APPENDIX A - Wasteload Analysis Summary
Central Weber Sewer Improvement District WWTP

UPDES UT0021911
7/28/2014

Parameter of Interest	Season	Receiving Water 7Q10 Flow, cfs cfs	Receiving Water Temp. Deg. C	Receiving Water pH pH	Receiving Water Conc. mg/l	Discharge pH	Blended 001 pH	Blended 002 pH	NH3-N/TRC Decay Coeff. per Day	WQ Std. 001 mg/l	WQ Std. 002 mg/l	Std. Acute or Chronic	Chronic TRC/Metal Std. mg/l	Acute TRC/Metal Std. mg/l	WWTP Design Flow MGD	WWTP Flow to Weber R. MGD	WWTP Flow to Warren C. MGD	Warren C. Flow to Weber MGD	Effluent Limit mg/l
								Scenario 1(a) - 69.5 MGD to Outfall 002							**69.5**	**0**	**69.5**	**69.5**	
NH3-N	Summer	37	17.7	8.2	0.11	7.47		7.81	4.4		11.99	Acute			69.5	0.0	69.5	69.5	**38.57**
NH3-N	Fall	55	6.7	8.2	0.06	7.43		7.84	4.4		11.38	Acute			69.5	0.0	69.5	69.5	**28.35**
NH3-N	Spring	39	11.7	8.0	0.10	7.41		7.69	4.4		14.76	Acute			69.5	0.0	69.5	69.5	**38.90**
NH3-N	Winter	42	3.8	8.1	0.12	7.38		7.73	4.4		13.79	Acute			69.5	0.0	69.5	69.5	**30.65**
NH3-N	Summer	37	17.7	8.2	0.11	7.47		7.81	4.4		2.57	Chronic			69.5	0.0	69.5	69.5	**9.57**
NH3-N	Fall	55	6.7	8.2	0.06	7.43		7.84	4.4		3.04	Chronic			69.5	0.0	69.5	69.5	**9.27**
NH3-N	Spring	39	11.7	8.0	0.10	7.41		7.69	4.4		3.63	Chronic			69.5	0.0	69.5	69.5	**11.17**
NH3-N	Winter	42	3.8	8.1	0.12	7.38		7.73	4.4		3.47	Chronic			69.5	0.0	69.5	69.5	**9.06**
TRC	Summer	37	17.7	8.2	0.000				30.0		0.0190	Acute			69.5	0.0	69.5	69.5	**3.711**
TRC	Fall	55	6.7	8.2	0.000				30.0		0.0190	Acute			69.5	0.0	69.5	69.5	**0.412**
TRC	Spring	39	11.7	8.0	0.000				30.0		0.0190	Acute			69.5	0.0	69.5	69.5	**0.906**
TRC	Winter	42	3.8	8.1	0.000				30.0		0.0190	Acute			69.5	0.0	69.5	69.5	**0.263**
TRC	Summer	37	17.7	8.2	0.00000				30.0		0.011	Chronic			69.5	0.0	69.5	69.5	**2.508**
TRC	Fall	55	6.7	8.2	0.00000				30.0		0.011	Chronic			69.5	0.0	69.5	69.5	**0.293**
TRC	Spring	39	11.7	8.0	0.00000				30.0		0.011	Chronic			69.5	0.0	69.5	69.5	**0.616**
TRC	Winter	42	3.8	8.1	0.00000				30.0		0.011	Chronic			69.5	0.0	69.5	69.5	**0.180**
Copper	Summer	37			0.0018						0.05713	Acute			69.5	0.0	69.5	69.5	**0.0899**
Copper	Fall	55			0.0018						0.05713	Acute			69.5	0.0	69.5	69.5	**0.0970**
Copper	Spring	39			0.0018						0.05713	Acute			69.5	0.0	69.5	69.5	**0.0906**
Copper	Winter	42			0.0018						0.05713	Acute			69.5	0.0	69.5	69.5	**0.0918**
