Baypointe Golf Site Nutrient Removal Unit Costs

Engineer's Opinion of Probable Construction Cost

Cell 1	$1,156,800
Cell 2	$651,100
Cell 3	$124,600
Cell 4	$305,500
Opinion of Probable Construction Cost*	$2,238,000

*excludes land acquisition, design, and amenities for recreational area

Cost of Land Acquisition	$800,000	$1,200,000
***Liens/fines to date of offer**		$499,237
Construction Cost	$2,238,000	$2,238,000
Design Cost	$268,560	$268,560
Total Upfront Costs	$3,306,560	$4,205,797
Annual Maintenance Cost	$50,000	$50,000
Cost of Capital, %	7%	7%
Number of Periods, years	30	30
Annualized Total Cost	**$316,463.78**	**$388,930.01**

*liens are the total cost of the liens/fines before any negotiated reduction

Cost per Pound of Pollutant Removed

	TN Removed (lb/yr)	TP Removed (lb/yr)
Cell 1	463.14	102.6
Cell 2	197.31	40.37
Cell 3	61.53	20.92
Cell 4	49.87	16.58
Total	771.85	180.47
Cost per lb removed (land purchase included)	**$504**	**$2,155**

* Project discharges to a coastal system; use coastal comps

CFI - Coastal				
High			**<$646**	**<$4,715**
Med				
Low			>$646	>$4,715
CFI - General				
High		<$176		<$1,498
Med		$176-$475		**$1,498-$4,152**
Low		**>$475**		>$4,152

CFI Process Overview

METRICS FOR RANKING COST EFFECTIVENESS

Water Supply Projects			
Project Type	**High**	**Medium**	**Low**
Reuse (cost/gpd)	<$10	$10-$15	>$15
Brackish (cost/gpd)	<$10	$10-$15	>$15
Surface Water (cost/gpd)	<$15	$15-$20	>$20
Seawater (cost/gpd)	<$20	$20-$25	>$25
Other AWS (cost/gpd)	<$10	$10-$15	>$15
Conservation (cost/1000 gallons saved)	≤$3	$3.01-$6	>$6
Water Quality Projects (cost/lb of pollutant removed)			
Project Type	**High**	**Medium**	**Low**
Total Nitrogen (cost/lb)	<$176	≥$176 ≤ $475	>$475
Total Phosphorus (cost/lb)	<$1498	≥$1498 ≤ $4152	>$4152
Septic Conversion Total Nitrogen (cost/lb)	<$100	≥$100 ≤ $176	>$176
Natural Systems Restoration Projects (cost/acre restored; cost/linear foot restored)			
Project Type	**High**	**Medium**	**Low**
Shoreline Restoration	≤$269 per linear feet	N/A	>$269 per linear feet
Upland (Exotics removal)	≤$2,348 per acre	N/A	>$2,348 per acre
Dredging	TBD on similar projects	TBD on similar projects	TBD on similar projects
Hydrologic Restoration	≤$1,775 per acre	N/A	>$1,775 per acre
Combined elements	≤$53,326 per acre	N/A	>$53,326 per acre
Flood Protection Projects			
Project Type	**High**	**Medium**	**Low**
BMPs (benefit/cost ratio)	≥1	0.7-0.9	<0.7
BMPs (when benefit/cost ratio is not available)	N/A	Costs based on design. Estimates appear reasonable.	Costs based on conceptual level, or, Costs high compared to similar projects
Watershed Management Plan (cost/sq. mile) Excludes LiDAR and Peer Review costs	Urban: ≤$66,000 Rural: ≤$12,000 Mixed: ≤$20,000	Urban: $66,001-$87,000 Rural: $12,001-$20,000 Mixed: $20,001-$41,000	Urban: >$87,000 Rural: >$20,000 Mixed: >$41,000
Watershed Management Plan Updates (cost/sq. mile) (Watershed Evaluation, Floodplain Analysis, and Alternatives Analysis)	Urban: ≤$25,000 Rural: ≤$6,000 Mixed: ≤$15,000	Urban: $25,001-$40,000 Rural: $6,001-$10,000 Mixed: $15,001-$22,000	Urban: >$40,000 Rural: >$10,000 Mixed: >$22,000

Water Quality Projects - Based on past projects average Cost/lb of pollutant removed and average Cost/acre treated

Project Type – Urban/Suburban	High	Medium	Low
Water Quality BMP Implementation (TN target pollutant)	Cost/lb TN $224 or less and Cost/acre $8,050 or less	High for Cost/lb and Low for Cost/acre or Low for Cost/lb and High for Cost/Acre	Cost/lb TN more than $224 and Cost/acre more than $8,050
Water Quality BMP Implementation (TP target pollutant)	Cost/lb TP $896 or less and Cost/acre $8,050 or less	High for Cost/lb and Low for Cost/acre or Low for Cost/lb and High for Cost/Acre	Cost/lb TP more than $896 and Cost/acre more than $8,050
Water Quality BMP Implementation (TSS target pollutant)	Cost/lb TSS $12 or less and Cost/acre $8,050 or less	High for Cost/lb and Low for Cost/acre or Low for Cost/lb and High for Cost/Acre	Cost/lb TSS more than $12 and Cost/acre more than $8,050

Project Type – Costal/LID	High	Medium	Low
Water Quality BMP Implementation (TN target pollutant)	Cost/lb TN $646 or less and Cost/acre $46,947 or less	High for Cost/lb and Low for Cost/acre or Low for Cost/lb and High for Cost/Acre	Cost/lb TN more than $646 and Cost/acre more than $46,947
Water Quality BMP Implementation (TP target pollutant)	Cost/lb TP $4,715 or less and Cost/acre $46,947 or less	High for Cost/lb and Low for Cost/acre or Low for Cost/lb and High for Cost/Acre	Cost/lb TP more than $4,715 and Cost/acre more than $46,947
Water Quality BMP Implementation (TSS target pollutant)	Cost/lb TSS $20 or less and Cost/acre $46,947 or less	High for Cost/lb and Low for Cost/acre or Low for Cost/lb and High for Cost/Acre	Cost/lb TSS more than $20 and Cost/acre more than $46,947