ISTAP Phase 2 Report: Supplementary Appendix

Appendices D, E and F

Authored by the Independent Scientific Technical Advisory Panel

Under the Auspices of the California Coastal Commission and Poseidon Resources (Surfside) LLC

Convened and Facilitated by CONCUR, Inc.

CONCUR
NEGOTIATING EFFECTIVE ENVIRONMENTAL AGREEMENTS

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APPENDIX D: Life Cycle Costs Associated with Different Project Scales

Appendix D shows the life cycle cost analysis for each project scale (12.5 MGD, 25 MGD, 50 MGD, 100 MGD), intake option, discount rate (3% and 7%), and project life (30-year and 50-year) assumption. In each life cycle cost table, we show the capital costs for the desalination facility with different intake options over the expected construction period, as well as the operations and maintenance (O&M) costs over the project life. We also show decommissioning costs of $9,000,000 at the end of each project life.

To perform the life cycle cost analysis, we adjusted all costs to 2015 dollars, taking out the inflation that was built in to the original capital cost estimates. We then applied the discount rate to these real cost estimates over time to estimate total present value (PV) capital and O&M costs. We also applied the discount rate to the expected water production at each facility over time so that we could determine the unit cost (i.e., PV costs/PV water production) of water over time.

Please note that the tables below are very large and difficult to present legibly on a single page. We recommend that you magnify your screen size by 200% or more in order to easily read these data.

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	14,002	$ 196,096,438		$ 196,096,438	$ 213,709,991		$ 213,709,991	$ 256,709,253		$ 256,709,253	$ 208,104,344		$ 208,104,344	$ 254,768,305		$ 254,768,305	$ 255,486,664		$ 255,486,664
1	13,594	$ 72,214,637		$ 70,111,298	$ 209,869,382		$ 203,756,681	$ 252,095,898		$ 244,753,299	$ 77,658,500		$ 75,396,602	$ 250,189,831		$ 242,902,748	$ 250,895,281		$ 243,587,651
2	13,198		$ 13,594,138	$ 12,813,779	$ 206,097,792		$ 194,266,936	$ 154,728,406		$ 145,846,363		$ 12,350,296	$ 11,641,338	$ 103,191,328		$ 97,267,723	$ 155,223,438		$ 146,312,978
3	12,814		$ 13,594,138	$ 12,440,562	$ 101,196,991		$ 92,609,582		$ 14,464,893	$ 13,237,426		$ 12,350,296	$ 11,302,270		$ 10,411,789	$ 9,528,262		$ 10,411,789	$ 9,528,262
4	12,440		$ 13,594,138	$ 12,078,216		$ 14,464,893	$ 12,851,870		$ 14,464,893	$ 12,851,870		$ 12,350,296	$ 10,973,078		$ 10,411,789	$ 9,250,740		$ 10,411,789	$ 9,250,740
5	12,078		$ 13,594,138	$ 11,726,423		$ 14,464,893	$ 12,477,544		$ 14,464,893	$ 12,477,544		$ 12,350,296	$ 10,653,474		$ 10,411,789	$ 8,981,301		$ 10,411,789	$ 8,981,301
6	11,726		$ 13,594,138	$ 11,384,877		$ 14,464,893	$ 12,114,120		$ 14,464,893	$ 12,114,120		$ 12,350,296	$ 10,343,178		$ 10,411,789	$ 8,719,710		$ 10,411,789	$ 8,719,710
7	11,385		$ 13,594,138	$ 11,053,278		$ 14,464,893	$ 11,761,282		$ 14,464,893	$ 11,761,282		$ 12,350,296	$ 10,041,921		$ 10,411,789	$ 8,465,737		$ 10,411,789	$ 8,465,737
8	11,053		$ 13,594,138	$ 10,731,338		$ 14,464,893	$ 11,418,720		$ 14,464,893	$ 11,418,720		$ 12,350,296	$ 9,749,438		$ 10,411,789	$ 8,219,163		$ 10,411,789	$ 8,219,163
9	10,731		$ 13,594,138	$ 10,418,775		$ 14,464,893	$ 11,086,136		$ 14,464,893	$ 11,086,136		$ 12,350,296	$ 9,465,473		$ 10,411,789	$ 7,979,769		$ 10,411,789	$ 7,979,769
10	10,419		$ 13,594,138	$ 10,115,315		$ 14,464,893	$ 10,763,239		$ 14,464,893	$ 10,763,239		$ 12,350,296	$ 9,189,780		$ 10,411,789	$ 7,747,349		$ 10,411,789	$ 7,747,349
11	10,115		$ 13,594,138	$ 9,820,695		$ 14,464,893	$ 10,449,746		$ 14,464,893	$ 10,449,746		$ 12,350,296	$ 8,922,117		$ 10,411,789	$ 7,521,698		$ 10,411,789	$ 7,521,698
12	9,821		$ 13,594,138	$ 9,534,655		$ 14,464,893	$ 10,145,385		$ 14,464,893	$ 10,145,385		$ 12,350,296	$ 8,662,249		$ 10,411,789	$ 7,302,619		$ 10,411,789	$ 7,302,619
13	9,535		$ 13,594,138	$ 9,256,947		$ 14,464,893	$ 9,849,888		$ 14,464,893	$ 9,849,888		$ 12,350,296	$ 8,409,951		$ 10,411,789	$ 7,089,922		$ 10,411,789	$ 7,089,922
14	9,257		$ 13,594,138	$ 8,987,327		$ 14,464,893	$ 9,562,998		$ 14,464,893	$ 9,562,998		$ 12,350,296	$ 8,165,001		$ 10,411,789	$ 6,883,419		$ 10,411,789	$ 6,883,419
15	8,987		$ 13,594,138	$ 8,725,560		$ 14,464,893	$ 9,284,464		$ 14,464,893	$ 9,284,464		$ 12,350,296	$ 7,927,185		$ 10,411,789	$ 6,682,931		$ 10,411,789	$ 6,682,931
16	8,725		$ 13,594,138	$ 8,471,417		$ 14,464,893	$ 9,014,043		$ 14,464,893	$ 9,014,043		$ 12,350,296	$ 7,696,296		$ 10,411,789	$ 6,488,283		$ 10,411,789	$ 6,488,283
17	8,471		$ 13,594,138	$ 8,224,677		$ 14,464,893	$ 8,751,498		$ 14,464,893	$ 8,751,498		$ 12,350,296	$ 7,472,132		$ 10,411,789	$ 6,299,304		$ 10,411,789	$ 6,299,304
18	8,225		$ 13,594,138	$ 7,985,123		$ 14,464,893	$ 8,496,600		$ 14,464,893	$ 8,496,600		$ 12,350,296	$ 7,254,497		$ 10,411,789	$ 6,115,829		$ 10,411,789	$ 6,115,829
19	7,985		$ 13,594,138	$ 7,752,547		$ 14,464,893	$ 8,249,126		$ 14,464,893	$ 8,249,126		$ 12,350,296	$ 7,043,201		$ 10,411,789	$ 5,937,698		$ 10,411,789	$ 5,937,698
20	7,752		$ 13,594,138	$ 7,526,745		$ 14,464,893	$ 8,008,861		$ 14,464,893	$ 8,008,861		$ 12,350,296	$ 6,838,059		$ 10,411,789	$ 5,764,755		$ 10,411,789	$ 5,764,755
21	7,527		$ 13,594,138	$ 7,307,519		$ 14,464,893	$ 7,775,593		$ 14,464,893	$ 7,775,593		$ 12,350,296	$ 6,638,893		$ 10,411,789	$ 5,596,850		$ 10,411,789	$ 5,596,850
22	7,307		$ 13,594,138	$ 7,094,679		$ 14,464,893	$ 7,549,119		$ 14,464,893	$ 7,549,119		$ 12,350,296	$ 6,445,527		$ 10,411,789	$ 5,433,835		$ 10,411,789	$ 5,433,835
23	7,095		$ 13,594,138	$ 6,888,038		$ 14,464,893	$ 7,329,242		$ 14,464,893	$ 7,329,242		$ 12,350,296	$ 6,257,793		$ 10,411,789	$ 5,275,568		$ 10,411,789	$ 5,275,568
24	6,888		$ 13,594,138	$ 6,687,415		$ 14,464,893	$ 7,115,769		$ 14,464,893	$ 7,115,769		$ 12,350,296	$ 6,075,527		$ 10,411,789	$ 5,121,910		$ 10,411,789	$ 5,121,910
25	6,687		$ 13,594,138	$ 6,492,636		$ 14,464,893	$ 6,908,513		$ 14,464,893	$ 6,908,513		$ 12,350,296	$ 5,898,570		$ 10,411,789	$ 4,972,728		$ 10,411,789	$ 4,972,728
26	6,493		$ 13,594,138	$ 6,303,530		$ 14,464,893	$ 6,707,295		$ 14,464,893	$ 6,707,295		$ 12,350,296	$ 5,726,767		$ 10,411,789	$ 4,827,892		$ 10,411,789	$ 4,827,892
27	6,303		$ 13,594,138	$ 6,119,932		$ 14,464,893	$ 6,511,937		$ 14,464,893	$ 6,511,937		$ 12,350,296	$ 5,559,968		$ 10,411,789	$ 4,687,274		$ 10,411,789	$ 4,687,274
28	6,120		$ 13,594,138	$ 5,941,682		$ 14,464,893	$ 6,322,268		$ 14,464,893	$ 6,322,268		$ 12,350,296	$ 5,398,027		$ 10,411,789	$ 4,550,751		$ 10,411,789	$ 4,550,751
29	5,942		$ 13,594,138	$ 5,768,623		$ 14,464,893	$ 6,138,125		$ 14,464,893	$ 6,138,125		$ 12,350,296	$ 5,240,803		$ 10,411,789	$ 4,418,205		$ 10,411,789	$ 4,418,205
30	5,769		$ 13,594,138	$ 5,600,605		$ 14,464,893	$ 5,959,344		$ 14,464,893	$ 5,959,344		$ 12,350,296	$ 5,088,158		$ 10,411,789	$ 4,289,519		$ 10,411,789	$ 4,289,519
31	5,601		$ 13,594,138	$ 5,437,480		$ 14,464,893	$ 5,785,771		$ 14,464,893	$ 5,785,771		$ 12,350,296	$ 4,939,960		$ 10,411,789	$ 4,164,582		$ 10,411,789	$ 4,164,582
32	5,437	$ 2,880,000		$ 1,118,411		$ 14,464,893	$ 5,617,254		$ 14,464,893	$ 5,617,254	$ 2,880,000		$ 1,118,411		$ 10,411,789	$ 4,043,283		$ 10,411,789	$ 4,043,283
33	5,279			$ -		$ 14,464,893	$ 5,453,644	$ 2,880,000		$ 1,085,836			$ -	$ 2,880,000		$ 1,085,836	$ 2,880,000		$ 1,085,836
34	5,125				$ 2,880,000		$ 1,054,209			$ -			$ -			$ -			$ -
Total PV costs		271,191,075		$ 526,016,541	733,754,157		$ 964,856,796	666,413,558		$ 915,637,928	288,642,844		$ 519,639,989	611,029,463		$ 788,385,497	664,485,383		$ 838,834,014
Unit cost				$ 1,974.19			$ 3,841.73			$ 3,539.57			$ 1,950.26			$ 3,047.65			$ 3,243

Table D.1.1 Life cycle cost analysis, 12.5 MGD facility, 3% discount rate, 30-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	14,002	$196,096,438		$ 196,096,438	$ 213,709,991		$213,709,991	$ 256,709,253		$ 256,709,253	$208,104,344		$ 208,104,344	$254,768,305		$254,768,305	$ 255,486,664		$ 255,486,664
1	13,086	$ 72,214,637		$ 67,490,315	$ 209,869,382		$196,139,609	$ 252,095,898		$ 235,603,643	$ 77,658,500		$ 72,578,038	$250,189,831		$233,822,272	$ 250,895,281		$ 234,481,571
2	12,230		$ 13,594,138	$ 11,873,647	$ 206,097,792		$180,013,794	$ 154,728,406		$ 135,145,783		$ 12,350,296	$ 10,787,227	$103,191,328		$ 90,131,302	$ 155,223,438		$ 135,578,162
3	11,430		$ 13,594,138	$ 11,096,866	$ 101,196,991		$ 82,606,889		$ 14,464,893	$ 11,807,661		$ 12,350,296	$ 10,081,520		$ 10,411,789	$ 8,499,121		$ 10,411,789	$ 8,499,121
4	10,682		$ 13,594,138	$ 10,370,903		$ 14,464,893	$ 11,035,198		$ 14,464,893	$ 11,035,198		$ 12,350,296	$ 9,421,982		$ 10,411,789	$ 7,943,104		$ 10,411,789	$ 7,943,104
5	9,983		$ 13,594,138	$ 9,692,433		$ 14,464,893	$ 10,313,269		$ 14,464,893	$ 10,313,269		$ 12,350,296	$ 8,805,590		$ 10,411,789	$ 7,423,462		$ 10,411,789	$ 7,423,462
6	9,330		$ 13,594,138	$ 9,058,348		$ 14,464,893	$ 9,638,569		$ 14,464,893	$ 9,638,569		$ 12,350,296	$ 8,229,524		$ 10,411,789	$ 6,937,815		$ 10,411,789	$ 6,937,815
7	8,720		$ 13,594,138	$ 8,465,746		$ 14,464,893	$ 9,008,008		$ 14,464,893	$ 9,008,008		$ 12,350,296	$ 7,691,144		$ 10,411,789	$ 6,483,939		$ 10,411,789	$ 6,483,939
8	8,149		$ 13,594,138	$ 7,911,912		$ 14,464,893	$ 8,418,699		$ 14,464,893	$ 8,418,699		$ 12,350,296	$ 7,187,985		$ 10,411,789	$ 6,059,756		$ 10,411,789	$ 6,059,756
9	7,616		$ 13,594,138	$ 7,394,310		$ 14,464,893	$ 7,867,943		$ 14,464,893	$ 7,867,943		$ 12,350,296	$ 6,717,743		$ 10,411,789	$ 5,663,323		$ 10,411,789	$ 5,663,323
10	7,118		$ 13,594,138	$ 6,910,570		$ 14,464,893	$ 7,353,218		$ 14,464,893	$ 7,353,218		$ 12,350,296	$ 6,278,264		$ 10,411,789	$ 5,292,826		$ 10,411,789	$ 5,292,826
11	6,652		$ 13,594,138	$ 6,458,477		$ 14,464,893	$ 6,872,166		$ 14,464,893	$ 6,872,166		$ 12,350,296	$ 5,867,537		$ 10,411,789	$ 4,946,566		$ 10,411,789	$ 4,946,566
12	6,217		$ 13,594,138	$ 6,035,960		$ 14,464,893	$ 6,422,585		$ 14,464,893	$ 6,422,585		$ 12,350,296	$ 5,483,679		$ 10,411,789	$ 4,622,959		$ 10,411,789	$ 4,622,959
13	5,810		$ 13,594,138	$ 5,641,084		$ 14,464,893	$ 6,002,416		$ 14,464,893	$ 6,002,416		$ 12,350,296	$ 5,124,934		$ 10,411,789	$ 4,320,522		$ 10,411,789	$ 4,320,522
14	5,430		$ 13,594,138	$ 5,272,041		$ 14,464,893	$ 5,609,735		$ 14,464,893	$ 5,609,735		$ 12,350,296	$ 4,789,658		$ 10,411,789	$ 4,037,871		$ 10,411,789	$ 4,037,871
15	5,075		$ 13,594,138	$ 4,927,141		$ 14,464,893	$ 5,242,743		$ 14,464,893	$ 5,242,743		$ 12,350,296	$ 4,476,316		$ 10,411,789	$ 3,773,712		$ 10,411,789	$ 3,773,712
16	4,743		$ 13,594,138	$ 4,604,805		$ 14,464,893	$ 4,899,760		$ 14,464,893	$ 4,899,760		$ 12,350,296	$ 4,183,473		$ 10,411,789	$ 3,526,833		$ 10,411,789	$ 3,526,833
17	4,433		$ 13,594,138	$ 4,303,556		$ 14,464,893	$ 4,579,215		$ 14,464,893	$ 4,579,215		$ 12,350,296	$ 3,909,787		$ 10,411,789	$ 3,296,106		$ 10,411,789	$ 3,296,106
18	4,143		$ 13,594,138	$ 4,022,015		$ 14,464,893	$ 4,279,640		$ 14,464,893	$ 4,279,640		$ 12,350,296	$ 3,654,007		$ 10,411,789	$ 3,080,473		$ 10,411,789	$ 3,080,473
19	3,872		$ 13,594,138	$ 3,758,892		$ 14,464,893	$ 3,999,663		$ 14,464,893	$ 3,999,663		$ 12,350,296	$ 3,414,960		$ 10,411,789	$ 2,878,946		$ 10,411,789	$ 2,878,946
20	3,618		$ 13,594,138	$ 3,512,984		$ 14,464,893	$ 3,738,003		$ 14,464,893	$ 3,738,003		$ 12,350,296	$ 3,191,551		$ 10,411,789	$ 2,690,604		$ 10,411,789	$ 2,690,604
21	3,382		$ 13,594,138	$ 3,283,162		$ 14,464,893	$ 3,493,461		$ 14,464,893	$ 3,493,461		$ 12,350,296	$ 2,982,758		$ 10,411,789	$ 2,514,583		$ 10,411,789	$ 2,514,583
22	3,160		$ 13,594,138	$ 3,068,376		$ 14,464,893	$ 3,264,917		$ 14,464,893	$ 3,264,917		$ 12,350,296	$ 2,787,624		$ 10,411,789	$ 2,350,078		$ 10,411,789	$ 2,350,078
23	2,954		$ 13,594,138	$ 2,867,641		$ 14,464,893	$ 3,051,324		$ 14,464,893	$ 3,051,324		$ 12,350,296	$ 2,605,256		$ 10,411,789	$ 2,196,334		$ 10,411,789	$ 2,196,334
24	2,760		$ 13,594,138	$ 2,680,038		$ 14,464,893	$ 2,851,705		$ 14,464,893	$ 2,851,705		$ 12,350,296	$ 2,434,819		$ 10,411,789	$ 2,052,649		$ 10,411,789	$ 2,052,649
25	2,580		$ 13,594,138	$ 2,504,709		$ 14,464,893	$ 2,665,145		$ 14,464,893	$ 2,665,145		$ 12,350,296	$ 2,275,532		$ 10,411,789	$ 1,918,364		$ 10,411,789	$ 1,918,364
26	2,411		$ 13,594,138	$ 2,340,849		$ 14,464,893	$ 2,490,789		$ 14,464,893	$ 2,490,789		$ 12,350,296	$ 2,126,665		$ 10,411,789	$ 1,792,863		$ 10,411,789	$ 1,792,863
27	2,253		$ 13,594,138	$ 2,187,710		$ 14,464,893	$ 2,327,841		$ 14,464,893	$ 2,327,841		$ 12,350,296	$ 1,987,538		$ 10,411,789	$ 1,675,573		$ 10,411,789	$ 1,675,573
28	2,106		$ 13,594,138	$ 2,044,588		$ 14,464,893	$ 2,175,552		$ 14,464,893	$ 2,175,552		$ 12,350,296	$ 1,857,512		$ 10,411,789	$ 1,565,956		$ 10,411,789	$ 1,565,956
29	1,968		$ 13,594,138	$ 1,910,830		$ 14,464,893	$ 2,033,226		$ 14,464,893	$ 2,033,226		$ 12,350,296	$ 1,735,992		$ 10,411,789	$ 1,463,510		$ 10,411,789	$ 1,463,510
30	1,839		$ 13,594,138	$ 1,785,823		$ 14,464,893	$ 1,900,211		$ 14,464,893	$ 1,900,211		$ 12,350,296	$ 1,622,423		$ 10,411,789	$ 1,367,767		$ 10,411,789	$ 1,367,767
31	1,719		$ 13,594,138	$ 1,668,993		$ 14,464,893	$ 1,775,898		$ 14,464,893	$ 1,775,898		$ 12,350,296	$ 1,516,283		$ 10,411,789	$ 1,278,287		$ 10,411,789	$ 1,278,287
32	1,607	$ 2,880,000		$ 330,454		$ 14,464,893	$ 1,659,718		$ 14,464,893	$ 1,659,718	$ 2,880,000		$ 330,454		$ 10,411,789	$ 1,194,660		$ 10,411,789	$ 1,194,660
33	1,501			$ -		$ 14,464,893	$ 1,551,138	$ 2,880,000		$ 308,836			$ -	$ 2,880,000		$ 308,836	$ 2,880,000		$ 308,836
34	1,403				$ 2,880,000		$ 288,632			$ -			$ -			$ -			$ -
Total PV costs				$ 421,571,618	733,754,157		$819,280,672	666,413,558		$ 784,545,795			$ 424,242,117			$691,879,278			$ 738,703,797
Unit cost				$ 2,596.18			$ 5,776.48			$ 5,169.70			$ 2,612.62			$ 4,559.08			$ 4,868