Copper	Summer	37			0.0018						0.0353	Chronic			69.5	0.0	69.5	69.5	**0.0640**
Copper	Fall	55			0.0018						0.0353	Chronic			69.5	0.0	69.5	69.5	**0.0727**
Copper	Spring	39			0.0018						0.0353	Chronic			69.5	0.0	69.5	69.5	**0.0650**
Copper	Winter	42			0.0018						0.0353	Chronic			69.5	0.0	69.5	69.5	**0.0664**
Mercury	Summer	37			2.0E-06						0.002400	Acute			69.5	0.0	69.5	69.5	**0.0038**
Mercury	Fall	55			2.0E-06						0.002400	Acute			69.5	0.0	69.5	69.5	**0.0041**
Mercury	Spring	39			2.0E-06						0.002400	Acute			69.5	0.0	69.5	69.5	**0.0039**
Mercury	Winter	42			2.0E-06						0.002400	Acute			69.5	0.0	69.5	69.5	**0.0039**
Mercury	Summer	37			2.0E-06						0.000012	Chronic			69.5	0.0	69.5	69.5	**0.000021**
Mercury	Fall	55			2.0E-06						0.000012	Chronic			69.5	0.0	69.5	69.5	**0.000023**
Mercury	Spring	39			2.0E-06						0.000012	Chronic			69.5	0.0	69.5	69.5	**0.000021**
Mercury	Winter	42			2.0E-06						0.000012	Chronic			69.5	0.0	69.5	69.5	**0.000021**
																			Limit
								Scenario 1(b) - 25 MGD to Outfall 002							**69.5**	**0**	**69.5**	**25**	
NH3-N	Summer	37	17.7	8.2	0.11	7.47		7.89	4.4		10.32	Acute			69.5	0.0	69.5	25.0	**38.35**
NH3-N	Fall	55	6.7	8.2	0.06	7.43		7.93	4.4		9.58	Acute			69.5	0.0	69.5	25.0	**28.97**
NH3-N	Spring	39	11.7	8.0	0.10	7.41		7.76	4.4		13.13	Acute			69.5	0.0	69.5	25.0	**40.25**
NH3-N	Winter	42	3.8	8.1	0.12	7.38		7.81	4.4		11.90	Acute			69.5	0.0	69.5	25.0	**30.99**
NH3-N	Summer	37	17.7	8.2	0.11	7.47		7.89	4.4		2.31	Chronic			69.5	0.0	69.5	25.0	**10.86**
NH3-N	Fall	55	6.7	8.2	0.06	7.43		7.93	4.4		2.68	Chronic			69.5	0.0	69.5	25.0	**11.01**
NH3-N	Spring	39	11.7	8.0	0.10	7.41		7.76	4.4		3.36	Chronic			69.5	0.0	69.5	25.0	**13.17**
NH3-N	Winter	42	3.8	8.1	0.12	7.38		7.81	4.4		3.14	Chronic			69.5	0.0	69.5	25.0	**10.53**

TRC	Summer	37	17.7	8.2	0.000			30.0	0.0190	Acute	69.5	0.0	69.5	25.0	**4.292**
TRC	Fall	55	6.7	8.2	0.000			30.0	0.0190	Acute	69.5	0.0	69.5	25.0	**0.501**
TRC	Spring	39	11.7	8.0	0.000			30.0	0.0190	Acute	69.5	0.0	69.5	25.0	**1.054**
TRC	Winter	42	3.8	8.1	0.000			30.0	0.0190	Acute	69.5	0.0	69.5	25.0	**0.308**
TRC	Summer	37	17.7	8.2	0.000			30.0	0.011	Chronic	69.5	0.0	69.5	25.0	**3.180**
TRC	Fall	55	6.7	8.2	0.000			30.0	0.011	Chronic	69.5	0.0	69.5	25.0	**0.396**
