

Bellefonte FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1		\$4,219,302
C Improve Yields of Production Wells	A1	\$35,750
C Improve Spring Collection System	A4	\$143,000
A Install Spring Water Flow Meter and Meter Pit	A5	\$25,025
C Pump Replacement for Production Well #2	A7	\$21,450
A Replace or Repair Existing Raceway Standpipes	B1	\$28,243
C Raceway Concrete Repair or High-Bond Epoxy Coating	B2	\$112,970
C Install Permanent Bird Predation Protection	B3	\$1,287,000
A Install Flow Baffles in Raceways	B5	\$204,204
C Design and Construct New Bridge Across Spring Creek	D1	\$411,840
C Install Sludge Storage System	E1	\$228,800
C Re-Design and Construct Additional Clarifier	E2	\$243,100
C Regrade and Line Settling Ponds (Two, 0.33-Acre Ponds)	E3	\$47,332
C Install High Flow Capacity Disc Filter	E4	\$255,184
A New Effluent Flow Measurement Device and Composite Sampler	E5	\$58,630
C Electrical and Emerg. Service to all Water/Wastewater Improvements	F6	\$135,850
C Traveling Bridge Sand Media Filter	E7	\$947,100
A Aeration System For Polishing Pond	E8	\$33,825
PRIORITY 2		\$2,224,049
C Install Bulk Liquid Oxygen Tank	A2	\$100,100
C Install Filter Systems and UV Systems for Hatchery Buildings	A3	\$481,066
A Additional Degassing Devices	A6	\$14,300
C Additional Early Rearing and Egg Incubation Units	B4	\$858,000
C Construct New or Expand Current Garage	C1	\$225,885
C Pole Barn Expansion	C2	\$97,185
A Update the Lower Hatchery Bldg or Convert to Additional Storage Space	C3	\$7,150
A Siding Multi-Purpose Building	C4	\$30,030
C Bituminous Road Surface	D2	\$241,318
C Convert Retention Pond to a Chemical Retention/Detoxification Basin	E6	\$41,745
C Additional Security Lighting	F2	\$35,750
C Heating in Garage and Upper Hatchery Building	F3	\$17,160
A Upgrade Air Compressors and Oxygen Generators	F5	\$74,360
PRIORITY 3		\$18,590
A Handicapped Parking	D4	\$715
A Visitor I & E Display Improvements	G1	\$14,300
A PENN DOT Signage	G2	\$3,575
Items Not Recommended for Prioritization at This Time		
A Siding Multi-Purpose Building	C4	\$30,030
A Visitor Walking Trail from Footbridge into Facility	D3	\$14,300
A Upper Emergency Generator Conversion (Completed)	F1	\$0
A Renovation of Elec. System & Additional Telephone Line (Completed)	F4	\$0

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
A = Improvement Recommended to be Completed by PFBC Construction Crews

Benner Spring FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1		\$4,215,671
C Additional Water Supply/Recirculation Water Pump Station	A1	\$944,749
A Complete Bulk Liquid Oxygen System and LHO Contacting Chambers	A2	\$317,625
C Ultraviolet (UV) Disinfection for Hatchery Building	A3	\$194,920
C Install Filter & UV Systems for Spring Creek Water	A6	\$393,762
A Install Flow Baffles within Raceways	B4	\$217,360
A Hoists to Maneuver 55-Gallon Drums within Chemical Storage Building	C4	\$1,430
C Install Sludge Storage System	E1	\$228,800
A Install Baffles within Settling Pond	E2	\$3,432
C Regrade and Line the Reconstructed Settling Pond	E3	\$88,821
C Install High Flow Capacity Disc Filter	E4	\$240,486
A Install New Effluent Flow Measurement Device and Composite Sampler	E5	\$56,166
C Convert Polishing Pond to Chemical Retention/Detox Basin	E6	\$41,745
C Traveling Bridge Sand Media Filter	E7	\$1,082,400
A Aeration System For Polishing Pond	E8	\$33,825
C Upgrade Alarm Systems	F1	\$135,300
C Electrical and Emerg. Service to all Water/Wastewater Improvements	F2	\$234,850
PRIORITY 2		\$1,074,365
A Mechanical Aerators for Ponds	A5	\$21,450
C Repair and Line Cool/Warmwater Production Ponds	B1	\$178,875
C Installation of Permanent Bird Predation Protection	B2	\$85,800
A Raceway Concrete Repairs	B3	\$139,568
C Pole Building Expansion (Three Additional Bays)	C1	\$143,550
A Bulk Feed Storage Bin Replacement	C2	\$33,248
A Siding Replacement on All Buildings	C3	\$50,244
C Addition to Maintenance Building	C5	\$61,270
C Sandblast and Paint Bridges	D1	\$143,000
C Bituminous Road Surface	D2	\$217,360
PRIORITY 3		\$17,875
A Visitor I & E Display Improvements	G1	\$14,300
A PENN DOT Signage	G2	\$3,575
Items Not Recommended for Prioritization at This Time		
C Improve Yield of Production Well #2 (Completed)	A4	\$0

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
A = Improvement Recommended to be Completed by PFBC Construction Crews

Big Spring FCS Summary of Opinions of Probable Cost



Project: Big Spring Recirculation Study
Option: 3-B
By: Team **Date:** 4/18/2001

Detailed Opinion of Probable Costs					
	ITEM				TOTAL COST

1	Pre-Engineered Production Building (Including Facility power)				\$3,004,480
2	Culture Tank (24 Units, 3 Modules)				\$1,195,200
3	Swirl Separator				\$360,000
4	Drum Filter				\$450,000
5	Pumping				\$309,000
6	Fluidized-Sand Biofilters				\$202,800
7	Combined Stripper/LHO				\$127,050
8	LHO Sump Tank				\$117,000
9	UV Filter				\$927,000
11	Ozone Generation System				\$345,750
12	Final Solids Capture				\$181,500
13	Fish Handling and Harvest				\$53,000
14	Demolition				\$374,000
15	Mobilization Bonds & Insurance				\$229,403