Table D.1.2 Life cycle cost analysis, 12.5 MGD facility, 7% discount rate, 30-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	14,002	$ 196,096,438		$ 196,096,438	$ 213,709,991		$ 213,709,991	$ 256,709,253		$ 256,709,253	$ 208,104,344		$ 208,104,344	$ 254,768,305		$ 254,768,305	$ 255,486,664		$ 255,486,664
1	13,594	$ 72,214,637		$ 70,111,298	$ 209,869,382		$ 203,756,681	$ 252,095,898		$ 244,753,299	$ 77,658,500		$ 75,396,602	$ 250,189,831		$ 242,902,748	$ 250,895,281		$ 243,587,651
2	13,198		$ 13,594,138	$ 12,813,779	$ 206,097,792		$ 194,266,936	$ 154,728,406		$ 145,846,363		$ 12,350,296	$ 11,641,338	$ 103,191,328		$ 97,267,723	$ 155,223,438		$ 146,312,978
3	12,814		$ 13,594,138	$ 12,440,562	$ 101,196,991		$ 92,609,582		$ 14,464,893	$ 13,237,426		$ 12,350,296	$ 11,302,270		$ 10,411,789	$ 9,528,262		$ 10,411,789	$ 9,528,262
4	12,440		$ 13,594,138	$ 12,078,216		$ 14,464,893	$ 12,851,870		$ 14,464,893	$ 12,851,870		$ 12,350,296	$ 10,973,078		$ 10,411,789	$ 9,250,740		$ 10,411,789	$ 9,250,740
5	12,078		$ 13,594,138	$ 11,726,423		$ 14,464,893	$ 12,477,544		$ 14,464,893	$ 12,477,544		$ 12,350,296	$ 10,653,474		$ 10,411,789	$ 8,981,301		$ 10,411,789	$ 8,981,301
6	11,726		$ 13,594,138	$ 11,384,877		$ 14,464,893	$ 12,114,120		$ 14,464,893	$ 12,114,120		$ 12,350,296	$ 10,343,178		$ 10,411,789	$ 8,719,710		$ 10,411,789	$ 8,719,710
7	11,385		$ 13,594,138	$ 11,053,278		$ 14,464,893	$ 11,761,282		$ 14,464,893	$ 11,761,282		$ 12,350,296	$ 10,041,921		$ 10,411,789	$ 8,465,737		$ 10,411,789	$ 8,465,737
8	11,053		$ 13,594,138	$ 10,731,338		$ 14,464,893	$ 11,418,720		$ 14,464,893	$ 11,418,720		$ 12,350,296	$ 9,749,438		$ 10,411,789	$ 8,219,163		$ 10,411,789	$ 8,219,163
9	10,731		$ 13,594,138	$ 10,418,775		$ 14,464,893	$ 11,086,136		$ 14,464,893	$ 11,086,136		$ 12,350,296	$ 9,465,473		$ 10,411,789	$ 7,979,769		$ 10,411,789	$ 7,979,769
10	10,419		$ 13,594,138	$ 10,115,315		$ 14,464,893	$ 10,763,239		$ 14,464,893	$ 10,763,239		$ 12,350,296	$ 9,189,780		$ 10,411,789	$ 7,747,349		$ 10,411,789	$ 7,747,349
11	10,115		$ 13,594,138	$ 9,820,695		$ 14,464,893	$ 10,449,746		$ 14,464,893	$ 10,449,746		$ 12,350,296	$ 8,922,117		$ 10,411,789	$ 7,521,698		$ 10,411,789	$ 7,521,698
12	9,821		$ 13,594,138	$ 9,534,655		$ 14,464,893	$ 10,145,385		$ 14,464,893	$ 10,145,385		$ 12,350,296	$ 8,662,249		$ 10,411,789	$ 7,302,619		$ 10,411,789	$ 7,302,619
13	9,535		$ 13,594,138	$ 9,256,947		$ 14,464,893	$ 9,849,888		$ 14,464,893	$ 9,849,888		$ 12,350,296	$ 8,409,951		$ 10,411,789	$ 7,089,922		$ 10,411,789	$ 7,089,922
14	9,257		$ 13,594,138	$ 8,987,327		$ 14,464,893	$ 9,562,998		$ 14,464,893	$ 9,562,998		$ 12,350,296	$ 8,165,001		$ 10,411,789	$ 6,883,419		$ 10,411,789	$ 6,883,419
15	8,987		$ 13,594,138	$ 8,725,560		$ 14,464,893	$ 9,284,464		$ 14,464,893	$ 9,284,464		$ 12,350,296	$ 7,927,185		$ 10,411,789	$ 6,682,931		$ 10,411,789	$ 6,682,931
16	8,725		$ 13,594,138	$ 8,471,417		$ 14,464,893	$ 9,014,043		$ 14,464,893	$ 9,014,043		$ 12,350,296	$ 7,696,296		$ 10,411,789	$ 6,488,283		$ 10,411,789	$ 6,488,283
17	8,471		$ 13,594,138	$ 8,224,677		$ 14,464,893	$ 8,751,498		$ 14,464,893	$ 8,751,498		$ 12,350,296	$ 7,472,132		$ 10,411,789	$ 6,299,304		$ 10,411,789	$ 6,299,304
18	8,225		$ 13,594,138	$ 7,985,123		$ 14,464,893	$ 8,496,600		$ 14,464,893	$ 8,496,600		$ 12,350,296	$ 7,254,497		$ 10,411,789	$ 6,115,829		$ 10,411,789	$ 6,115,829
19	7,985		$ 13,594,138	$ 7,752,547		$ 14,464,893	$ 8,249,126		$ 14,464,893	$ 8,249,126		$ 12,350,296	$ 7,043,201		$ 10,411,789	$ 5,937,698		$ 10,411,789	$ 5,937,698
20	7,752		$ 13,594,138	$ 7,526,745		$ 14,464,893	$ 8,008,861		$ 14,464,893	$ 8,008,861		$ 12,350,296	$ 6,838,059		$ 10,411,789	$ 5,764,755		$ 10,411,789	$ 5,764,755
21	7,527		$ 13,594,138	$ 7,307,519		$ 14,464,893	$ 7,775,593		$ 14,464,893	$ 7,775,593		$ 12,350,296	$ 6,638,893		$ 10,411,789	$ 5,596,850		$ 10,411,789	$ 5,596,850
22	7,307		$ 13,594,138	$ 7,094,679		$ 14,464,893	$ 7,549,119		$ 14,464,893	$ 7,549,119		$ 12,350,296	$ 6,445,527		$ 10,411,789	$ 5,433,835		$ 10,411,789	$ 5,433,835
23	7,095		$ 13,594,138	$ 6,888,038		$ 14,464,893	$ 7,329,242		$ 14,464,893	$ 7,329,242		$ 12,350,296	$ 6,257,793		$ 10,411,789	$ 5,275,568		$ 10,411,789	$ 5,275,568
24	6,888		$ 13,594,138	$ 6,687,415		$ 14,464,893	$ 7,115,769		$ 14,464,893	$ 7,115,769		$ 12,350,296	$ 6,075,527		$ 10,411,789	$ 5,121,910		$ 10,411,789	$ 5,121,910
25	6,687		$ 13,594,138	$ 6,492,636		$ 14,464,893	$ 6,908,513		$ 14,464,893	$ 6,908,513		$ 12,350,296	$ 5,898,570		$ 10,411,789	$ 4,972,728		$ 10,411,789	$ 4,972,728
26	6,493		$ 13,594,138	$ 6,303,530		$ 14,464,893	$ 6,707,295		$ 14,464,893	$ 6,707,295		$ 12,350,296	$ 5,726,767		$ 10,411,789	$ 4,827,892		$ 10,411,789	$ 4,827,892
27	6,303		$ 13,594,138	$ 6,119,932		$ 14,464,893	$ 6,511,937		$ 14,464,893	$ 6,511,937		$ 12,350,296	$ 5,559,968		$ 10,411,789	$ 4,687,274		$ 10,411,789	$ 4,687,274
28	6,120		$ 13,594,138	$ 5,941,682		$ 14,464,893	$ 6,322,268		$ 14,464,893	$ 6,322,268		$ 12,350,296	$ 5,398,027		$ 10,411,789	$ 4,550,751		$ 10,411,789	$ 4,550,751
29	5,942		$ 13,594,138	$ 5,768,623		$ 14,464,893	$ 6,138,125		$ 14,464,893	$ 6,138,125		$ 12,350,296	$ 5,240,803		$ 10,411,789	$ 4,418,205		$ 10,411,789	$ 4,418,205
30	5,769		$ 13,594,138	$ 5,600,605		$ 14,464,893	$ 5,959,344		$ 14,464,893	$ 5,959,344		$ 12,350,296	$ 5,088,158		$ 10,411,789	$ 4,289,519		$ 10,411,789	$ 4,289,519
31	5,601		$ 13,594,138	$ 5,437,480		$ 14,464,893	$ 5,785,771		$ 14,464,893	$ 5,785,771		$ 12,350,296	$ 4,939,960		$ 10,411,789	$ 4,164,582		$ 10,411,789	$ 4,164,582
32	5,437		$ 13,594,138	$ 5,279,107		$ 14,464,893	$ 5,617,254		$ 14,464,893	$ 5,617,254		$ 12,350,296	$ 4,796,077		$ 10,411,789	$ 4,043,283		$ 10,411,789	$ 4,043,283
33	5,279		$ 13,594,138	$ 5,125,347		$ 14,464,893	$ 5,453,644		$ 14,464,893	$ 5,453,644		$ 12,350,296	$ 4,656,386		$ 10,411,789	$ 3,925,518		$ 10,411,789	$ 3,925,518
34	5,125		$ 13,594,138	$ 4,976,065		$ 14,464,893	$ 5,294,800		$ 14,464,893	$ 5,294,800		$ 12,350,296	$ 4,520,763		$ 10,411,789	$ 3,811,182		$ 10,411,789	$ 3,811,182
35	4,976		$ 13,594,138	$ 4,831,131		$ 14,464,893	$ 5,140,583		$ 14,464,893	$ 5,140,583		$ 12,350,296	$ 4,389,090		$ 10,411,789	$ 3,700,177		$ 10,411,789	$ 3,700,177
36	4,831		$ 13,594,138	$ 4,690,418		$ 14,464,893	$ 4,990,857		$ 14,464,893	$ 4,990,857		$ 12,350,296	$ 4,261,253		$ 10,411,789	$ 3,592,405		$ 10,411,789	$ 3,592,405
37	4,690		$ 13,594,138	$ 4,553,804		$ 14,464,893	$ 4,845,492		$ 14,464,893	$ 4,845,492		$ 12,350,296	$ 4,137,138		$ 10,411,789	$ 3,487,772		$ 10,411,789	$ 3,487,772
38	4,554		$ 13,594,138	$ 4,421,169		$ 14,464,893	$ 4,704,362		$ 14,464,893	$ 4,704,362		$ 12,350,296	$ 4,016,639		$ 10,411,789	$ 3,386,186		$ 10,411,789	$ 3,386,186
39	4,421		$ 13,594,138	$ 4,292,397		$ 14,464,893	$ 4,567,341		$ 14,464,893	$ 4,567,341		$ 12,350,296	$ 3,899,650		$ 10,411,789	$ 3,287,559		$ 10,411,789	$ 3,287,559
40	4,292		$ 13,594,138	$ 4,167,376		$ 14,464,893	$ 4,434,312		$ 14,464,893	$ 4,434,312		$ 12,350,296	$ 3,786,068		$ 10,411,789	$ 3,191,805		$ 10,411,789	$ 3,191,805
41	4,167		$ 13,594,138	$ 4,045,996		$ 14,464,893	$ 4,305,157		$ 14,464,893	$ 4,305,157		$ 12,350,296	$ 3,675,794		$ 10,411,789	$ 3,098,840		$ 10,411,789	$ 3,098,840
42	4,046		$ 13,594,138	$ 3,928,152		$ 14,464,893	$ 4,179,764		$ 14,464,893	$ 4,179,764		$ 12,350,296	$ 3,568,732		$ 10,411,789	$ 3,008,583		$ 10,411,789	$ 3,008,583
43	3,928		$ 13,594,138	$ 3,813,739		$ 14,464,893	$ 4,058,024		$ 14,464,893	$ 4,058,024		$ 12,350,296	$ 3,464,788		$ 10,411,789	$ 2,920,954		$ 10,411,789	$ 2,920,954
44	3,814		$ 13,594,138	$ 3,702,660		$ 14,464,893	$ 3,939,829		$ 14,464,893	$ 3,939,829		$ 12,350,296	$ 3,363,872		$ 10,411,789	$ 2,835,878		$ 10,411,789	$ 2,835,878
45	3,703		$ 13,594,138	$ 3,594,815		$ 14,464,893	$ 3,825,076		$ 14,464,893	$ 3,825,076		$ 12,350,296	$ 3,265,895		$ 10,411,789	$ 2,753,279		$ 10,411,789	$ 2,753,279
46	3,595		$ 13,594,138	$ 3,490,112		$ 14,464,893	$ 3,713,666		$ 14,464,893	$ 3,713,666		$ 12,350,296	$ 3,170,772		$ 10,411,789	$ 2,673,087		$ 10,411,789	$ 2,673,087
47	3,490		$ 13,594,138	$ 3,388,458		$ 14,464,893	$ 3,605,501		$ 14,464,893	$ 3,605,501		$ 12,350,296	$ 3,078,420		$ 10,411,789	$ 2,595,230		$ 10,411,789	$ 2,595,230
48	3,388		$ 13,594,138	$ 3,289,765		$ 14,464,893	$ 3,500,487		$ 14,464,893	$ 3,500,487		$ 12,350,296	$ 2,988,757		$ 10,411,789	$ 2,519,640		$ 10,411,789	$ 2,519,640
49	3,290		$ 13,594,138	$ 3,193,947		$ 14,464,893	$ 3,398,531		$ 14,464,893	$ 3,398,531		$ 12,350,296	$ 2,901,706		$ 10,411,789	$ 2,446,253		$ 10,411,789	$ 2,446,253
50	3,194		$ 13,594,138	$ 3,100,919		$ 14,464,893	$ 3,299,545		$ 14,464,893	$ 3,299,545		$ 12,350,296	$ 2,817,190		$ 10,411,789	$ 2,375,003		$ 10,411,789	$ 2,375,003
51	3,101		$ 13,594,138	$ 3,010,601		$ 14,464,893	$ 3,203,441		$ 14,464,893	$ 3,203,441		$ 12,350,296	$ 2,735,136		$ 10,411,789	$ 2,305,828		$ 10,411,789	$ 2,305,828
52	3,011	$ 2,880,000		$ 619,237		$ 14,464,893	$ 3,110,137		$ 14,464,893	$ 3,110,137	$ 2,880,000		$ 619,237		$ 10,411,789	$ 2,238,668		$ 10,411,789	$ 2,238,668
53	2,923			$ -		$ 14,464,893	$ 3,019,551	$ 2,880,000		$ 601,201			$ -	$ 2,880,000		$ 601,201	$ 2,880,000		$ 601,201
54	2,838				$ 2,880,000		$ 583,690			$ -						$ -			$ -
Total PV costs				$ 606,413,347			$ 1,045,522,733			$ 998,723,844			$ 592,634,940			$ 848,054,708			$ 898,503,225
Unit cost				$ 1,733.76			$ 3,171			$ 2,941.05			$ 1,694.36			$ 2,497			$ 2,645.92

Table D.1.3 Life cycle cost analysis, 12.5 MGD facility, 3% discount rate, 50-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	14,002	$ 196,096,438		$ 196,096,438	$ 213,709,991		$ 213,709,991	$ 256,709,253		$ 256,709,253	$ 208,104,344		$ 208,104,344	$ 254,768,305		$ 254,768,305	$ 255,486,664		$ 255,486,664
1	13,086	$ 72,214,637		$ 67,490,315	$ 209,869,382		$ 196,139,609	$ 252,095,898		$ 235,603,643	$ 77,658,500		$ 72,578,038	$ 250,189,831		$ 233,822,272	$ 250,895,281		$ 234,481,571
2	12,230		$ 13,594,138	$ 11,873,647	$ 206,097,792		$ 180,013,794	$ 154,728,406		$ 135,145,783		$ 12,350,296	$ 10,787,227	$ 103,191,328		$ 90,131,302	$ 155,223,438		$ 135,578,162
3	11,430		$ 13,594,138	$ 11,096,866	$ 101,196,991		$ 82,606,889		$ 14,464,893	$ 11,807,661		$ 12,350,296	$ 10,081,520		$ 10,411,789	$ 8,499,121		$ 10,411,789	$ 8,499,121
4	10,682		$ 13,594,138	$ 10,370,903		$ 14,464,893	$ 11,035,198		$ 14,464,893	$ 11,035,198		$ 12,350,296	$ 9,421,982		$ 10,411,789	$ 7,943,104		$ 10,411,789	$ 7,943,104
5	9,983		$ 13,594,138	$ 9,692,433		$ 14,464,893	$ 10,313,269		$ 14,464,893	$ 10,313,269		$ 12,350,296	$ 8,805,590		$ 10,411,789	$ 7,423,462		$ 10,411,789	$ 7,423,462
6	9,330		$ 13,594,138	$ 9,058,348		$ 14,464,893	$ 9,638,569		$ 14,464,893	$ 9,638,569		$ 12,350,296	$ 8,229,524		$ 10,411,789	$ 6,937,815		$ 10,411,789	$ 6,937,815
7	8,720		$ 13,594,138	$ 8,465,746		$ 14,464,893	$ 9,008,008		$ 14,464,893	$ 9,008,008		$ 12,350,296	$ 7,691,144		$ 10,411,789	$ 6,483,939		$ 10,411,789	$ 6,483,939
8	8,149		$ 13,594,138	$ 7,911,912		$ 14,464,893	$ 8,418,699		$ 14,464,893	$ 8,418,699		$ 12,350,296	$ 7,187,985		$ 10,411,789	$ 6,059,756		$ 10,411,789	$ 6,059,756
9	7,616		$ 13,594,138	$ 7,394,310		$ 14,464,893	$ 7,867,943		$ 14,464,893	$ 7,867,943		$ 12,350,296	$ 6,717,743		$ 10,411,789	$ 5,663,323		$ 10,411,789	$ 5,663,323
10	7,118		$ 13,594,138	$ 6,910,570		$ 14,464,893	$ 7,353,218		$ 14,464,893	$ 7,353,218		$ 12,350,296	$ 6,278,264		$ 10,411,789	$ 5,292,826		$ 10,411,789	$ 5,292,826
11	6,652		$ 13,594,138	$ 6,458,477		$ 14,464,893	$ 6,872,166		$ 14,464,893	$ 6,872,166		$ 12,350,296	$ 5,867,537		$ 10,411,789	$ 4,946,566		$ 10,411,789	$ 4,946,566
12	6,217		$ 13,594,138	$ 6,035,960		$ 14,464,893	$ 6,422,585		$ 14,464,893	$ 6,422,585		$ 12,350,296	$ 5,483,679		$ 10,411,789	$ 4,622,959		$ 10,411,789	$ 4,622,959
13	5,810		$ 13,594,138	$ 5,641,084		$ 14,464,893	$ 6,002,416		$ 14,464,893	$ 6,002,416		$ 12,350,296	$ 5,124,934		$ 10,411,789	$ 4,320,522		$ 10,411,789	$ 4,320,522
14	5,430		$ 13,594,138	$ 5,272,041		$ 14,464,893	$ 5,609,735		$ 14,464,893	$ 5,609,735		$ 12,350,296	$ 4,789,658		$ 10,411,789	$ 4,037,871		$ 10,411,789	$ 4,037,871
15	5,075		$ 13,594,138	$ 4,927,141		$ 14,464,893	$ 5,242,743		$ 14,464,893	$ 5,242,743		$ 12,350,296	$ 4,476,316		$ 10,411,789	$ 3,773,712		$ 10,411,789	$ 3,773,712
16	4,743		$ 13,594,138	$ 4,604,805		$ 14,464,893	$ 4,899,760		$ 14,464,893	$ 4,899,760		$ 12,350,296	$ 4,183,473		$ 10,411,789	$ 3,526,833		$ 10,411,789	$ 3,526,833
17	4,433		$ 13,594,138	$ 4,303,556		$ 14,464,893	$ 4,579,215		$ 14,464,893	$ 4,579,215		$ 12,350,296	$ 3,909,787		$ 10,411,789	$ 3,296,106		$ 10,411,789	$ 3,296,106
18	4,143		$ 13,594,138	$ 4,022,015		$ 14,464,893	$ 4,279,640		$ 14,464,893	$ 4,279,640		$ 12,350,296	$ 3,654,007		$ 10,411,789	$ 3,080,473		$ 10,411,789	$ 3,080,473
19	3,872		$ 13,594,138	$ 3,758,892		$ 14,464,893	$ 3,999,663		$ 14,464,893	$ 3,999,663		$ 12,350,296	$ 3,414,960		$ 10,411,789	$ 2,878,946		$ 10,411,789	$ 2,878,946
20	3,618		$ 13,594,138	$ 3,512,984		$ 14,464,893	$ 3,738,003		$ 14,464,893	$ 3,738,003		$ 12,350,296	$ 3,191,551		$ 10,411,789	$ 2,690,604		$ 10,411,789	$ 2,690,604
21	3,382		$ 13,594,138	$ 3,283,162		$ 14,464,893	$ 3,493,461		$ 14,464,893	$ 3,493,461		$ 12,350,296	$ 2,982,758		$ 10,411,789	$ 2,514,583		$ 10,411,789	$ 2,514,583
22	3,160		$ 13,594,138	$ 3,068,376		$ 14,464,893	$ 3,264,917		$ 14,464,893	$ 3,264,917		$ 12,350,296	$ 2,787,624		$ 10,411,789	$ 2,350,078		$ 10,411,789	$ 2,350,078
23	2,954		$ 13,594,138	$ 2,867,641		$ 14,464,893	$ 3,051,324		$ 14,464,893	$ 3,051,324		$ 12,350,296	$ 2,605,256		$ 10,411,789	$ 2,196,334		$ 10,411,789	$ 2,196,334
24	2,760		$ 13,594,138	$ 2,680,038		$ 14,464,893	$ 2,851,705		$ 14,464,893	$ 2,851,705		$ 12,350,296	$ 2,434,819		$ 10,411,789	$ 2,052,649		$ 10,411,789	$ 2,052,649
25	2,580		$ 13,594,138	$ 2,504,709		$ 14,464,893	$ 2,665,145		$ 14,464,893	$ 2,665,145		$ 12,350,296	$ 2,275,532		$ 10,411,789	$ 1,918,364		$ 10,411,789	$ 1,918,364
26	2,411		$ 13,594,138	$ 2,340,849		$ 14,464,893	$ 2,490,789		$ 14,464,893	$ 2,490,789		$ 12,350,296	$ 2,126,665		$ 10,411,789	$ 1,792,863		$ 10,411,789	$ 1,792,863
27	2,253		$ 13,594,138	$ 2,187,710		$ 14,464,893	$ 2,327,841		$ 14,464,893	$ 2,327,841		$ 12,350,296	$ 1,987,538		$ 10,411,789	$ 1,675,573		$ 10,411,789	$ 1,675,573
28	2,106		$ 13,594,138	$ 2,044,588		$ 14,464,893	$ 2,175,552		$ 14,464,893	$ 2,175,552		$ 12,350,296	$ 1,857,512		$ 10,411,789	$ 1,565,956		$ 10,411,789	$ 1,565,956
29	1,968		$ 13,594,138	$ 1,910,830		$ 14,464,893	$ 2,033,226		$ 14,464,893	$ 2,033,226		$ 12,350,296	$ 1,735,992		$ 10,411,789	$ 1,463,510		$ 10,411,789	$ 1,463,510
30	1,839		$ 13,594,138	$ 1,785,823		$ 14,464,893	$ 1,900,211		$ 14,464,893	$ 1,900,211		$ 12,350,296	$ 1,622,423		$ 10,411,789	$ 1,367,767		$ 10,411,789	$ 1,367,767
31	1,719		$ 13,594,138	$ 1,668,993		$ 14,464,893	$ 1,775,898		$ 14,464,893	$ 1,775,898		$ 12,350,296	$ 1,516,283		$ 10,411,789	$ 1,278,287		$ 10,411,789	$ 1,278,287
32	1,607		$ 13,594,138	$ 1,559,807		$ 14,464,893	$ 1,659,718		$ 14,464,893	$ 1,659,718		$ 12,350,296	$ 1,417,087		$ 10,411,789	$ 1,194,660		$ 10,411,789	$ 1,194,660
33	1,501		$ 13,594,138	$ 1,457,763		$ 14,464,893	$ 1,551,138		$ 14,464,893	$ 1,551,138		$ 12,350,296	$ 1,324,380		$ 10,411,789	$ 1,116,505		$ 10,411,789	$ 1,116,505
34	1,403		$ 13,594,138	$ 1,362,396		$ 14,464,893	$ 1,449,662		$ 14,464,893	$ 1,449,662		$ 12,350,296	$ 1,237,739		$ 10,411,789	$ 1,043,463		$ 10,411,789	$ 1,043,463
35	1,311		$ 13,594,138	$ 1,273,267		$ 14,464,893	$ 1,354,824		$ 14,464,893	$ 1,354,824		$ 12,350,296	$ 1,156,765		$ 10,411,789	$ 975,199		$ 10,411,789	$ 975,199
36	1,226		$ 13,594,138	$ 1,189,969		$ 14,464,893	$ 1,266,191		$ 14,464,893	$ 1,266,191		$ 12,350,296	$ 1,081,089		$ 10,411,789	$ 911,401		$ 10,411,789	$ 911,401
37	1,145		$ 13,594,138	$ 1,112,121		$ 14,464,893	$ 1,183,356		$ 14,464,893	$ 1,183,356		$ 12,350,296	$ 1,010,363		$ 10,411,789	$ 851,776		$ 10,411,789	$ 851,776
38	1,071		$ 13,594,138	$ 1,039,365		$ 14,464,893	$ 1,105,940		$ 14,464,893	$ 1,105,940		$ 12,350,296	$ 944,265		$ 10,411,789	$ 796,053		$ 10,411,789	$ 796,053
39	1,000		$ 13,594,138	$ 971,369		$ 14,464,893	$ 1,033,589		$ 14,464,893	$ 1,033,589		$ 12,350,296	$ 882,490		$ 10,411,789	$ 743,974		$ 10,411,789	$ 743,974
40	935		$ 13,594,138	$ 907,822		$ 14,464,893	$ 965,971		$ 14,464,893	$ 965,971		$ 12,350,296	$ 824,757		$ 10,411,789	$ 695,303		$ 10,411,789	$ 695,303
41	874		$ 13,594,138	$ 848,432		$ 14,464,893	$ 902,777		$ 14,464,893	$ 902,777		$ 12,350,296	$ 770,801		$ 10,411,789	$ 649,816		$ 10,411,789	$ 649,816
42	817		$ 13,594,138	$ 792,927		$ 14,464,893	$ 843,717		$ 14,464,893	$ 843,717		$ 12,350,296	$ 720,375		$ 10,411,789	$ 607,305		$ 10,411,789	$ 607,305
43	763		$ 13,594,138	$ 741,053		$ 14,464,893	$ 788,520		$ 14,464,893	$ 788,520		$ 12,350,296	$ 673,248		$ 10,411,789	$ 567,575		$ 10,411,789	$ 567,575
44	713		$ 13,594,138	$ 692,573		$ 14,464,893	$ 736,935		$ 14,464,893	$ 736,935		$ 12,350,296	$ 629,204		$ 10,411,789	$ 530,444		$ 10,411,789	$ 530,444
45	667		$ 13,594,138	$ 647,264		$ 14,464,893	$ 688,724		$ 14,464,893	$ 688,724		$ 12,350,296	$ 588,041		$ 10,411,789	$ 495,742		$ 10,411,789	$ 495,742
46	623		$ 13,594,138	$ 604,920		$ 14,464,893	$ 643,667		$ 14,464,893	$ 643,667		$ 12,350,296	$ 549,571		$ 10,411,789	$ 463,310		$ 10,411,789	$ 463,310
47	582		$ 13,594,138	$ 565,346		$ 14,464,893	$ 601,558		$ 14,464,893	$ 601,558		$ 12,350,296	$ 513,617		$ 10,411,789	$ 433,000		$ 10,411,789	$ 433,000
48	544		$ 13,594,138	$ 528,361		$ 14,464,893	$ 562,204		$ 14,464,893	$ 562,204		$ 12,350,296	$ 480,016		$ 10,411,789	$ 404,673		$ 10,411,789	$ 404,673
49	509		$ 13,594,138	$ 493,795		$ 14,464,893	$ 525,424		$ 14,464,893	$ 525,424		$ 12,350,296	$ 448,613		$ 10,411,789	$ 378,199		$ 10,411,789	$ 378,199
50	475		$ 13,594,138	$ 461,491		$ 14,464,893	$ 491,051		$ 14,464,893	$ 491,051		$ 12,350,296	$ 419,265		$ 10,411,789	$ 353,457		$ 10,411,789	$ 353,457
51	444		$ 13,594,138	$ 431,300		$ 14,464,893	$ 458,926		$ 14,464,893	$ 458,926		$ 12,350,296	$ 391,836		$ 10,411,789	$ 330,334		$ 10,411,789	$ 330,334
52	415	$ 2,880,000		$ 85,396		$ 14,464,893	$ 428,903		$ 14,464,893	$ 428,903	$ 2,880,000		$ 85,396		$ 10,411,789	$ 308,723		$ 10,411,789	$ 308,723
53	388			$ -		$ 14,464,893	$ 400,844	$ 2,880,000		$ 79,809			$ -	$ 2,880,000		$ 79,809	$ 2,880,000		$ 79,809
54	363				$ 2,880,000		$ 74,588			$ -						$ -			$ -
Total PV costs				$ 439,007,897			$ 835,499,411			$ 801,899,846			$ 440,060,582			$ 704,306,501			$ 751,131,020
Unit cost				$ 2,430.92			$ 5,297			$ 4,751.19			$ 2,436.75			$ 4,173			$ 4,450.39

Table D.1.4 Life cycle cost analysis, 12.5 MGD facility, 7% discount rate, 50-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	28,004	$ 228,779,178		$ 228,779,178	$ 249,355,203		$ 249,355,203	$ 299,521,008		$ 299,521,008	$ 243,966,986		$ 243,966,986	$ 298,077,664		$ 298,077,664	$ 298,472,897		$ 298,472,897
1	27,188	$ 224,667,758		$ 218,124,037	$ 244,874,009		$ 237,741,756	$ 294,138,278		$ 285,571,144	$ 239,582,624		$ 232,604,489	$ 292,720,872		$ 284,195,021	$ 293,109,002		$ 284,571,846
2	26,396	$ 13,789,389		$ 12,997,822	$ 240,473,347		$ 226,669,193	$ 288,852,281		$ 272,270,979	$ 14,116,623		$ 13,306,271	$ 287,460,348		$ 270,958,948	$ 287,841,502		$ 271,318,223
3	25,627		$ 27,188,276	$ 24,881,124	$ 236,151,769		$ 216,112,322	$ 265,932,450		$ 243,365,863		$ 24,700,592	$ 22,604,541	$ 175,022,504		$ 160,170,384	$ 265,708,546		$ 243,160,959
4	24,881		$ 27,188,276	$ 24,156,431	$ 231,907,856		$ 206,047,126		$ 28,929,786	$ 25,703,740		$ 24,700,592	$ 21,946,156		$ 20,823,578	$ 18,501,480		$ 20,823,578	$ 18,501,480
5	24,156		$ 27,188,276	$ 23,452,846	$ 56,935,052		$ 49,112,676		$ 28,929,786	$ 24,955,088		$ 24,700,592	$ 21,306,947		$ 20,823,578	$ 17,962,602		$ 20,823,578	$ 17,962,602
6	23,452		$ 27,188,276	$ 22,769,753		$ 28,929,786	$ 24,228,240		$ 28,929,786	$ 24,228,240		$ 24,700,592	$ 20,686,357		$ 20,823,578	$ 17,439,419		$ 20,823,578	$ 17,439,419
7	22,769		$ 27,188,276	$ 22,106,557		$ 28,929,786	$ 23,522,563		$ 28,929,786	$ 23,522,563		$ 24,700,592	$ 20,083,842		$ 20,823,578	$ 16,931,475		$ 20,823,578	$ 16,931,475
8	22,106		$ 27,188,276	$ 21,462,676		$ 28,929,786	$ 22,837,440		$ 28,929,786	$ 22,837,440		$ 24,700,592	$ 19,498,875		$ 20,823,578	$ 16,438,325		$ 20,823,578	$ 16,438,325
9	21,462		$ 27,188,276	$ 20,837,550		$ 28,929,786	$ 22,172,272		$ 28,929,786	$ 22,172,272		$ 24,700,592	$ 18,930,947		$ 20,823,578	$ 15,959,539		$ 20,823,578	$ 15,959,539
10	20,837		$ 27,188,276	$ 20,230,631		$ 28,929,786	$ 21,526,478		$ 28,929,786	$ 21,526,478		$ 24,700,592	$ 18,379,560		$ 20,823,578	$ 15,494,698		$ 20,823,578	$ 15,494,698
11	20,230		$ 27,188,276	$ 19,641,389		$ 28,929,786	$ 20,899,493		$ 28,929,786	$ 20,899,493		$ 24,700,592	$ 17,844,233		$ 20,823,578	$ 15,043,396		$ 20,823,578	$ 15,043,396
12	19,641		$ 27,188,276	$ 19,069,310		$ 28,929,786	$ 20,290,770		$ 28,929,786	$ 20,290,770		$ 24,700,592	$ 17,324,498		$ 20,823,578	$ 14,605,239		$ 20,823,578	$ 14,605,239
13	19,069		$ 27,188,276	$ 18,513,893		$ 28,929,786	$ 19,699,777		$ 28,929,786	$ 19,699,777		$ 24,700,592	$ 16,819,901		$ 20,823,578	$ 14,179,844		$ 20,823,578	$ 14,179,844
14	18,514		$ 27,188,276	$ 17,974,653		$ 28,929,786	$ 19,125,997		$ 28,929,786	$ 19,125,997		$ 24,700,592	$ 16,330,001		$ 20,823,578	$ 13,766,838		$ 20,823,578	$ 13,766,838
15	17,974		$ 27,188,276	$ 17,451,120		$ 28,929,786	$ 18,568,929		$ 28,929,786	$ 18,568,929		$ 24,700,592	$ 15,854,370		$ 20,823,578	$ 13,365,863		$ 20,823,578	$ 13,365,863
16	17,451		$ 27,188,276	$ 16,942,835		$ 28,929,786	$ 18,028,086		$ 28,929,786	$ 18,028,086		$ 24,700,592	$ 15,392,592		$ 20,823,578	$ 12,976,566		$ 20,823,578	$ 12,976,566
17	16,943		$ 27,188,276	$ 16,449,354		$ 28,929,786	$ 17,502,996		$ 28,929,786	$ 17,502,996		$ 24,700,592	$ 14,944,264		$ 20,823,578	$ 12,598,607		$ 20,823,578	$ 12,598,607
18	16,449		$ 27,188,276	$ 15,970,247		$ 28,929,786	$ 16,993,200		$ 28,929,786	$ 16,993,200		$ 24,700,592	$ 14,508,994		$ 20,823,578	$ 12,231,658		$ 20,823,578	$ 12,231,658
19	15,970		$ 27,188,276	$ 15,505,094		$ 28,929,786	$ 16,498,253		$ 28,929,786	$ 16,498,253		$ 24,700,592	$ 14,086,402		$ 20,823,578	$ 11,875,396		$ 20,823,578	$ 11,875,396
20	15,505		$ 27,188,276	$ 15,053,489		$ 28,929,786	$ 16,017,721		$ 28,929,786	$ 16,017,721		$ 24,700,592	$ 13,676,119		$ 20,823,578	$ 11,529,510		$ 20,823,578	$ 11,529,510
21	15,053		$ 27,188,276	$ 14,615,038		$ 28,929,786	$ 15,551,186		$ 28,929,786	$ 15,551,186		$ 24,700,592	$ 13,277,785		$ 20,823,578	$ 11,193,699		$ 20,823,578	$ 11,193,699
22	14,615		$ 27,188,276	$ 14,189,357		$ 28,929,786	$ 15,098,238		$ 28,929,786	$ 15,098,238		$ 24,700,592	$ 12,891,054		$ 20,823,578	$ 10,867,669		$ 20,823,578	$ 10,867,669
23	14,189		$ 27,188,276	$ 13,776,075		$ 28,929,786	$ 14,658,484		$ 28,929,786	$ 14,658,484		$ 24,700,592	$ 12,515,586		$ 20,823,578	$ 10,551,135		$ 20,823,578	$ 10,551,135
24	13,776		$ 27,188,276	$ 13,374,830		$ 28,929,786	$ 14,231,538		$ 28,929,786	$ 14,231,538		$ 24,700,592	$ 12,151,054		$ 20,823,578	$ 10,243,821		$ 20,823,578	$ 10,243,821
25	13,375		$ 27,188,276	$ 12,985,272		$ 28,929,786	$ 13,817,027		$ 28,929,786	$ 13,817,027		$ 24,700,592	$ 11,797,140		$ 20,823,578	$ 9,945,457		$ 20,823,578	$ 9,945,457
26	12,985		$ 27,188,276	$ 12,607,060		$ 28,929,786	$ 13,414,589		$ 28,929,786	$ 13,414,589		$ 24,700,592	$ 11,453,534		$ 20,823,578	$ 9,655,783		$ 20,823,578	$ 9,655,783
27	12,607		$ 27,188,276	$ 12,239,864		$ 28,929,786	$ 13,023,873		$ 28,929,786	$ 13,023,873		$ 24,700,592	$ 11,119,936		$ 20,823,578	$ 9,374,547		$ 20,823,578	$ 9,374,547
28	12,240		$ 27,188,276	$ 11,883,363		$ 28,929,786	$ 12,644,537		$ 28,929,786	$ 12,644,537		$ 24,700,592	$ 10,796,054		$ 20,823,578	$ 9,101,502		$ 20,823,578	$ 9,101,502
29	11,883		$ 27,188,276	$ 11,537,246		$ 28,929,786	$ 12,276,249		$ 28,929,786	$ 12,276,249		$ 24,700,592	$ 10,481,606		$ 20,823,578	$ 8,836,410		$ 20,823,578	$ 8,836,410
30	11,537		$ 27,188,276	$ 11,201,210		$ 28,929,786	$ 11,918,689		$ 28,929,786	$ 11,918,689		$ 24,700,592	$ 10,176,317		$ 20,823,578	$ 8,579,039		$ 20,823,578	$ 8,579,039
31	11,201		$ 27,188,276	$ 10,874,961		$ 28,929,786	$ 11,571,543		$ 28,929,786	$ 11,571,543		$ 24,700,592	$ 9,879,919		$ 20,823,578	$ 8,329,164		$ 20,823,578	$ 8,329,164
32	10,875		$ 27,188,276	$ 10,558,215		$ 28,929,786	$ 11,234,507		$ 28,929,786	$ 11,234,507		$ 24,700,592	$ 9,592,155		$ 20,823,578	$ 8,086,567		$ 20,823,578	$ 8,086,567
33	10,558	$ 5,040,000		$ 1,900,212		$ 28,929,786	$ 10,907,289		$ 28,929,786	$ 10,907,289	$ 5,040,000		$ 1,900,212		$ 20,823,578	$ 7,851,036		$ 20,823,578	$ 7,851,036
34	10,251					$ 28,929,786	$ 10,589,601	$ 5,040,000		$ 1,844,866			$ -	$ 5,040,000		$ 1,844,866	$ 5,040,000		$ 1,844,866
35	9,952					$ 28,929,786	$ 10,281,166			$ -			$ -			$ -			$ -
36	9,662				$ 5,040,000		$ 1,738,963			$ -			$ -			$ -			$ -
Total PV costs				$ 964,112,695			$ 1,675,907,971			$ 1,621,492,652			$ 948,128,700			$ 1,388,763,165			$ 1,472,885,073
Unit cost				$ 1,863			$ 3,540			$ 3,228			$ 1,833			$ 2,765			$ 2,932