TRC	Spring	39	11.7	8.0	0.000			30.0	0.011	Chronic	69.5	0.0	69.5	25.0	**0.788**
TRC	Winter	42	3.8	8.1	0.000			30.0	0.011	Chronic	69.5	0.0	69.5	25.0	**0.233**
Copper	Summer	37			0.0018				0.05713	Acute	69.5	0.0	69.5	25.0	**0.1036**
Copper	Fall	55			0.0018				0.05713	Acute	69.5	0.0	69.5	25.0	**0.1175**
Copper	Spring	39			0.0018				0.05713	Acute	69.5	0.0	69.5	25.0	**0.1052**
Copper	Winter	42			0.0018				0.05713	Acute	69.5	0.0	69.5	25.0	**0.1075**
Copper	Summer	37			0.0018				0.0353	Chronic	69.5	0.0	69.5	25.0	**0.0807**
Copper	Fall	55			0.0018				0.0353	Chronic	69.5	0.0	69.5	25.0	**0.0975**
Copper	Spring	39			0.0018				0.0353	Chronic	69.5	0.0	69.5	25.0	**0.0826**
Copper	Winter	42			0.0018				0.0353	Chronic	69.5	0.0	69.5	25.0	**0.0854**
Mercury	Summer	37			2.0E-06				0.002400	Acute	69.5	0.0	69.5	25.0	**0.0038**
Mercury	Fall	55			2.0E-06				0.002400	Acute	69.5	0.0	69.5	25.0	**0.0050**
Mercury	Spring	39			2.0E-06				0.002400	Acute	69.5	0.0	69.5	25.0	**0.0045**
Mercury	Winter	42			2.0E-06				0.002400	Acute	69.5	0.0	69.5	25.0	**0.0046**
Mercury	Summer	37			2.0E-06				0.000012	Chronic	69.5	0.0	69.5	25.0	**0.000026**
Mercury	Fall	55			2.0E-06				0.000012	Chronic	69.5	0.0	69.5	25.0	**0.000031**
Mercury	Spring	39			2.0E-06				0.000012	Chronic	69.5	0.0	69.5	25.0	**0.000026**
Mercury	Winter	42			2.0E-06				0.000012	Chronic	69.5	0.0	69.5	25.0	**0.000027**
															Limit
							Scenario 2 - 69.5 MGD to Outfall 001				**69.5**	**69.5**	**0**	**0**	
NH3-N	Summer	37	17.7	8.2	0.11	7.47	7.66	4.4	15.52	Acute	69.5	69.5	0.0	0.0	**19.63**
NH3-N	Fall	55	6.7	8.2	0.06	7.43	7.69	4.4	14.67	Acute	69.5	69.5	0.0	0.0	**20.45**
NH3-N	Spring	39	11.7	8.0	0.10	7.41	7.57	4.4	17.95	Acute	69.5	69.5	0.0	0.0	**22.95**
NH3-N	Winter	42	3.8	8.1	0.12	7.38	7.58	4.4	17.52	Acute	69.5	69.5	0.0	0.0	**22.78**
NH3-N	Summer	37	17.7	8.2	0.11	7.47	7.66	4.4	3.05	Chronic	69.5	69.5	0.0	0.0	**4.62**
NH3-N	Fall	55	6.7	8.2	0.06	7.43	7.69	4.4	3.62	Chronic	69.5	69.5	0.0	0.0	**6.43**
NH3-N	Spring	39	11.7	8.0	0.10	7.41	7.57	4.4	4.11	Chronic	69.5	69.5	0.0	0.0	**6.35**
NH3-N	Winter	42	3.8	8.1	0.12	7.38	7.58	4.4	4.05	Chronic	69.5	69.5	0.0	0.0	**6.42**
TRC	Summer	37	17.7	8.2	0.000			30.0	0.0190	Acute	69.5	69.5	0.0	0.0	**0.024**
TRC	Fall	55	6.7	8.2	0.000			30.0	0.0190	Acute	69.5	69.5	0.0	0.0	**0.027**
TRC	Spring	39	11.7	8.0	0.000			30.0	0.0190	Acute	69.5	69.5	0.0	0.0	**0.024**