Subtotal Construction Costs	\$7,876,183
10% Estimating Contingency	\$787,618
Total Construction Costs	\$8,663,802
10% Construction/Change Order Contingency	\$866,380
8% Design Phase Engineering	\$693,104
7% Construction Phase Engineering	\$606,466
Option 3-B Total:	\$10,829,752

(Note: This Table was taken directly from Big Spring FCS Recirculation Study, April, 2001)

Table VII-8. Corry FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1 (Capital Budget)		\$2,635,631
CB,C	Replace Foster Spring Water Collection Gallery	A1 \$143,000
CB,C	Water Disinfection System, Ozone and UV	A2 \$718,403
CB,C	Replace Influent Pipeline to Raceways E-H	A11 \$59,345
CB,C	Microscreen and UV Disinfect Influent to Rways I-L	A12 \$439,070
CB,C	Replace Main Property Spring Water Collection Gallery	A14 \$71,500
CB,C	Optional Wastewater Treatment System	E2 \$595,023
CB,A	Install New Effluent Flow Measurement Device and Sampler	E3 \$56,705
CB,C	New Chemical Retention Basin	E4 \$439,725
CB,C	Provide Elec. Service & Emerg. Power to Water/WW Impr.	F6 \$112,860
PRIORITY 2		\$351,395
A	Modify Existing Aeration Tower	A3 \$14,300
C	Well Metering System	A7 \$49,665
C	Rehabilitate Production Wells	A8 \$53,625
C	Construct Lower End Recirculation Pump Station	A13 \$167,310
C	Repair Concrete Raceways at Main Hatchery	B3 \$57,200
A	Install New Drainage System along Raceway I	D3 \$9,295
PRIORITY 3		\$2,618,988
C	Construct Annex Pond Pump System	A9 \$151,702
C	Construct New Production Ponds in Annex	B1 \$1,761,581
C	Demolish Annex Property Raceways	B2 \$7,150
A	Install Sun/UV Protection for Historical Visitor Exhibits	C1 \$7,150
C	Construct Equipment/Vehicle Storage Building	C2 \$171,600
A	Install Fire Detection Systems in Hatchery Buildings	C3 \$14,300
C	Resurface Roadways and Parking Areas	D1 \$311,740
A	Install Additional Bulk Feed Storage Bin	D2 \$11,083
C	Upgrade Alarm Systems	F3 \$143,000
A	Install Additional Telephone Line	F2 \$358
C	Rewire Hatchery Building and Residence	F4 \$21,450
A	Visitor I & E Display Improvements	G1 \$14,300
A	Install PA DOT Signage	G2 \$3,575
Items Not Recommended for Prioritization at This Time		
A	Install Low Head Contact Chambers in HB (In Progress)	A4 \$0
C	Install Sand Filtration and UV Disinfection for HB (In Progress)	A5 \$0
A	Replace HB Water Supply System to Tanks (In Progress)	A6 \$0
C	Alternative Water Supply Source to Ponds	A10 \$21,450
A	Replace Foster's Property and Annex Spring Pumps (Completed)	A15 \$0
A	Replace Interior Walls within Foster's Property Pump Bldg. (Completed)	C4 \$0
A, #	Convert Unused Raceways to Chemical Retention Basin	E1 \$78,588
C	Install Control Systems for Foster and Annex Pumps	F1 \$21,450
C	Replace Hatchery Building Lighting (Completed)	F5 \$0

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
A = Improvement Recommended to be Completed by PFBC Construction Crews
CB = Capital Budget Items

This item is a historic hatchery rearing area but it is incorrectly designated as a wetland.