Table D.2.1 Life cycle cost analysis, 25 MGD facility, 3% discount rate, 30-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	28003.5	$ 228,779,178		$ 228,779,178	$ 249,355,203		$ 249,355,203	$ 299,521,008		$ 299,521,008	$ 243,966,986		$ 243,966,986	$ 298,077,664		$ 298,077,664	$ 298,472,897		$ 298,472,897
1	26171.4953	$ 224,667,758		$ 209,969,868	$ 244,874,009		$ 228,854,214	$ 294,138,278		$ 274,895,587	$ 239,582,624		$ 223,908,994	$ 292,720,872		$ 273,570,908	$ 293,109,002		$ 273,933,647
2	24459.3414	$ 13,789,389		$ 12,044,186	$ 240,473,347		$ 210,038,734	$ 288,852,281		$ 252,294,769	$ 14,116,623		$ 12,330,005	$ 287,460,348		$ 251,079,000	$ 287,841,502		$ 251,411,916
3	22859.1976		$ 27,188,276	$ 22,193,732	$ 236,151,769		$ 192,770,188	$ 265,932,450		$ 217,080,094		$ 24,700,592	$ 20,163,041	$ 175,022,504		$ 142,870,498	$ 265,708,546		$ 216,897,322
4	21363.7361		$ 27,188,276	$ 20,741,806	$ 231,907,856		$ 176,921,393		$ 28,929,786	$ 22,070,395		$ 24,700,592	$ 18,843,963		$ 20,823,578	$ 15,886,208		$ 20,823,578	$ 15,886,208
5	19966.1085		$ 27,188,276	$ 19,384,865	$ 56,935,052		$ 40,593,906		$ 28,929,786	$ 20,626,538		$ 24,700,592	$ 17,611,181		$ 20,823,578	$ 14,846,924		$ 20,823,578	$ 14,846,924
6	18659.9145		$ 27,188,276	$ 18,116,696		$ 28,929,786	$ 19,277,138		$ 28,929,786	$ 19,277,138		$ 24,700,592	$ 16,459,047		$ 20,823,578	$ 13,875,629		$ 20,823,578	$ 13,875,629
7	17439.1724		$ 27,188,276	$ 16,931,492		$ 28,929,786	$ 18,016,017		$ 28,929,786	$ 18,016,017		$ 24,700,592	$ 15,382,287		$ 20,823,578	$ 12,967,878		$ 20,823,578	$ 12,967,878
8	16298.292		$ 27,188,276	$ 15,823,824		$ 28,929,786	$ 16,837,399		$ 28,929,786	$ 16,837,399		$ 24,700,592	$ 14,375,969		$ 20,823,578	$ 12,119,512		$ 20,823,578	$ 12,119,512
9	15232.0486		$ 27,188,276	$ 14,788,621		$ 28,929,786	$ 15,735,887		$ 28,929,786	$ 15,735,887		$ 24,700,592	$ 13,435,485		$ 20,823,578	$ 11,326,647		$ 20,823,578	$ 11,326,647
10	14235.5594		$ 27,188,276	$ 13,821,141		$ 28,929,786	$ 14,706,436		$ 28,929,786	$ 14,706,436		$ 24,700,592	$ 12,556,528		$ 20,823,578	$ 10,585,651		$ 20,823,578	$ 10,585,651
11	13304.2611		$ 27,188,276	$ 12,916,954		$ 28,929,786	$ 13,744,333		$ 28,929,786	$ 13,744,333		$ 24,700,592	$ 11,735,073		$ 20,823,578	$ 9,893,132		$ 20,823,578	$ 9,893,132
12	12433.8889		$ 27,188,276	$ 12,071,920		$ 28,929,786	$ 12,845,171		$ 28,929,786	$ 12,845,171		$ 24,700,592	$ 10,967,358		$ 20,823,578	$ 9,245,918		$ 20,823,578	$ 9,245,918
13	11620.4569		$ 27,188,276	$ 11,282,168		$ 28,929,786	$ 12,004,833		$ 28,929,786	$ 12,004,833		$ 24,700,592	$ 10,249,867		$ 20,823,578	$ 8,641,045		$ 20,823,578	$ 8,641,045
14	10860.2401		$ 27,188,276	$ 10,544,082		$ 28,929,786	$ 11,219,470		$ 28,929,786	$ 11,219,470		$ 24,700,592	$ 9,579,315		$ 20,823,578	$ 8,075,743		$ 20,823,578	$ 8,075,743
15	10149.7571		$ 27,188,276	$ 9,854,282		$ 28,929,786	$ 10,485,486		$ 28,929,786	$ 10,485,486		$ 24,700,592	$ 8,952,631		$ 20,823,578	$ 7,547,423		$ 20,823,578	$ 7,547,423
16	9485.75431		$ 27,188,276	$ 9,209,610		$ 28,929,786	$ 9,799,519		$ 28,929,786	$ 9,799,519		$ 24,700,592	$ 8,366,945		$ 20,823,578	$ 7,053,666		$ 20,823,578	$ 7,053,666
17	8865.19094		$ 27,188,276	$ 8,607,112		$ 28,929,786	$ 9,158,429		$ 28,929,786	$ 9,158,429		$ 24,700,592	$ 7,819,575		$ 20,823,578	$ 6,592,212		$ 20,823,578	$ 6,592,212
18	8285.22518		$ 27,188,276	$ 8,044,030		$ 28,929,786	$ 8,559,280		$ 28,929,786	$ 8,559,280		$ 24,700,592	$ 7,308,014		$ 20,823,578	$ 6,160,945		$ 20,823,578	$ 6,160,945
19	7743.2011		$ 27,188,276	$ 7,517,785		$ 28,929,786	$ 7,999,327		$ 28,929,786	$ 7,999,327		$ 24,700,592	$ 6,829,919		$ 20,823,578	$ 5,757,893		$ 20,823,578	$ 5,757,893
20	7236.63655		$ 27,188,276	$ 7,025,967		$ 28,929,786	$ 7,476,006		$ 28,929,786	$ 7,476,006		$ 24,700,592	$ 6,383,102		$ 20,823,578	$ 5,381,208		$ 20,823,578	$ 5,381,208
21	6763.21172		$ 27,188,276	$ 6,566,325		$ 28,929,786	$ 6,986,922		$ 28,929,786	$ 6,986,922		$ 24,700,592	$ 5,965,516		$ 20,823,578	$ 5,029,167		$ 20,823,578	$ 5,029,167
22	6320.75862		$ 27,188,276	$ 6,136,752		$ 28,929,786	$ 6,529,834		$ 28,929,786	$ 6,529,834		$ 24,700,592	$ 5,575,249		$ 20,823,578	$ 4,700,156		$ 20,823,578	$ 4,700,156
23	5907.25105		$ 27,188,276	$ 5,735,282		$ 28,929,786	$ 6,102,648		$ 28,929,786	$ 6,102,648		$ 24,700,592	$ 5,210,513		$ 20,823,578	$ 4,392,669		$ 20,823,578	$ 4,392,669
24	5520.79537		$ 27,188,276	$ 5,360,077		$ 28,929,786	$ 5,703,410		$ 28,929,786	$ 5,703,410		$ 24,700,592	$ 4,869,638		$ 20,823,578	$ 4,105,298		$ 20,823,578	$ 4,105,298
25	5159.62184		$ 27,188,276	$ 5,009,418		$ 28,929,786	$ 5,330,289		$ 28,929,786	$ 5,330,289		$ 24,700,592	$ 4,551,064		$ 20,823,578	$ 3,836,727		$ 20,823,578	$ 3,836,727
26	4822.07649		$ 27,188,276	$ 4,681,699		$ 28,929,786	$ 4,981,579		$ 28,929,786	$ 4,981,579		$ 24,700,592	$ 4,253,331		$ 20,823,578	$ 3,585,726		$ 20,823,578	$ 3,585,726
27	4506.61354		$ 27,188,276	$ 4,375,419		$ 28,929,786	$ 4,655,681		$ 28,929,786	$ 4,655,681		$ 24,700,592	$ 3,975,075		$ 20,823,578	$ 3,351,146		$ 20,823,578	$ 3,351,146
28	4211.78836		$ 27,188,276	$ 4,089,177		$ 28,929,786	$ 4,351,104		$ 28,929,786	$ 4,351,104		$ 24,700,592	$ 3,715,024		$ 20,823,578	$ 3,131,912		$ 20,823,578	$ 3,131,912
29	3936.2508		$ 27,188,276	$ 3,821,661		$ 28,929,786	$ 4,066,452		$ 28,929,786	$ 4,066,452		$ 24,700,592	$ 3,471,985		$ 20,823,578	$ 2,927,021		$ 20,823,578	$ 2,927,021
30	3678.73907		$ 27,188,276	$ 3,571,645		$ 28,929,786	$ 3,800,423		$ 28,929,786	$ 3,800,423		$ 24,700,592	$ 3,244,846		$ 20,823,578	$ 2,735,533		$ 20,823,578	$ 2,735,533
31	3438.07389		$ 27,188,276	$ 3,337,986		$ 28,929,786	$ 3,551,797		$ 28,929,786	$ 3,551,797		$ 24,700,592	$ 3,032,566		$ 20,823,578	$ 2,556,573		$ 20,823,578	$ 2,556,573
32	3213.15317		$ 27,188,276	$ 3,119,613		$ 28,929,786	$ 3,319,436		$ 28,929,786	$ 3,319,436		$ 24,700,592	$ 2,834,174		$ 20,823,578	$ 2,389,321		$ 20,823,578	$ 2,389,321
33	3002.94689	$ 5,040,000		$ 540,463		$ 28,929,786	$ 3,102,277		$ 28,929,786	$ 3,102,277	$ 5,040,000		$ 540,463		$ 20,823,578	$ 2,233,010		$ 20,823,578	$ 2,233,010
34	2806.49242					$ 28,929,786	$ 2,899,324	$ 5,040,000		$ 505,105			$ -	$ 5,040,000		$ 505,105	$ 5,040,000		$ 505,105
35	2622.89011					$ 28,929,786	$ 2,709,649			$ -			$ -			$ -			$ -
36	2451.29917				$ 5,040,000		$ 441,179			$ -			$ -			$ -			$ -
Total PV costs				$ 746,014,836			$ 1,354,930,371			$ 1,337,340,079			$ 748,464,731			$ 1,177,035,071			$ 1,252,152,781
Unit cost				$ 2,458			$ 5,469			$ 4,715			$ 2,466			$ 4,149			$ 4,414

Table D.2.2 Life cycle cost analysis, 25 MGD facility, 7% discount rate, 30-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	28,004	$ 228,779,178		$ 228,779,178	$ 249,355,203		$ 249,355,203	$ 299,521,008		$ 299,521,008	$ 243,966,986		$ 243,966,986	$ 298,077,664		$ 298,077,664	$ 298,472,897		$ 298,472,897
1	27,188	$ 224,667,758		$ 218,124,037	$ 244,874,009		$ 237,741,756	$ 294,138,278		$ 285,571,144	$ 239,582,624		$ 232,604,489	$ 292,720,872		$ 284,195,021	$ 293,109,002		$ 284,571,846
2	26,396	$ 13,789,389		$ 12,997,822	$ 240,473,347		$ 226,669,193	$ 288,852,281		$ 272,270,979	$ 14,116,623		$ 13,306,271	$ 287,460,348		$ 270,958,948	$ 287,841,502		$ 271,318,223
3	25,627		$ 27,188,276	$ 24,881,124	$ 236,151,769		$ 216,112,322	$ 265,932,450		$ 243,365,863		$ 24,700,592	$ 22,604,541	$ 175,022,504		$ 160,170,384	$ 265,708,546		$ 243,160,959
4	24,881		$ 27,188,276	$ 24,156,431	$ 231,907,856		$ 206,047,126		$ 28,929,786	$ 25,703,740		$ 24,700,592	$ 21,946,156		$ 20,823,578	$ 18,501,480		$ 20,823,578	$ 18,501,480
5	24,156		$ 27,188,276	$ 23,452,846	$ 56,935,052		$ 49,112,676		$ 28,929,786	$ 24,955,088		$ 24,700,592	$ 21,306,947		$ 20,823,578	$ 17,962,602		$ 20,823,578	$ 17,962,602
6	23,452		$ 27,188,276	$ 22,769,753		$ 28,929,786	$ 24,228,240		$ 28,929,786	$ 24,228,240		$ 24,700,592	$ 20,686,357		$ 20,823,578	$ 17,439,419		$ 20,823,578	$ 17,439,419
7	22,769		$ 27,188,276	$ 22,106,557		$ 28,929,786	$ 23,522,563		$ 28,929,786	$ 23,522,563		$ 24,700,592	$ 20,083,842		$ 20,823,578	$ 16,931,475		$ 20,823,578	$ 16,931,475
8	22,106		$ 27,188,276	$ 21,462,676		$ 28,929,786	$ 22,837,440		$ 28,929,786	$ 22,837,440		$ 24,700,592	$ 19,498,875		$ 20,823,578	$ 16,438,325		$ 20,823,578	$ 16,438,325
9	21,462		$ 27,188,276	$ 20,837,550		$ 28,929,786	$ 22,172,272		$ 28,929,786	$ 22,172,272		$ 24,700,592	$ 18,930,947		$ 20,823,578	$ 15,959,539		$ 20,823,578	$ 15,959,539
10	20,837		$ 27,188,276	$ 20,230,631		$ 28,929,786	$ 21,526,478		$ 28,929,786	$ 21,526,478		$ 24,700,592	$ 18,379,560		$ 20,823,578	$ 15,494,698		$ 20,823,578	$ 15,494,698
11	20,230		$ 27,188,276	$ 19,641,389		$ 28,929,786	$ 20,899,493		$ 28,929,786	$ 20,899,493		$ 24,700,592	$ 17,844,233		$ 20,823,578	$ 15,043,396		$ 20,823,578	$ 15,043,396
12	19,641		$ 27,188,276	$ 19,069,310		$ 28,929,786	$ 20,290,770		$ 28,929,786	$ 20,290,770		$ 24,700,592	$ 17,324,498		$ 20,823,578	$ 14,605,239		$ 20,823,578	$ 14,605,239
13	19,069		$ 27,188,276	$ 18,513,893		$ 28,929,786	$ 19,699,777		$ 28,929,786	$ 19,699,777		$ 24,700,592	$ 16,819,901		$ 20,823,578	$ 14,179,844		$ 20,823,578	$ 14,179,844
14	18,514		$ 27,188,276	$ 17,974,653		$ 28,929,786	$ 19,125,997		$ 28,929,786	$ 19,125,997		$ 24,700,592	$ 16,330,001		$ 20,823,578	$ 13,766,838		$ 20,823,578	$ 13,766,838
15	17,974		$ 27,188,276	$ 17,451,120		$ 28,929,786	$ 18,568,929		$ 28,929,786	$ 18,568,929		$ 24,700,592	$ 15,854,370		$ 20,823,578	$ 13,365,863		$ 20,823,578	$ 13,365,863
16	17,451		$ 27,188,276	$ 16,942,835		$ 28,929,786	$ 18,028,086		$ 28,929,786	$ 18,028,086		$ 24,700,592	$ 15,392,592		$ 20,823,578	$ 12,976,566		$ 20,823,578	$ 12,976,566
17	16,943		$ 27,188,276	$ 16,449,354		$ 28,929,786	$ 17,502,996		$ 28,929,786	$ 17,502,996		$ 24,700,592	$ 14,944,264		$ 20,823,578	$ 12,598,607		$ 20,823,578	$ 12,598,607
18	16,449		$ 27,188,276	$ 15,970,247		$ 28,929,786	$ 16,993,200		$ 28,929,786	$ 16,993,200		$ 24,700,592	$ 14,508,994		$ 20,823,578	$ 12,231,658		$ 20,823,578	$ 12,231,658
19	15,970		$ 27,188,276	$ 15,505,094		$ 28,929,786	$ 16,498,253		$ 28,929,786	$ 16,498,253		$ 24,700,592	$ 14,086,402		$ 20,823,578	$ 11,875,396		$ 20,823,578	$ 11,875,396
20	15,505		$ 27,188,276	$ 15,053,489		$ 28,929,786	$ 16,017,721		$ 28,929,786	$ 16,017,721		$ 24,700,592	$ 13,676,119		$ 20,823,578	$ 11,529,510		$ 20,823,578	$ 11,529,510
21	15,053		$ 27,188,276	$ 14,615,038		$ 28,929,786	$ 15,551,186		$ 28,929,786	$ 15,551,186		$ 24,700,592	$ 13,277,785		$ 20,823,578	$ 11,193,699		$ 20,823,578	$ 11,193,699
22	14,615		$ 27,188,276	$ 14,189,357		$ 28,929,786	$ 15,098,238		$ 28,929,786	$ 15,098,238		$ 24,700,592	$ 12,891,054		$ 20,823,578	$ 10,867,669		$ 20,823,578	$ 10,867,669
23	14,189		$ 27,188,276	$ 13,776,075		$ 28,929,786	$ 14,658,484		$ 28,929,786	$ 14,658,484		$ 24,700,592	$ 12,515,586		$ 20,823,578	$ 10,551,135		$ 20,823,578	$ 10,551,135
24	13,776		$ 27,188,276	$ 13,374,830		$ 28,929,786	$ 14,231,538		$ 28,929,786	$ 14,231,538		$ 24,700,592	$ 12,151,054		$ 20,823,578	$ 10,243,821		$ 20,823,578	$ 10,243,821
25	13,375		$ 27,188,276	$ 12,985,272		$ 28,929,786	$ 13,817,027		$ 28,929,786	$ 13,817,027		$ 24,700,592	$ 11,797,140		$ 20,823,578	$ 9,945,457		$ 20,823,578	$ 9,945,457
26	12,985		$ 27,188,276	$ 12,607,060		$ 28,929,786	$ 13,414,589		$ 28,929,786	$ 13,414,589		$ 24,700,592	$ 11,453,534		$ 20,823,578	$ 9,655,783		$ 20,823,578	$ 9,655,783
27	12,607		$ 27,188,276	$ 12,239,864		$ 28,929,786	$ 13,023,873		$ 28,929,786	$ 13,023,873		$ 24,700,592	$ 11,119,936		$ 20,823,578	$ 9,374,547		$ 20,823,578	$ 9,374,547
28	12,240		$ 27,188,276	$ 11,883,363		$ 28,929,786	$ 12,644,537		$ 28,929,786	$ 12,644,537		$ 24,700,592	$ 10,796,054		$ 20,823,578	$ 9,101,502		$ 20,823,578	$ 9,101,502
29	11,883		$ 27,188,276	$ 11,537,246		$ 28,929,786	$ 12,276,249		$ 28,929,786	$ 12,276,249		$ 24,700,592	$ 10,481,606		$ 20,823,578	$ 8,836,410		$ 20,823,578	$ 8,836,410
30	11,537		$ 27,188,276	$ 11,201,210		$ 28,929,786	$ 11,918,689		$ 28,929,786	$ 11,918,689		$ 24,700,592	$ 10,176,317		$ 20,823,578	$ 8,579,039		$ 20,823,578	$ 8,579,039
31	11,201		$ 27,188,276	$ 10,874,961		$ 28,929,786	$ 11,571,543		$ 28,929,786	$ 11,571,543		$ 24,700,592	$ 9,879,919		$ 20,823,578	$ 8,329,164		$ 20,823,578	$ 8,329,164
32	10,875		$ 27,188,276	$ 10,558,215		$ 28,929,786	$ 11,234,507		$ 28,929,786	$ 11,234,507		$ 24,700,592	$ 9,592,155		$ 20,823,578	$ 8,086,567		$ 20,823,578	$ 8,086,567
33	10,558		$ 27,188,276	$ 10,250,694		$ 28,929,786	$ 10,907,289		$ 28,929,786	$ 10,907,289		$ 24,700,592	$ 9,312,771		$ 20,823,578	$ 7,851,036		$ 20,823,578	$ 7,851,036
34	10,251		$ 27,188,276	$ 9,952,130		$ 28,929,786	$ 10,589,601		$ 28,929,786	$ 10,589,601		$ 24,700,592	$ 9,041,526		$ 20,823,578	$ 7,622,365		$ 20,823,578	$ 7,622,365
35	9,952		$ 27,188,276	$ 9,662,262		$ 28,929,786	$ 10,281,166		$ 28,929,786	$ 10,281,166		$ 24,700,592	$ 8,778,180		$ 20,823,578	$ 7,400,354		$ 20,823,578	$ 7,400,354
36	9,662		$ 27,188,276	$ 9,380,837		$ 28,929,786	$ 9,981,714		$ 28,929,786	$ 9,981,714		$ 24,700,592	$ 8,522,505		$ 20,823,578	$ 7,184,810		$ 20,823,578	$ 7,184,810
37	9,381		$ 27,188,276	$ 9,107,609		$ 28,929,786	$ 9,690,985		$ 28,929,786	$ 9,690,985		$ 24,700,592	$ 8,274,277		$ 20,823,578	$ 6,975,543		$ 20,823,578	$ 6,975,543
38	9,107		$ 27,188,276	$ 8,842,338		$ 28,929,786	$ 9,408,723		$ 28,929,786	$ 9,408,723		$ 24,700,592	$ 8,033,278		$ 20,823,578	$ 6,772,372		$ 20,823,578	$ 6,772,372
39	8,842		$ 27,188,276	$ 8,584,795		$ 28,929,786	$ 9,134,683		$ 28,929,786	$ 9,134,683		$ 24,700,592	$ 7,799,299		$ 20,823,578	$ 6,575,119		$ 20,823,578	$ 6,575,119
40	8,585		$ 27,188,276	$ 8,334,752		$ 28,929,786	$ 8,868,624		$ 28,929,786	$ 8,868,624		$ 24,700,592	$ 7,572,135		$ 20,823,578	$ 6,383,610		$ 20,823,578	$ 6,383,610
41	8,335		$ 27,188,276	$ 8,091,992		$ 28,929,786	$ 8,610,314		$ 28,929,786	$ 8,610,314		$ 24,700,592	$ 7,351,588		$ 20,823,578	$ 6,197,680		$ 20,823,578	$ 6,197,680
42	8,092		$ 27,188,276	$ 7,856,303		$ 28,929,786	$ 8,359,529		$ 28,929,786	$ 8,359,529		$ 24,700,592	$ 7,137,464		$ 20,823,578	$ 6,017,165		$ 20,823,578	$ 6,017,165
43	7,856		$ 27,188,276	$ 7,627,479		$ 28,929,786	$ 8,116,047		$ 28,929,786	$ 8,116,047		$ 24,700,592	$ 6,929,577		$ 20,823,578	$ 5,841,908		$ 20,823,578	$ 5,841,908
44	7,627		$ 27,188,276	$ 7,405,319		$ 28,929,786	$ 7,879,657		$ 28,929,786	$ 7,879,657		$ 24,700,592	$ 6,727,744		$ 20,823,578	$ 5,671,755		$ 20,823,578	$ 5,671,755
45	7,405		$ 27,188,276	$ 7,189,630		$ 28,929,786	$ 7,650,153		$ 28,929,786	$ 7,650,153		$ 24,700,592	$ 6,531,791		$ 20,823,578	$ 5,506,558		$ 20,823,578	$ 5,506,558
46	7,190		$ 27,188,276	$ 6,980,224		$ 28,929,786	$ 7,427,333		$ 28,929,786	$ 7,427,333		$ 24,700,592	$ 6,341,544		$ 20,823,578	$ 5,346,173		$ 20,823,578	$ 5,346,173
47	6,980		$ 27,188,276	$ 6,776,916		$ 28,929,786	$ 7,211,003		$ 28,929,786	$ 7,211,003		$ 24,700,592	$ 6,156,839		$ 20,823,578	$ 5,190,459		$ 20,823,578	$ 5,190,459
48	6,777		$ 27,188,276	$ 6,579,530		$ 28,929,786	$ 7,000,974		$ 28,929,786	$ 7,000,974		$ 24,700,592	$ 5,977,514		$ 20,823,578	$ 5,039,281		$ 20,823,578	$ 5,039,281
49	6,579		$ 27,188,276	$ 6,387,893		$ 28,929,786	$ 6,797,062		$ 28,929,786	$ 6,797,062		$ 24,700,592	$ 5,803,411		$ 20,823,578	$ 4,892,506		$ 20,823,578	$ 4,892,506
50	6,388		$ 27,188,276	$ 6,201,838		$ 28,929,786	$ 6,599,089		$ 28,929,786	$ 6,599,089		$ 24,700,592	$ 5,634,380		$ 20,823,578	$ 4,750,006		$ 20,823,578	$ 4,750,006
51	6,202		$ 27,188,276	$ 6,021,202		$ 28,929,786	$ 6,406,883		$ 28,929,786	$ 6,406,883		$ 24,700,592	$ 5,470,272		$ 20,823,578	$ 4,611,656		$ 20,823,578	$ 4,611,656
52	6,021		$ 27,188,276	$ 5,845,827		$ 28,929,786	$ 6,220,274		$ 28,929,786	$ 6,220,274		$ 24,700,592	$ 5,310,943		$ 20,823,578	$ 4,477,336		$ 20,823,578	$ 4,477,336
53	5,846	$ 5,040,000		$ 1,052,101		$ 28,929,786	$ 6,039,101		$ 28,929,786	$ 6,039,101	$ 5,040,000		$ 1,052,101		$ 20,823,578	$ 4,346,928		$ 20,823,578	$ 4,346,928
54	5,675					$ 28,929,786	$ 5,863,205	$ 5,040,000		$ 1,021,458				$ 5,040,000		$ 1,021,458	$ 5,040,000		$ 1,021,458
55	5,510					$ 28,929,786	$ 5,692,432			$ -						$ -			$ -
56	5,350				$ 5,040,000		$ 962,822			$ -									
Total PV costs				$ 1,120,344,155			$ 1,828,089,613			$ 1,782,942,156			$ 1,089,987,628			$ 1,504,743,341			$ 1,588,865,249
Unit cost				$ 1,649.60			$ 2,941			$ 2,703.96			$ 1,604.90			$ 2,282			$ 2,409.63

