



Note: Process Design based on recycling ratio of 1.5Q (Parameters 14 & 16)  
Client requested to use a recycle ratio of (3Q + 100m<sup>3</sup>/hr) divided evenly into two Tanks.

COD:BOD 2 (To be confirmed during detailed design)  
Estimated Values in Final Settlement Tank  
XX - % Expected / Removal / Destruction Rate  
Clients Input Parameters & Acwa Assumptions

Parameter	Units	Returned liq. Based on																												Recycled		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	A	B	
Flows	m <sup>3</sup> /day	602.00	30.10	25.93	4.17	3.71	29.64	601.54	601.54	601.54	1431.00	2294.25	0.00	2294.25	3049.50	5343.75	3049.50	8393.25	8393.25	2070.25	6323.00	224.00	2070.25	41.40	2028.84	33.82	30.13	231.59	261.71	0.46	3.69	
	m <sup>3</sup> /hr	25.08	1.25	1.08	0.17	0.15	1.23	25.06	25.06	25.06	59.63	95.59	0.00	95.59	127.06	222.66	127.06	349.72	349.72	86.26	263.46	9.33	86.26	1.73	84.54	1.41	1.26	9.65	10.90	0.02	0.15	
COD Concentration	PPM	1708.00	1622.60	1622.60	1622.60	1622.60	1622.60	1622.60	1622.60	973.56	1817.00	50.00	1393.54	50.00	576.68	3081.64	152.48	3081.64	3040.07	364.81	89.98	274.83	9.74	89.98	0.90	89.08						
COD Load	Kg/d	1028.22	48.84	42.07	6.77	6.02	48.09	976.06	976.06	585.64	2600.13	3197.14	0.00	3197.14	152.48	3081.64	152.48	3081.64	3040.07	364.81	89.98	274.83	9.74	89.98	0.90	89.08						
COD Removal/Availa.	%	100.0	95.0	---	---	---	---	95.0	95.0	57.0	43.00	100.00	100.00	---	96.39	---	---	95.09	11.41	2.81	---	---	---	---	2.79							
BOD Concentration	PPM	854.00	828.38	828.38	828.38	828.38	828.38	811.30	811.30	1460.34	908.50	952.43	20.00	952.43	20.00	315.24	20.00	176.78	26.52	25.19	25.19	25.19	25.19	12.60	25.45							
BOD Load	Kg/d	514.11	24.93	21.48	3.46	3.08	24.55	488.03	488.03	878.45	1300.06	2185.11	0.00	2185.11	60.99	1684.57	60.99	1483.73	222.56	52.15	159.28	5.64	52.15	0.52	51.63							
TSS Concentration	PPM	500.00	7000.00	1400.00	40400.00	4000.00	1725.62	100.00	100.00	100.00	500.00	567.26	7000.00	567.26	7000.00	4238.21	7000.00	5241.65	5517.94	165.54	7000.00	7000.00	182.09	1500.00	9.29	41200.00	4000.00	1750.00	2009.0	320000.00	320000.00	
TSS Load	Kg/d	301.00	240.80	36.30	168.56	14.85	51.15	60.15	60.15	60.15	715.50	1301.43	0.00	1301.43	21346.50	22647.93	21346.50	43994.43	46313.43	342.70	44261.00	1568.00	376.98	62.11	18.85	1393.38	120.50	405.27	525.78	147.26	1182.05	
TP Concentration	PPM	619.00	11389.60	49.52	81860.10	49.52	49.52	49.52	49.52	49.52	0.10	13.57	12.00	13.57	12.00	12.04	12.00	11.42	4.57	4.57	4.57	4.57	1.37	27.42	0.84	4.0%	0.4%	0.2%	4.57		32.0%	
TP Load	Kg/d	372.64	342.83	1.28	341.54	0.18	1.47	29.79	29.79	29.79	0.14	31.13	0.00	31.13	36.59	64.34	36.59	95.88	38.35	9.46	28.89	1.02	2.84	1.14	1.70	DS	DS	DS	4.57		DS	
TP Removal/Availa.	%	100.0	1840.0	8.0	---	---	---	8.0	8.0	8.0	0	???	???	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TN Concentration	PPM	350.00	142.86	142.86	142.86	142.86	142.86	142.86	142.86	142.86	146.00	129.04	15.00	129.04	15.00	31.98	15.00	12.91	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	
TN Load	Kg/d	210.70	210.70	3.70	0.60	0.53	4.23	85.93	85.93	85.93	208.93	296.04	0.00	296.04	45.74	170.89	45.74	108.32	37.91	9.35	28.56	1.01	9.35	0.19	9.16							