Huntsdale FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1 (Capital Budget)		\$3,671,859
CB,A	Oxygen Supplementation System	A4 \$381,095
CB,A	Aeration/Degassing of Spring Water	A6 \$107,250
CB,A	Repair Leaking Standpipes at Raceways	B6 \$58,630
CB,C	Install Sludge Storage System	E1 \$228,800
CB,A	Extend Standpipes at B-Series Raceways (See B6)	E2 \$0
CB,C	Regrade and Membrane Line Settling Pond	E4 \$89,196
CB,C	Repair Wastewater Line near B-Series Raceways	E5 \$163,735
CB,C	Bypass B-Series with A-Series Wastewater	E6 \$70,463
CB,A	Additional Bulkhead in Settling Pond	E7 \$10,725
CB,A	Clarifier Enhancement	E8 \$108,240
CB,C	Overflow WW Microscreening System	E9 \$396,835
CB,C	Convert Settling Lagoon to Chemical Retention Basin (see E4)	E10 \$0
CB,A	Sludge Transfer Piping from Clarifier to Sludge Storage (see E8)	E11 \$0
CB,C	Control Valves and Piping to Divert to Chem. Ret. Basin	E12 \$50,050
CB,C	Install Pipeline for Clarifier Overflow to Microscreen	E13 \$4,059
CB,C	Install Microscreen Backwash System to Existing Clarifier	E14 \$2,706
CB,C	Traveling Bridge Sand Media Filter	E15 \$1,716,000
CB,A	Aeration System For Polishing Pond	E16 \$71,500
CB,C	Provide Elec. Service & Emerg. Power to Water/WW Impr.	F4 \$212,575
PRIORITY 2		\$2,482,466
A	Irishtown Run Intake Screen	A1 \$35,750
C	Heat Exchangers for West Side of Cool/Warm Bldg.	A2 \$260,975
C	Pressure Filtration and UV Disinfection for H. Bldgs.	A3 \$619,891
A	Increase Water Supply to Cool/Warmwater Ponds	A7 \$111,612
C	Bucher Spring Water Collection Gallery	A8 \$143,000
C	Subdivide Pond #1 and New Harvest/Outlet Structures	B1 \$254,040
C	Membrane Line Ponds #1-#4 and #6-#11	B2 \$424,424
A	Repair/Improve Bird Protection System	B3 \$350,350
A	Replace Smoke Alarms	C7 \$14,300
C	Improve Security and Facility Lighting	D1 \$60,775
C	Upgrade Alarm Systems	F1 \$143,000
C	Upgrade Electrical Service to A- and B-Series Raceways	F2 \$28,600
C	Emergency System & Redundant Pump at McManus Spr.	F3 \$35,750
PRIORITY 3		\$1,306,710
A	Additional Egg Incubation Units	B4 \$39,325
A	Remove Unused Broodfish Transfer System	B5 \$14,300
A	Replace Cool/Warmwater Bldg Rearing Units	B8 \$128,700
A	Renovate Residence or Convert to Office Space	C1 \$128,700
C	Construct Additional Storage Building	C2 \$186,780
A	Construct Additional Feed and Chemical Storage	C3 \$136,290
A	Replace Siding and Guttering on Pole Barn	C4 \$24,453
A	Replace Bulk Feed Storage Bins	C5 \$22,165
A	New Windows & Update Displays of Multi-Purpose Bldg.	C6 \$71,500
C	Resurface Floor in Cool/Warmwater HB	C8 \$36,969
C	Bituminous Road Surface	D2 \$478,203
A	New Bridge for Bucher Spring	D3 \$7,150
A	Upgrade Visitor Displays and Wayside Exhibits	G1 \$14,300
A	Install Wayside Visitor Kiosk and Visitor's Facilities	G2 \$14,300
A	Install PA DOT Signage	G3 \$3,575
Items Not Recommended for Prioritization at This Time		
A	Increase Water Supply to Coldwater HB	A5 \$232,375
A	Install Flow Baffles within Raceways (In Progress)	B7 \$0
A	Install Baffles in Settling Pond (Completed)	E3 \$0

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
A = Improvement Recommended to be Completed by PFBC Construction Crews
CB = Capital Budget Items

Oswayo FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1 (Capital Budget)		\$2,039,053
CB,A	Install Spring Water Flow Meters and Meter Pit	A2 \$35,750
CB,C	Water Treatment System for Hatchery Building	A3 \$228,951
CB,A	Pumped Recirculation Flow Meter and Meter Pit	A6 \$28,600
CB,A	Install Bulk Liquid Oxygen System	A8 \$100,100
CB,A	Repair Concrete on Upper Aerator Structure	A9 \$21,450
CB,C	Replace Piping Between Upper and Lower Rwys	A10 \$73,073
CB,A	Repair or Replace Indoor Early Rearing Units	B1 \$8,809
CB,A	Install Flow Baffles within Raceways	B3 \$109,824
CB,C	Replace Roof on Hatchery Building	C2 \$37,645
CB,C	Renovate Exterior Walls & Windows of Multipurpose Bldg.	C3 \$57,200
CB,C	Waterproof Residence Basement	C4 \$3,575
CB,A	Fencing around Wastewater Improvements	D4 \$18,876
CB,C	Install Sludge Storage System	E1 \$228,800
CB,C	Overflow WW Microscreening System	E2 \$147,612
CB,C	Convert Settling Lagoon to Chemical Retention Basin	E3 \$55,323
CB,C	Sludge Transfer Piping from Clarifier to Sludge Storage	E4 \$42,900
CB,A	Install New Effluent Flow Measurement Device and Sampler	E5 \$56,705
CB,C	Pump System to Transfer Clarifier OW to Settling Pond	E7 \$127,985
CB,C	Traveling Bridge Sand Media Filter	E8 \$500,500
CB,A	Aeration System For Polishing Pond	E9 \$35,750
CB,C	Provide Elec. Service & Emerg. Power to Water/WW Impr.	F1 \$119,625
PRIORITY 2		\$548,989
C	Microscreening System for Serial Reuse Water	A4 \$150,657
C	Repair and Resurface Concrete Raceways	B4 \$48,620
C	Resurface Roadways and Parking Areas	D1 \$162,668
C	New WW Piping from HB to Clarifier and Chem. Basin	E6 \$30,030
C	Upgrade Alarm Systems	F2 \$143,000
C	Replace Garage Lighting	F3 \$14,014
PRIORITY 3		\$1,870,197
C	Improve Underground Spring Collection Galleries	A1 \$286,000
C	Disinfection of Serial Reuse and Recirculated Water	A5 \$905,946
C	Membrane Lined Minnow Pond	B6 \$84,715
C	New Concrete Outlet/Harvest Structure for Minnow Pond	B7 \$22,094
C	Permanent Bird Protection over Lower Raceways	B8 \$163,020
C	New Equipment Storage Building	C1 \$366,080
C	New Access Roads	D2 \$20,177
A	Bulk Feed Storage Bins	D3 \$22,165
Items Not Recommended for Prioritization at This Time		
C	Rehabilitation of Water Recirculation Pumping System	A7 \$57,200
A	Additional Egg Incubation and Early Rearing Units	B2 \$197,340
A	Replace or Repair Existing Raceway Standpipes (Completed)	B5 \$0
C	Addition to Hatchery Building	C5 \$536,250
A	Upgrade Visitor Displays (Completed)	G1 \$0
A	Visitor I & E Kiosk	G2 \$14,300