Table D.2.3 Life cycle cost analysis, 25 MGD facility, 3% discount rate, 50-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	28,004	$ 228,779,178		$ 228,779,178	$ 249,355,203		$ 249,355,203	$ 299,521,008		$ 299,521,008	$ 243,966,986		$ 243,966,986	$ 298,077,664		$ 298,077,664	$ 298,472,897		$ 298,472,897
1	26,171	$ 224,667,758		$ 209,969,868	$ 244,874,009		$ 228,854,214	$ 294,138,278		$ 274,895,587	$ 239,582,624		$ 223,908,994	$ 292,720,872		$ 273,570,908	$ 293,109,002		$ 273,933,647
2	24,459	$ 13,789,389		$ 12,044,186	$ 240,473,347		$ 210,038,734	$ 288,852,281		$ 252,294,769	$ 14,116,623		$ 12,330,005	$ 287,460,348		$ 251,079,000	$ 287,841,502		$ 251,411,916
3	22,859		$ 27,188,276	$ 22,193,732	$ 236,151,769		$ 192,770,188	$ 265,932,450		$ 217,080,094		$ 24,700,592	$ 20,163,041	$ 175,022,504		$ 142,870,498	$ 265,708,546		$ 216,897,322
4	21,364		$ 27,188,276	$ 20,741,806	$ 231,907,856		$ 176,921,393		$ 28,929,786	$ 22,070,395		$ 24,700,592	$ 18,843,963		$ 20,823,578	$ 15,886,208		$ 20,823,578	$ 15,886,208
5	19,966		$ 27,188,276	$ 19,384,865	$ 56,935,052		$ 40,593,906		$ 28,929,786	$ 20,626,538		$ 24,700,592	$ 17,611,181		$ 20,823,578	$ 14,846,924		$ 20,823,578	$ 14,846,924
6	18,660		$ 27,188,276	$ 18,116,696		$ 28,929,786	$ 19,277,138		$ 28,929,786	$ 19,277,138		$ 24,700,592	$ 16,459,047		$ 20,823,578	$ 13,875,629		$ 20,823,578	$ 13,875,629
7	17,439		$ 27,188,276	$ 16,931,492		$ 28,929,786	$ 18,016,017		$ 28,929,786	$ 18,016,017		$ 24,700,592	$ 15,382,287		$ 20,823,578	$ 12,967,878		$ 20,823,578	$ 12,967,878
8	16,298		$ 27,188,276	$ 15,823,824		$ 28,929,786	$ 16,837,399		$ 28,929,786	$ 16,837,399		$ 24,700,592	$ 14,375,969		$ 20,823,578	$ 12,119,512		$ 20,823,578	$ 12,119,512
9	15,232		$ 27,188,276	$ 14,788,621		$ 28,929,786	$ 15,735,887		$ 28,929,786	$ 15,735,887		$ 24,700,592	$ 13,435,485		$ 20,823,578	$ 11,326,647		$ 20,823,578	$ 11,326,647
10	14,236		$ 27,188,276	$ 13,821,141		$ 28,929,786	$ 14,706,436		$ 28,929,786	$ 14,706,436		$ 24,700,592	$ 12,556,528		$ 20,823,578	$ 10,585,651		$ 20,823,578	$ 10,585,651
11	13,304		$ 27,188,276	$ 12,916,954		$ 28,929,786	$ 13,744,333		$ 28,929,786	$ 13,744,333		$ 24,700,592	$ 11,735,073		$ 20,823,578	$ 9,893,132		$ 20,823,578	$ 9,893,132
12	12,434		$ 27,188,276	$ 12,071,920		$ 28,929,786	$ 12,845,171		$ 28,929,786	$ 12,845,171		$ 24,700,592	$ 10,967,358		$ 20,823,578	$ 9,245,918		$ 20,823,578	$ 9,245,918
13	11,620		$ 27,188,276	$ 11,282,168		$ 28,929,786	$ 12,004,833		$ 28,929,786	$ 12,004,833		$ 24,700,592	$ 10,249,867		$ 20,823,578	$ 8,641,045		$ 20,823,578	$ 8,641,045
14	10,860		$ 27,188,276	$ 10,544,082		$ 28,929,786	$ 11,219,470		$ 28,929,786	$ 11,219,470		$ 24,700,592	$ 9,579,315		$ 20,823,578	$ 8,075,743		$ 20,823,578	$ 8,075,743
15	10,150		$ 27,188,276	$ 9,854,282		$ 28,929,786	$ 10,485,486		$ 28,929,786	$ 10,485,486		$ 24,700,592	$ 8,952,631		$ 20,823,578	$ 7,547,423		$ 20,823,578	$ 7,547,423
16	9,486		$ 27,188,276	$ 9,209,610		$ 28,929,786	$ 9,799,519		$ 28,929,786	$ 9,799,519		$ 24,700,592	$ 8,366,945		$ 20,823,578	$ 7,053,666		$ 20,823,578	$ 7,053,666
17	8,865		$ 27,188,276	$ 8,607,112		$ 28,929,786	$ 9,158,429		$ 28,929,786	$ 9,158,429		$ 24,700,592	$ 7,819,575		$ 20,823,578	$ 6,592,212		$ 20,823,578	$ 6,592,212
18	8,285		$ 27,188,276	$ 8,044,030		$ 28,929,786	$ 8,559,280		$ 28,929,786	$ 8,559,280		$ 24,700,592	$ 7,308,014		$ 20,823,578	$ 6,160,945		$ 20,823,578	$ 6,160,945
19	7,743		$ 27,188,276	$ 7,517,785		$ 28,929,786	$ 7,999,327		$ 28,929,786	$ 7,999,327		$ 24,700,592	$ 6,829,919		$ 20,823,578	$ 5,757,893		$ 20,823,578	$ 5,757,893
20	7,237		$ 27,188,276	$ 7,025,967		$ 28,929,786	$ 7,476,006		$ 28,929,786	$ 7,476,006		$ 24,700,592	$ 6,383,102		$ 20,823,578	$ 5,381,208		$ 20,823,578	$ 5,381,208
21	6,763		$ 27,188,276	$ 6,566,325		$ 28,929,786	$ 6,986,922		$ 28,929,786	$ 6,986,922		$ 24,700,592	$ 5,965,516		$ 20,823,578	$ 5,029,167		$ 20,823,578	$ 5,029,167
22	6,321		$ 27,188,276	$ 6,136,752		$ 28,929,786	$ 6,529,834		$ 28,929,786	$ 6,529,834		$ 24,700,592	$ 5,575,249		$ 20,823,578	$ 4,700,156		$ 20,823,578	$ 4,700,156
23	5,907		$ 27,188,276	$ 5,735,282		$ 28,929,786	$ 6,102,648		$ 28,929,786	$ 6,102,648		$ 24,700,592	$ 5,210,513		$ 20,823,578	$ 4,392,669		$ 20,823,578	$ 4,392,669
24	5,521		$ 27,188,276	$ 5,360,077		$ 28,929,786	$ 5,703,410		$ 28,929,786	$ 5,703,410		$ 24,700,592	$ 4,869,638		$ 20,823,578	$ 4,105,298		$ 20,823,578	$ 4,105,298
25	5,160		$ 27,188,276	$ 5,009,418		$ 28,929,786	$ 5,330,289		$ 28,929,786	$ 5,330,289		$ 24,700,592	$ 4,551,064		$ 20,823,578	$ 3,836,727		$ 20,823,578	$ 3,836,727
26	4,822		$ 27,188,276	$ 4,681,699		$ 28,929,786	$ 4,981,579		$ 28,929,786	$ 4,981,579		$ 24,700,592	$ 4,253,331		$ 20,823,578	$ 3,585,726		$ 20,823,578	$ 3,585,726
27	4,507		$ 27,188,276	$ 4,375,419		$ 28,929,786	$ 4,655,681		$ 28,929,786	$ 4,655,681		$ 24,700,592	$ 3,975,075		$ 20,823,578	$ 3,351,146		$ 20,823,578	$ 3,351,146
28	4,212		$ 27,188,276	$ 4,089,177		$ 28,929,786	$ 4,351,104		$ 28,929,786	$ 4,351,104		$ 24,700,592	$ 3,715,024		$ 20,823,578	$ 3,131,912		$ 20,823,578	$ 3,131,912
29	3,936		$ 27,188,276	$ 3,821,661		$ 28,929,786	$ 4,066,452		$ 28,929,786	$ 4,066,452		$ 24,700,592	$ 3,471,985		$ 20,823,578	$ 2,927,021		$ 20,823,578	$ 2,927,021
30	3,679		$ 27,188,276	$ 3,571,645		$ 28,929,786	$ 3,800,423		$ 28,929,786	$ 3,800,423		$ 24,700,592	$ 3,244,846		$ 20,823,578	$ 2,735,533		$ 20,823,578	$ 2,735,533
31	3,438		$ 27,188,276	$ 3,337,986		$ 28,929,786	$ 3,551,797		$ 28,929,786	$ 3,551,797		$ 24,700,592	$ 3,032,566		$ 20,823,578	$ 2,556,573		$ 20,823,578	$ 2,556,573
32	3,213		$ 27,188,276	$ 3,119,613		$ 28,929,786	$ 3,319,436		$ 28,929,786	$ 3,319,436		$ 24,700,592	$ 2,834,174		$ 20,823,578	$ 2,389,321		$ 20,823,578	$ 2,389,321
33	3,003		$ 27,188,276	$ 2,915,527		$ 28,929,786	$ 3,102,277		$ 28,929,786	$ 3,102,277		$ 24,700,592	$ 2,648,761		$ 20,823,578	$ 2,233,010		$ 20,823,578	$ 2,233,010
34	2,806		$ 27,188,276	$ 2,724,791		$ 28,929,786	$ 2,899,324		$ 28,929,786	$ 2,899,324		$ 24,700,592	$ 2,475,477		$ 20,823,578	$ 2,086,925		$ 20,823,578	$ 2,086,925
35	2,623		$ 27,188,276	$ 2,546,534		$ 28,929,786	$ 2,709,649		$ 28,929,786	$ 2,709,649		$ 24,700,592	$ 2,313,530		$ 20,823,578	$ 1,950,398		$ 20,823,578	$ 1,950,398
36	2,451		$ 27,188,276	$ 2,379,938		$ 28,929,786	$ 2,532,382		$ 28,929,786	$ 2,532,382		$ 24,700,592	$ 2,162,178		$ 20,823,578	$ 1,822,801		$ 20,823,578	$ 1,822,801
37	2,291		$ 27,188,276	$ 2,224,241		$ 28,929,786	$ 2,366,712		$ 28,929,786	$ 2,366,712		$ 24,700,592	$ 2,020,727		$ 20,823,578	$ 1,703,553		$ 20,823,578	$ 1,703,553
38	2,141		$ 27,188,276	$ 2,078,730		$ 28,929,786	$ 2,211,881		$ 28,929,786	$ 2,211,881		$ 24,700,592	$ 1,888,530		$ 20,823,578	$ 1,592,105		$ 20,823,578	$ 1,592,105
39	2,001		$ 27,188,276	$ 1,942,738		$ 28,929,786	$ 2,067,178		$ 28,929,786	$ 2,067,178		$ 24,700,592	$ 1,764,981		$ 20,823,578	$ 1,487,949		$ 20,823,578	$ 1,487,949
40	1,870		$ 27,188,276	$ 1,815,643		$ 28,929,786	$ 1,931,942		$ 28,929,786	$ 1,931,942		$ 24,700,592	$ 1,649,515		$ 20,823,578	$ 1,390,606		$ 20,823,578	$ 1,390,606
41	1,748		$ 27,188,276	$ 1,696,863		$ 28,929,786	$ 1,805,553		$ 28,929,786	$ 1,805,553		$ 24,700,592	$ 1,541,603		$ 20,823,578	$ 1,299,632		$ 20,823,578	$ 1,299,632
42	1,633		$ 27,188,276	$ 1,585,853		$ 28,929,786	$ 1,687,433		$ 28,929,786	$ 1,687,433		$ 24,700,592	$ 1,440,750		$ 20,823,578	$ 1,214,610		$ 20,823,578	$ 1,214,610
43	1,527		$ 27,188,276	$ 1,482,106		$ 28,929,786	$ 1,577,040		$ 28,929,786	$ 1,577,040		$ 24,700,592	$ 1,346,496		$ 20,823,578	$ 1,135,149		$ 20,823,578	$ 1,135,149
44	1,427		$ 27,188,276	$ 1,385,146		$ 28,929,786	$ 1,473,869		$ 28,929,786	$ 1,473,869		$ 24,700,592	$ 1,258,407		$ 20,823,578	$ 1,060,887		$ 20,823,578	$ 1,060,887
45	1,333		$ 27,188,276	$ 1,294,529		$ 28,929,786	$ 1,377,448		$ 28,929,786	$ 1,377,448		$ 24,700,592	$ 1,176,081		$ 20,823,578	$ 991,483		$ 20,823,578	$ 991,483
46	1,246		$ 27,188,276	$ 1,209,840		$ 28,929,786	$ 1,287,335		$ 28,929,786	$ 1,287,335		$ 24,700,592	$ 1,099,141		$ 20,823,578	$ 926,620		$ 20,823,578	$ 926,620
47	1,165		$ 27,188,276	$ 1,130,691		$ 28,929,786	$ 1,203,116		$ 28,929,786	$ 1,203,116		$ 24,700,592	$ 1,027,235		$ 20,823,578	$ 866,000		$ 20,823,578	$ 866,000
48	1,088		$ 27,188,276	$ 1,056,721		$ 28,929,786	$ 1,124,408		$ 28,929,786	$ 1,124,408		$ 24,700,592	$ 960,033		$ 20,823,578	$ 809,346		$ 20,823,578	$ 809,346
49	1,017		$ 27,188,276	$ 987,590		$ 28,929,786	$ 1,050,849		$ 28,929,786	$ 1,050,849		$ 24,700,592	$ 897,227		$ 20,823,578	$ 756,398		$ 20,823,578	$ 756,398
50	951		$ 27,188,276	$ 922,981		$ 28,929,786	$ 982,101		$ 28,929,786	$ 982,101		$ 24,700,592	$ 838,530		$ 20,823,578	$ 706,914		$ 20,823,578	$ 706,914
51	888		$ 27,188,276	$ 862,599		$ 28,929,786	$ 917,852		$ 28,929,786	$ 917,852		$ 24,700,592	$ 783,673		$ 20,823,578	$ 660,667		$ 20,823,578	$ 660,667
52	830		$ 27,188,276	$ 806,167		$ 28,929,786	$ 857,805		$ 28,929,786	$ 857,805		$ 24,700,592	$ 732,404		$ 20,823,578	$ 617,446		$ 20,823,578	$ 617,446
53	776	$ 5,040,000		$ 139,666		$ 28,929,786	$ 801,687		$ 28,929,786	$ 801,687	$ 5,040,000		$ 139,666		$ 20,823,578	$ 577,052		$ 20,823,578	$ 577,052
54	725					$ 28,929,786	$ 749,240	$ 5,040,000		$ 130,529				$ 5,040,000		$ 130,529	$ 5,040,000		$ 130,529
55	678					$ 28,929,786	$ 700,225			$ -						$ -			$ -
56	633				$ 5,040,000		$ 114,009			$ -									
Total PV costs				$ 778,663,269			$ 1,383,309,260			$ 1,369,831,068			$ 778,089,211			$ 1,200,317,036			$ 1,275,434,746
Unit cost				$ 2,306.76			$ 5,020			$ 4,342.14			$ 2,305.06			$ 3,805			$ 4,042.92

Table D.2.4 Life cycle cost analysis, 25 MGD facility, 7% discount rate, 50-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	56007	$ 306,400,685		$ 306,400,685	$ 333,993,862		$ 333,993,862	$ 401,180,208		$ 401,180,208	$ 326,345,449		$ 326,345,449	$ 398,971,649		$ 398,971,649	$ 400,030,290		$ 400,030,290
1	54375.7282	$ 300,894,319		$ 292,130,407	$ 327,991,615		$ 318,438,461	$ 393,970,547		$ 382,495,677	$ 320,480,653		$ 311,146,265	$ 391,801,678		$ 380,389,979	$ 392,841,294		$ 381,399,315
2	52791.9691	$ 221,615,181		$ 208,893,563	$ 322,097,236		$ 303,607,537	$ 386,890,452		$ 364,681,357	$ 236,040,940		$ 222,491,225	$ 384,760,560		$ 362,673,730	$ 385,781,493		$ 363,636,057
3	51254.3389		$ 54,376,552	$ 49,762,248	$ 316,308,785		$ 289,467,346	$ 379,937,594		$ 347,696,720		$ 49,401,184	$ 45,209,081	$ 377,845,978		$ 345,782,596	$ 378,848,564		$ 346,700,104
4	49761.4941		$ 54,376,552	$ 48,312,862	$ 310,624,359		$ 275,985,720	$ 373,109,686		$ 331,503,124		$ 49,401,184	$ 43,892,312	$ 307,976,198		$ 273,632,863	$ 372,040,228		$ 330,552,924
5	48312.1302		$ 54,376,552	$ 46,905,692	$ 305,042,089		$ 263,131,986	$ 91,601,121		$ 79,015,932		$ 49,401,184	$ 42,613,895		$ 41,647,157	$ 35,925,203	$ 100,007,572		$ 86,267,411
6	46904.9808		$ 54,376,552	$ 45,539,507	$ 299,560,138		$ 250,876,900		$ 57,859,572	$ 48,456,481		$ 49,401,184	$ 41,372,714		$ 41,647,157	$ 34,878,838		$ 41,647,157	$ 34,878,838
7	45538.8163		$ 54,376,552	$ 44,213,113		$ 57,859,572	$ 47,045,127		$ 57,859,572	$ 47,045,127		$ 49,401,184	$ 40,167,683		$ 41,647,157	$ 33,862,950		$ 41,647,157	$ 33,862,950
8	44212.443		$ 54,376,552	$ 42,925,353		$ 57,859,572	$ 45,674,880		$ 57,859,572	$ 45,674,880		$ 49,401,184	$ 38,997,751		$ 41,647,157	$ 32,876,650		$ 41,647,157	$ 32,876,650
9	42924.7019		$ 54,376,552	$ 41,675,100		$ 57,859,572	$ 44,344,544		$ 57,859,572	$ 44,344,544		$ 49,401,184	$ 37,861,894		$ 41,647,157	$ 31,919,078		$ 41,647,157	$ 31,919,078
10	41674.4679		$ 54,376,552	$ 40,461,262		$ 57,859,572	$ 43,052,955		$ 57,859,572	$ 43,052,955		$ 49,401,184	$ 36,759,120		$ 41,647,157	$ 30,989,396		$ 41,647,157	$ 30,989,396
11	40460.6484		$ 54,376,552	$ 39,282,778		$ 57,859,572	$ 41,798,986		$ 57,859,572	$ 41,798,986		$ 49,401,184	$ 35,688,466		$ 41,647,157	$ 30,086,792		$ 41,647,157	$ 30,086,792
12	39282.1829		$ 54,376,552	$ 38,138,620		$ 57,859,572	$ 40,581,540		$ 57,859,572	$ 40,581,540		$ 49,401,184	$ 34,648,996		$ 41,647,157	$ 29,210,478		$ 41,647,157	$ 29,210,478
13	38138.0417		$ 54,376,552	$ 37,027,786		$ 57,859,572	$ 39,399,553		$ 57,859,572	$ 39,399,553		$ 49,401,184	$ 33,639,802		$ 41,647,157	$ 28,359,687		$ 41,647,157	$ 28,359,687
14	37027.225		$ 54,376,552	$ 35,949,307		$ 57,859,572	$ 38,251,993		$ 57,859,572	$ 38,251,993		$ 49,401,184	$ 32,660,002		$ 41,647,157	$ 27,533,677		$ 41,647,157	$ 27,533,677
15	35948.7621		$ 54,376,552	$ 34,902,240		$ 57,859,572	$ 37,137,858		$ 57,859,572	$ 37,137,858		$ 49,401,184	$ 31,708,740		$ 41,647,157	$ 26,731,725		$ 41,647,157	$ 26,731,725
16	34901.7108		$ 54,376,552	$ 33,885,670		$ 57,859,572	$ 36,056,172		$ 57,859,572	$ 36,056,172		$ 49,401,184	$ 30,785,184		$ 41,647,157	$ 25,953,131		$ 41,647,157	$ 25,953,131
17	33885.1561		$ 54,376,552	$ 32,898,708		$ 57,859,572	$ 35,005,993		$ 57,859,572	$ 35,005,993		$ 49,401,184	$ 29,888,529		$ 41,647,157	$ 25,197,215		$ 41,647,157	$ 25,197,215
18	32898.2098		$ 54,376,552	$ 31,940,494		$ 57,859,572	$ 33,986,401		$ 57,859,572	$ 33,986,401		$ 49,401,184	$ 29,017,989		$ 41,647,157	$ 24,463,315		$ 41,647,157	$ 24,463,315
19	31940.0095		$ 54,376,552	$ 31,010,188		$ 57,859,572	$ 32,996,505		$ 57,859,572	$ 32,996,505		$ 49,401,184	$ 28,172,805		$ 41,647,157	$ 23,750,792		$ 41,647,157	$ 23,750,792
20	31009.718		$ 54,376,552	$ 30,106,979		$ 57,859,572	$ 32,035,442		$ 57,859,572	$ 32,035,442		$ 49,401,184	$ 27,352,238		$ 41,647,157	$ 23,059,021		$ 41,647,157	$ 23,059,021
21	30106.5223		$ 54,376,552	$ 29,230,076		$ 57,859,572	$ 31,102,371		$ 57,859,572	$ 31,102,371		$ 49,401,184	$ 26,555,571		$ 41,647,157	$ 22,387,399		$ 41,647,157	$ 22,387,399
22	29229.6333		$ 54,376,552	$ 28,378,715		$ 57,859,572	$ 30,196,477		$ 57,859,572	$ 30,196,477		$ 49,401,184	$ 25,782,107		$ 41,647,157	$ 21,735,339		$ 41,647,157	$ 21,735,339
23	28378.2848		$ 54,376,552	$ 27,552,150		$ 57,859,572	$ 29,316,968		$ 57,859,572	$ 29,316,968		$ 49,401,184	$ 25,031,172		$ 41,647,157	$ 21,102,271		$ 41,647,157	$ 21,102,271
24	27551.7328		$ 54,376,552	$ 26,749,661		$ 57,859,572	$ 28,463,075		$ 57,859,572	$ 28,463,075		$ 49,401,184	$ 24,302,109		$ 41,647,157	$ 20,487,641		$ 41,647,157	$ 20,487,641
25	26749.2551		$ 54,376,552	$ 25,970,544		$ 57,859,572	$ 27,634,054		$ 57,859,572	$ 27,634,054		$ 49,401,184	$ 23,594,280		$ 41,647,157	$ 19,890,914		$ 41,647,157	$ 19,890,914
26	25970.1506		$ 54,376,552	$ 25,214,121		$ 57,859,572	$ 26,829,179		$ 57,859,572	$ 26,829,179		$ 49,401,184	$ 22,907,068		$ 41,647,157	$ 19,311,567		$ 41,647,157	$ 19,311,567
27	25213.7384		$ 54,376,552	$ 24,479,729		$ 57,859,572	$ 26,047,746		$ 57,859,572	$ 26,047,746		$ 49,401,184	$ 22,239,872		$ 41,647,157	$ 18,749,094		$ 41,647,157	$ 18,749,094
28	24479.3577		$ 54,376,552	$ 23,766,727		$ 57,859,572	$ 25,289,074		$ 57,859,572	$ 25,289,074		$ 49,401,184	$ 21,592,109		$ 41,647,157	$ 18,203,004		$ 41,647,157	$ 18,203,004
29	23766.3667		$ 54,376,552	$ 23,074,492		$ 57,859,572	$ 24,552,499		$ 57,859,572	$ 24,552,499		$ 49,401,184	$ 20,963,213		$ 41,647,157	$ 17,672,819		$ 41,647,157	$ 17,672,819
30	23074.1424		$ 54,376,552	$ 22,402,420		$ 57,859,572	$ 23,837,378		$ 57,859,572	$ 23,837,378		$ 49,401,184	$ 20,352,634		$ 41,647,157	$ 17,158,077		$ 41,647,157	$ 17,158,077
31	22402.08		$ 54,376,552	$ 21,749,922		$ 57,859,572	$ 23,143,085		$ 57,859,572	$ 23,143,085		$ 49,401,184	$ 19,759,838		$ 41,647,157	$ 16,658,327		$ 41,647,157	$ 16,658,327
32	21749.5923		$ 54,376,552	$ 21,116,429		$ 57,859,572	$ 22,469,015		$ 57,859,572	$ 22,469,015		$ 49,401,184	$ 19,184,309		$ 41,647,157	$ 16,173,133		$ 41,647,157	$ 16,173,133
33	21116.109	$ 9,000,000		$ 3,393,236		$ 57,859,572	$ 21,814,577		$ 57,859,572	$ 21,814,577	$ 9,000,000		$ 3,393,236		$ 41,647,157	$ 15,702,071		$ 41,647,157	$ 15,702,071
34	20501.0767					$ 57,859,572	$ 21,179,201		$ 57,859,572	$ 21,179,201			$ -		$ 41,647,157	$ 15,244,729		$ 41,647,157	$ 15,244,729
35	19903.958					$ 57,859,572	$ 20,562,331		$ 57,859,572	$ 20,562,331			$ -	$ 9,000,000		$ 3,198,451		$ 41,647,157	$ 14,800,708
36	19324.231					$ 57,859,572	$ 19,963,428	$ 9,000,000		$ 3,105,292			$ -			$ -	$ 9,000,000		$ 3,105,292
37	18761.3893				$ 9,000,000		$ 3,014,846			$ -			$ -			$ -			$ -
Total PV costs				$ 1,815,440,782			$ 2,988,285,066			$ 2,887,939,769			$ 1,776,077,657			$ 2,489,923,600			$ 2,615,841,230
Unit cost				$ 1,754			$ 3,250			$ 3,050			$ 1,716			$ 2,553			$ 2,762

