

APPENDIX K:

Present Worth Analysis

Bear Creek Township, Luzerne County, PA
Sewage Facilities Alternative 1

Capital Cost Estimate Summary - Alternative No. 1 (Including Land)			
1 Sewage Collection and Conveyance System			\$ 10,405,519.20
2 State Route 115 Corridor Sewage Collection System			\$ 1,066,111.20
3 Sewage Conveyance System			\$ 988,416.00
4 Equalization Tank/Pump Station			\$ 838,800.00
5 Connection Fee to Plains			\$ 210,000.00
		Total	\$ 13,508,846.40
Operation and Maintenance Costs			
1 Total O&M Cost for Sewage Collection/Conveyance System			\$ 77,050.00
2 Annual Treatment Fee to WVSA (\$160/EDU)	(480 EDUS)		\$ 76,800.00
3 Annual Conveyance Fee to Plains Twp. (\$89/EDU)	(480 EDUS)		\$ 42,720.00
			\$ 196,570.00
Present Worth Analysis			
Given:			
Planning period for PW calculations	20 Years		
Discount rate	4.375% as per US EPA and PADEP		
Land Escalation Factor per annum	3.00%		
Initial Capital Cost			
Non-land	\$	13,493,846	
Land	\$	15,000	
Less sunk cost	\$	-	
Total	\$	13,508,846	
Operation and Maintenance Cost Summary Alternative 1			
Item 1	\$	196,570	
Item 2	\$	-	
Total	\$	196,570	
Analysis:			
1 Compute Present worth factor for planning period and discount rate.			
Single payment present worth factor	0.4246882		
Annual payment present worth factor	13.149983		
2 Salvage Value			
A. Sewage Collection System (Study Areas 1 and 2)			
		Capital Cost	
Cost for Collection/Conveyance System Piping with 50 yr. life	\$	9,544,337	
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 50 yr. items following this section)	\$	853,682	
Initial Value (non-land)	\$	9,544,337	
Annual Straight line Depreciation based on		50 years	
	\$	190,887	
Cumulative Depreciation over planning period of		20 years	
	\$	3,817,735	
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation			
Initial Value	\$	9,544,337	
Accumulated Depreciation	\$	(3,817,735)	
Salvage Value	\$	5,726,602	at year 20
	Salvage Value \$	5,726,602	at year 20
	Single payment discount factor	0.4246882	
	Present Worth of Salvage Value	2,432,021	

Bear Creek Township, Luzerne County, PA
Sewage Facilities Alternative 1

B. State Route 115 Corridor Sewage Collection System		Capital Cost
Cost for Collection/Conveyance System Piping with 50 yr. life	\$	1,028,887
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 50 yr. items following this section)	\$	37,224
Initial Value (non-land)	\$	1,028,887
Annual Straight line Depreciation based on		50 years
	\$	20,578
Cumulative Depreciation over planning period of		20 years
	\$	411,555
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$	1,028,887
Accumulated Depreciation	\$	(411,555)
Salvage Value	\$	617,332 at year 20
	Salvage Value \$	617,332 at year 20
	Single payment discount factor	0.4246882
	Present Worth of Salvage Value	262,174
C. Sewage Conveyance System to Plains		Capital Cost
Cost for Collection/Conveyance System Piping with 50 yr. life	\$	959,040
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 50 yr. items following this section)	\$	29,376
Initial Value (non-land)	\$	959,040
Annual Straight line Depreciation based on		50 years
	\$	19,181
Cumulative Depreciation over planning period of		20 years
	\$	383,616
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$	959,040
Accumulated Depreciation	\$	(383,616)
Salvage Value	\$	575,424 at year 20
	Salvage Value \$	575,424 at year 20
	Single payment discount factor	0.4246882
	Present Worth of Salvage Value	244,376
D. Equalization Tank/Pump Station Construction Cost Estimate		Capital Cost
Cost for Tanks, System Piping etc. with 40 yr. life	\$	680,166
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 40 yr. items following this section)	\$	151,134
Initial Value (non-land)	\$	680,166
Annual Straight line Depreciation based on		40 years
	\$	17,004
Cumulative Depreciation over planning period of		20 years
	\$	340,083
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$	680,166
Accumulated Depreciation	\$	(340,083)
Salvage Value	\$	340,083 at year 20
	Salvage Value \$	340,083 at year 20
	Single payment discount factor	0.4246882
	Present Worth of Salvage Value	144,429