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
A = Improvement Recommended to be Completed by PFBC Construction Crews
CB = Capital Budget Items

Pleasant Gap FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1		\$2,127,366
C	Recirculation and Water Treatment Options	A1 \$676,838
A	Replace or Repair Early Rearing Units	B1 \$6,206
A	Renovate Feed Storage Facility	C3 \$1,012
A	Replace Bulk Feed Storage Bins	C6 \$31,202
A	Construct Shelter over Main Intake	C7 \$25,740
C	Connect Facility to Municipal Water	D1 \$12,375
C	Install Sludge Storage System	E1 \$216,480
C	Replace Liner within Settling Pond	E2 \$38,324
C	Install a High Flow Capacity Disc Microscreen	E3 \$203,990
A	New Effluent Flow Measurement Device	E4 \$35,750
C	Traveling Bridge Sand Media Filter	E6 \$811,800
A	Aeration System For Two Polishing Ponds	E7 \$67,650
PRIORITY 2		\$950,109
C	New Water Distribution Box for Lower Raceways	A2 \$28,600
C	Install Pressurized Sand Filters and UV Disinfection for HB	A4 \$412,044
C	Repair or Replace Lower and Nursery Raceways	B3 \$28,600
C	Construct Multiple-Bay Pre-Engineered Metal Storage Bldg	C1 \$133,155
A	Plumbing Shop Removal	C2 \$7,150
A	Expand Existing Chemical Storage Capabilities	C4 \$11,385
A	Hatchery Building Window Replacement	C5 \$38,610
A	Improve Footbridge from Visitor's Parking Lot to Facility	D2 \$6,765
C	Electrical and Emerg. Service to all Water/Wastewater Improvements	F1 \$135,850
C	Alarm and Control Systems Renovation	F2 \$126,500
C	Outdoor Hatchery Lighting Enhancement	F3 \$21,450
PRIORITY 3		\$511,551
C	Install Permanent Bird Predation Protection	B2 \$214,500
A	Visitor's Center Renovation	C8 \$143,000
A	Provide ADA Parking	D3 \$715
C	New Settling Pond and Utilize Existing Pond for Chem. Ret.	E5 \$135,461
A	Upgrade Visitor Displays and Exhibits	G1 \$14,300
A	PENN DOT Signage	G2 \$3,575
Items Not Recommended for Prioritization at This Time		
A	Bulk Liquid Oxygen and Oxygen Contacting (Completed)	A3 \$0
A	Replace Roof on Existing Garage (In Progress)	C9 \$0

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
A = Improvement Recommended to be Completed by PFBC Construction Crews

Reynoldsdale FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1 (Capital Budget)		\$5,572,648
CB,A	LOX and Oxygen Supplementation System	A1 \$163,020
CB,C	Recirc. Pump Station, Microscreening, & UV Disinfection System	A2 \$1,326,969
CB,C	Replacement of Outdoor Rearing Units	B1 \$3,498,433
CB,C	Predation Protection (See B1)	B2 \$0
CB,C	Repair or Demolish the Remaining Raceways #13-#108	B6 \$29,387
CB,C	Building for Recirculation System (See A2)	C5 \$0
CB,A	Ditch Renovation and Drainage Improvements	D4 \$4,290
CB,C	Clarifier and Sludge Transfer Pumps to Sludge Storage Tank	E1 \$185,900
CB,C	Solids Microscreening System (See A2)	E2 \$0
CB,A	New Effluent Flow Measurement Device	E3 \$35,750
CB,C	Install Sludge Storage System	E4 \$228,800
CB,C	Upgrade Electrical Systems & Service	F8 \$100,100
PRIORITY 2		\$1,291,414
C	Repair/Cover a Portion of Raceways #1-#60 to Support Broodstock Program	B5 \$324,610
A	Replace Hatchhouse Tanks	B7 \$246,774
C	Bituminous Road Surface and Site Repairs	D1 \$296,571
C	New Emerg. Generator to Provide Elec. Service to All Existing Bldgs.	F1 \$250,250
C	Electrical and Emerg. Service to all Improvements (See F1)	F2 \$0
C	Rewire and Replace Lighting within Hatchery Bldg.	F4 \$30,209
C	Upgrade Alarm Systems	F7 \$143,000
PRIORITY 3		\$3,919,276
A	Enclosure Improvements at Spring Water Source	A3 \$7,722
C	Provide Water Supply Source for Ponds at Dunning Creek	A4 \$133,261
C	New Production Ponds	B3 \$3,220,825
A	Ceiling Repair and Ventilation within Hatchery Bldg.	C2 \$68,640
A	Siding Multi-Purpose Bldg.	C3 \$63,063
C	ADA Access to Visitor's Center	C4 \$112,970
C	New Domestic Water Supply to Visitor's Center from Local Municipality	D2 \$123,750
A	Walkway from Visitor's Parking Area Around Facility	D3 \$715
A	Fencing Around Proposed Coolwater Production Ponds	D5 \$94,380
C	New Effluent Diversion Box	E5 \$18,876
C	Provide Electrical Service to Vehicle Storage Building	F3 \$35,750
C	Rewire Storage/Chemical Bldg.	F5 \$21,450
A	Upgrade Visitors Displays & Wayside Exhibits	G1 \$14,300
A	PENN DOT Signage	G2 \$3,575
Items Not Recommended for Prioritization at This Time		
A	Flow Baffles within New Raceways (In Conjunction w/ Option B1b)	B4 \$57,200
A	Replace Roof on Multi-Purpose Bldg. (Completed)	C1 \$0
A	Install Air Conditioners on Multi-Purpose Bldg. (Completed)	F6 \$0

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
 = Improvement Recommended to be Completed by PFBC Construction Crews
 CB = Capital Budget Items