TRC	Winter	42	3.8	8.1	0.000			30.0	0.0190	Acute	69.5	69.5	0.0	0.0	**0.025**
TRC	Summer	37	17.7	8.2	0.000			30.0	0.011	Chronic	69.5	69.5	0.0	0.0	**0.017**
TRC	Fall	55	6.7	8.2	0.000			30.0	0.011	Chronic	69.5	69.5	0.0	0.0	**0.020**
TRC	Spring	39	11.7	8.0	0.000			30.0	0.011	Chronic	69.5	69.5	0.0	0.0	**0.017**
TRC	Winter	42	3.8	8.1	0.000			30.0	0.011	Chronic	69.5	69.5	0.0	0.0	**0.018**
Copper	Summer	37			0.0018				0.05713	Acute	69.5	69.5	0.0	0.0	**0.0719**
Copper	Fall	55			0.0018				0.05713	Acute	69.5	69.5	0.0	0.0	**0.0790**
Copper	Spring	39			0.0018				0.05713	Acute	69.5	69.5	0.0	0.0	**0.0727**
Copper	Winter	42			0.0018				0.05713	Acute	69.5	69.5	0.0	0.0	**0.0738**
Copper	Summer	37			0.0018				0.0353	Chronic	69.5	69.5	0.0	0.0	**0.0531**
Copper	Fall	55			0.0018				0.0353	Chronic	69.5	69.5	0.0	0.0	**0.0618**
Copper	Spring	39			0.0018				0.0353	Chronic	69.5	69.5	0.0	0.0	**0.0541**
Copper	Winter	42			0.0018				0.0353	Chronic	69.5	69.5	0.0	0.0	**0.0555**

Mercury	Summer	37			2.0E-06					0.002400	Acute	69.5	69.5	0.0	0.0	0.0030
Mercury	Fall	55			2.0E-06					0.002400	Acute	69.5	69.5	0.0	0.0	0.0033
Mercury	Spring	39			2.0E-06					0.002400	Acute	69.5	69.5	0.0	0.0	0.0031
Mercury	Winter	42			2.0E-06					0.002400	Acute	69.5	69.5	0.0	0.0	0.0031
Mercury	Summer	37			2.0E-06					0.000012	Chronic	69.5	69.5	0.0	0.0	0.000017
Mercury	Fall	55			2.0E-06					0.000012	Chronic	69.5	69.5	0.0	0.0	0.000020
Mercury	Spring	39			2.0E-06					0.000012	Chronic	69.5	69.5	0.0	0.0	0.000018
Mercury	Winter	42			2.0E-06					0.000012	Chronic	69.5	69.5	0.0	0.0	0.000018
																Limit
Scenario 3(a) - 25 MGD to Outfall 001 and 0 MGD to Outfall 002												**69.5**	**25**	**44.5**	**0**	
NH3-N	Summer	37	17.7	8.2	0.11	7.47	7.83	4.4	11.6		Acute	69.5	25.0	44.5	0.0	20.05
NH3-N	Fall	55	6.7	8.2	0.06	7.43	7.88	4.4	10.5		Acute	69.5	25.0	44.5	0.0	21.92
NH3-N	Spring	39	11.7	8.0	0.10	7.41	7.71	4.4	14.3		Acute	69.5	25.0	44.5	0.0	25.36
NH3-N	Winter	42	3.8	8.1	0.12	7.38	7.75	4.4	13.1		Acute	69.5	25.0	44.5	0.0	24.08
NH3-N	Summer	37	17.7	8.2	0.11	7.47	7.83	4.4	2.51		Chronic	69.5	25.0	44.5	0.0	6.053
NH3-N	Fall	55	6.7	8.2	0.06	7.43	7.88	4.4	2.87		Chronic	69.5	25.0	44.5	0.0	9.037
NH3-N	Spring	39	11.7	8.0	0.10	7.41	7.71	4.4	3.55		Chronic	69.5	25.0	44.5	0.0	8.941