Bear Creek Township, Luzerne County, PA
Sewage Facilities Alternative 1

E. Connection to Plains			
*This item is a one-time fee to Plains Twp and the Salvage Value is \$ 0			
F. Land	\$	15,000	
Cumulative Escalation factor over planning period of		20 years	
		1.806111	
Future Value of Land at end of the planning period of		20 years	
	\$	27,092	
Salvage Value = Future Value			
	Salvage Value: \$	27,092	20 years
	Single payment discount factor:	0.4246882	
	Present Worth of Salvage Value of Land \$	11,506	
3 Present Worth of Operations and Maintenance Costs			
	Annual O&M Costs \$	196,570	
	Annual payment present worth factor	13.149983	
	Present Worth of O&M Costs \$	2,584,892	
4 Total Present Worth			
	Present Worth of Initial Capital Cost	\$ 13,508,846	
	Present Worth of O&M Costs	\$ 2,584,892	
	Subtotal	\$ 16,093,739	
	Less Present Worth of Salvage Value	(3,094,505)	
	TOTAL PRESENT WORTH	\$ 12,999,234	

Bear Creek Twp, Luzerne County, PA
Sewage Facilities Alternative 2

Capital Cost Estimate Summary - Alternative No. 2			
1	Sewage Collection and Conveyance System		\$ 10,405,519.20
2	State Route 115 Corridor Sewage Collection System		\$ 1,066,111.20
3	Wastewater Treatment Plant (0.15 MGD SBR)		\$ 4,073,760.00
		Total	\$ 15,545,390.40
Operation and Maintenance Cost Summary Alternative 2			
1	Total O&M Cost		\$ 244,030.00
Present Worth Analysis			
Given:			
Planning period for PW calculations		20 Years	
Discount rate		4.375% as per US EPA and PADEP	
Land Escalation Factor per annum		3.00%	
Initial Capital Cost			
	Non-land	\$ 15,492,890	
	Land	\$ 52,500	
	Less sunk cost	\$ -	
	Total	\$ 15,545,390	
Annual O&M costs			
	Item 1	\$ 244,030	
	Item 2	\$ -	
	Total	\$ 244,030	
Analysis:			
1 Compute Present worth factor for planning period and discount rate.			
	Single payment present worth factor		0.4246882
	Annual payment present worth factor		13.149983
2 Salvage Value			
A. Sewage Collection System (Study Areas 1 and 2)			
			Capital Cost
	Cost for Collection/Conveyance System Piping with 50 yr. life	\$ 9,544,337	
	Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 50 yr. items following this section)	\$ 853,682	
	Initial Value (non-land)	\$ 9,544,337	
	Annual Straight line Depreciation based on 50 years	\$ 190,887	
	Cumulative Depreciation over planning period of 20 years	\$ 3,817,735	
	Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
	Initial Value	\$ 9,544,337	
	Accumulated Depreciation	\$ (3,817,735)	
	Salvage Value	\$ 5,726,602	at year 20
	Salvage Value	\$ 5,726,602	at year 20
	Single payment discount factor	0.4246882	
	Present Worth of Salvage Value	2,432,021	

Bear Creek Twp, Luzerne County, PA
Sewage Facilities Alternative 2

B. State Route 115 Corridor Sewage Collection System		Capital Cost
Cost for Collection/Conveyance System Piping with 50 yr. life	\$	1,028,887
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 50 yr. items following this section)	\$	37,224
Initial Value (non-land)	\$	1,028,887
Annual Straight line Depreciation based on		50 years
	\$	20,578
Cumulative Depreciation over planning period of		20 years
	\$	411,555
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$	1,028,887
Accumulated Depreciation	\$	(411,555)
Salvage Value	\$	617,332 at year 20
	Salvage Value \$	617,332 at year 20
	Single payment discount factor	0.4246882
	Present Worth of Salvage Value	262,174
C. Wastewater Treatment Plant (0.15 MGD SBR)		Capital Cost
Cost for Conc. Tanks, Site Piping etc. with 40 yr. life	\$	2,131,722
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 40 yr. items following this section)	\$	1,897,037
Initial Value (non-land)	\$	2,131,722
Annual Straight line Depreciation based on		40 years
	\$	53,293
Cumulative Depreciation over planning period of		20 years
	\$	1,065,861
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$	2,131,722
Accumulated Depreciation	\$	(1,065,861)
Salvage Value	\$	1,065,861 at year 20
	Salvage Value \$	1,065,861 at year 20
	Single payment discount factor	0.4246882
	Present Worth of Salvage Value	452,659
D. Land	\$	52,500
Cumulative Escalation factor over planning period of		20 years
		1.806111
Future Value of Land at end of the planning period of		20 years
	\$	94,821
Salvage Value = Future Value		
	Salvage Value \$	94,821 20 years
	Single payment discount factor	0.4246882
Present Worth of Salvage Value of Land	\$	40,269
3 Present Worth of Operations and Maintenance Costs		
Annual O&M Costs	\$	244,030
Annual payment present worth factor		13.149983
Present Worth of O&M Costs	\$	3,208,990