A

Tylersville FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1 (Capital Budget)		\$1,971,245
CB,C	Remove Easternmost Drying Bed & Enclosure	C1
CB,C	Cast-in-Place Square Overtopping Intercept Manhole	E1
CB,C	Install High Flow Capacity Disc Filter	E2
CB,C	Install Alternate Pipeline for Clarifier Overflow to Microscreen	E3
CB,C	Install Microscreen Backwash System to Existing Clarifier	E4
CB,C	Convert Polishing Pond to Aeration / Chemical Retention/Detox Basin	E8
CB,C	Service to all Water/Wastewater Improvements	F1
CB,C	Emergency Power to all Water/Wastewater Improvements	F2
CB,C	Traveling Bridge Sand Media Filter	E10
CB,A	Aeration System For Polishing Pond	E11
PRIORITY 2		\$1,828,606
A	Install Fencing Around Spring Water Source	A2
C	Recirculation Water Pump Station	A6
C	Install Ultraviolet Disinfection System for Pumped Recirculation Water	A7
C	Installation of Bird Predation Protection	B3
A	Concrete Flooring within Storage/Pole Building	C2
A	Siding on the Gable Ends of all Buildings	C3
C	Paving & Site Repairs	D1
C	Provide Fish Transport Vehicle Wash/Disinfect Station	E7
A	Oxygen Injection System	E9
PRIORITY 3		\$193,086
C	Utilize Groundwater from Production Well	A3
C	High Vol. Forced Air Stripping Column and Headtank (Alt. to A5)	A4
A	Replace or Expand Resident Garage	C4
C	Visitor I & E Building with Observation Platform	G1
Items Not Recommended for Prioritization at This Time		
A	Extend Length of Spring Pool Dam (In Progress)	A1
C	Flat-Plate Heat Exchanger (Alt. to A4)	A5
A	Install Flow Baffles within Raceways (Completed)	B1
A	Replace or Repair Existing Raceway Standpipes (In Progress)	B2
A	Extend Raceway Quiescent Zones (Completed)	B4
A	Install New Effluent Flow Measurement Device and Sampler (Completed)	E5
C	Install Sludge Storage System (In Progress)	E6

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
A = Improvement Recommended to be Completed by PFBC Construction Crews
CB = Capital Budget Items

Fairview FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1		\$1,104,686
C	Install Hor. Well/Collection Gallery or New Pumped Vert. Well for N & S Raine	A2 \$286,000
C	Install Sump and New Pumps for Recirculation System	A6 \$131,852
A	Install Flow Baffles within Raceways	B2 \$53,768
C	Pole Building Expansion	C1 \$79,695
A	Chemical Storage Expansion	C2 \$6,831
C	New Pump House for Recirculation	C5 \$12,650
C	Install Sludge Storage System	E1 \$228,800
C	Install High Flow Capacity Disc Filter (1,000 gpm)	E3 \$154,941
A	Aeration System For Polishing Pond	E4 \$35,750
C	Improve Electrical Service to Raceways	F2 \$28,600
C	Air Conditioning for Residence	F4 \$7,150
C	Heating Replacement in Hatchery Building	F5 \$78,650
PRIORITY 2		\$911,002
C	Disinfection Bldg. with In-Line Screening/Filtering and UV Disinf. Equip.	A3 \$455,172
A	Hatchery Building Roof Replacement (Sloped Portions Only)	C3 \$12,966
A	Residence Renovation	C4 \$41,745
C	Improve Security and Facility Lighting	D1 \$35,750
C	Bituminous Road Surface (Re-Seal Only)	D2 \$65,069
C	Upgrade Alarm and Control Systems	F1 \$143,000
C	Electrical and Emerg. Service to all Water/Wastewater Improvements	F3 \$135,850
C	Install VFD Controllers for the Pumps within New Pump Bldg.	F6 \$21,450
PRIORITY 3		\$1,171,638
A	Construct a Shelter Over North Raine	A1 \$51,480
C	Install Chillers for North Raine Water (Summer Months Only)	A5 \$536,250
C	Construct New Fish Rearing Units at Mission Site	B1 \$508,200
A	Construct Containment Dike for Sludge Disposal Area	E2 \$7,150
A	Upgrade Visitors Displays and Construct Walkway to Facility	G1 \$15,373
A	Media for Educational Videos and Training	G2 \$3,575
A	PENN DOT Signage	G3 \$3,575
A	ADA Compliant Restrooms, Parking, and Walkways	G4 \$41,745
A	Picnic Tables near Parking Lot	G5 \$4,290
Items Not Recommended for Prioritization at This Time		
C	Bulk Liquid Oxygen System (Completed)	A4 \$0

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
A = Improvement Recommended to be Completed by PFBC Construction Crews