Table D.3.1 Life cycle cost analysis, 50 MGD facility, 3% discount rate, 30-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	56007	$ 306,400,685		$ 306,400,685	$ 333,993,862		$ 333,993,862	$ 401,180,208		$ 401,180,208	$ 326,345,449		$ 326,345,449	$ 398,971,649		$ 398,971,649	$400,030,290		$ 400,030,290
1	52342.991	$ 300,894,319		$ 281,209,644	$ 327,991,615		$ 306,534,220	$ 393,970,547		$ 368,196,773	$ 320,480,653		$ 299,514,629	$ 391,801,678		$ 366,169,793	$392,841,294		$ 367,141,396
2	48918.683	$ 221,615,181		$ 193,567,282	$ 322,097,236		$ 281,332,200	$ 386,890,452		$ 337,925,104	$ 236,040,940		$ 206,167,299	$ 384,760,560		$ 336,064,774	$385,781,493		$ 336,956,497
3	45718.395		$ 54,376,552	$ 44,387,464	$ 316,308,785		$ 258,202,190	$ 379,937,594		$ 310,142,251		$ 49,401,184	$ 40,326,081	$ 377,845,978		$ 308,434,870	$378,848,564		$ 309,253,279
4	42727.472		$ 54,376,552	$ 41,483,611	$ 310,624,359		$ 236,973,836	$ 373,109,686		$ 284,643,593		$ 49,401,184	$ 37,687,926	$ 307,976,198		$ 234,953,567	$372,040,228		$ 283,827,709
5	39932.217		$ 54,376,552	$ 38,769,730	$ 305,042,089		$ 217,490,794	$ 91,601,121		$ 65,310,333		$ 49,401,184	$ 35,222,361		$ 41,647,157	$ 29,693,847	$100,007,572		$ 71,304,017
6	37319.829		$ 54,376,552	$ 36,233,393	$ 299,560,138		$ 199,609,569		$ 57,859,572	$ 38,554,276		$ 49,401,184	$ 32,918,095		$ 41,647,157	$ 27,751,259		$ 41,647,157	$ 27,751,259
7	34878.345		$ 54,376,552	$ 33,862,984		$ 57,859,572	$ 36,032,034		$ 57,859,572	$ 36,032,034		$ 49,401,184	$ 30,764,574		$ 41,647,157	$ 25,935,756		$ 41,647,157	$ 25,935,756
8	32596.584		$ 54,376,552	$ 31,647,649		$ 57,859,572	$ 33,674,798		$ 57,859,572	$ 33,674,798		$ 49,401,184	$ 28,751,939		$ 41,647,157	$ 24,239,024		$ 41,647,157	$ 24,239,024
9	30464.097		$ 54,376,552	$ 29,577,242		$ 57,859,572	$ 31,471,774		$ 57,859,572	$ 31,471,774		$ 49,401,184	$ 26,870,971		$ 41,647,157	$ 22,653,294		$ 41,647,157	$ 22,653,294
10	28471.119		$ 54,376,552	$ 27,642,282		$ 57,859,572	$ 29,412,873		$ 57,859,572	$ 29,412,873		$ 49,401,184	$ 25,113,057		$ 41,647,157	$ 21,171,303		$ 41,647,157	$ 21,171,303
11	26608.522		$ 54,376,552	$ 25,833,908		$ 57,859,572	$ 27,488,666		$ 57,859,572	$ 27,488,666		$ 49,401,184	$ 23,470,146		$ 41,647,157	$ 19,786,264		$ 41,647,157	$ 19,786,264
12	24867.778		$ 54,376,552	$ 24,143,840		$ 57,859,572	$ 25,690,342		$ 57,859,572	$ 25,690,342		$ 49,401,184	$ 21,934,716		$ 41,647,157	$ 18,491,836		$ 41,647,157	$ 18,491,836
13	23240.914		$ 54,376,552	$ 22,564,336		$ 57,859,572	$ 24,009,665		$ 57,859,572	$ 24,009,665		$ 49,401,184	$ 20,499,735		$ 41,647,157	$ 17,282,089		$ 41,647,157	$ 17,282,089
14	21720.48		$ 54,376,552	$ 21,088,165		$ 57,859,572	$ 22,438,940		$ 57,859,572	$ 22,438,940		$ 49,401,184	$ 19,158,631		$ 41,647,157	$ 16,151,485		$ 41,647,157	$ 16,151,485
15	20299.514		$ 54,376,552	$ 19,708,565		$ 57,859,572	$ 20,970,972		$ 57,859,572	$ 20,970,972		$ 49,401,184	$ 17,905,262		$ 41,647,157	$ 15,094,846		$ 41,647,157	$ 15,094,846
16	18971.509		$ 54,376,552	$ 18,419,220		$ 57,859,572	$ 19,599,039		$ 57,859,572	$ 19,599,039		$ 49,401,184	$ 16,733,890		$ 41,647,157	$ 14,107,333		$ 41,647,157	$ 14,107,333
17	17730.382		$ 54,376,552	$ 17,214,224		$ 57,859,572	$ 18,316,859		$ 57,859,572	$ 18,316,859		$ 49,401,184	$ 15,639,150		$ 41,647,157	$ 13,184,423		$ 41,647,157	$ 13,184,423
18	16570.45		$ 54,376,552	$ 16,088,060		$ 57,859,572	$ 17,118,560		$ 57,859,572	$ 17,118,560		$ 49,401,184	$ 14,616,028		$ 41,647,157	$ 12,321,891		$ 41,647,157	$ 12,321,891
19	15486.402		$ 54,376,552	$ 15,035,570		$ 57,859,572	$ 15,998,654		$ 57,859,572	$ 15,998,654		$ 49,401,184	$ 13,659,839		$ 41,647,157	$ 11,515,786		$ 41,647,157	$ 11,515,786
20	14473.273		$ 54,376,552	$ 14,051,934		$ 57,859,572	$ 14,952,013		$ 57,859,572	$ 14,952,013		$ 49,401,184	$ 12,766,205		$ 41,647,157	$ 10,762,417		$ 41,647,157	$ 10,762,417
21	13526.423		$ 54,376,552	$ 13,132,649		$ 57,859,572	$ 13,973,844		$ 57,859,572	$ 13,973,844		$ 49,401,184	$ 11,931,032		$ 41,647,157	$ 10,058,333		$ 41,647,157	$ 10,058,333
22	12641.517		$ 54,376,552	$ 12,273,504		$ 57,859,572	$ 13,059,667		$ 57,859,572	$ 13,059,667		$ 49,401,184	$ 11,150,498		$ 41,647,157	$ 9,400,312		$ 41,647,157	$ 9,400,312
23	11814.502		$ 54,376,552	$ 11,470,564		$ 57,859,572	$ 12,205,296		$ 57,859,572	$ 12,205,296		$ 49,401,184	$ 10,421,026		$ 41,647,157	$ 8,785,338		$ 41,647,157	$ 8,785,338
24	11041.591		$ 54,376,552	$ 10,720,153		$ 57,859,572	$ 11,406,819		$ 57,859,572	$ 11,406,819		$ 49,401,184	$ 9,739,276		$ 41,647,157	$ 8,210,596		$ 41,647,157	$ 8,210,596
25	10319.244		$ 54,376,552	$ 10,018,835		$ 57,859,572	$ 10,660,579		$ 57,859,572	$ 10,660,579		$ 49,401,184	$ 9,102,127		$ 41,647,157	$ 7,673,454		$ 41,647,157	$ 7,673,454
26	9644.153		$ 54,376,552	$ 9,363,397		$ 57,859,572	$ 9,963,158		$ 57,859,572	$ 9,963,158		$ 49,401,184	$ 8,506,661		$ 41,647,157	$ 7,171,453		$ 41,647,157	$ 7,171,453
27	9013.2271		$ 54,376,552	$ 8,750,839		$ 57,859,572	$ 9,311,362		$ 57,859,572	$ 9,311,362		$ 49,401,184	$ 7,950,151		$ 41,647,157	$ 6,702,292		$ 41,647,157	$ 6,702,292
28	8423.5767		$ 54,376,552	$ 8,178,354		$ 57,859,572	$ 8,702,208		$ 57,859,572	$ 8,702,208		$ 49,401,184	$ 7,430,047		$ 41,647,157	$ 6,263,825		$ 41,647,157	$ 6,263,825
29	7872.5016		$ 54,376,552	$ 7,643,321		$ 57,859,572	$ 8,132,904		$ 57,859,572	$ 8,132,904		$ 49,401,184	$ 6,943,969		$ 41,647,157	$ 5,854,042		$ 41,647,157	$ 5,854,042
30	7357.4781		$ 54,376,552	$ 7,143,291		$ 57,859,572	$ 7,600,845		$ 57,859,572	$ 7,600,845		$ 49,401,184	$ 6,489,691		$ 41,647,157	$ 5,471,067		$ 41,647,157	$ 5,471,067
31	6876.1478		$ 54,376,552	$ 6,675,973		$ 57,859,572	$ 7,103,594		$ 57,859,572	$ 7,103,594		$ 49,401,184	$ 6,065,132		$ 41,647,157	$ 5,113,147		$ 41,647,157	$ 5,113,147
32	6426.3063		$ 54,376,552	$ 6,239,227		$ 57,859,572	$ 6,638,873		$ 57,859,572	$ 6,638,873		$ 49,401,184	$ 5,668,348		$ 41,647,157	$ 4,778,642		$ 41,647,157	$ 4,778,642
33	6005.8938	$ 9,000,000		$ 965,112		$ 57,859,572	$ 6,204,554		$ 57,859,572	$ 6,204,554	$ 9,000,000		$ 965,112		$ 41,647,157	$ 4,466,020		$ 41,647,157	$ 4,466,020
34	5612.9848					$ 57,859,572	$ 5,798,648		$ 57,859,572	$ 5,798,648			$ -		$ 41,647,157	$ 4,173,851		$ 41,647,157	$ 4,173,851
35	5245.7802					$ 57,859,572	$ 5,419,298		$ 57,859,572	$ 5,419,298			$ -	$ 9,000,000		$ 842,966		$ 41,647,157	$ 3,900,795
36	4902.5983					$ 57,859,572	$ 5,064,764	$ 9,000,000		$ 787,819			$ -			$ -	$ 9,000,000		$ 787,819
37	4581.8676				$ 9,000,000		$ 736,280			$ -			$ -			$ -			$ -
38	4282.1193						$ -			$ -			$ -			$ -			$ -
39	4001.9806						$ -			$ -			$ -			$ -			$ -
Total PV costs				$1,371,505,006			$ 2,313,294,547			$ 2,280,097,191			$ 1,368,429,053			$ 2,039,702,843			$ 2,137,773,178
Unit cost				$ 2,259			$ 4,995			$ 4,601			$ 2,254			$ 3,847			$ 4,314

Table D.3.2 Life cycle cost analysis, 50 MGD facility, 7% discount rate, 30-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	56,007	$ 306,400,685		$ 306,400,685	$ 333,993,862		$ 333,993,862	$ 401,180,208		$ 401,180,208	$ 326,345,449		$ 326,345,449	$ 398,971,649		$ 398,971,649	$ 400,030,290		$ 400,030,290
1	54,376	$ 300,894,319		$ 292,130,407	$ 327,991,615		$ 318,438,461	$ 393,970,547		$ 382,495,677	$ 320,480,653		$ 311,146,265	$ 391,801,678		$ 380,389,979	$ 392,841,294		$ 381,399,315
2	52,792	$ 221,615,181		$ 208,893,563	$ 322,097,236		$ 303,607,537	$ 386,890,452		$ 364,681,357	$ 236,040,940		$ 222,491,225	$ 384,760,560		$ 362,673,730	$ 385,781,493		$ 363,636,057
3	51,254		$ 54,376,552	$ 49,762,248	$ 316,308,785		$ 289,467,346	$ 379,937,594		$ 347,696,720		$ 49,401,184	$ 45,209,081	$ 377,845,978		$ 345,782,596	$ 378,848,564		$ 346,700,104
4	49,761		$ 54,376,552	$ 48,312,862	$ 310,624,359		$ 275,985,720	$ 373,109,686		$ 331,503,124		$ 49,401,184	$ 43,892,312	$ 307,976,198		$ 273,632,863	$ 372,040,228		$ 330,552,924
5	48,312		$ 54,376,552	$ 46,905,692	$ 305,042,089		$ 263,131,986	$ 91,601,121		$ 79,015,932		$ 49,401,184	$ 42,613,895		$ 41,647,157	$ 35,925,203	$ 100,007,572		$ 86,267,411
6	46,905		$ 54,376,552	$ 45,539,507	$ 299,560,138		$ 250,876,900		$ 57,859,572	$ 48,456,481		$ 49,401,184	$ 41,372,714		$ 41,647,157	$ 34,878,838		$ 41,647,157	$ 34,878,838
7	45,539		$ 54,376,552	$ 44,213,113		$ 57,859,572	$ 47,045,127		$ 57,859,572	$ 47,045,127		$ 49,401,184	$ 40,167,683		$ 41,647,157	$ 33,862,950		$ 41,647,157	$ 33,862,950
8	44,212		$ 54,376,552	$ 42,925,353		$ 57,859,572	$ 45,674,880		$ 57,859,572	$ 45,674,880		$ 49,401,184	$ 38,997,751		$ 41,647,157	$ 32,876,650		$ 41,647,157	$ 32,876,650
9	42,925		$ 54,376,552	$ 41,675,100		$ 57,859,572	$ 44,344,544		$ 57,859,572	$ 44,344,544		$ 49,401,184	$ 37,861,894		$ 41,647,157	$ 31,919,078		$ 41,647,157	$ 31,919,078
10	41,674		$ 54,376,552	$ 40,461,262		$ 57,859,572	$ 43,052,955		$ 57,859,572	$ 43,052,955		$ 49,401,184	$ 36,759,120		$ 41,647,157	$ 30,989,396		$ 41,647,157	$ 30,989,396
11	40,461		$ 54,376,552	$ 39,282,778		$ 57,859,572	$ 41,798,986		$ 57,859,572	$ 41,798,986		$ 49,401,184	$ 35,688,466		$ 41,647,157	$ 30,086,792		$ 41,647,157	$ 30,086,792
12	39,282		$ 54,376,552	$ 38,138,620		$ 57,859,572	$ 40,581,540		$ 57,859,572	$ 40,581,540		$ 49,401,184	$ 34,648,996		$ 41,647,157	$ 29,210,478		$ 41,647,157	$ 29,210,478
13	38,138		$ 54,376,552	$ 37,027,786		$ 57,859,572	$ 39,399,553		$ 57,859,572	$ 39,399,553		$ 49,401,184	$ 33,639,802		$ 41,647,157	$ 28,359,687		$ 41,647,157	$ 28,359,687
14	37,027		$ 54,376,552	$ 35,949,307		$ 57,859,572	$ 38,251,993		$ 57,859,572	$ 38,251,993		$ 49,401,184	$ 32,660,002		$ 41,647,157	$ 27,533,677		$ 41,647,157	$ 27,533,677
15	35,949		$ 54,376,552	$ 34,902,240		$ 57,859,572	$ 37,137,858		$ 57,859,572	$ 37,137,858		$ 49,401,184	$ 31,708,740		$ 41,647,157	$ 26,731,725		$ 41,647,157	$ 26,731,725
16	34,902		$ 54,376,552	$ 33,885,670		$ 57,859,572	$ 36,056,172		$ 57,859,572	$ 36,056,172		$ 49,401,184	$ 30,785,184		$ 41,647,157	$ 25,953,131		$ 41,647,157	$ 25,953,131
17	33,885		$ 54,376,552	$ 32,898,708		$ 57,859,572	$ 35,005,993		$ 57,859,572	$ 35,005,993		$ 49,401,184	$ 29,888,529		$ 41,647,157	$ 25,197,215		$ 41,647,157	$ 25,197,215
18	32,898		$ 54,376,552	$ 31,940,494		$ 57,859,572	$ 33,986,401		$ 57,859,572	$ 33,986,401		$ 49,401,184	$ 29,017,989		$ 41,647,157	$ 24,463,315		$ 41,647,157	$ 24,463,315
19	31,940		$ 54,376,552	$ 31,010,188		$ 57,859,572	$ 32,996,505		$ 57,859,572	$ 32,996,505		$ 49,401,184	$ 28,172,805		$ 41,647,157	$ 23,750,792		$ 41,647,157	$ 23,750,792
20	31,010		$ 54,376,552	$ 30,106,979		$ 57,859,572	$ 32,035,442		$ 57,859,572	$ 32,035,442		$ 49,401,184	$ 27,352,238		$ 41,647,157	$ 23,059,021		$ 41,647,157	$ 23,059,021
21	30,107		$ 54,376,552	$ 29,230,076		$ 57,859,572	$ 31,102,371		$ 57,859,572	$ 31,102,371		$ 49,401,184	$ 26,555,571		$ 41,647,157	$ 22,387,399		$ 41,647,157	$ 22,387,399
22	29,230		$ 54,376,552	$ 28,378,715		$ 57,859,572	$ 30,196,477		$ 57,859,572	$ 30,196,477		$ 49,401,184	$ 25,782,107		$ 41,647,157	$ 21,735,339		$ 41,647,157	$ 21,735,339
23	28,378		$ 54,376,552	$ 27,552,150		$ 57,859,572	$ 29,316,968		$ 57,859,572	$ 29,316,968		$ 49,401,184	$ 25,031,172		$ 41,647,157	$ 21,102,271		$ 41,647,157	$ 21,102,271
24	27,552		$ 54,376,552	$ 26,749,661		$ 57,859,572	$ 28,463,075		$ 57,859,572	$ 28,463,075		$ 49,401,184	$ 24,302,109		$ 41,647,157	$ 20,487,641		$ 41,647,157	$ 20,487,641
25	26,749		$ 54,376,552	$ 25,970,544		$ 57,859,572	$ 27,634,054		$ 57,859,572	$ 27,634,054		$ 49,401,184	$ 23,594,280		$ 41,647,157	$ 19,890,914		$ 41,647,157	$ 19,890,914
26	25,970		$ 54,376,552	$ 25,214,121		$ 57,859,572	$ 26,829,179		$ 57,859,572	$ 26,829,179		$ 49,401,184	$ 22,907,068		$ 41,647,157	$ 19,311,567		$ 41,647,157	$ 19,311,567
27	25,214		$ 54,376,552	$ 24,479,729		$ 57,859,572	$ 26,047,746		$ 57,859,572	$ 26,047,746		$ 49,401,184	$ 22,239,872		$ 41,647,157	$ 18,749,094		$ 41,647,157	$ 18,749,094
28	24,479		$ 54,376,552	$ 23,766,727		$ 57,859,572	$ 25,289,074		$ 57,859,572	$ 25,289,074		$ 49,401,184	$ 21,592,109		$ 41,647,157	$ 18,203,004		$ 41,647,157	$ 18,203,004
29	23,766		$ 54,376,552	$ 23,074,492		$ 57,859,572	$ 24,552,499		$ 57,859,572	$ 24,552,499		$ 49,401,184	$ 20,963,213		$ 41,647,157	$ 17,672,819		$ 41,647,157	$ 17,672,819
30	23,074		$ 54,376,552	$ 22,402,420		$ 57,859,572	$ 23,837,378		$ 57,859,572	$ 23,837,378		$ 49,401,184	$ 20,352,634		$ 41,647,157	$ 17,158,077		$ 41,647,157	$ 17,158,077
31	22,402		$ 54,376,552	$ 21,749,922		$ 57,859,572	$ 23,143,085		$ 57,859,572	$ 23,143,085		$ 49,401,184	$ 19,759,838		$ 41,647,157	$ 16,658,327		$ 41,647,157	$ 16,658,327
32	21,750		$ 54,376,552	$ 21,116,429		$ 57,859,572	$ 22,469,015		$ 57,859,572	$ 22,469,015		$ 49,401,184	$ 19,184,309		$ 41,647,157	$ 16,173,133		$ 41,647,157	$ 16,173,133
33	21,116		$ 54,376,552	$ 20,501,387		$ 57,859,572	$ 21,814,577		$ 57,859,572	$ 21,814,577		$ 49,401,184	$ 18,625,543		$ 41,647,157	$ 15,702,071		$ 41,647,157	$ 15,702,071
34	20,501		$ 54,376,552	$ 19,904,260		$ 57,859,572	$ 21,179,201		$ 57,859,572	$ 21,179,201		$ 49,401,184	$ 18,083,051		$ 41,647,157	$ 15,244,729		$ 41,647,157	$ 15,244,729
35	19,904		$ 54,376,552	$ 19,324,524		$ 57,859,572	$ 20,562,331		$ 57,859,572	$ 20,562,331		$ 49,401,184	$ 17,556,361		$ 41,647,157	$ 14,800,708		$ 41,647,157	$ 14,800,708
36	19,324		$ 54,376,552	$ 18,761,674		$ 57,859,572	$ 19,963,428		$ 57,859,572	$ 19,963,428		$ 49,401,184	$ 17,045,010		$ 41,647,157	$ 14,369,619		$ 41,647,157	$ 14,369,619
37	18,761		$ 54,376,552	$ 18,215,217		$ 57,859,572	$ 19,381,969		$ 57,859,572	$ 19,381,969		$ 49,401,184	$ 16,548,554		$ 41,647,157	$ 13,951,087		$ 41,647,157	$ 13,951,087
38	18,215		$ 54,376,552	$ 17,684,677		$ 57,859,572	$ 18,817,446		$ 57,859,572	$ 18,817,446		$ 49,401,184	$ 16,066,557		$ 41,647,157	$ 13,544,745		$ 41,647,157	$ 13,544,745
39	17,684		$ 54,376,552	$ 17,169,589		$ 57,859,572	$ 18,269,365		$ 57,859,572	$ 18,269,365		$ 49,401,184	$ 15,598,599		$ 41,647,157	$ 13,150,237		$ 41,647,157	$ 13,150,237
40	17,169		$ 54,376,552	$ 16,669,504		$ 57,859,572	$ 17,737,248		$ 57,859,572	$ 17,737,248		$ 49,401,184	$ 15,144,271		$ 41,647,157	$ 12,767,221		$ 41,647,157	$ 12,767,221
41	16,669		$ 54,376,552	$ 16,183,985		$ 57,859,572	$ 17,220,629		$ 57,859,572	$ 17,220,629		$ 49,401,184	$ 14,703,176		$ 41,647,157	$ 12,395,360		$ 41,647,157	$ 12,395,360
42	16,184		$ 54,376,552	$ 15,712,606		$ 57,859,572	$ 16,719,057		$ 57,859,572	$ 16,719,057		$ 49,401,184	$ 14,274,928		$ 41,647,157	$ 12,034,330		$ 41,647,157	$ 12,034,330
43	15,712		$ 54,376,552	$ 15,254,958		$ 57,859,572	$ 16,232,094		$ 57,859,572	$ 16,232,094		$ 49,401,184	$ 13,859,153		$ 41,647,157	$ 11,683,816		$ 41,647,157	$ 11,683,816
44	15,255		$ 54,376,552	$ 14,810,638		$ 57,859,572	$ 15,759,315		$ 57,859,572	$ 15,759,315		$ 49,401,184	$ 13,455,488		$ 41,647,157	$ 11,343,510		$ 41,647,157	$ 11,343,510
45	14,810		$ 54,376,552	$ 14,379,261		$ 57,859,572	$ 15,300,306		$ 57,859,572	$ 15,300,306		$ 49,401,184	$ 13,063,581		$ 41,647,157	$ 11,013,117		$ 41,647,157	$ 11,013,117
46	14,379		$ 54,376,552	$ 13,960,447		$ 57,859,572	$ 14,854,666		$ 57,859,572	$ 14,854,666		$ 49,401,184	$ 12,683,088		$ 41,647,157	$ 10,692,346		$ 41,647,157	$ 10,692,346
47	13,960		$ 54,376,552	$ 13,553,832		$ 57,859,572	$ 14,422,005		$ 57,859,572	$ 14,422,005		$ 49,401,184	$ 12,313,678		$ 41,647,157	$ 10,380,919		$ 41,647,157	$ 10,380,919
48	13,554		$ 54,376,552	$ 13,159,060		$ 57,859,572	$ 14,001,947		$ 57,859,572	$ 14,001,947		$ 49,401,184	$ 11,955,027		$ 41,647,157	$ 10,078,562		$ 41,647,157	$ 10,078,562
49	13,159		$ 54,376,552	$ 12,775,787		$ 57,859,572	$ 13,594,123		$ 57,859,572	$ 13,594,123		$ 49,401,184	$ 11,606,823		$ 41,647,157	$ 9,785,012		$ 41,647,157	$ 9,785,012
50	12,776		$ 54,376,552	$ 12,403,677		$ 57,859,572	$ 13,198,178		$ 57,859,572	$ 13,198,178		$ 49,401,184	$ 11,268,760		$ 41,647,157	$ 9,500,011		$ 41,647,157	$ 9,500,011
51	12,403		$ 54,376,552	$ 12,042,404		$ 57,859,572	$ 12,813,765		$ 57,859,572	$ 12,813,765		$ 49,401,184	$ 10,940,543		$ 41,647,157	$ 9,223,312		$ 41,647,157	$ 9,223,312
52	12,042		$ 54,376,552	$ 11,691,655		$ 57,859,572	$ 12,440,549		$ 57,859,572	$ 12,440,549		$ 49,401,184	$ 10,621,887		$ 41,647,157	$ 8,954,672		$ 41,647,157	$ 8,954,672
53	11,691	$ 9,000,000		$ 1,878,753		$ 57,859,572	$ 12,078,203		$ 57,859,572	$ 12,078,203	$ 9,000,000		$ 1,878,753		$ 41,647,157	$ 8,693,856		$ 41,647,157	$ 8,693,856
54	11,351					$ 57,859,572	$ 11,726,410		$ 57,859,572	$ 11,726,410					$ 41,647,157	$ 8,440,637		$ 41,647,157	$ 8,440,637
55	11,020					$ 57,859,572	$ 11,384,864		$ 57,859,572	$ 11,384,864				$ 9,000,000		$ 1,770,905		$ 41,647,157	$ 8,194,793
56	10,699					$ 57,859,572	$ 11,053,266	$ 9,000,000		$ 1,719,325							$ 9,000,000		
57	10,388				$ 9,000,000		$ 1,669,247			$ -									
Total PV costs				$ 2,128,085,441			$ 3,283,944,872			$ 3,192,469,369			$ 2,059,977,251			$ 2,715,299,130			$ 2,832,933,100
Unit cost				$ 1,567			$ 2,721			$ 2,568			$ 1,517			$ 2,121			$ 2,279

