADDITIONAL CAPITAL					**$ 3,400,000**

TOTAL CIP ADDITIONAL CAPITAL	**$ 6,000,000**

Cost Estimate Scenario 3B - Pease Alternative TN 8
SBR Secondary Treatment at PIT Site (7.9 MGD)

NEW PIT WWTF O&M COST - For Consent Decree								
ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
PIT Headworks								
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Bar Screens	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
Screenings Washer & Compactor	5	1	25%	8,166	KWH	$ 0.1395	$ 1,139.09	
Grit Pumps	15	1	25%	24,497	KWH	$ 0.1395	$ 3,417.28	
Vortex Grit Removal	2	1	100%	13,065	KWH	$ 0.1395	$ 1,822.55	
Grit Classifier & Washer	2	1	25%	3,266	KWH	$ 0.1395	$ 455.64	
								$ 21,402.95
PIT Primary Clarifiers								
Longitudinal Sludge Collector	2	4	100%	52,260	KWH	$ 0.1395	$ 7,290.20	
								$ 7,290.20
PIT Disinfection								
UV Electricity	70	3	100%	1,371,812	KWH	$ 0.1395	$ 191,367.79	
								$ 191,367.79
PIT SBR Secondary Treatment								
First Additional 0.6 MGD Basin	66	1	100%	431,141	KWH	$ 0.1395	$ 60,144.16	
Second Additional 0.6 MGD Basin	66	1	100%	431,141	KWH	$ 0.1395	$ 60,144.16	
First New 2.25 MGD Basins	150	1	100%	979,866	KWH	$ 0.1395	$ 136,691.28	
Second New 2.25 MGD Basins	150	1	100%	979,866	KWH	$ 0.1395	$ 136,691.28	
								$ 393,670.87
PIT Biosolids Processing								
Polymer							$ 26,250.00	
Sludge Disposal							$ 245,000.00	
Odor Control -Media Replacement							$ 5,000.00	
Odor Control -Energy	10	1	100%	65,324	KWH	$ 0.1395	$ 9,112.75	
Rotary Drum Thickener	5	1	75%	24,497	KWH	$ 0.1395	$ 3,417.28	
								$ 288,780.03
PIT Additional Loads								
Lights, Heating, Etc.								$ 20,401.04
NEW PIT WWTF O&M YEARLY TOTAL								**$ 922,912.88**

NEW CSO O&M COST ESTIMATE								
ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
NEW CSO TREATMENT O&M YEARLY TOTAL								**$ -**

NEW COLLECTION SYSTEM O&M COST ESTIMATE								
ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
Mechanic St Pump Station								
Pumps	10.1	1	50%	32,989	KWH	$ 0.1395	$ 4,601.94	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 4,856.53
Piece Island Newcastle and CSO Washdown Pump Station								
Pumps	10.8	1	50%	35,275	KWH	$ 0.1395	$ 4,920.89	
Misc		1	100%	1,825	KWH	$ 0.1395	$ 254.59	
								$ 5,175.47
NEW COLLECTION SYSTEM O&M YEARLY TOTAL								**$ 10,032**

NEW CD O&M YEARLY TOTAL	**$ 932,944.88**
CONSENT DECREE O&M PRESENT VALUE (5%, 20 yrs)	**$11,700,000.00**

Cost Estimate Scenario 3B - Pease Alternative TN 8
SBR Secondary Treatment at PIT Site (7.9 MGD)

ADDITIONAL CAPITAL IMPROVEMENTS PLAN O&M COST								
ITEM	HP	# IN SERVICE	% TIME IN USE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
ADDITIONAL CIP O&M YEARLY TOTAL								**$ -**
ADDITIONAL CIP O&M PRESENT VALUE (5%, 20 yrs)								**$0.00**

Cost Estimate Scenario 3B - Pease Alternative TN 8

SBR Secondary Treatment at PIT Site (7.9 MGD)

EXISTING O&M COSTS FROM FY 2010								
ITEM	**HP**	**# IN SERVICE**	**% TIME IN USE**	**QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**	
Existing O&M Requirements (2010)								
REGULAR SALARIES							$ 435,359.00	
SALARIES - SLUDGE REMOVAL								
ON CALL MONITORING							$ 14,237.00	
PART TIME SALARIES								
OVERTIME							$ 49,318.00	
CERTIFICATION STIPEND								
SOCIAL SECURITY							$ 31,212.00	
MEDICARE							$ 7,323.00	
RETIREMENT							$ 48,077.00	
PROF SERVICES-ENGINEERING							$ 15,000.00	
PAGERS							$ 900.00	
TELEPHONE							$ 10,000.00	
CELLULAR PHONES							$ 4,500.00	
PROFESSIONAL SERVICES							$ 20,000.00	
SECURITY/ALARMS							$ 500.00	
PROF/SERVICES-CONTRACT								
ELECTRICITY							$ 240,000.00	
NATURAL GAS							$ 30,000.00	
HEATING OIL							$ 10,000.00	
PROPANE GAS							$ 2,400.00	
WATER /SEWER FEES							$ 46,000.00	
RUBBISH REMOVAL							$ 1,000.00	
SLUDGE DISPOSAL							$ 305,000.00	
GRIT AND GREASE REMOVAL							$ 62,000.00	
REPAIRS-STRUCTURAL							$ 3,000.00	
REPAIRS-ELECTRICAL							$ 500.00	
REPAIRS-PLUMBING							$ 5,000.00	
REPAIRS-EQUIPMENT							$ 150,000.00	
REPAIRS-FIRE ALARM SYS							$ 8,000.00	
REPAIRS-VEHICLE							$ 17,000.00	
REPAIRS-BLDINGS & GROUNDS							$ 30,000.00	
REPAIRS-COMPUTER EQUIP								
REPAIRS-OFFICE EQUIPMENT								
MAINTENANCE							$ 36,000.00	
SCADA EQUIPMENT							$ 40,000.00	
GENERATOR MAINTENANCE							$ 3,000.00	
RENTAL OTHER EQUIPMENT							$ 19,000.00	
PROPERTY INSURANCE								
ADVERTISING								
STATE CERTIFICATION							$ 1,000.00	
TRAINING-EDUCATION							$ 6,500.00	
PRINTING								
DUES PROFESSIONAL ORGANIZ							$ 1,200.00	
OPERATIONAL PERMITS								
TRAVEL AND CONFERENCE							$ 1,000.00	
TRAVEL REIMBURSEMENT							$ 2,500.00	
FIRST AID							$ 1,350.00	
OFFICE SUPPLIES							$ 3,200.00	
PRINTING SUPPLIES								
OPERATING SUPPLIES							$ 22,000.00	
GASOLINE								
DIESEL FUEL							$ 600.00	
MATERIALS-CHEMICALS							$ 858,000.00	
VEHICLE REPAIRS								
BOOKS & PERIODICALS								
CLOTHING ALLOWANCE								
CLOTHING							$ 7,500.00	
PROTECTIVE CLOTHING							$ 3,500.00	
TOOLS							$ 8,000.00	
OTHER IMPROVEMENTS							$ 25,000.00	
MACHINERY AND EQUIPMENT							$ 80,000.00	
DEPRECIATION							$ 585,552.00	
INTEREST-BONDED DEBT							$ 275,802.00	
INTEREST ON BOND,FROM PDA							$ 80,501.00	
EXISTING O&M YEARLY TOTAL								**$ 3,607,531**
EXISTING O&M PRESENT VALUE (5%, 20 yrs)								**$45,000,000.00**