Linesville FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1		\$3,393,998
C Reservoir WS Treatment (T-Screen, Pressure Strainer & UV)	A8	\$676,363
C Install Sand Filter & UV Systems for Hatchery Building	A9	\$379,291
C Iron Filtration System for Production Well Water	A11	\$250,250
C Concrete Harvest Structure for Big Ponds	B2	\$67,515
C Install Liners within North and South Ponds	B7	\$505,794
A Replacement of Valves at Silos	B10	\$28,518
C New Outlet Structures for South and Pumphouse Ponds	B11	\$438,846
A Roof Replacement (Multi-Purpose and Well Houses)	C2	\$40,864
A Replace Windows and Paint Visitor Center	C4	\$43,472
C Settling Pond Improvements (Big & South Ponds)	E1	\$111,254
C Convert Pond #12 to Settling Pond (Pumphouse Ponds)	E2	\$174,876
C Construct Additional and/or Improve Settling Ponds (North)	E3	\$212,757
C Replace WW Transfer Pumps for Multi-Purpose Bldg.	E4	\$85,800
C Upgrade Alarm Systems	F1	\$135,300
C Electrical and Emerg. Service to all Water/Wastewater Improvements	F3	\$243,100
PRIORITY 2		\$4,686,289
A Install Well Metering System	A1	\$25,025
C Replace Pumps for South Ponds	A2	\$138,875
C Improve Yield or Replace Production Well #5	A3	\$63,250
C Increase Main Pump House Capacity	A4	\$84,546
C Install Additional Production Wells	A5	\$126,500
A Aeration for Production Ponds (Add to Item F2)	A6	\$201,300
C Install Water Heating System for Hatchery Building	A12	\$128,700
C Temperature Management Capability for N & S Ponds	A13	\$120,175
A Replacement of Egg Incubation Units	B1	\$145,860
C Remove and Reconstruct Concrete Raceways (Daphnia)	B3	\$328,900
C Remove Double Ditch Ponds and Construct New Ponds	B5	\$2,277,329
C Predation Protection over New Daphnia Raceways	B8	\$224,224
A Repair and Resurface the Concrete Raceways	B9	\$12,177
C Construct New Pre-Engineered Storage Building	C1	\$233,475
C Bituminous Road Surface	D3	\$232,870
A Install Boat Ramp	D4	\$71,500
C Provide Electric Service to All Ponds	F2	\$178,750
C Replace HVAC Systems within the Multi-Purpose Bldg.	F5	\$57,083
C Electrical and Lighting Repairs in Multi-Purpose Boiler Room	F6	\$35,750
PRIORITY 3		\$1,857,863
C Monitoring for pH and DO for N & S Ponds	A14	\$135,850
C Construction of New Cool/Warmwater Production Ponds	B4	\$1,606,551
A Install Window in Bathroom at Residence	C3	\$677
A Walking Trail, Site Observation Tower and Picnic Pavilion	D1	\$25,025
C ADA Compliant Restrooms, Parking and Walkways	D2	\$43,285
A Visitor Observation Platform & Picnic Shelter	G1	\$42,900
A PENN DOT Signage	G2	\$3,575
Items Not Recommended for Prioritization at This Time		
C Bulk Liquid Oxygen System (Completed)	A7	\$0
C Reservoir Trtmnt (T-Screen, Microscreen & UV) (Alt. to A8)	A10	\$633,677
C Regrade and Reslope the North Ponds (Alt. to B5)	B6	\$22,341
A Additional Telephone Line in Maintenance Building (Completed)	F4	\$0

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
 = Improvement Recommended to be Completed by PFBC Construction Crews

A

Pleasant Mount FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1		\$3,224,740
C	Replace Creek Intake Water Supply Piping	A1
		\$121,550
A	Bulk Liquid Oxygen System	A2
		\$100,100
A	LHO Contacting Chambers, Distribution Piping, and Metering	A3
		\$128,700
C	Rehabilitate Existing Production Wells	A4
		\$50,738
C	Hatchery Building Recirculation Systems	A7
		\$515,814
C	Construct New Rearing Ponds at Hankins Site	B1
		\$368,636
C	Construct Larger Catch Basin in Pond #12	B3
		\$48,979
C	Production Pond Consolidation and Renovation (Alt. to Item B2)	B5
		\$1,240,085
A	Remove and Replace Early Rearing Units	B6
		\$106,887
C	Concrete Raceways Serial Drainage Modifications	B7
		\$101,475
A	Hankins Pond Drainage Improvements	B8
		\$4,059
C	Demolish Large Barn	C1
		\$10,148
A	New Effluent Flow Measurement Device	E1
		\$35,750
C	Repair or Replace Wastewater Line to Clarifier	E2
		\$27,170
C	Electrical and Emerg. Service to all Water/Wastewater Improvements	F1
		\$221,650
C	Install a New Emergency Generator and Transfer Switch (See F1)	F2
		\$0
C	Upgrade Elec. Service and Rewire HBs, Res. & Rearing Units	F3
		\$143,000
C	Conduct Electrical Study (Under Separate Contract)	F5
		\$0
PRIORITY 2		\$828,832
C	Construct New Pre-Engineered Vehicle and Feed Storage Bldg	C2
		\$235,422
A	Renovations to Coldwater Production Hatchery Building #1	C3
		\$22,140
C	Renovations to Both Residences (3,500 SF Combined)	C4
		\$143,756
C	Resurface Roadways and Parking Areas as Reqd.	D1
		\$284,513
C	Reserved	D2
		\$0
C	Upgrade Alarm Systems	F4
		\$143,000
PRIORITY 3		\$526,378
C	Water Treatment Syst. For Pumped Recirc. & Creek Water	A8
		\$462,798
A	Trailer Mounted Pump and Aluminum Irrigation Piping	A9
		\$21,450
A	Construct Additional Footbridge	D3
		\$6,765
A	Crosswalk Warning Signs Across Route 371	D4
		\$6,765
A	Upgrade Visitor Displays	G1
		\$14,300
A	Install Wayside Visitor Kiosk & Visitor's Facilities	G2
		\$14,300
Items Not Recommended for Prioritization at This Time		
A	Increase Buffering Capacity in Cool/Warmwater Ponds (by PFBC)	A5
		\$0
C	Improve Aeration to Cool/Warmwater Production Ponds	A6
		\$81,191
C	Production Pond Repairs (Alt. to Item B5)	B2
		\$588,552
C	Repair or Replace all Bulkheads (Inlet Structures) within Ponds	B4
		\$44,649

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
A = Improvement Recommended to be Completed by PFBC Construction Crews