Table D.3.3 Life cycle cost analysis, 50 MGD facility, 3% discount rate, 50-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	56,007	$ 306,400,685		$ 306,400,685	$ 333,993,862		$ 333,993,862	$ 401,180,208		$ 401,180,208	$ 326,345,449		$ 326,345,449	$ 398,971,649		$ 398,971,649	$ 400,030,290		$ 400,030,290
1	52,343	$ 300,894,319		$ 281,209,644	$ 327,991,615		$ 306,534,220	$ 393,970,547		$ 368,196,773	$ 320,480,653		$ 299,514,629	$ 391,801,678		$ 366,169,793	$ 392,841,294		$ 367,141,396
2	48,919	$ 221,615,181		$ 193,567,282	$ 322,097,236		$ 281,332,200	$ 386,890,452		$ 337,925,104	$ 236,040,940		$ 206,167,299	$ 384,760,560		$ 336,064,774	$ 385,781,493		$ 336,956,497
3	45,718		$ 54,376,552	$ 44,387,464	$ 316,308,785		$ 258,202,190	$ 379,937,594		$ 310,142,251		$ 49,401,184	$ 40,326,081	$ 377,845,978		$ 308,434,870	$ 378,848,564		$ 309,253,279
4	42,727		$ 54,376,552	$ 41,483,611	$ 310,624,359		$ 236,973,836	$ 373,109,686		$ 284,643,593		$ 49,401,184	$ 37,687,926	$ 307,976,198		$ 234,953,567	$ 372,040,228		$ 283,827,709
5	39,932		$ 54,376,552	$ 38,769,730	$ 305,042,089		$ 217,490,794	$ 91,601,121		$ 65,310,333		$ 49,401,184	$ 35,222,361		$ 41,647,157	$ 29,693,847	$ 100,007,572		$ 71,304,017
6	37,320		$ 54,376,552	$ 36,233,393	$ 299,560,138		$ 199,609,569		$ 57,859,572	$ 38,554,276		$ 49,401,184	$ 32,918,095		$ 41,647,157	$ 27,751,259		$ 41,647,157	$ 27,751,259
7	34,878		$ 54,376,552	$ 33,862,984		$ 57,859,572	$ 36,032,034		$ 57,859,572	$ 36,032,034		$ 49,401,184	$ 30,764,574		$ 41,647,157	$ 25,935,756		$ 41,647,157	$ 25,935,756
8	32,597		$ 54,376,552	$ 31,647,649		$ 57,859,572	$ 33,674,798		$ 57,859,572	$ 33,674,798		$ 49,401,184	$ 28,751,939		$ 41,647,157	$ 24,239,024		$ 41,647,157	$ 24,239,024
9	30,464		$ 54,376,552	$ 29,577,242		$ 57,859,572	$ 31,471,774		$ 57,859,572	$ 31,471,774		$ 49,401,184	$ 26,870,971		$ 41,647,157	$ 22,653,294		$ 41,647,157	$ 22,653,294
10	28,471		$ 54,376,552	$ 27,642,282		$ 57,859,572	$ 29,412,873		$ 57,859,572	$ 29,412,873		$ 49,401,184	$ 25,113,057		$ 41,647,157	$ 21,171,303		$ 41,647,157	$ 21,171,303
11	26,609		$ 54,376,552	$ 25,833,908		$ 57,859,572	$ 27,488,666		$ 57,859,572	$ 27,488,666		$ 49,401,184	$ 23,470,146		$ 41,647,157	$ 19,786,264		$ 41,647,157	$ 19,786,264
12	24,868		$ 54,376,552	$ 24,143,840		$ 57,859,572	$ 25,690,342		$ 57,859,572	$ 25,690,342		$ 49,401,184	$ 21,934,716		$ 41,647,157	$ 18,491,836		$ 41,647,157	$ 18,491,836
13	23,241		$ 54,376,552	$ 22,564,336		$ 57,859,572	$ 24,009,665		$ 57,859,572	$ 24,009,665		$ 49,401,184	$ 20,499,735		$ 41,647,157	$ 17,282,089		$ 41,647,157	$ 17,282,089
14	21,720		$ 54,376,552	$ 21,088,165		$ 57,859,572	$ 22,438,940		$ 57,859,572	$ 22,438,940		$ 49,401,184	$ 19,158,631		$ 41,647,157	$ 16,151,485		$ 41,647,157	$ 16,151,485
15	20,300		$ 54,376,552	$ 19,708,565		$ 57,859,572	$ 20,970,972		$ 57,859,572	$ 20,970,972		$ 49,401,184	$ 17,905,262		$ 41,647,157	$ 15,094,846		$ 41,647,157	$ 15,094,846
16	18,972		$ 54,376,552	$ 18,419,220		$ 57,859,572	$ 19,599,039		$ 57,859,572	$ 19,599,039		$ 49,401,184	$ 16,733,890		$ 41,647,157	$ 14,107,333		$ 41,647,157	$ 14,107,333
17	17,730		$ 54,376,552	$ 17,214,224		$ 57,859,572	$ 18,316,859		$ 57,859,572	$ 18,316,859		$ 49,401,184	$ 15,639,150		$ 41,647,157	$ 13,184,423		$ 41,647,157	$ 13,184,423
18	16,570		$ 54,376,552	$ 16,088,060		$ 57,859,572	$ 17,118,560		$ 57,859,572	$ 17,118,560		$ 49,401,184	$ 14,616,028		$ 41,647,157	$ 12,321,891		$ 41,647,157	$ 12,321,891
19	15,486		$ 54,376,552	$ 15,035,570		$ 57,859,572	$ 15,998,654		$ 57,859,572	$ 15,998,654		$ 49,401,184	$ 13,659,839		$ 41,647,157	$ 11,515,786		$ 41,647,157	$ 11,515,786
20	14,473		$ 54,376,552	$ 14,051,934		$ 57,859,572	$ 14,952,013		$ 57,859,572	$ 14,952,013		$ 49,401,184	$ 12,766,205		$ 41,647,157	$ 10,762,417		$ 41,647,157	$ 10,762,417
21	13,526		$ 54,376,552	$ 13,132,649		$ 57,859,572	$ 13,973,844		$ 57,859,572	$ 13,973,844		$ 49,401,184	$ 11,931,032		$ 41,647,157	$ 10,058,333		$ 41,647,157	$ 10,058,333
22	12,642		$ 54,376,552	$ 12,273,504		$ 57,859,572	$ 13,059,667		$ 57,859,572	$ 13,059,667		$ 49,401,184	$ 11,150,498		$ 41,647,157	$ 9,400,312		$ 41,647,157	$ 9,400,312
23	11,815		$ 54,376,552	$ 11,470,564		$ 57,859,572	$ 12,205,296		$ 57,859,572	$ 12,205,296		$ 49,401,184	$ 10,421,026		$ 41,647,157	$ 8,785,338		$ 41,647,157	$ 8,785,338
24	11,042		$ 54,376,552	$ 10,720,153		$ 57,859,572	$ 11,406,819		$ 57,859,572	$ 11,406,819		$ 49,401,184	$ 9,739,276		$ 41,647,157	$ 8,210,596		$ 41,647,157	$ 8,210,596
25	10,319		$ 54,376,552	$ 10,018,835		$ 57,859,572	$ 10,660,579		$ 57,859,572	$ 10,660,579		$ 49,401,184	$ 9,102,127		$ 41,647,157	$ 7,673,454		$ 41,647,157	$ 7,673,454
26	9,644		$ 54,376,552	$ 9,363,397		$ 57,859,572	$ 9,963,158		$ 57,859,572	$ 9,963,158		$ 49,401,184	$ 8,506,661		$ 41,647,157	$ 7,171,453		$ 41,647,157	$ 7,171,453
27	9,013		$ 54,376,552	$ 8,750,839		$ 57,859,572	$ 9,311,362		$ 57,859,572	$ 9,311,362		$ 49,401,184	$ 7,950,151		$ 41,647,157	$ 6,702,292		$ 41,647,157	$ 6,702,292
28	8,424		$ 54,376,552	$ 8,178,354		$ 57,859,572	$ 8,702,208		$ 57,859,572	$ 8,702,208		$ 49,401,184	$ 7,430,047		$ 41,647,157	$ 6,263,825		$ 41,647,157	$ 6,263,825
29	7,873		$ 54,376,552	$ 7,643,321		$ 57,859,572	$ 8,132,904		$ 57,859,572	$ 8,132,904		$ 49,401,184	$ 6,943,969		$ 41,647,157	$ 5,854,042		$ 41,647,157	$ 5,854,042
30	7,357		$ 54,376,552	$ 7,143,291		$ 57,859,572	$ 7,600,845		$ 57,859,572	$ 7,600,845		$ 49,401,184	$ 6,489,691		$ 41,647,157	$ 5,471,067		$ 41,647,157	$ 5,471,067
31	6,876		$ 54,376,552	$ 6,675,973		$ 57,859,572	$ 7,103,594		$ 57,859,572	$ 7,103,594		$ 49,401,184	$ 6,065,132		$ 41,647,157	$ 5,113,147		$ 41,647,157	$ 5,113,147
32	6,426		$ 54,376,552	$ 6,239,227		$ 57,859,572	$ 6,638,873		$ 57,859,572	$ 6,638,873		$ 49,401,184	$ 5,668,348		$ 41,647,157	$ 4,778,642		$ 41,647,157	$ 4,778,642
33	6,006		$ 54,376,552	$ 5,831,053		$ 57,859,572	$ 6,204,554		$ 57,859,572	$ 6,204,554		$ 49,401,184	$ 5,297,521		$ 41,647,157	$ 4,466,020		$ 41,647,157	$ 4,466,020
34	5,613		$ 54,376,552	$ 5,449,582		$ 57,859,572	$ 5,798,648		$ 57,859,572	$ 5,798,648		$ 49,401,184	$ 4,950,954		$ 41,647,157	$ 4,173,851		$ 41,647,157	$ 4,173,851
35	5,246		$ 54,376,552	$ 5,093,068		$ 57,859,572	$ 5,419,298		$ 57,859,572	$ 5,419,298		$ 49,401,184	$ 4,627,060		$ 41,647,157	$ 3,900,795		$ 41,647,157	$ 3,900,795
36	4,903		$ 54,376,552	$ 4,759,876		$ 57,859,572	$ 5,064,764		$ 57,859,572	$ 5,064,764		$ 49,401,184	$ 4,324,355		$ 41,647,157	$ 3,645,603		$ 41,647,157	$ 3,645,603
37	4,582		$ 54,376,552	$ 4,448,483		$ 57,859,572	$ 4,733,424		$ 57,859,572	$ 4,733,424		$ 49,401,184	$ 4,041,453		$ 41,647,157	$ 3,407,106		$ 41,647,157	$ 3,407,106
38	4,282		$ 54,376,552	$ 4,157,460		$ 57,859,572	$ 4,423,761		$ 57,859,572	$ 4,423,761		$ 49,401,184	$ 3,777,059		$ 41,647,157	$ 3,184,211		$ 41,647,157	$ 3,184,211
39	4,002		$ 54,376,552	$ 3,885,477		$ 57,859,572	$ 4,134,356		$ 57,859,572	$ 4,134,356		$ 49,401,184	$ 3,529,962		$ 41,647,157	$ 2,975,898		$ 41,647,157	$ 2,975,898
40	3,740		$ 54,376,552	$ 3,631,287		$ 57,859,572	$ 3,863,884		$ 57,859,572	$ 3,863,884		$ 49,401,184	$ 3,299,030		$ 41,647,157	$ 2,781,213		$ 41,647,157	$ 2,781,213
41	3,495		$ 54,376,552	$ 3,393,726		$ 57,859,572	$ 3,611,107		$ 57,859,572	$ 3,611,107		$ 49,401,184	$ 3,083,205		$ 41,647,157	$ 2,599,264		$ 41,647,157	$ 2,599,264
42	3,267		$ 54,376,552	$ 3,171,707		$ 57,859,572	$ 3,374,866		$ 57,859,572	$ 3,374,866		$ 49,401,184	$ 2,881,500		$ 41,647,157	$ 2,429,219		$ 41,647,157	$ 2,429,219
43	3,053		$ 54,376,552	$ 2,964,212		$ 57,859,572	$ 3,154,081		$ 57,859,572	$ 3,154,081		$ 49,401,184	$ 2,692,991		$ 41,647,157	$ 2,270,298		$ 41,647,157	$ 2,270,298
44	2,853		$ 54,376,552	$ 2,770,291		$ 57,859,572	$ 2,947,739		$ 57,859,572	$ 2,947,739		$ 49,401,184	$ 2,516,814		$ 41,647,157	$ 2,121,774		$ 41,647,157	$ 2,121,774
45	2,667		$ 54,376,552	$ 2,589,057		$ 57,859,572	$ 2,754,896		$ 57,859,572	$ 2,754,896		$ 49,401,184	$ 2,352,163		$ 41,647,157	$ 1,982,966		$ 41,647,157	$ 1,982,966
46	2,492		$ 54,376,552	$ 2,419,680		$ 57,859,572	$ 2,574,669		$ 57,859,572	$ 2,574,669		$ 49,401,184	$ 2,198,283		$ 41,647,157	$ 1,853,240		$ 41,647,157	$ 1,853,240
47	2,329		$ 54,376,552	$ 2,261,383		$ 57,859,572	$ 2,406,233		$ 57,859,572	$ 2,406,233		$ 49,401,184	$ 2,054,470		$ 41,647,157	$ 1,732,000		$ 41,647,157	$ 1,732,000
48	2,177		$ 54,376,552	$ 2,113,442		$ 57,859,572	$ 2,248,816		$ 57,859,572	$ 2,248,816		$ 49,401,184	$ 1,920,065		$ 41,647,157	$ 1,618,691		$ 41,647,157	$ 1,618,691
49	2,034		$ 54,376,552	$ 1,975,179		$ 57,859,572	$ 2,101,697		$ 57,859,572	$ 2,101,697		$ 49,401,184	$ 1,794,454		$ 41,647,157	$ 1,512,796		$ 41,647,157	$ 1,512,796
50	1,901		$ 54,376,552	$ 1,845,962		$ 57,859,572	$ 1,964,203		$ 57,859,572	$ 1,964,203		$ 49,401,184	$ 1,677,059		$ 41,647,157	$ 1,413,828		$ 41,647,157	$ 1,413,828
51	1,777		$ 54,376,552	$ 1,725,198		$ 57,859,572	$ 1,835,704		$ 57,859,572	$ 1,835,704		$ 49,401,184	$ 1,567,345		$ 41,647,157	$ 1,321,334		$ 41,647,157	$ 1,321,334
52	1,661		$ 54,376,552	$ 1,612,335		$ 57,859,572	$ 1,715,611		$ 57,859,572	$ 1,715,611		$ 49,401,184	$ 1,464,809		$ 41,647,157	$ 1,234,892		$ 41,647,157	$ 1,234,892
53	1,552	$ 9,000,000		$ 249,403		$ 57,859,572	$ 1,603,375		$ 57,859,572	$ 1,603,375	$ 9,000,000		$ 249,403		$ 41,647,157	$ 1,154,105		$ 41,647,157	$ 1,154,105
54	1,451					$ 57,859,572	$ 1,498,481		$ 57,859,572	$ 1,498,481					$ 41,647,157	$ 1,078,602		$ 41,647,157	$ 1,078,602
55	1,356					$ 57,859,572	$ 1,400,449		$ 57,859,572	$ 1,400,449				$ 9,000,000		$ 217,839		$ 41,647,157	$ 1,008,040
56	1,267					$ 57,859,572	$ 1,308,831	$ 9,000,000		$ 203,587							$ 9,000,000		
57	1,184				$ 9,000,000		$ 190,269			$ -									
Total PV costs				$1,436,887,756			$2,366,404,719			$2,336,925,075			$1,427,763,899			$2,083,295,549			$ 2,178,310,438
Unit cost				$ 2,128			$ 4,595			$ 4,241			$ 2,115			$ 3,533			$ 3,953

Table D.3.4 Life cycle cost analysis, 50 MGD facility, 7% discount rate, 50-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	112014	$ 563,777,261		$ 563,777,261	$ 506,145,692		$ 506,145,692	$ 553,694,927		$ 553,694,927	$ 600,475,626		$ 600,475,626	$ 734,107,834		$ 734,107,834	$ 736,055,733		$ 736,055,733
1	108751.456	$ 553,645,547		$ 537,519,949	$ 497,049,682		$ 482,572,507	$ 543,744,404		$ 527,907,189	$ 589,684,401		$ 572,509,127	$ 720,915,088		$ 699,917,561	$ 722,827,981		$ 701,774,739
2	105583.938	$ 407,771,934		$ 384,364,157	$ 488,117,139		$ 460,097,218	$ 533,972,704		$ 503,320,486	$ 434,315,330		$ 409,383,854	$ 707,959,430		$ 667,319,663	$ 709,837,947		$ 669,090,345
3	102508.678		$ 108,753,105	$ 99,524,497	$ 479,345,123		$ 438,668,691	$ 524,376,612		$ 479,878,883		$ 98,802,367	$ 90,418,162	$ 695,236,600		$ 636,239,976	$ 697,081,358		$ 637,928,191
4	99522.9882		$ 108,753,105	$ 96,625,725	$ 470,730,750		$ 418,238,175	$ 514,952,972		$ 457,529,046		$ 98,802,367	$ 87,784,624	$ 566,676,204		$ 503,484,467	$ 684,554,020		$ 608,217,380
5	96624.2604		$ 108,753,105	$ 93,811,383	$ 462,271,188		$ 398,759,187	$ 505,698,686		$ 436,220,129		$ 98,802,367	$ 85,227,790		$ 83,294,313	$ 71,850,406	$ 184,013,933		$ 158,732,035
6	93809.9615		$ 108,753,105	$ 91,079,013	$ 453,963,653		$ 380,187,412	$ 496,610,710		$ 415,903,652		$ 98,802,367	$ 82,745,427		$ 83,294,313	$ 69,757,676		$ 83,294,313	$ 69,757,676
7	91077.6326		$ 108,753,105	$ 88,426,226	$ 445,805,414		$ 362,480,598		$ 115,719,144	$ 94,090,254		$ 98,802,367	$ 80,335,366		$ 83,294,313	$ 67,725,899		$ 83,294,313	$ 67,725,899
8	88424.886		$ 108,753,105	$ 85,850,705	$ 218,896,894		$ 172,799,229		$ 115,719,144	$ 91,349,761		$ 98,802,367	$ 77,995,501		$ 83,294,313	$ 65,753,300		$ 83,294,313	$ 65,753,300
9	85849.4039		$ 108,753,105	$ 83,350,199		$ 115,719,144	$ 88,689,088		$ 115,719,144	$ 88,689,088		$ 98,802,367	$ 75,723,788		$ 83,294,313	$ 63,838,155		$ 83,294,313	$ 63,838,155
10	83348.9358		$ 108,753,105	$ 80,922,523		$ 115,719,144	$ 86,105,911		$ 115,719,144	$ 86,105,911		$ 98,802,367	$ 73,518,240		$ 83,294,313	$ 61,978,792		$ 83,294,313	$ 61,978,792
11	80921.2969		$ 108,753,105	$ 78,565,557		$ 115,719,144	$ 83,597,972		$ 115,719,144	$ 83,597,972		$ 98,802,367	$ 71,376,932		$ 83,294,313	$ 60,173,584		$ 83,294,313	$ 60,173,584
12	78564.3659		$ 108,753,105	$ 76,277,240		$ 115,719,144	$ 81,163,079		$ 115,719,144	$ 81,163,079		$ 98,802,367	$ 69,297,993		$ 83,294,313	$ 58,420,956		$ 83,294,313	$ 58,420,956
13	76276.0834		$ 108,753,105	$ 74,055,572		$ 115,719,144	$ 78,799,106		$ 115,719,144	$ 78,799,106		$ 98,802,367	$ 67,279,604		$ 83,294,313	$ 56,719,374		$ 83,294,313	$ 56,719,374
14	74054.4499		$ 108,753,105	$ 71,898,614		$ 115,719,144	$ 76,503,987		$ 115,719,144	$ 76,503,987		$ 98,802,367	$ 65,320,004		$ 83,294,313	$ 55,067,354		$ 83,294,313	$ 55,067,354
15	71897.5242		$ 108,753,105	$ 69,804,480		$ 115,719,144	$ 74,275,715		$ 115,719,144	$ 74,275,715		$ 98,802,367	$ 63,417,480		$ 83,294,313	$ 53,463,450		$ 83,294,313	$ 53,463,450
16	69803.4215		$ 108,753,105	$ 67,771,339		$ 115,719,144	$ 72,112,345		$ 115,719,144	$ 72,112,345		$ 98,802,367	$ 61,570,369		$ 83,294,313	$ 51,906,262		$ 83,294,313	$ 51,906,262
17	67770.3122		$ 108,753,105	$ 65,797,417		$ 115,719,144	$ 70,011,985		$ 115,719,144	$ 70,011,985		$ 98,802,367	$ 59,777,057		$ 83,294,313	$ 50,394,429		$ 83,294,313	$ 50,394,429
18	65796.4196		$ 108,753,105	$ 63,880,987		$ 115,719,144	$ 67,972,801		$ 115,719,144	$ 67,972,801		$ 98,802,367	$ 58,035,978		$ 83,294,313	$ 48,926,630		$ 83,294,313	$ 48,926,630
19	63880.019		$ 108,753,105	$ 62,020,376		$ 115,719,144	$ 65,993,011		$ 115,719,144	$ 65,993,011		$ 98,802,367	$ 56,345,610		$ 83,294,313	$ 47,501,583		$ 83,294,313	$ 47,501,583
20	62019.4359		$ 108,753,105	$ 60,213,957		$ 115,719,144	$ 64,070,884		$ 115,719,144	$ 64,070,884		$ 98,802,367	$ 54,704,475		$ 83,294,313	$ 46,118,042		$ 83,294,313	$ 46,118,042
21	60213.0446		$ 108,753,105	$ 58,460,153		$ 115,719,144	$ 62,204,742		$ 115,719,144	$ 62,204,742		$ 98,802,367	$ 53,111,141		$ 83,294,313	$ 44,774,798		$ 83,294,313	$ 44,774,798
22	58459.2666		$ 108,753,105	$ 56,757,430		$ 115,719,144	$ 60,392,954		$ 115,719,144	$ 60,392,954		$ 98,802,367	$ 51,564,215		$ 83,294,313	$ 43,470,677		$ 83,294,313	$ 43,470,677
23	56756.5695		$ 108,753,105	$ 55,104,301		$ 115,719,144	$ 58,633,935		$ 115,719,144	$ 58,633,935		$ 98,802,367	$ 50,062,344		$ 83,294,313	$ 42,204,541		$ 83,294,313	$ 42,204,541
24	55103.4655		$ 108,753,105	$ 53,499,321		$ 115,719,144	$ 56,926,151		$ 115,719,144	$ 56,926,151		$ 98,802,367	$ 48,604,218		$ 83,294,313	$ 40,975,283		$ 83,294,313	$ 40,975,283
25	53498.5102		$ 108,753,105	$ 51,941,088		$ 115,719,144	$ 55,268,108		$ 115,719,144	$ 55,268,108		$ 98,802,367	$ 47,188,561		$ 83,294,313	$ 39,781,828		$ 83,294,313	$ 39,781,828
26	51940.3012		$ 108,753,105	$ 50,428,241		$ 115,719,144	$ 53,658,357		$ 115,719,144	$ 53,658,357		$ 98,802,367	$ 45,814,137		$ 83,294,313	$ 38,623,134		$ 83,294,313	$ 38,623,134
27	50427.4769		$ 108,753,105	$ 48,959,458		$ 115,719,144	$ 52,095,492		$ 115,719,144	$ 52,095,492		$ 98,802,367	$ 44,479,744		$ 83,294,313	$ 37,498,188		$ 83,294,313	$ 37,498,188
28	48958.7154		$ 108,753,105	$ 47,533,454		$ 115,719,144	$ 50,578,148		$ 115,719,144	$ 50,578,148		$ 98,802,367	$ 43,184,218		$ 83,294,313	$ 36,406,008		$ 83,294,313	$ 36,406,008
29	47532.7334		$ 108,753,105	$ 46,148,984		$ 115,719,144	$ 49,104,998		$ 115,719,144	$ 49,104,998		$ 98,802,367	$ 41,926,425		$ 83,294,313	$ 35,345,639		$ 83,294,313	$ 35,345,639
30	46148.2849		$ 108,753,105	$ 44,804,839		$ 115,719,144	$ 47,674,755		$ 115,719,144	$ 47,674,755		$ 98,802,367	$ 40,705,267		$ 83,294,313	$ 34,316,154		$ 83,294,313	$ 34,316,154
31	44804.1601		$ 108,753,105	$ 43,499,844		$ 115,719,144	$ 46,286,170		$ 115,719,144	$ 46,286,170		$ 98,802,367	$ 39,519,677		$ 83,294,313	$ 33,316,655		$ 83,294,313	$ 33,316,655
32	43499.1845		$ 108,753,105	$ 42,232,858		$ 115,719,144	$ 44,938,029		$ 115,719,144	$ 44,938,029		$ 98,802,367	$ 38,368,618		$ 83,294,313	$ 32,346,267		$ 83,294,313	$ 32,346,267
33	42232.218	$ 16,560,000		$ 6,243,555		$ 115,719,144	$ 43,629,155		$ 115,719,144	$ 43,629,155	$ 16,560,000		$ 6,243,555		$ 83,294,313	$ 31,404,142		$ 83,294,313	$ 31,404,142
34	41002.1534					$ 115,719,144	$ 42,358,403		$ 115,719,144	$ 42,358,403			$ -		$ 83,294,313	$ 30,489,459		$ 83,294,313	$ 30,489,459
35	39807.9159					$ 115,719,144	$ 41,124,663		$ 115,719,144	$ 41,124,663			$ -	$ 16,560,000		$ 5,885,149		$ 83,294,313	$ 29,601,416
36	38648.4621					$ 115,719,144	$ 39,926,857		$ 115,719,144	$ 39,926,857			$ -			$ -	$ 16,560,000		$ 5,713,737
37	37522.7787					$ 115,719,144	$ 38,763,939	$ 16,560,000		$ 5,547,317			$ -			$ -			$ -
38	36429.8822					$ 115,719,144	$ 37,634,892			$ -			$ -			$ -			$ -
39	35368.8177				$ 16,560,000		$ 5,228,879			$ -			$ -			$ -			$ -
Total PV costs				$ 3,501,150,702			$ 5,415,673,220			$ 5,279,538,445			$ 3,414,015,127			$ 4,697,503,317			$ 4,925,811,837
Unit cost				$ 1,692			$ 3,125			$ 2,871			$ 1,650			$ 2,408			$ 2,601

Table D.4.1 Life cycle cost analysis, 100 MGD facility, 3% discount rate, 30-year project life