Bear Creek Twp, Luzerne County, PA
Sewage Facilities Alternative 2

<u>4</u> Total Present Worth	
Present Worth of Initial Capital Cost	\$ 15,545,390
Present Worth of O&M Costs	\$ 3,208,990
Subtotal	\$ 18,754,381
Less Present Worth of Salvage Value	(3,187,122)
TOTAL PRESENT WORTH	\$ 15,567,259

Bear Creek Township, Luzerne County, PA
Sewage Facilities Alternative 3

Capital Cost Estimate Summary - Alternative No. 3		
1 Sewage Collection and Conveyance System		\$ 10,939,816.80
2 Wastewater Treatment Plant (0.15 MGD SBR)		\$ 4,610,880.00
3 Spray Irrigation System		\$ 3,241,713.60
	Total	\$ 18,792,410.40
Operation and Maintenance Cost Summary Alternative 3		
1 Total O&M Cost		\$ 279,450.00
Present Worth Analysis		
Given:		
Planning period for PW calculations	20 Years	
Discount rate	4.375% as per US EPA and PADEP	
Land Escalation Factor per annum	3.00%	
Initial Capital Cost		
Non-land	\$	17,944,910
Land	\$	847,500
Less sunk cost	\$	-
Total	\$	18,792,410
Annual O&M costs		
Item 1	\$	279,450
Item 2	\$	-
Total	\$	279,450
Analysis:		
1 Compute Present worth factor for planning period and discount rate.		
Single payment present worth factor		0.4246882
Annual payment present worth factor		13.149983
2 Salvage Value		
A. Sewage Collection System (Study Areas 1 and 2)		
		Capital Cost
Cost for Collection/Conveyance System Piping with 50 yr. life		\$ 10,028,074
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 50 yr. items following this section)		\$ 904,243
Initial Value (non-land)	\$	10,028,074
Annual Straight line Depreciation based on		50 years
	\$	200,561
Cumulative Depreciation over planning period of		20 years
	\$	4,011,230
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$	10,028,074
Accumulated Depreciation	\$	(4,011,230)
Salvage Value	\$	6,016,844 at year 20
Salvage Value	\$	6,016,844 at year 20
Single payment discount factor		0.4246882
Present Worth of Salvage Value	\$	2,555,283

Bear Creek Township, Luzerne County, PA
Sewage Facilities Alternative 3

B. Wastewater Treatment Plant (0.15 MGD SBR)		Capital Cost
Cost for Conc. Tanks, Site Piping etc. with 40 yr. life		\$ 2,593,972
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 40 yr. items following this section)		\$ 2,016,907
Initial Value (non-land)	\$ 2,593,972	
Annual Straight line Depreciation based on	40 years	
	\$ 64,849	
Cumulative Depreciation over planning period of	20 years	
	\$ 1,296,986	
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$ 2,593,972	
Accumulated Depreciation	\$ (1,296,986)	
Salvage Value	\$ 1,296,986	at year 20
	Salvage Value \$ 1,296,986	at year 20
	Single payment discount factor 0.4246882	
	Present Worth of Salvage Value	550,815
C. Spray Irrigation System		Capital Cost
Cost for Storage Pond, Spray Irr. Piping etc. with 40 yr. life		\$ 1,782,426
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 40 yr. items following this section)		\$ 619,286
Initial Value (non-land)	\$ 1,782,426	
Annual Straight line Depreciation based on	40 years	
	\$ 44,561	
Cumulative Depreciation over planning period of	20 years	
	\$ 891,213	
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$ 1,782,426	
Accumulated Depreciation	\$ (891,213)	
Salvage Value	\$ 891,213	at year 20
	Salvage Value \$ 891,213	at year 20
	Single payment discount factor 0.4246882	
	Present Worth of Salvage Value	378,488
D. Land	\$ 847,500	
Cumulative Escalation factor over planning period of	20 years	
	1.806111	
Future Value of Land at end of the planning period of	20 years	
	\$ 1,530,679	
Salvage Value = Future Value		
	Salvage Value \$ 1,530,679	20 years
	Single payment discount factor 0.4246882	
	Present Worth of Salvage Value of Land \$	650,061
3 Present Worth of Operations and Maintenance Costs		
Annual O&M Costs	\$ 279,450	
Annual payment present worth factor	13.149983	
Present Worth of O&M Costs	\$ 3,674,763	