Tionesta FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1		\$2,184,540
A	Install Bulk Liquid Oxygen System	A2 \$100,100
C	Modify Existing Aeration Towers	A3 \$64,350
A	Install Control Valves at Head Ends of Upper & Lower Raceways	A7 \$91,520
C	Replacement of Production Well #2	A8 \$35,750
C	Repair Head and Midpoint Aerators	A9 \$21,450
C	Install Chillers to Well Water	A10 \$286,000
C	Install Flow Meters, Meter Pit & Related Instrumentation to Wells	A11 \$50,050
C	Replace Production Well Pumps	A12 \$50,050
C	Cool/Warmwater Production Pond Renovations	B1 \$264,622
A	Renovate Circular Tanks within Hatchery Building	B3 \$62,205
A	Replace Existing Standpipes within Hatchery Bldg. & Curvilinear Rwys	B7 \$27,885
A	Replace Egg Incubation Units within Hatchery Bldg.	B8 \$60,060
A	Install Flow Baffles within Curvilinear Raceways	B9 \$171,600
C	Additional Domestic Water Well	D1 \$7,150
A	Install New Effluent Flow Measurement Devices & Composite Samplers	E1 \$58,630
C	Install a High Flow Capacity Disc Microscreen	E3 \$167,811
C	Traveling Bridge Sand Media Filter	E4 \$405,900
A	Aeration System For Polishing Pond	E5 \$33,825
C	Electrical and Emerg. Service to all Water/Wastewater Improvements	F1 \$135,850
C	Electrical Service to Curvilinear Raceways	F2 \$28,600
C	Replace Electrical Wiring Between Production Well #2 and #3	F3 \$5,720
C	Rewire Existing Production Well Bldgs.	F6 \$21,450
C	Install Control Systems for the Production Well Pumps	F7 \$32,175
A	Air Conditioning for Conference Room	F8 \$1,788
PRIORITY 2		\$486,674
C	Remove and Replace Tubbs Run Units (Alt. to B6)	B2 \$300,114
A	Replace Fiberglass on Existing Drying Bed Enclosure	C2 \$38,610
C	Upgrade Alarm Systems	F4 \$126,500
C	Rewire Hatchery Bldg.	F5 \$21,450
PRIORITY 3		\$74,058
C	Install Permanent Birds Predation for Tubbs Run Units	B5 \$21,450
A	Crosswalk Across Route 62	D2 \$30,443
A	Picnic Tables at PFBC Access Area	D3 \$4,290
A	Upgrade Visitor Displays & Exhibits	G1 \$14,300
A	PENN DOT Signage	G2 \$3,575
Items Not Recommended for Prioritization at This Time		
C	Treated Water from Tubbs Run (Completed)	A1 \$0
C	Sand Filter & UV Disinfection of Tubbs Run Water (See A1)	A4 \$0
C	Pump Replacement for Production Well #1 (Completed)	A5 \$0
A	Increase Buffering Capacity in Cool/Warmwater Prod. Ponds (by PFBC)	A6 \$0
C	Additional Production Ponds	B4 \$1,248,176
C	Repair Existing Concrete Tubbs Run Raceways (Alt. to B2)	B6 \$240,240
A	Construct Bldg. to House Sand Filters and UV (Completed)	C1 \$0
A	Combine Effluent Outfalls (Completed)	E2 \$0

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
A = Improvement Recommended to be Completed by PFBC Construction Crews

Union City FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1		\$2,893,072
C Improve Sand Filtration System	A1	\$486,200
C Install Chillers in Hatchery Building for Reservoir Water	A2	\$185,900
C Install Additional Wells	A3	\$126,500
A Install Control Valves on Lower Supply Dam Pipeline	A6	\$44,275
A Replace Valves in Hatchery Building and Garage	A7	\$12,650
A Connect Upper Supply Dam to Sand Filtration System	A8	\$79,063
C Replace Boiler or Install Heat Exchangers in HB	A9	\$86,930
C Install Recirculation Water Pump Station, Filtration and UV System	A10	\$454,548
A Replacement of Egg Incubation Units and Piping	B1	\$19,811
C Repair Leaks within Ponds #2 and #7	B5	\$14,300
A Replace Slide Gates with Control Valves	B6	\$8,580
C Pond Consolidation and Replacement	B7	\$661,554
A Demolish Old Concrete Raceways	B8	\$7,150
A Additional Chemical Storage	C3	\$68,145
C Bituminous Paving and Road Repairs	D1	\$71,709
C Connect Facility DWW to Municipal Domestic Wastewater	E1	\$20,625
C Expand Settling Pond #10	E2	\$26,813
A Install Control Valves to Stop Flow from HB to Pond #12	E3	\$13,750
C Install Modern Effluent Treatment System for HB Effluent	E4	\$305,470
C Electrical and Emerg. Service to all Water/Wastewater Improvements	F3	\$135,850
C Upgrade and Replace Electrical Wiring Systems	F4	\$63,250
PRIORITY 2		\$374,897
A Replace or Expand the Garage	C1	\$93,390
A Replace Windows and Siding for Hatchery Building	C2	\$75,075
A Additional Office Space	C4	\$16,445
C Upgrade Alarm Systems	F1	\$126,500
C Install New Lighting in Pole Barn, Hatchery Building and Garage	F5	\$27,737
C Security Lighting	F6	\$35,750
PRIORITY 3		\$75,675
A Residence Renovation	C7	\$18,975
A Installation of Security Fencing	D2	\$12,177
A Upgrade Visitor Displays and Wayside Exhibits	G1	\$14,300
A Pennsylvania DOT Signage	G2	\$3,575
A ADA Restrooms and Parking	G3	\$26,648
Items Not Recommended for Prioritization at This Time		
A Construct Larger Supply Dam	A4	\$63,250
C Freeze Protect Pipes	A5	\$37,950
C Dredge and Reslope Production Ponds (Alt. to Item B7)	B2	\$54,120
C Construct Concrete Harvest Structures (Alt. to Item B7)	B3	\$275,606
A Eliminate Production Pond #6 (Alt. to Item B7)	B4	\$26,384
A Siding for Garage	C5	\$9,662
A Replace Barn Door (In Progress)	C6	\$0
A Replace Telephone Systems (Completed)	F2	\$0