		Low cost estimate									High cost estiamte								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	112014	$ 563,777,261		$ 563,777,261	$ 506,145,692		$ 506,145,692	$ 553,694,927		$ 553,694,927	$ 600,475,626		$ 600,475,626	$ 734,107,834		$ 734,107,834	$ 736,055,733		$ 736,055,733
1	104686	$ 553,645,547		$ 517,425,745	$ 497,049,682		$ 464,532,413	$ 543,744,404		$ 508,172,340	$ 589,684,401		$ 551,106,917	$ 720,915,088		$ 673,752,419	$ 722,827,981		$ 675,540,170
2	97837.37	$ 407,771,934		$ 356,163,799	$ 488,117,139		$ 426,340,413	$ 533,972,704		$ 466,392,439	$ 434,315,330		$ 379,347,830	$ 707,959,430		$ 618,359,184	$ 709,837,947		$ 619,999,954
3	91436.79		$ 108,753,105	$ 88,774,928	$ 479,345,123		$ 391,288,406	$ 524,376,612		$ 428,047,515		$ 98,802,367	$ 80,652,163	$ 695,236,600		$ 567,520,161	$ 697,081,358		$ 569,026,033
4	85454.94		$ 108,753,105	$ 82,967,223	$ 470,730,750		$ 359,118,236	$ 514,952,972		$ 392,855,157		$ 98,802,367	$ 75,375,853	$ 566,676,204		$ 432,314,563	$ 684,554,020		$ 522,242,984
5	79864.43		$ 108,753,105	$ 77,539,461	$ 462,271,188		$ 329,592,968	$ 505,698,686		$ 360,556,174		$ 98,802,367	$ 70,444,722		$ 83,294,313	$ 59,387,694	$ 184,013,933		$ 131,199,391
6	74639.66		$ 108,753,105	$ 72,466,786	$ 453,963,653		$ 302,495,150	$ 496,610,710		$ 330,912,685		$ 98,802,367	$ 65,836,189		$ 83,294,313	$ 55,502,518		$ 83,294,313	$ 55,502,518
7	69756.69		$ 108,753,105	$ 67,725,968	$ 445,805,414		$ 277,625,206		$ 115,719,144	$ 72,064,067		$ 98,802,367	$ 61,529,149		$ 83,294,313	$ 51,871,512		$ 83,294,313	$ 51,871,512
8	65193.17		$ 108,753,105	$ 63,295,297	$ 218,896,894		$ 127,399,985		$ 115,719,144	$ 67,349,595		$ 98,802,367	$ 57,503,877		$ 83,294,313	$ 48,478,049		$ 83,294,313	$ 48,478,049
9	60928.19		$ 108,753,105	$ 59,154,483		$ 115,719,144	$ 62,943,547		$ 115,719,144	$ 62,943,547		$ 98,802,367	$ 53,741,941		$ 83,294,313	$ 45,306,588		$ 83,294,313	$ 45,306,588
10	56942.24		$ 108,753,105	$ 55,284,564		$ 115,719,144	$ 58,825,745		$ 115,719,144	$ 58,825,745		$ 98,802,367	$ 50,226,113		$ 83,294,313	$ 42,342,605		$ 83,294,313	$ 42,342,605
11	53217.04		$ 108,753,105	$ 51,667,817		$ 115,719,144	$ 54,977,332		$ 115,719,144	$ 54,977,332		$ 98,802,367	$ 46,940,293		$ 83,294,313	$ 39,572,528		$ 83,294,313	$ 39,572,528
12	49735.56		$ 108,753,105	$ 48,287,679		$ 115,719,144	$ 51,380,684		$ 115,719,144	$ 51,380,684		$ 98,802,367	$ 43,869,433		$ 83,294,313	$ 36,983,671		$ 83,294,313	$ 36,983,671
13	46481.83		$ 108,753,105	$ 45,128,672		$ 115,719,144	$ 48,019,331		$ 115,719,144	$ 48,019,331		$ 98,802,367	$ 40,999,470		$ 83,294,313	$ 34,564,179		$ 83,294,313	$ 34,564,179
14	43440.96		$ 108,753,105	$ 42,176,329		$ 115,719,144	$ 44,877,879		$ 115,719,144	$ 44,877,879		$ 98,802,367	$ 38,317,262		$ 83,294,313	$ 32,302,971		$ 83,294,313	$ 32,302,971
15	40599.03		$ 108,753,105	$ 39,417,130		$ 115,719,144	$ 41,941,943		$ 115,719,144	$ 41,941,943		$ 98,802,367	$ 35,810,525		$ 83,294,313	$ 30,189,692		$ 83,294,313	$ 30,189,692
16	37943.02		$ 108,753,105	$ 36,838,439		$ 115,719,144	$ 39,198,078		$ 115,719,144	$ 39,198,078		$ 98,802,367	$ 33,467,780		$ 83,294,313	$ 28,214,666		$ 83,294,313	$ 28,214,666
17	35460.76		$ 108,753,105	$ 34,428,448		$ 115,719,144	$ 36,633,718		$ 115,719,144	$ 36,633,718		$ 98,802,367	$ 31,278,299		$ 83,294,313	$ 26,368,846		$ 83,294,313	$ 26,368,846
18	33140.9		$ 108,753,105	$ 32,176,119		$ 115,719,144	$ 34,237,119		$ 115,719,144	$ 34,237,119		$ 98,802,367	$ 29,232,055		$ 83,294,313	$ 24,643,782		$ 83,294,313	$ 24,643,782
19	30972.8		$ 108,753,105	$ 30,071,140		$ 115,719,144	$ 31,997,308		$ 115,719,144	$ 31,997,308		$ 98,802,367	$ 27,319,678		$ 83,294,313	$ 23,031,572		$ 83,294,313	$ 23,031,572
20	28946.55		$ 108,753,105	$ 28,103,869		$ 115,719,144	$ 29,904,026		$ 115,719,144	$ 29,904,026		$ 98,802,367	$ 25,532,409		$ 83,294,313	$ 21,524,833		$ 83,294,313	$ 21,524,833
21	27052.85		$ 108,753,105	$ 26,265,298		$ 115,719,144	$ 27,947,688		$ 115,719,144	$ 27,947,688		$ 98,802,367	$ 23,862,065		$ 83,294,313	$ 20,116,667		$ 83,294,313	$ 20,116,667
22	25283.03		$ 108,753,105	$ 24,547,007		$ 115,719,144	$ 26,119,334		$ 115,719,144	$ 26,119,334		$ 98,802,367	$ 22,300,995		$ 83,294,313	$ 18,800,623		$ 83,294,313	$ 18,800,623
23	23629		$ 108,753,105	$ 22,941,128		$ 115,719,144	$ 24,410,593		$ 115,719,144	$ 24,410,593		$ 98,802,367	$ 20,842,051		$ 83,294,313	$ 17,570,676		$ 83,294,313	$ 17,570,676
24	22083.18		$ 108,753,105	$ 21,440,307		$ 115,719,144	$ 22,813,638		$ 115,719,144	$ 22,813,638		$ 98,802,367	$ 19,478,553		$ 83,294,313	$ 16,421,192		$ 83,294,313	$ 16,421,192
25	20638.49		$ 108,753,105	$ 20,037,670		$ 115,719,144	$ 21,321,157		$ 115,719,144	$ 21,321,157		$ 98,802,367	$ 18,204,255		$ 83,294,313	$ 15,346,909		$ 83,294,313	$ 15,346,909
26	19288.31		$ 108,753,105	$ 18,726,794		$ 115,719,144	$ 19,926,315		$ 115,719,144	$ 19,926,315		$ 98,802,367	$ 17,013,322		$ 83,294,313	$ 14,342,905		$ 83,294,313	$ 14,342,905
27	18026.45		$ 108,753,105	$ 17,501,677		$ 115,719,144	$ 18,622,724		$ 115,719,144	$ 18,622,724		$ 98,802,367	$ 15,900,301		$ 83,294,313	$ 13,404,584		$ 83,294,313	$ 13,404,584
28	16847.15		$ 108,753,105	$ 16,356,708		$ 115,719,144	$ 17,404,415		$ 115,719,144	$ 17,404,415		$ 98,802,367	$ 14,860,095		$ 83,294,313	$ 12,527,649		$ 83,294,313	$ 12,527,649
29	15745		$ 108,753,105	$ 15,286,643		$ 115,719,144	$ 16,265,809		$ 115,719,144	$ 16,265,809		$ 98,802,367	$ 13,887,939		$ 83,294,313	$ 11,708,083		$ 83,294,313	$ 11,708,083
30	14714.96		$ 108,753,105	$ 14,286,582		$ 115,719,144	$ 15,201,690		$ 115,719,144	$ 15,201,690		$ 98,802,367	$ 12,979,382		$ 83,294,313	$ 10,942,134		$ 83,294,313	$ 10,942,134
31	13752.3		$ 108,753,105	$ 13,351,946		$ 115,719,144	$ 14,207,187		$ 115,719,144	$ 14,207,187		$ 98,802,367	$ 12,130,264		$ 83,294,313	$ 10,226,293		$ 83,294,313	$ 10,226,293
32	12852.61		$ 108,753,105	$ 12,478,454		$ 115,719,144	$ 13,277,745		$ 115,719,144	$ 13,277,745		$ 98,802,367	$ 11,336,695		$ 83,294,313	$ 9,557,283		$ 83,294,313	$ 9,557,283
33	12011.79	$ 16,560,000		$ 1,775,807		$ 115,719,144	$ 12,409,108		$ 115,719,144	$ 12,409,108	$ 16,560,000		$ 1,775,807		$ 83,294,313	$ 8,932,041		$ 83,294,313	$ 8,932,041
34	11225.97					$ 115,719,144	$ 11,597,297		$ 115,719,144	$ 11,597,297			$ -		$ 83,294,313	$ 8,347,701		$ 83,294,313	$ 8,347,701
35	10491.56					$ 115,719,144	$ 10,838,595		$ 115,719,144	$ 10,838,595			$ -	$ 16,560,000		$ 1,551,058		$ 83,294,313	$ 7,801,590
36	9805.197					$ 115,719,144	$ 10,129,528		$ 115,719,144	$ 10,129,528			$ -			$ -	$ 16,560,000		$ 1,449,587
37	9163.735					$ 115,719,144	$ 9,466,849	$ 16,560,000		$ 1,354,754			$ -			$ -			$ -
38	8564.239					$ 115,719,144	$ 8,847,522			$ -			$ -			$ -			$ -
39	8003.961				$ 16,560,000		$ 1,183,295			$ -			$ -			$ -			$ -
Total PV costs				$ 2,617,867,177			$ 4,021,465,668			$ 3,998,829,188			$ 2,603,579,308			$ 3,816,135,666			$ 3,992,458,195
Unit cost				$ 2,156			$ 4,971			$ 4,317			$ 2,145			$ 3,599			$ 4,029

Table D.4.2 Life cycle cost analysis, 100 MGD facility, 7% discount rate, 30-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	112,014	$ 563,777,261		$ 563,777,261	$ 506,145,692		$ 506,145,692	$ 553,694,927		$ 553,694,927	$ 600,475,626		$ 600,475,626	$ 734,107,834		$ 734,107,834	$ 736,055,733		$ 736,055,733
1	108,751	$ 553,645,547		$ 537,519,949	$ 497,049,682		$ 482,572,507	$ 543,744,404		$ 527,907,189	$ 589,684,401		$ 572,509,127	$ 720,915,088		$ 699,917,561	$ 722,827,981		$ 701,774,739
2	105,584	$ 407,771,934		$ 384,364,157	$ 488,117,139		$ 460,097,218	$ 533,972,704		$ 503,320,486	$ 434,315,330		$ 409,383,854	$ 707,959,430		$ 667,319,663	$ 709,837,947		$ 669,090,345
3	102,509		$ 108,753,105	$ 99,524,497	$ 479,345,123		$ 438,668,691	$ 524,376,612		$ 479,878,883		$ 98,802,367	$ 90,418,162	$ 695,236,600		$ 636,239,976	$ 697,081,358		$ 637,928,191
4	99,523		$ 108,753,105	$ 96,625,725	$ 470,730,750		$ 418,238,175	$ 514,952,972		$ 457,529,046		$ 98,802,367	$ 87,784,624	$ 566,676,204		$ 503,484,467	$ 684,554,020		$ 608,217,380
5	96,624		$ 108,753,105	$ 93,811,383	$ 462,271,188		$ 398,759,187	$ 505,698,686		$ 436,220,129		$ 98,802,367	$ 85,227,790		$ 83,294,313	$ 71,850,406	$ 184,013,933		$ 158,732,035
6	93,810		$ 108,753,105	$ 91,079,013	$ 453,963,653		$ 380,187,412	$ 496,610,710		$ 415,903,652		$ 98,802,367	$ 82,745,427		$ 83,294,313	$ 69,757,676		$ 83,294,313	$ 69,757,676
7	91,078		$ 108,753,105	$ 88,426,226	$ 445,805,414		$ 362,480,598		$ 115,719,144	$ 94,090,254		$ 98,802,367	$ 80,335,366		$ 83,294,313	$ 67,725,899		$ 83,294,313	$ 67,725,899
8	88,425		$ 108,753,105	$ 85,850,705	$ 218,896,894		$ 172,799,229		$ 115,719,144	$ 91,349,761		$ 98,802,367	$ 77,995,501		$ 83,294,313	$ 65,753,300		$ 83,294,313	$ 65,753,300
9	85,849		$ 108,753,105	$ 83,350,199		$ 115,719,144	$ 88,689,088		$ 115,719,144	$ 88,689,088		$ 98,802,367	$ 75,723,788		$ 83,294,313	$ 63,838,155		$ 83,294,313	$ 63,838,155
10	83,349		$ 108,753,105	$ 80,922,523		$ 115,719,144	$ 86,105,911		$ 115,719,144	$ 86,105,911		$ 98,802,367	$ 73,518,240		$ 83,294,313	$ 61,978,792		$ 83,294,313	$ 61,978,792
11	80,921		$ 108,753,105	$ 78,565,557		$ 115,719,144	$ 83,597,972		$ 115,719,144	$ 83,597,972		$ 98,802,367	$ 71,376,932		$ 83,294,313	$ 60,173,584		$ 83,294,313	$ 60,173,584
12	78,564		$ 108,753,105	$ 76,277,240		$ 115,719,144	$ 81,163,079		$ 115,719,144	$ 81,163,079		$ 98,802,367	$ 69,297,993		$ 83,294,313	$ 58,420,956		$ 83,294,313	$ 58,420,956
13	76,276		$ 108,753,105	$ 74,055,572		$ 115,719,144	$ 78,799,106		$ 115,719,144	$ 78,799,106		$ 98,802,367	$ 67,279,604		$ 83,294,313	$ 56,719,374		$ 83,294,313	$ 56,719,374
14	74,054		$ 108,753,105	$ 71,898,614		$ 115,719,144	$ 76,503,987		$ 115,719,144	$ 76,503,987		$ 98,802,367	$ 65,320,004		$ 83,294,313	$ 55,067,354		$ 83,294,313	$ 55,067,354
15	71,898		$ 108,753,105	$ 69,804,480		$ 115,719,144	$ 74,275,715		$ 115,719,144	$ 74,275,715		$ 98,802,367	$ 63,417,480		$ 83,294,313	$ 53,463,450		$ 83,294,313	$ 53,463,450
16	69,803		$ 108,753,105	$ 67,771,339		$ 115,719,144	$ 72,112,345		$ 115,719,144	$ 72,112,345		$ 98,802,367	$ 61,570,369		$ 83,294,313	$ 51,906,262		$ 83,294,313	$ 51,906,262
17	67,770		$ 108,753,105	$ 65,797,417		$ 115,719,144	$ 70,011,985		$ 115,719,144	$ 70,011,985		$ 98,802,367	$ 59,777,057		$ 83,294,313	$ 50,394,429		$ 83,294,313	$ 50,394,429
18	65,796		$ 108,753,105	$ 63,880,987		$ 115,719,144	$ 67,972,801		$ 115,719,144	$ 67,972,801		$ 98,802,367	$ 58,035,978		$ 83,294,313	$ 48,926,630		$ 83,294,313	$ 48,926,630
19	63,880		$ 108,753,105	$ 62,020,376		$ 115,719,144	$ 65,993,011		$ 115,719,144	$ 65,993,011		$ 98,802,367	$ 56,345,610		$ 83,294,313	$ 47,501,583		$ 83,294,313	$ 47,501,583
20	62,019		$ 108,753,105	$ 60,213,957		$ 115,719,144	$ 64,070,884		$ 115,719,144	$ 64,070,884		$ 98,802,367	$ 54,704,475		$ 83,294,313	$ 46,118,042		$ 83,294,313	$ 46,118,042
21	60,213		$ 108,753,105	$ 58,460,153		$ 115,719,144	$ 62,204,742		$ 115,719,144	$ 62,204,742		$ 98,802,367	$ 53,111,141		$ 83,294,313	$ 44,774,798		$ 83,294,313	$ 44,774,798
22	58,459		$ 108,753,105	$ 56,757,430		$ 115,719,144	$ 60,392,954		$ 115,719,144	$ 60,392,954		$ 98,802,367	$ 51,564,215		$ 83,294,313	$ 43,470,677		$ 83,294,313	$ 43,470,677
23	56,757		$ 108,753,105	$ 55,104,301		$ 115,719,144	$ 58,633,935		$ 115,719,144	$ 58,633,935		$ 98,802,367	$ 50,062,344		$ 83,294,313	$ 42,204,541		$ 83,294,313	$ 42,204,541
24	55,103		$ 108,753,105	$ 53,499,321		$ 115,719,144	$ 56,926,151		$ 115,719,144	$ 56,926,151		$ 98,802,367	$ 48,604,218		$ 83,294,313	$ 40,975,283		$ 83,294,313	$ 40,975,283
25	53,499		$ 108,753,105	$ 51,941,088		$ 115,719,144	$ 55,268,108		$ 115,719,144	$ 55,268,108		$ 98,802,367	$ 47,188,561		$ 83,294,313	$ 39,781,828		$ 83,294,313	$ 39,781,828
26	51,940		$ 108,753,105	$ 50,428,241		$ 115,719,144	$ 53,658,357		$ 115,719,144	$ 53,658,357		$ 98,802,367	$ 45,814,137		$ 83,294,313	$ 38,623,134		$ 83,294,313	$ 38,623,134
27	50,427		$ 108,753,105	$ 48,959,458		$ 115,719,144	$ 52,095,492		$ 115,719,144	$ 52,095,492		$ 98,802,367	$ 44,479,744		$ 83,294,313	$ 37,498,188		$ 83,294,313	$ 37,498,188
28	48,959		$ 108,753,105	$ 47,533,454		$ 115,719,144	$ 50,578,148		$ 115,719,144	$ 50,578,148		$ 98,802,367	$ 43,184,218		$ 83,294,313	$ 36,406,008		$ 83,294,313	$ 36,406,008
29	47,533		$ 108,753,105	$ 46,148,984		$ 115,719,144	$ 49,104,998		$ 115,719,144	$ 49,104,998		$ 98,802,367	$ 41,926,425		$ 83,294,313	$ 35,345,639		$ 83,294,313	$ 35,345,639
30	46,148		$ 108,753,105	$ 44,804,839		$ 115,719,144	$ 47,674,755		$ 115,719,144	$ 47,674,755		$ 98,802,367	$ 40,705,267		$ 83,294,313	$ 34,316,154		$ 83,294,313	$ 34,316,154
31	44,804		$ 108,753,105	$ 43,499,844		$ 115,719,144	$ 46,286,170		$ 115,719,144	$ 46,286,170		$ 98,802,367	$ 39,519,677		$ 83,294,313	$ 33,316,655		$ 83,294,313	$ 33,316,655
32	43,499		$ 108,753,105	$ 42,232,858		$ 115,719,144	$ 44,938,029		$ 115,719,144	$ 44,938,029		$ 98,802,367	$ 38,368,618		$ 83,294,313	$ 32,346,267		$ 83,294,313	$ 32,346,267
33	42,232		$ 108,753,105	$ 41,002,775		$ 115,719,144	$ 43,629,155		$ 115,719,144	$ 43,629,155		$ 98,802,367	$ 37,251,086		$ 83,294,313	$ 31,404,142		$ 83,294,313	$ 31,404,142
34	41,002		$ 108,753,105	$ 39,808,519		$ 115,719,144	$ 42,358,403		$ 115,719,144	$ 42,358,403		$ 98,802,367	$ 36,166,103		$ 83,294,313	$ 30,489,459		$ 83,294,313	$ 30,489,459
35	39,808		$ 108,753,105	$ 38,649,048		$ 115,719,144	$ 41,124,663		$ 115,719,144	$ 41,124,663		$ 98,802,367	$ 35,112,721		$ 83,294,313	$ 29,601,416		$ 83,294,313	$ 29,601,416
36	38,648		$ 108,753,105	$ 37,523,347		$ 115,719,144	$ 39,926,857		$ 115,719,144	$ 39,926,857		$ 98,802,367	$ 34,090,020		$ 83,294,313	$ 28,739,239		$ 83,294,313	$ 28,739,239
37	37,523		$ 108,753,105	$ 36,430,434		$ 115,719,144	$ 38,763,939		$ 115,719,144	$ 38,763,939		$ 98,802,367	$ 33,097,107		$ 83,294,313	$ 27,902,174		$ 83,294,313	$ 27,902,174
38	36,430		$ 108,753,105	$ 35,369,354		$ 115,719,144	$ 37,634,892		$ 115,719,144	$ 37,634,892		$ 98,802,367	$ 32,133,114		$ 83,294,313	$ 27,089,489		$ 83,294,313	$ 27,089,489
39	35,369		$ 108,753,105	$ 34,339,178		$ 115,719,144	$ 36,538,730		$ 115,719,144	$ 36,538,730		$ 98,802,367	$ 31,197,198		$ 83,294,313	$ 26,300,475		$ 83,294,313	$ 26,300,475
40	34,339		$ 108,753,105	$ 33,339,008		$ 115,719,144	$ 35,474,495		$ 115,719,144	$ 35,474,495		$ 98,802,367	$ 30,288,542		$ 83,294,313	$ 25,534,442		$ 83,294,313	$ 25,534,442
41	33,339		$ 108,753,105	$ 32,367,969		$ 115,719,144	$ 34,441,258		$ 115,719,144	$ 34,441,258		$ 98,802,367	$ 29,406,351		$ 83,294,313	$ 24,790,720		$ 83,294,313	$ 24,790,720
42	32,367		$ 108,753,105	$ 31,425,213		$ 115,719,144	$ 33,438,114		$ 115,719,144	$ 33,438,114		$ 98,802,367	$ 28,549,855		$ 83,294,313	$ 24,068,660		$ 83,294,313	$ 24,068,660
43	31,425		$ 108,753,105	$ 30,509,915		$ 115,719,144	$ 32,464,188		$ 115,719,144	$ 32,464,188		$ 98,802,367	$ 27,718,306		$ 83,294,313	$ 23,367,631		$ 83,294,313	$ 23,367,631
44	30,509		$ 108,753,105	$ 29,621,277		$ 115,719,144	$ 31,518,630		$ 115,719,144	$ 31,518,630		$ 98,802,367	$ 26,910,977		$ 83,294,313	$ 22,687,021		$ 83,294,313	$ 22,687,021
45	29,621		$ 108,753,105	$ 28,758,521		$ 115,719,144	$ 30,600,611		$ 115,719,144	$ 30,600,611		$ 98,802,367	$ 26,127,162		$ 83,294,313	$ 22,026,234		$ 83,294,313	$ 22,026,234
46	28,758		$ 108,753,105	$ 27,920,894		$ 115,719,144	$ 29,709,331		$ 115,719,144	$ 29,709,331		$ 98,802,367	$ 25,366,177		$ 83,294,313	$ 21,384,693		$ 83,294,313	$ 21,384,693
47	27,920		$ 108,753,105	$ 27,107,665		$ 115,719,144	$ 28,844,011		$ 115,719,144	$ 28,844,011		$ 98,802,367	$ 24,627,356		$ 83,294,313	$ 20,761,838		$ 83,294,313	$ 20,761,838
48	27,107		$ 108,753,105	$ 26,318,121		$ 115,719,144	$ 28,003,894		$ 115,719,144	$ 28,003,894		$ 98,802,367	$ 23,910,054		$ 83,294,313	$ 20,157,124		$ 83,294,313	$ 20,157,124
49	26,318		$ 108,753,105	$ 25,551,574		$ 115,719,144	$ 27,188,247		$ 115,719,144	$ 27,188,247		$ 98,802,367	$ 23,213,645		$ 83,294,313	$ 19,570,023		$ 83,294,313	$ 19,570,023
50	25,551		$ 108,753,105	$ 24,807,353		$ 115,719,144	$ 26,396,356		$ 115,719,144	$ 26,396,356		$ 98,802,367	$ 22,537,519		$ 83,294,313	$ 19,000,023		$ 83,294,313	$ 19,000,023
51	24,807		$ 108,753,105	$ 24,084,809		$ 115,719,144	$ 25,627,530		$ 115,719,144	$ 25,627,530		$ 98,802,367	$ 21,881,087		$ 83,294,313	$ 18,446,624		$ 83,294,313	$ 18,446,624
52	24,084		$ 108,753,105	$ 23,383,310		$ 115,719,144	$ 24,881,097		$ 115,719,144	$ 24,881,097		$ 98,802,367	$ 21,243,774		$ 83,294,313	$ 17,909,344		$ 83,294,313	$ 17,909,344
53	23,383	$ 16,560,000		$ 3,456,905		$ 115,719,144	$ 24,156,405		$ 115,719,144	$ 24,156,405	$ 16,560,000		$ 3,456,905		$ 83,294,313	$ 17,387,712		$ 83,294,313	$ 17,387,712
54	22,702					$ 115,719,144	$ 23,452,820		$ 115,719,144	$ 23,452,820					$ 83,294,313	$ 16,881,274		$ 83,294,313	$ 16,881,274
55	22,041					$ 115,719,144	$ 22,769,729		$ 115,719,144	$ 22,769,729				$ 16,560,000		$ 3,258,464		$ 83,294,313	$ 16,389,586
56	21,399					$ 115,719,144	$ 22,106,533		$ 115,719,144	$ 22,106,533							$ 16,560,000		
57	20,775					$ 115,719,144	$ 21,462,653	$ 16,560,000		$ 3,071,415									
58	20,170					$ 115,719,144	$ 20,837,527												
59	19,583				$ 16,560,000														
Total PV costs				$4,126,682,337			$ 5,970,356,501			$ 5,871,073,353			$3,982,056,631			$ 5,148,482,785			$5,360,492,423
Unit cost				$ 1,519			$ 2,624			$ 2,432			$ 1,466			$ 2,011			$ 2,156

Table D.4.3 Life cycle cost analysis, 100 MGD facility, 3% discount rate, 50-year project life