NH3-N	Winter	42	3.8	8.1	0.12	7.38	7.75	4.4	3.36		Chronic	69.5	25.0	44.5	0.0	8.804
TRC	Summer	37	17.7	8.2	0.000			30.0	0.0190		Acute	69.5	25.0	44.5	0.0	0.033
TRC	Fall	55	6.7	8.2	0.000			30.0	0.0190		Acute	69.5	25.0	44.5	0.0	0.040
TRC	Spring	39	11.7	8.0	0.000			30.0	0.0190		Acute	69.5	25.0	44.5	0.0	0.034
TRC	Winter	42	3.8	8.1	0.000			30.0	0.0190		Acute	69.5	25.0	44.5	0.0	0.035
TRC	Summer	37	17.7	8.2	0.000			30.0	0.011		Chronic	69.5	25.0	44.5	0.0	0.027
TRC	Fall	55	6.7	8.2	0.000			30.0	0.011		Chronic	69.5	25.0	44.5	0.0	0.035
TRC	Spring	39	11.7	8.0	0.000			30.0	0.011		Chronic	69.5	25.0	44.5	0.0	0.028
TRC	Winter	42	3.8	8.1	0.000			30.0	0.011		Chronic	69.5	25.0	44.5	0.0	0.029
Copper	Summer	37			0.0018					0.05713	Acute	69.5	25.0	44.5	0.0	0.085
Copper	Fall	55			0.0018					0.05713	Acute	69.5	25.0	44.5	0.0	0.085
Copper	Spring	39			0.0018					0.05713	Acute	69.5	25.0	44.5	0.0	0.085
Copper	Winter	42			0.0018					0.05713	Acute	69.5	25.0	44.5	0.0	0.085
Copper	Summer	37			0.0018					0.0353	Chronic	69.5	25.0	44.5	0.0	0.0849
Copper	Fall	55			0.0018					0.0353	Chronic	69.5	25.0	44.5	0.0	0.1090
Copper	Spring	39			0.0018					0.0353	Chronic	69.5	25.0	44.5	0.0	0.0876
Copper	Winter	42			0.0018					0.0353	Chronic	69.5	25.0	44.5	0.0	0.0916
Mercury	Summer	37			2.0E-06					0.002400	Acute	69.5	25.0	44.5	0.0	0.0042
Mercury	Fall	55			2.0E-06					0.002400	Acute	69.5	25.0	44.5	0.0	0.0050
Mercury	Spring	39			2.0E-06					0.002400	Acute	69.5	25.0	44.5	0.0	0.0043
Mercury	Winter	42			2.0E-06					0.002400	Acute	69.5	25.0	44.5	0.0	0.0044
Mercury	Summer	37			2.0E-06					0.000012	Chronic	69.5	25.0	44.5	0.0	0.000027
Mercury	Fall	55			2.0E-06					0.000012	Chronic	69.5	25.0	44.5	0.0	0.000034
Mercury	Spring	39			2.0E-06					0.000012	Chronic	69.5	25.0	44.5	0.0	0.000028
Mercury	Winter	42			2.0E-06					0.000012	Chronic	69.5	25.0	44.5	0.0	0.000029
Scenario 3(B) - 25 MGD to Outfall 001 and 44.5 MGD to Outfall 002												**69.5**	**25**	**44.5**	**44.5**	
NH3-N	Summer	37	17.7	8.2	0.11	7.47	7.83	7.89	4.4	11.6	10.36	Acute	69.5	25.0	44.5	44.5	20.10
NH3-N	Fall	55	6.7	8.2	0.06	7.43	7.88	7.92	4.4	10.5	9.78	Acute	69.5	25.0	44.5	44.5	21.98
NH3-N	Spring	39	11.7	8.0	0.10	7.41	7.71	7.75	4.4	14.3	13.19	Acute	69.5	25.0	44.5	44.5	25.38
NH3-N	Winter	42	3.8	8.1	0.12	7.38	7.75	7.81	4.4	13.1	12.00	Acute	69.5	25.0	44.5	44.5	24.00