Bear Creek Township, Luzerne County, PA
Sewage Facilities Alternative 3

4 Total Present Worth	
Present Worth of Initial Capital Cost	\$ 18,792,410
Present Worth of O&M Costs	\$ 3,674,763
Subtotal	\$ 22,467,173
Less Present Worth of Salvage Value	(4,134,647)
TOTAL PRESENT WORTH	\$ 18,332,526

Bear Creek Township, Luzerne County, PA
Sewage Facilities Alternative 4

Capital Cost Estimate Summary - Alternative No. 4		
1 Sewage Collection and Conveyance System	\$	11,119,816.80
2 Wastewater Treatment Plant (0.15 MGD Extended Aeration)	\$	3,698,640.00
3 Spray Irrigation System	\$	4,542,588.00
Total	\$	19,361,044.80
Operation and Maintenance Cost Summary Alternative 4		
1 Total O&M Cost	\$	288,650.00
Present Worth Analysis		
Given:		
Planning period for PW calculations	20 Years	
Discount rate	4.375% as per US EPA and PADEP	
Land Escalation Factor per annum	3.00%	
Initial Capital Cost		
Non-land	\$	18,133,545
Land	\$	1,227,500
Less sunk cost	\$	-
Total	\$	19,361,045
Annual O&M costs		
Item 1	\$	288,650
Item 2	\$	-
Total	\$	288,650
Analysis:		
1 Compute Present worth factor for planning period and discount rate.		
Single payment present worth factor	0.4246882	
Annual payment present worth factor	13.149983	
2 Salvage Value		
A. Sewage Collection System (Study Areas 1 and 2)		
	Capital Cost	
Cost for Collection/Conveyance System Piping with 50 yr. life	\$	10,166,174
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 50 yr. items following this section)	\$	946,143
Initial Value (non-land)	\$	10,166,174
Annual Straight line Depreciation based on		50 years
	\$	203,323
Cumulative Depreciation over planning period of		20 years
	\$	4,066,470
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$	10,166,174
Accumulated Depreciation	\$	(4,066,470)
Salvage Value	\$	6,099,704
		at year 20
Salvage Value	\$	6,099,704
Single payment discount factor		0.4246882
Present Worth of Salvage Value	\$	2,590,473

Bear Creek Township, Luzerne County, PA
Sewage Facilities Alternative 4

B. Wastewater Treatment Plant (0.15 MGD Extended Aeration)		Capital Cost
Cost for Collection/Conveyance System Piping with 40 yr. life		\$ 2,505,892
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 40 yr. items following this section)		\$ 1,192,747
Initial Value (non-land)	\$ 2,505,892	
Annual Straight line Depreciation based on	40 years	
	\$ 62,647	
Cumulative Depreciation over planning period of	20 years	
	\$ 1,252,946	
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$ 2,505,892	
Accumulated Depreciation	\$ (1,252,946)	
Salvage Value	\$ 1,252,946	at year 20
	Salvage Value \$ 1,252,946	at year 20
	Single payment discount factor 0.4246882	
	Present Worth of Salvage Value	532,111
C. Spray Irrigation System		Capital Cost
Cost for Collection/Conveyance System Piping with 40 yr. life		\$ 2,471,550
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 40 yr. items following this section)		\$ 851,037
Initial Value (non-land)	\$ 2,471,550	
Annual Straight line Depreciation based on	40 years	
	\$ 61,789	
Cumulative Depreciation over planning period of	20 years	
	\$ 1,235,775	
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$ 2,471,550	
Accumulated Depreciation	\$ (1,235,775)	
Salvage Value	\$ 1,235,775	at year 20
	Salvage Value \$ 1,235,775	at year 20
	Single payment discount factor 0.4246882	
	Present Worth of Salvage Value	524,819
D. Land	\$ 1,227,500	
Cumulative Escalation factor over planning period of	20 years	
	1.806111	
Future Value of Land at end of the planning period of	20 years	
	\$ 2,217,002	
Salvage Value = Future Value		
	Salvage Value \$ 2,217,002	20 years
	Single payment discount factor 0.4246882	
	Present Worth of Salvage Value of Land \$	941,534