		Low cost estimate									High cost estimate								
		Open Ocean			SIG Trestle			SIG Float-in			Open Ocean			SIG Trestle			SIG Float-in		
Year	PV water production	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total	Capital	O&M	PV total
0	112,014	$ 563,777,261		$ 563,777,261	$ 506,145,692		$ 506,145,692	$ 553,694,927		$ 553,694,927	$ 600,475,626		$ 600,475,626	$ 734,107,834		$ 734,107,834	$ 736,055,733		$ 736,055,733
1	104,686	$ 553,645,547		$ 517,425,745	$ 497,049,682		$ 464,532,413	$ 543,744,404		$ 508,172,340	$ 589,684,401		$ 551,106,917	$ 720,915,088		$ 673,752,419	$ 722,827,981		$ 675,540,170
2	97,837	$ 407,771,934		$ 356,163,799	$ 488,117,139		$ 426,340,413	$ 533,972,704		$ 466,392,439	$ 434,315,330		$ 379,347,830	$ 707,959,430		$ 618,359,184	$ 709,837,947		$ 619,999,954
3	91,437		$ 108,753,105	$ 88,774,928	$ 479,345,123		$ 391,288,406	$ 524,376,612		$ 428,047,515		$ 98,802,367	$ 80,652,163	$ 695,236,600		$ 567,520,161	$ 697,081,358		$ 569,026,033
4	85,455		$ 108,753,105	$ 82,967,223	$ 470,730,750		$ 359,118,236	$ 514,952,972		$ 392,855,157		$ 98,802,367	$ 75,375,853	$ 566,676,204		$ 432,314,563	$ 684,554,020		$ 522,242,984
5	79,864		$ 108,753,105	$ 77,539,461	$ 462,271,188		$ 329,592,968	$ 505,698,686		$ 360,556,174		$ 98,802,367	$ 70,444,722		$ 83,294,313	$ 59,387,694	$ 184,013,933		$ 131,199,391
6	74,640		$ 108,753,105	$ 72,466,786	$ 453,963,653		$ 302,495,150	$ 496,610,710		$ 330,912,685		$ 98,802,367	$ 65,836,189		$ 83,294,313	$ 55,502,518		$ 83,294,313	$ 55,502,518
7	69,757		$ 108,753,105	$ 67,725,968	$ 445,805,414		$ 277,625,206		$ 115,719,144	$ 72,064,067		$ 98,802,367	$ 61,529,149		$ 83,294,313	$ 51,871,512		$ 83,294,313	$ 51,871,512
8	65,193		$ 108,753,105	$ 63,295,297	$ 218,896,894		$ 127,399,985		$ 115,719,144	$ 67,349,595		$ 98,802,367	$ 57,503,877		$ 83,294,313	$ 48,478,049		$ 83,294,313	$ 48,478,049
9	60,928		$ 108,753,105	$ 59,154,483		$ 115,719,144	$ 62,943,547		$ 115,719,144	$ 62,943,547		$ 98,802,367	$ 53,741,941		$ 83,294,313	$ 45,306,588		$ 83,294,313	$ 45,306,588
10	56,942		$ 108,753,105	$ 55,284,564		$ 115,719,144	$ 58,825,745		$ 115,719,144	$ 58,825,745		$ 98,802,367	$ 50,226,113		$ 83,294,313	$ 42,342,605		$ 83,294,313	$ 42,342,605
11	53,217		$ 108,753,105	$ 51,667,817		$ 115,719,144	$ 54,977,332		$ 115,719,144	$ 54,977,332		$ 98,802,367	$ 46,940,293		$ 83,294,313	$ 39,572,528		$ 83,294,313	$ 39,572,528
12	49,736		$ 108,753,105	$ 48,287,679		$ 115,719,144	$ 51,380,684		$ 115,719,144	$ 51,380,684		$ 98,802,367	$ 43,869,433		$ 83,294,313	$ 36,983,671		$ 83,294,313	$ 36,983,671
13	46,482		$ 108,753,105	$ 45,128,672		$ 115,719,144	$ 48,019,331		$ 115,719,144	$ 48,019,331		$ 98,802,367	$ 40,999,470		$ 83,294,313	$ 34,564,179		$ 83,294,313	$ 34,564,179
14	43,441		$ 108,753,105	$ 42,176,329		$ 115,719,144	$ 44,877,879		$ 115,719,144	$ 44,877,879		$ 98,802,367	$ 38,317,262		$ 83,294,313	$ 32,302,971		$ 83,294,313	$ 32,302,971
15	40,599		$ 108,753,105	$ 39,417,130		$ 115,719,144	$ 41,941,943		$ 115,719,144	$ 41,941,943		$ 98,802,367	$ 35,810,525		$ 83,294,313	$ 30,189,692		$ 83,294,313	$ 30,189,692
16	37,943		$ 108,753,105	$ 36,838,439		$ 115,719,144	$ 39,198,078		$ 115,719,144	$ 39,198,078		$ 98,802,367	$ 33,467,780		$ 83,294,313	$ 28,214,666		$ 83,294,313	$ 28,214,666
17	35,461		$ 108,753,105	$ 34,428,448		$ 115,719,144	$ 36,633,718		$ 115,719,144	$ 36,633,718		$ 98,802,367	$ 31,278,299		$ 83,294,313	$ 26,368,846		$ 83,294,313	$ 26,368,846
18	33,141		$ 108,753,105	$ 32,176,119		$ 115,719,144	$ 34,237,119		$ 115,719,144	$ 34,237,119		$ 98,802,367	$ 29,232,055		$ 83,294,313	$ 24,643,782		$ 83,294,313	$ 24,643,782
19	30,973		$ 108,753,105	$ 30,071,140		$ 115,719,144	$ 31,997,308		$ 115,719,144	$ 31,997,308		$ 98,802,367	$ 27,319,678		$ 83,294,313	$ 23,031,572		$ 83,294,313	$ 23,031,572
20	28,947		$ 108,753,105	$ 28,103,869		$ 115,719,144	$ 29,904,026		$ 115,719,144	$ 29,904,026		$ 98,802,367	$ 25,532,409		$ 83,294,313	$ 21,524,833		$ 83,294,313	$ 21,524,833
21	27,053		$ 108,753,105	$ 26,265,298		$ 115,719,144	$ 27,947,688		$ 115,719,144	$ 27,947,688		$ 98,802,367	$ 23,862,065		$ 83,294,313	$ 20,116,667		$ 83,294,313	$ 20,116,667
22	25,283		$ 108,753,105	$ 24,547,007		$ 115,719,144	$ 26,119,334		$ 115,719,144	$ 26,119,334		$ 98,802,367	$ 22,300,995		$ 83,294,313	$ 18,800,623		$ 83,294,313	$ 18,800,623
23	23,629		$ 108,753,105	$ 22,941,128		$ 115,719,144	$ 24,410,593		$ 115,719,144	$ 24,410,593		$ 98,802,367	$ 20,842,051		$ 83,294,313	$ 17,570,676		$ 83,294,313	$ 17,570,676
24	22,083		$ 108,753,105	$ 21,440,307		$ 115,719,144	$ 22,813,638		$ 115,719,144	$ 22,813,638		$ 98,802,367	$ 19,478,553		$ 83,294,313	$ 16,421,192		$ 83,294,313	$ 16,421,192
25	20,638		$ 108,753,105	$ 20,037,670		$ 115,719,144	$ 21,321,157		$ 115,719,144	$ 21,321,157		$ 98,802,367	$ 18,204,255		$ 83,294,313	$ 15,346,909		$ 83,294,313	$ 15,346,909
26	19,288		$ 108,753,105	$ 18,726,794		$ 115,719,144	$ 19,926,315		$ 115,719,144	$ 19,926,315		$ 98,802,367	$ 17,013,322		$ 83,294,313	$ 14,342,905		$ 83,294,313	$ 14,342,905
27	18,026		$ 108,753,105	$ 17,501,677		$ 115,719,144	$ 18,622,724		$ 115,719,144	$ 18,622,724		$ 98,802,367	$ 15,900,301		$ 83,294,313	$ 13,404,584		$ 83,294,313	$ 13,404,584
28	16,847		$ 108,753,105	$ 16,356,708		$ 115,719,144	$ 17,404,415		$ 115,719,144	$ 17,404,415		$ 98,802,367	$ 14,860,095		$ 83,294,313	$ 12,527,649		$ 83,294,313	$ 12,527,649
29	15,745		$ 108,753,105	$ 15,286,643		$ 115,719,144	$ 16,265,809		$ 115,719,144	$ 16,265,809		$ 98,802,367	$ 13,887,939		$ 83,294,313	$ 11,708,083		$ 83,294,313	$ 11,708,083
30	14,715		$ 108,753,105	$ 14,286,582		$ 115,719,144	$ 15,201,690		$ 115,719,144	$ 15,201,690		$ 98,802,367	$ 12,979,382		$ 83,294,313	$ 10,942,134		$ 83,294,313	$ 10,942,134
31	13,752		$ 108,753,105	$ 13,351,946		$ 115,719,144	$ 14,207,187		$ 115,719,144	$ 14,207,187		$ 98,802,367	$ 12,130,264		$ 83,294,313	$ 10,226,293		$ 83,294,313	$ 10,226,293
32	12,853		$ 108,753,105	$ 12,478,454		$ 115,719,144	$ 13,277,745		$ 115,719,144	$ 13,277,745		$ 98,802,367	$ 11,336,695		$ 83,294,313	$ 9,557,283		$ 83,294,313	$ 9,557,283
33	12,012		$ 108,753,105	$ 11,662,106		$ 115,719,144	$ 12,409,108		$ 115,719,144	$ 12,409,108		$ 98,802,367	$ 10,595,042		$ 83,294,313	$ 8,932,041		$ 83,294,313	$ 8,932,041
34	11,226		$ 108,753,105	$ 10,899,165		$ 115,719,144	$ 11,597,297		$ 115,719,144	$ 11,597,297		$ 98,802,367	$ 9,901,909		$ 83,294,313	$ 8,347,701		$ 83,294,313	$ 8,347,701
35	10,492		$ 108,753,105	$ 10,186,135		$ 115,719,144	$ 10,838,595		$ 115,719,144	$ 10,838,595		$ 98,802,367	$ 9,254,120		$ 83,294,313	$ 7,801,590		$ 83,294,313	$ 7,801,590
36	9,805		$ 108,753,105	$ 9,519,753		$ 115,719,144	$ 10,129,528		$ 115,719,144	$ 10,129,528		$ 98,802,367	$ 8,648,710		$ 83,294,313	$ 7,291,206		$ 83,294,313	$ 7,291,206
37	9,164		$ 108,753,105	$ 8,896,965		$ 115,719,144	$ 9,466,849		$ 115,719,144	$ 9,466,849		$ 98,802,367	$ 8,082,907		$ 83,294,313	$ 6,814,211		$ 83,294,313	$ 6,814,211
38	8,564		$ 108,753,105	$ 8,314,921		$ 115,719,144	$ 8,847,522		$ 115,719,144	$ 8,847,522		$ 98,802,367	$ 7,554,119		$ 83,294,313	$ 6,368,422		$ 83,294,313	$ 6,368,422
39	8,004		$ 108,753,105	$ 7,770,954		$ 115,719,144	$ 8,268,712		$ 115,719,144	$ 8,268,712		$ 98,802,367	$ 7,059,924		$ 83,294,313	$ 5,951,796		$ 83,294,313	$ 5,951,796
40	7,480		$ 108,753,105	$ 7,262,574		$ 115,719,144	$ 7,727,769		$ 115,719,144	$ 7,727,769		$ 98,802,367	$ 6,598,060		$ 83,294,313	$ 5,562,426		$ 83,294,313	$ 5,562,426
41	6,991		$ 108,753,105	$ 6,787,452		$ 115,719,144	$ 7,222,214		$ 115,719,144	$ 7,222,214		$ 98,802,367	$ 6,166,411		$ 83,294,313	$ 5,198,529		$ 83,294,313	$ 5,198,529
42	6,534		$ 108,753,105	$ 6,343,413		$ 115,719,144	$ 6,749,732		$ 115,719,144	$ 6,749,732		$ 98,802,367	$ 5,763,001		$ 83,294,313	$ 4,858,438		$ 83,294,313	$ 4,858,438
43	6,106		$ 108,753,105	$ 5,928,424		$ 115,719,144	$ 6,308,161		$ 115,719,144	$ 6,308,161		$ 98,802,367	$ 5,385,982		$ 83,294,313	$ 4,540,597		$ 83,294,313	$ 4,540,597
44	5,707		$ 108,753,105	$ 5,540,583		$ 115,719,144	$ 5,895,478		$ 115,719,144	$ 5,895,478		$ 98,802,367	$ 5,033,628		$ 83,294,313	$ 4,243,548		$ 83,294,313	$ 4,243,548
45	5,333		$ 108,753,105	$ 5,178,115		$ 115,719,144	$ 5,509,792		$ 115,719,144	$ 5,509,792		$ 98,802,367	$ 4,704,325		$ 83,294,313	$ 3,965,933		$ 83,294,313	$ 3,965,933
46	4,984		$ 108,753,105	$ 4,839,360		$ 115,719,144	$ 5,149,338		$ 115,719,144	$ 5,149,338		$ 98,802,367	$ 4,396,566		$ 83,294,313	$ 3,706,479		$ 83,294,313	$ 3,706,479
47	4,658		$ 108,753,105	$ 4,522,766		$ 115,719,144	$ 4,812,466		$ 115,719,144	$ 4,812,466		$ 98,802,367	$ 4,108,940		$ 83,294,313	$ 3,463,999		$ 83,294,313	$ 3,463,999
48	4,354		$ 108,753,105	$ 4,226,884		$ 115,719,144	$ 4,497,632		$ 115,719,144	$ 4,497,632		$ 98,802,367	$ 3,840,131		$ 83,294,313	$ 3,237,383		$ 83,294,313	$ 3,237,383
49	4,069		$ 108,753,105	$ 3,950,359		$ 115,719,144	$ 4,203,394		$ 115,719,144	$ 4,203,394		$ 98,802,367	$ 3,588,907		$ 83,294,313	$ 3,025,591		$ 83,294,313	$ 3,025,591
50	3,803		$ 108,753,105	$ 3,691,924		$ 115,719,144	$ 3,928,406		$ 115,719,144	$ 3,928,406		$ 98,802,367	$ 3,354,119		$ 83,294,313	$ 2,827,655		$ 83,294,313	$ 2,827,655
51	3,554		$ 108,753,105	$ 3,450,396		$ 115,719,144	$ 3,671,407		$ 115,719,144	$ 3,671,407		$ 98,802,367	$ 3,134,691		$ 83,294,313	$ 2,642,669		$ 83,294,313	$ 2,642,669
52	3,321		$ 108,753,105	$ 3,224,670		$ 115,719,144	$ 3,431,222		$ 115,719,144	$ 3,431,222		$ 98,802,367	$ 2,929,617		$ 83,294,313	$ 2,469,784		$ 83,294,313	$ 2,469,784
53	3,104	$ 16,560,000		$ 458,902		$ 115,719,144	$ 3,206,749		$ 115,719,144	$ 3,206,749	$ 16,560,000		$ 458,902		$ 83,294,313	$ 2,308,209		$ 83,294,313	$ 2,308,209
54	2,901					$ 115,719,144	$ 2,996,962		$ 115,719,144	$ 2,996,962					$ 83,294,313	$ 2,157,205		$ 83,294,313	$ 2,157,205
55	2,711					$ 115,719,144	$ 2,800,899		$ 115,719,144	$ 2,800,899				$ 16,560,000		$ 400,823		$ 83,294,313	$ 2,016,079
56	2,534					$ 115,719,144	$ 2,617,663		$ 115,719,144	$ 2,617,663							$ 16,560,000		
57	2,368					$ 115,719,144	$ 2,446,414	$ 16,560,000		$ 350,094									
58	2,213					$ 115,719,144	$ 2,286,368												
59	2,068				$ 16,560,000														
Total PV costs				$ 2,748,747,190			$ 4,114,013,149			$ 4,105,136,893			$ 2,722,363,512			$ 3,903,421,100			$ 4,073,658,766
Unit cost				$ 2,036			$ 4,573			$ 3,985			$ 2,016			$ 3,310			$ 3,696

Table D.4.4 Life cycle cost analysis, 100 MGD facility, 7% discount rate, 50-year project life

APPENDIX E: Data Related to OCWD Willingness to Pay

Appendix E provides the background data and assumptions we used to estimate OCWD willingness to pay (WTP) for water from the desalination facility in the future. As described in the main Report, per the current term sheet, OCWD has indicated that it would be willing to pay an amount equal to the price of MWD water, plus a reliability premium and the amount of MWD's local water supply subsidy. Thus, to estimate WTP we first estimated future MWD rates based on established forecasts developed by MWD. The base rate that MWD charges for treated water (Tier 1 rate) is currently (2015) $1,081 per acre-foot. In recent history, the Tier 1 rate has increased between 1% and 5% annually in real dollars. As shown in Table B-1, in this analysis, we assume the Tier 1 rate will increase in the near future as it has in the recent past, by 3.3% between 2015 and 2025, on average. We then assume the annual rate of increase will drop back to 3% per year starting in 2025.

In addition to the MWD rates, OCWD has indicated that it is willing to pay a reliability premium for locally produced water. Consistent with our understanding of the ongoing contract discussions, in our projections we assume that the reliability premium amounts to 20% of MWD's Tier 1 water price for 10 years after construction. The premium drops to 15% of the Tier 1 price for the next ten years, to 10% for 10 more years, to 5% for ten years, and then finally to 0%. For this analysis, we assume that the reliability premium kicks in as the facility comes online - around 2020 (although in reality this will differ by alternative).

In addition, MWD currently provides a subsidy to communities that develop local water supplies (including desalination) to offset reliance on MWD water. We assume that MWD will continue to provide this subsidy into the future. The subsidy varies according to the unit cost of the local supplies that are developed. There are currently three subsidy options that may be available to OCWD, including a sliding scale of up to $340/AF for 25 years, a sliding scale for up to $475/AF for 15 years and a fixed $305/AF for 25 years. OCWD's current term sheet is based on the second option, a maximum of $475 per AF for up to 15 years, provided that the cost of the local supply exceeds MWD rates by this amount.

Table E.1 shows what the subsidy would be in any given year of the analysis, based on the average cost of each intake option. The table shows more than 15 years of the subsidy because the year that the subsidy runs out will depend on when the project actually comes online.

Based on these assumptions, the final columns in Table B-1 show OCWD's WTP for water from a desalination facility with the different intake options. Uncertainty surrounding these estimates includes uncertainty regarding the rate at which MWD prices will increase in the future, as well as the actual unit cost of the desalination facility with different intake options. As unit costs change, the subsidy that MWD provides may also change, depending on how close it is to the project MWD rate.

						Amount over/below MWD rate			Subsidy (only available for 15 years following construction)			**Willingess to pay (MWD cost+reliability premium+subsidy)**		
		MWD rates - Tier 1 Treated	Forecasted increase	Reliability premium per current term sheet	MWD rate w/reliability premium	Open Ocean	SIG Trestle	SIG Float-in	Open Ocean	SIG Trestle	SIG Float-in	Open Ocean	SIG Trestle	SIG Float-in
1	2015	$1,081		0%	$1,081.00	906.31	2,518.13	2,453.75	$ 475	$ 475	$ 475	$1,556.00	$1,556.00	$1,556.00
2	2016	$1,103	2.1%	0%	$1,103.25	884.06	2,495.87	2,431.50	$ 475	$ 475	$ 475	$1,578.25	$1,578.25	$1,578.25
3	2017	$1,140	3.3%	0%	$1,139.56	847.75	2,459.57	2,395.19	$ 475	$ 475	$ 475	$1,614.56	$1,614.56	$1,614.56
4	2018	$1,170	2.7%	0%	$1,170.01	817.30	2,429.12	2,364.74	$ 475	$ 475	$ 475	$1,645.01	$1,645.01	$1,645.01
5	2019	$1,203	2.8%	0%	$1,202.80	784.51	2,396.32	2,331.95	$ 475	$ 475	$ 475	$1,677.80	$1,677.80	$1,677.80
6	2020	$1,252	4.1%	20%	$1,502.39	735.32	2,347.13	2,282.76	$ 475	$ 475	$ 475	$1,977.39	$1,977.39	$1,977.39
7	2021	$1,298	3.6%	20%	$1,557.20	689.64	2,301.46	2,237.08	$ 475	$ 475	$ 475	$2,032.20	$2,032.20	$2,032.20
8	2022	$1,342	3.4%	20%	$1,610.61	645.14	2,256.95	2,192.58	$ 475	$ 475	$ 475	$2,085.61	$2,085.61	$2,085.61
9	2023	$1,391	3.7%	20%	$1,669.64	595.95	2,207.76	2,143.39	$ 475	$ 475	$ 475	$2,144.64	$2,144.64	$2,144.64
10	2024	$1,444	3.8%	20%	$1,732.88	543.25	2,155.06	2,090.68	$ 475	$ 475	$ 475	$2,207.88	$2,207.88	$2,207.88
11	2025	$1,487	3.0%	20%	$1,784.87	499.92	2,111.74	2,047.36	$ 475	$ 475	$ 475	$2,259.87	$2,259.87	$2,259.87
12	2026	$1,532	3.0%	20%	$1,838.41	455.30	2,067.12	2,002.74	$ 455	$ 475	$ 475	$2,293.71	$2,313.41	$2,313.41
13	2027	$1,578	3.0%	20%	$1,893.56	409.34	2,021.15	1,956.78	$ 409	$ 475	$ 475	$2,302.91	$2,368.56	$2,368.56
14	2028	$1,625	3.0%	20%	$1,950.37	362.00	1,973.82	1,909.44	$ 362	$ 475	$ 475	$2,312.37	$2,425.37	$2,425.37
15	2029	$1,674	3.0%	20%	$2,008.88	313.24	1,925.06	1,860.68	$ 313	$ 475	$ 475	$2,322.13	$2,483.88	$2,483.88
16	2030	$1,724	3.0%	15%	$1,982.93	263.02	1,874.83	1,810.46	$ 263	$ 475	$ 475	$2,245.96	$2,457.93	$2,457.93
17	2031	$1,776	3.0%	15%	$2,042.42	211.29	1,823.11	1,758.73	$ 211	$ 475	$ 475	$2,253.72	$2,517.42	$2,517.42
18	2032	$1,829	3.0%	15%	$2,103.69	158.01	1,769.83	1,705.45	$ 158	$ 475	$ 475	$2,261.71	$2,578.69	$2,578.69
19	2033	$1,884	3.0%	15%	$2,166.81	103.13	1,714.95	1,650.57	$ 103	$ 475	$ 475	$2,269.94	$2,641.81	$2,641.81
20	2034	$1,941	3.0%	15%	$2,231.81	46.61	1,658.42	1,594.05	$ 47	$ 475	$ 475	$2,278.42	$2,706.81	$2,706.81
21	2035	$1,999	3.0%	15%	$2,298.76	(11.61)	1,600.20	1,535.82	$ -	$ 475	$ 475	$2,298.76	$2,773.76	$2,773.76
22	2036	$2,059	3.0%	15%	$2,367.73	(71.58)	1,540.23	1,475.86	$ -	$ 475	$ 475	$2,367.73	$2,842.73	$2,842.73
23	2037	$2,121	3.0%	15%	$2,438.76	(133.35)	1,478.47	1,414.09	$ -	$ 475	$ 475	$2,438.76	$2,913.76	$2,913.76
24	2038	$2,184	3.0%	15%	$2,511.92	(196.97)	1,414.85	1,350.47	$ -	$ 475	$ 475	$2,511.92	$2,986.92	$2,986.92
25	2039	$2,250	3.0%	15%	$2,587.28	(262.50)	1,349.32	1,284.94	$ -	$ 475	$ 475	$2,587.28	$3,062.28	$3,062.28
26	2040	$2,317	3.0%	10%	$2,549.03	(329.99)	1,281.82	1,217.45	$ -	$ 475	$ 475	$2,549.03	$3,024.03	$3,024.03
27	2041	$2,387	3.0%	10%	$2,625.50	(399.51)	1,212.30	1,147.93	$ -	$ 475	$ 475	$2,625.50	$3,100.50	$3,100.50
28	2042	$2,458	3.0%	10%	$2,704.27	(471.11)	1,140.70	1,076.32	$ -	$ 475	$ 475	$2,704.27	$3,179.27	$3,179.27
29	2043	$2,532	3.0%	10%	$2,785.40	(544.87)	1,066.95	1,002.57	$ -	$ 475	$ 475	$2,785.40	$3,260.40	$3,260.40
30	2044	$2,608	3.0%	10%	$2,868.96	(620.83)	990.98	926.61	$ -	$ 475	$ 475	$2,868.96	$3,343.96	$3,343.96
31	2045	$2,686	3.0%	10%	$2,955.03	(699.08)	912.74	848.36	$ -	$ 475	$ 475	$2,955.03	$3,430.03	$3,430.03
32	2046	$2,767	3.0%	10%	$3,043.68	(779.67)	832.15	767.77	$ -	$ 475	$ 475	$3,043.68	$3,518.68	$3,518.68
33	2047	$2,850	3.0%	10%	$3,134.99	(862.68)	749.14	684.76	$ -	$ 475	$ 475	$3,134.99	$3,609.99	$3,609.99
34	2048	$2,935	3.0%	10%	$3,229.04	(948.18)	663.64	599.26	$ -	$ 475	$ 475	$3,229.04	$3,704.04	$3,704.04
35	2049	$3,024	3.0%	10%	$3,325.91	(1,036.24)	575.57	511.20	$ -	$ 475	$ 475	$3,325.91	$3,800.91	$3,800.91
36	2050	$3,114	3.0%	5%	$3,269.97	(1,126.95)	484.86	420.49	$ -	$ 475	$ 420	$3,269.97	$3,744.97	$3,690.46
37	2051	$3,208	3.0%	5%	$3,368.07	(1,220.38)	391.44	327.06	$ -	$ 391	$ 327	$3,368.07	$3,759.51	$3,695.13
38	2052	$3,304	3.0%	5%	$3,469.11	(1,316.61)	295.21	230.83	$ -	$ 295	$ 231	$3,469.11	$3,764.32	$3,699.95
39	2053	$3,403	3.0%	5%	$3,573.19	(1,415.72)	196.09	131.71	$ -	$ 196	$ 132	$3,573.19	$3,769.28	$3,704.90
40	2054	$3,505	3.0%	5%	$3,680.38	(1,517.81)	94.00	29.62	$ -	$ 94	$ 30	$3,680.38	$3,774.38	$3,710.01
41	2055	$3,610	3.0%	5%	$3,790.80	(1,622.97)	(11.16)	(75.53)	$ -	$ -	$ -	$3,790.80	$3,790.80	$3,790.80
42	2056	$3,719	3.0%	5%	$3,904.52	(1,731.28)	(119.46)	(183.84)	$ -	$ -	$ -	$3,904.52	$3,904.52	$3,904.52
43	2057	$3,830	3.0%	5%	$4,021.65	(1,842.83)	(231.02)	(295.40)	$ -	$ -	$ -	$4,021.65	$4,021.65	$4,021.65
44	2058	$3,945	3.0%	5%	$4,142.30	(1,957.74)	(345.93)	(410.30)	$ -	$ -	$ -	$4,142.30	$4,142.30	$4,142.30
45	2059	$4,063	3.0%	5%	$4,266.57	(2,076.09)	(464.28)	(528.65)	$ -	$ -	$ -	$4,266.57	$4,266.57	$4,266.57
46	2060	$4,185	3.0%	0%	$4,185.31	(2,197.99)	(586.18)	(650.56)	$ -	$ -	$ -	$4,185.31	$4,185.31	$4,185.31
47	2061	$4,311	3.0%	0%	$4,310.86	(2,323.55)	(711.74)	(776.11)	$ -	$ -	$ -	$4,310.86	$4,310.86	$4,310.86
48	2062	$4,440	3.0%	0%	$4,440.19	(2,452.88)	(841.07)	(905.44)	$ -	$ -	$ -	$4,440.19	$4,440.19	$4,440.19
49	2063	$4,573	3.0%	0%	$4,573.40	(2,586.08)	(974.27)	(1,038.65)	$ -	$ -	$ -	$4,573.40	$4,573.40	$4,573.40
50	2064	$4,711	3.0%	0%	$4,710.60	(2,723.29)	(1,111.47)	(1,175.85)	$ -	$ -	$ -	$4,710.60	$4,710.60	$4,710.60
51	2065	$4,852	3.0%	0%	$4,851.92	(2,864.60)	(1,252.79)	(1,317.17)	$ -	$ -	$ -	$4,851.92	$4,851.92	$4,851.92
52	2066	$4,997	3.0%	0%	$4,997.47	(3,010.16)	(1,398.35)	(1,462.72)	$ -	$ -	$ -	$4,997.47	$4,997.47	$4,997.47
53	2067	$5,147	3.0%	0%	$5,147.40	(3,160.09)	(1,548.27)	(1,612.65)	$ -	$ -	$ -	$5,147.40	$5,147.40	$5,147.40
54	2068	$5,302	3.0%	0%	$5,301.82	(3,314.51)	(1,702.69)	(1,767.07)	$ -	$ -	$ -	$5,301.82	$5,301.82	$5,301.82
55	2069	$5,461	3.0%	0%	$5,460.87	(3,473.56)	(1,861.75)	(1,926.12)	$ -	$ -	$ -	$5,460.87	$5,460.87	$5,460.87

Table E.1 Assumptions and inputs used to estimate OCWD WTP

APPENDIX F: Sensitive Plants and Animals in the Huntington Beach Wetland Area

Table F.1 Sensitive species known from the vicinity with potential to occur in the Huntington Beach Wetland complex

Species	Common Name
Plants	
Aphanisma blitoides	Aphanisma
Atriplex coulteri	Coulter's Saltbush
Atriplex pacifica	South Coast Saltscale
Atriplex serenana var. davidsonii	Davidson's Saltscale
Astragalus pycnostachyus var. lanosissimus	Ventura Marsh Milk-vetch
Centromadia parryi ssp. Australis	Southern Tarplant
Cordylanthus maritimus ssp. maritimus	Salt Marsh Bird's-beak
Juncus acutus ssp. leopoldii	Southwestern Spiny Rush
Lasthenia glabrata ssp. coulteri	Coulter's Goldfields
Nemacaulis denudata var. denudata	Coast Woolly-Heads
Nama stenocarpum	Mud Nama
Navarretia prostrata	Prostrate
Navarretia Suaeda esteroa	Estuary Seablite
Animals	
Athene cunicularia	Burrowing Owl
Charadrius alexandrinus nivosus	Western Snowy Plover
Cicindela gabbi	Gabb's Tiger Beetle
Panoquina errans	Salt Marsh Skipper
Passerculus sandwichensis beldingi	Belding's Savannah Sparrow
Pelecanus occidentalis	California Brown Pelican
Rallus longirostris levipes	Light-footed Clapper Rail
Sterna antillarum browni	California Least Tern
Trigonoscuta dorothea dorothea	Dorothy's El Segundo Dune Weevil
Tryonia imitator	Mimic Tryonia (California Brackish Water Snail)

Source: Merkel & Associates, 2004