NH3-N	Summer	37	17.7	8.2	0.11	7.47	7.83	7.89	4.4	2.51	2.32	Chronic	69.5	25.0	44.5	44.5	6.04
NH3-N	Fall	55	6.7	8.2	0.06	7.43	7.88	7.92	4.4	2.87	2.73	Chronic	69.5	25.0	44.5	44.5	8.30

NH3-N	Spring	39	11.7	8.0	0.10	7.41	7.71	7.75	4.4	3.55	3.37	Chronic	69.5	25.0	44.5	44.5	9.06
NH3-N	Winter	42	3.8	8.1	0.12	7.38	7.75	7.81	4.4	3.36	3.16	Chronic	69.5	25.0	44.5	44.5	8.34
TRC	Summer	37	17.7	8.2	0.000				30.0	0.0190	0.0190	Acute	69.5	25.0	44.5	44.5	0.033
TRC	Fall	55	6.7	8.2	0.000				30.0	0.0190	0.0190	Acute	69.5	25.0	44.5	44.5	0.040
TRC	Spring	39	11.7	8.0	0.000				30.0	0.0190	0.0190	Acute	69.5	25.0	44.5	44.5	0.034
TRC	Winter	42	3.8	8.1	0.000				30.0	0.0190	0.0190	Acute	69.5	25.0	44.5	44.5	0.035
TRC	Summer	37	17.7	8.2	0.000				30.0	0.011	0.011	Chronic	69.5	25.0	44.5	44.5	0.027
TRC	Fall	55	6.7	8.2	0.000				30.0	0.011	0.011	Chronic	69.5	25.0	44.5	44.5	0.035
TRC	Spring	39	11.7	8.0	0.000				30.0	0.011	0.011	Chronic	69.5	25.0	44.5	44.5	0.028
TRC	Winter	42	3.8	8.1	0.000				30.0	0.011	0.011	Chronic	69.5	25.0	44.5	44.5	0.029
Copper	Summer	37			0.0018					0.05713	0.05713	Acute	69.5	25.0	44.5	44.5	0.08886
Copper	Fall	55			0.0018					0.05713	0.05713	Acute	69.5	25.0	44.5	44.5	0.09500
Copper	Spring	39			0.0018					0.05713	0.05713	Acute	69.5	25.0	44.5	44.5	0.08952
Copper	Winter	42			0.0018					0.05713	0.05713	Acute	69.5	25.0	44.5	44.5	0.09052
Copper	Summer	37			0.0018					0.0353	0.0353	Chronic	69.5	25.0	44.5	44.5	0.06347
Copper	Fall	55			0.0018					0.0353	0.0353	Chronic	69.5	25.0	44.5	44.5	0.07207
Copper	Spring	39			0.0018					0.0353	0.0353	Chronic	69.5	25.0	44.5	44.5	0.06443
Copper	Winter	42			0.0018					0.0353	0.0353	Chronic	69.5	25.0	44.5	44.5	0.06586
Mercury	Summer	37			2.0E-06					0.002400	0.002400	Acute	69.5	25.0	44.5	44.5	0.0038
Mercury	Fall	55			2.0E-06					0.002400	0.002400	Acute	69.5	25.0	44.5	44.5	0.0040
Mercury	Spring	39			2.0E-06					0.002400	0.002400	Acute	69.5	25.0	44.5	44.5	0.0038
Mercury	Winter	42			2.0E-06					0.002400	0.002400	Acute	69.5	25.0	44.5	44.5	0.0038
Mercury	Summer	37			2.0E-06					0.000012	0.000012	Chronic	69.5	25.0	44.5	44.5	0.000021
Mercury	Fall	55			2.0E-06					0.000012	0.000012	Chronic	69.5	25.0	44.5	44.5	0.000023
Mercury	Spring	39			2.0E-06					0.000012	0.000012	Chronic	69.5	25.0	44.5	44.5	0.000021
Mercury	Winter	42			2.0E-06					0.000012	0.000012	Chronic	69.5	25.0	44.5	44.5	0.000021