Bear Creek Township, Luzerne County, PA
Sewage Facilities Alternative 4

3 Present Worth of Operations and Maintenance Costs		
Annual O&M Costs	\$	288,650
Annual payment present worth factor		13.149983
Present Worth of O&M Costs	\$	3,795,743
4 Total Present Worth		
Present Worth of Initial Capital Cost	\$	19,361,045
Present Worth of O&M Costs	\$	3,795,743
Subtotal	\$	23,156,787
Less Present Worth of Salvage Value		(4,588,938)
TOTAL PRESENT WORTH	\$	18,567,850

Bear Creek Township, Luzerne County, PA
Sewage Facilities Alternative 5

Capital Cost Estimate Summary - Alternative No. 5			
1 Sewage Collection and Conveyance System - Study Area No. 1 and 2		\$	10,939,816.80
2 Subsurface Wastewater Disposal - Study Area No. 1		\$	3,984,480.00
3 Subsurface Wastewater Disposal - Study Area No. 2		\$	8,197,920.00
	Total	\$	23,122,216.80
Operation and Maintenance Cost Summary Alternative 5			
1 Total O&M Cost for Study Areas 1 and 2		\$	265,650.00
Present Worth Analysis			
Given:			
Planning period for PW calculations			20 Years
Discount rate			4.375% as per US EPA and PADEP
Land Escalation Factor per annum			3.00%
Initial Capital Cost			
Non-land	\$		20,984,717
Land	\$		2,137,500
Less sunk cost			-
Total	\$		23,122,217
Annual O&M costs			
Item 1	\$		265,650
Item 2			-
Total	\$		265,650
Analysis:			
1 Compute Present worth factor for planning period and discount rate.			
Single payment present worth factor			0.4246882
Annual payment present worth factor			13.149983
2 Salvage Value			
A. Sewage Collection System (Study Areas 1 and 2)			
		<u>Capital Cost</u>	
Cost for Collection/Conveyance System Piping with 50 yr. life		\$	10,028,074
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 50 yr. items following this section)		\$	904,243
Initial Value (non-land)	\$		10,028,074
Annual Straight line Depreciation based on			50 years
	\$		200,561
Cumulative Depreciation over planning period of			20 years
	\$		4,011,230
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation			
Initial Value	\$		10,028,074
Accumulated Depreciation	\$		(4,011,230)
Salvage Value	\$		6,016,844 at year 20
	Salvage Value	\$	6,016,844 at year 20
	Single payment discount factor		0.4246882
	Present Worth of Salvage Value		2,555,283

Bear Creek Township, Luzerne County, PA
Sewage Facilities Alternative 5

B. Wastewater Treatment Plant (0.15 MGD SBR)		Capital Cost
Cost for Collection/Conveyance System Piping with 40 yr. life		\$ 2,464,837
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 40 yr. items following this section)		\$ 1,519,642
Initial Value (non-land)	\$ 2,464,837	
Annual Straight line Depreciation based on	40 years	
	\$ 61,621	
Cumulative Depreciation over planning period of	20 years	
	\$ 1,232,419	
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$ 2,464,837	
Accumulated Depreciation	\$ (1,232,419)	
Salvage Value	\$ 1,232,419	at year 20
	Salvage Value \$ 1,232,419	at year 20
	Single payment discount factor 0.4246882	
	Present Worth of Salvage Value	523,394
C. Subsurface Wastewater Disposal - Study Areas 1 and 2		Capital Cost
Cost for Control Bldg, Distribution Piping etc. with 40 yr. life		\$ 4,508,640
Cost for equipment with 20 yr. life and therefore no salvage value (see breakdown for 20 and 40 yr. items following this section)		\$ 1,559,279
Initial Value (non-land)	\$ 4,508,640	
Annual Straight line Depreciation based on	40 years	
	\$ 112,716	
Cumulative Depreciation over planning period of	20 years	
	\$ 2,254,320	
Assume salvage value = net depreciated value = Initial Value - Accumulated Depreciation		
Initial Value	\$ 4,508,640	
Accumulated Depreciation	\$ (2,254,320)	
Salvage Value	\$ 2,254,320	at year 20
	Salvage Value \$ 2,254,320	at year 20
	Single payment discount factor 0.4246882	
	Present Worth of Salvage Value	957,383
D. Land	\$ 2,137,500	
Cumulative Escalation factor over planning period of	20 years	
	1.806111	
Future Value of Land at end of the planning period of	20 years	
	\$ 3,860,563	
Salvage Value = Future Value		
	Salvage Value \$ 3,860,563	20 years
	Single payment discount factor 0.4246882	
	Present Worth of Salvage Value of Land \$	1,639,536
3 Present Worth of Operations and Maintenance Costs		
Annual O&M Costs	\$ 265,650	
Annual payment present worth factor	13.149983	
Present Worth of O&M Costs	\$	3,493,293