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
A = Improvement Recommended to be Completed by PFBC Construction Crews

Upper Spring Creek FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1		\$1,033,504
C Install Recirculation Water Pump Station, Filtration and UV System	A3	\$454,548
A Chemical and Bagged Feed Storage	C2	\$7,590
C Repair and Enhance Settling Pond	E1	\$87,641
C Update Electrical Service and System	F1	\$221,375
C Electrical and Emerg. Service to all Water/Wastewater Improvements	F2	\$135,850
C Install Monitoring, Alarm, and Notification Systems	F4	\$126,500
PRIORITY 2		\$1,476,210
C Service and/or Replace Production Wells and Pumps	A1	\$126,500
A Install Bulk LOX System, LHO Contacting Chambers & Sealed Columns	A2	\$192,610
C Aeration for Production Ponds	A4	\$86,559
C Installation of Additional Water Supply Piping for Ponds	A5	\$172,964
C Demolition of Concrete Raceways	B1	\$7,150
C Installation of Circular Tanks for Broodstock Holding	B2	\$292,964
C Subdivision of Existing Warming Pond	B3	\$29,990
A Replace Existing Pond Harvest Structures	B4	\$175,031
A Install Egg Incubators	B5	\$47,740
A Install Early Rearing Units	B6	\$70,400
A Renovation of Existing Hatchery Building	C1	\$97,416
A Security Fencing Around Spring Crk Intake, HB and Improvements	D1	\$14,207
C Bituminous Road Surface	D2	\$31,119
C Security Lighting	D3	\$35,750
C Provide Electrical Service to Cool/Warmwater Production Ponds	F3	\$25,025
C Install VFD Controllers for Production Well Pumps	F5	\$32,175
C Bury Electrical Lines to Upper Spring Creek	F6	\$38,610
PRIORITY 3		\$0
None		
Items Not Recommended for Prioritization at This Time		
None		

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

C = Improvement Recommended to be Completed by Contracted Construction
A = Improvement Recommended to be Completed by PFBC Construction Crews

New Coldwater FCS Summary of Opinions of Probable Cost

Summary - Opinions of Probable Cost		
ITEM	DRAWING I.D. #	TOTAL COST **
PRIORITY 1		
Water Groundwater Supply	A1	\$1,716,000
Dissolved Oxygen Management System	A2	\$347,061
New Raceways (Option)	B1	\$3,432,000
Circular Tank Rearing (Option)	B1A	\$7,662,398
Hatchery Building--Production Area	C1	\$1,587,300
Broodstock Bldg.	C2	\$1,447,875
Vehicle/Equipment Storage Building	C3	\$446,160
Residences	C4	\$643,500
Land Acquisition & Sitework	D1	\$2,395,250
Site Paving and Access to State or Local Highway	D2	\$194,480
Security Fence	D3	\$8,580
Domestic Well & Water System	D4	\$28,600
Domestic Wastewater System	D5	\$35,750
Wastewater Piping	E1	\$170,170
Microscreen	E2	\$249,026
Clarifier	E3	\$185,900
Sludge Storage	E4	\$165,437
Wastewater Related Site Work	E5	\$87,087
Effluent Measurement	E6	\$35,750
Electrical Service	F1	\$286,000
Emergency Power	F2	\$150,150
Instrumentation and Alarm System	F3	\$214,500
Hatchery Building--Visitor Interpretation	G1	\$35,750
New Raceways (Option)	PRIORITY 1	\$13,862,326
Circular Tank Rearing (Option)	PRIORITY 1	\$18,092,724

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)

New Cool/Warmwater FCS Summary of Opinions of Probable Cost

New Hatchery Summary - Opinions of Probable Cost		
ITEM	Summary I.D.#	TOTAL COST
PRIORITY 1		
Water Groundwater Supply	A1	\$250,250
Elevated Water Supply Reservoir	A2	\$1,401,400
Building Water Supply Well	A3	\$71,500
One-Acre Production Ponds	B1	\$6,864,000
Indoor Fish Holding Tanks (Included in C1)	B2	\$0
Adult Spawning, Jar Incubation & Early Rearing Tanks (Inc. in C1)	B3	\$0
Future Pond Expansion Area	B4	\$3,432,000
Hatchery Building--Production	C1	\$1,430,000
Hatchery Building--Office/Laboratory	C2	\$514,800
Vehicle/Equipment Storage Building	C3	\$371,800
Residences	C4	\$429,000
Land Acquisition & Sitework (Assume PFBC Property, NO PROJECT COST)	D1	\$286,000
Paved Access to Commonwealth Highway	D2	\$35,750
Security Fence	D3	\$182,342
Effluent Settling Ponds	E1	\$143,000
Effluent Monitoring	E2	\$35,750
Electrical Service	F1	\$286,000
Emergency Power	F2	\$112,613
Instrumentation and Alarm System	F3	\$214,500
Hatchery Building--Visitor Interpretation	G1	\$71,500
(Note: Future Expansion Ponds, Item B4, was not included in this Total)		
PRIORITY 1		\$16,132,205

** Costs include Estimating (10%), State Construction (15%), Design Phase (8%), and Construction Phase (7%) Contingencies. (See Section XX for Contingencies Discussion)