Bear Creek Township, Luzerne County, PA
Sewage Facilities Alternative 5

4 Total Present Worth	
Present Worth of Initial Capital Cost	\$ 23,122,217
Present Worth of O&M Costs	\$ 3,493,293
Subtotal	\$ 26,615,510
Less Present Worth of Salvage Value	(5,675,595)
TOTAL PRESENT WORTH	\$ 20,939,914

Bear Creek Town of Luzerne County, PA
Act 537 Sewerage Facilities Plan

Salvage Value Summary				
Item	Item Cost (1)	20 Year Life Costs (2)	40 Year Life Costs (3)	50 Year Life Costs (4)
Alternative 1: Connection to Plains				
1 Sewage Collection System (Study Areas 1 and 2)	\$10,398,019	\$853,682	-	\$9,544,337
2 State Route 115 Corridor Sewage Collection System	\$1,066,111	\$37,224	-	\$1,028,887
3 Sewage Conveyance System to Plains	\$988,416	\$29,376	-	\$959,040
4 Equalization Tank/Pump Station Construction Cost Estimate	\$831,300	\$151,134	\$680,166	-
5 Connection Fee to Plains	\$210,000	-	-	-
Alternative 2: 150,000 GPD SBR WWTP with discharge to Susquehanna River				
1 Sewage Collection System (Study Areas 1 and 2)	\$10,398,019	\$853,682	-	\$9,544,337
2 State Route 115 Corridor Sewage Collection System	\$1,066,111	\$37,224	-	\$1,028,887
3 Wastewater Treatment Plant (0.15 MGD SBR)	\$4,028,760	\$1,897,037	\$2,131,723	-
Alternative 3: 150,000 GPD SBR WWTP w/ discharge to Bear Creek and Seasonal Spray Irrigation				
1 Sewage Collection System (Study Areas 1 and 2)	\$10,932,317	\$904,243	-	\$10,028,074
2 Wastewater Treatment Plant (0.15 MGD SBR)	\$4,610,880	\$2,016,907	\$2,593,973	-
3 Spray Irrigation System	\$2,401,714	\$619,287	\$1,782,427	-
Alternative 4: 150,000 GPD Extended Air WWTP with Spray Irrigation and year round storage capacity				
1 Sewage Collection System (Study Areas 1 and 2)	\$11,112,317	\$946,143	-	\$10,166,174
2 Wastewater Treatment Plant (0.15 MGD Extended Aeration)	\$3,698,640	\$1,192,748	\$2,505,892	-
3 Spray Irrigation System	\$3,322,588	\$851,037	\$2,471,551	-
Alternative 5: Two (2) Community Sand Mounds for each Study Area				
1 Sewage Collection and Conveyance System - Study Area No. 1 and 2	\$10,932,317	\$904,243	-	\$10,028,074
2 Wastewater Treatment Plant (0.15 MGD SBR)	\$3,984,480	\$1,519,642	\$2,464,838	-
3 Subsurface Wastewater Disposal - Study Areas 1 and 2	\$6,067,920	\$1,559,279	\$4,508,641	-

- Notes:
- (1) Item Costs include Construction Costs, Engineering/Administrative Costs and Contingencies, but does not include Land Costs
 - (2) 20 Year life includes equipment, electrical, and mechanical item costs
 - (3) 40 Year life includes structures, buildings and site work items
 - (4) 50 Year life includes collection/conveyance system piping and bituminous roadway restoration
 - (5) Contingency, Non-Construction Costs are split between 20 year, 40 year, and 50 year life costs based on percentage split of Construction Sub-total costs