Appendix D
Tables 4.1 & 4.2

Table 4.1. GC Impoundment Water Balance Using Average Annual Precipitation (24.5"/yr)

Month		Data		Application Area		Effluent Impoundments								
		Precip	ET	Net ET,	irrigation	Inflow, ac-in			Outflow, ac-in		Storage Vol, ac-in		GC Pond	GC Pond
		in.	in.	in.	in.	effluent	GW	Precip.	Evap.	irrigation	Change	Net	level	area (AC)
(1)	Days	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(13)
Jan	31	4.40	0.31	0.0	0.0	0	0	48	1	0	47	228	0.0	2.1
Feb	28	3.72	0.40	0.0	0.0	0	0	40	1	0	39	228	0.0	2.1
Mar	31	3.42	1.24	0.0	0.0	0	0	37	3	0	34	228	0.0	2.1
Apr	30	1.56	4.07	1.7	1.7	44	200	17	8	290	-37	191	-1.1	2.0
May	31	1.27	4.30	2.2	2.2	46	320	14	9	371	0	191	-1.1	2.0
Jun	30	0.75	4.95	3.2	3.2	44	510	8	10	549	4	195	-1.0	2.0
Jul	31	0.40	6.26	4.6	4.6	46	750	4	12	788	0	195	-1.0	2.0
Aug	31	0.35	5.85	4.3	4.3	46	700	4	12	740	-3	192	-1.0	2.0
Sep	30	0.37	4.24	3.0	3.0	44	480	4	8	517	3	195	-1.0	2.0
Oct	31	1.55	2.64	0.6	0.6	46	30	17	5	96	-9	186	-1.2	2.0
Nov	30	2.70	0.70	0.0	0.0	0	0	29	1	0	28	214	-0.4	2.1
Dec	31	3.97	0.29	0.0	0.0	0	0	43	1	0	42	228	0.0	2.1
TOTAL		24.46	35.25	19.6	19.6	315	2990	264	70	3351	148	**	**	**

AADF WRF effluent flow, gal/d:	40,000	Kc Factor	0.8			
Average Day Domestic Demand, gal/d:	68,625	Impoundment Storage Area, ac:	2.0			
Annual Domestic Demand, ac-in:	923	Stormwater Runoff Area, ac:	44.0			
Annual Domestic Supply, ac-in:	4,394	Stormwater Runoff Coefficient	0.2			
Annual Supply Remaining for Irrigation, ac-in:	3,472	1 ft Freeboard GC Impoundment Storage Vol, ac-ft:	16.5	197.4	(ac-in)	
Irrigation Application Area, acres:	171	0 ft Freeboard (Overflow) Storage Vol, ac-ft:	19.0	228.0	(ac-in)	

(1) Water balance begins in April with impoundment full

(2) Precipitation figures provided in the project EIR by adjusting Portola annual average precipitation (1931-1997)

(3) Average monthly evapotranspiration (ET) obtained from project EIR using Tahoe City and Vinton

(4) Net ET equals ET (3) times Kc minus precipitation (2). Zero when negative.

(5) Applied quantity for irrigation assumed equal to Net ET (4) as percolation is estimated to be negligible.

(6) Wastewater effluent flow equals daily wastewater flow times days per month.

(7) Annual groundwater supply available after domestic demand

(8) Precipitation inflow equal precipitation (2) times total pond catchment area.

(9) Evaporation outflow equals ET(3) times and water surface area (13) from the previous month.

(10) Irrigation flow equals applied irrigation necessary (5) times application area (171 acres).

(11) Volume change equals sum of inflow (6), (7), (8) minus sum of outflow (9), (10)

(12) Net volume equals running total of volume changes (11) beginning in October (impoundment at min level)

(13) Total pond water surface area derived by interpolation of pond volumes (ac-in) and area (acres)

Table 4.2. GC Impoundment Water Balance Using 100-Year Adjusted Precipitation (41.6"/yr)

Month		Data		Application Area		Effluent Impoundments								
		Precip (100)	ET	Net ET,	irrigation	Inflow, ac-in			Outflow, ac-in		Storage Vol, ac-in		GC Pond	GC Pond
		in.	in.	in.	in.	effluent	GW	Precip.	Evap.	irrigation	Change	Net	level	area (AC)
(1)	Days	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(13)
Jan	31	7.48	0.31	0.0	0.0	0	0	81	1	0	80	228	0.0	2.1
Feb	28	6.32	0.40	0.0	0.0	0	0	68	1	0	67	228	0.0	2.1
Mar	31	5.81	1.24	0.0	0.0	0	0	63	3	0	60	228	0.0	2.1
Apr	30	2.65	4.07	0.6	0.6	44	0	29	3	103	-38	190	-1.1	2.0
May	31	2.16	4.30	1.3	1.3	46	160	23	9	219	1	191	-1.1	2.0
Jun	30	1.28	4.95	2.7	2.7	44	410	14	10	459	-1	190	-1.1	2.0
Jul	31	0.68	6.26	4.3	4.3	46	700	7	12	740	1	191	-1.1	2.0
Aug	31	0.60	5.85	4.1	4.1	46	660	6	12	699	2	193	-1.0	2.0
Sep	30	0.63	4.24	2.8	2.8	44	430	7	8	472	0	193	-1.0	2.0
Oct	31	2.64	2.64	0.0	0.0	0	0	28	5	0	23	216	-0.4	2.1
Nov	30	4.59	0.70	0.0	0.0	0	0	50	1	0	48	228	0.0	2.1
Dec	31	6.75	0.29	0.0	0.0	0	0	73	1	0	72	228	0.0	2.1
TOTAL		41.58	35.25	15.7	15.7	270	2360	449	71	2693	316	**	**	**

MMDF WRF effluent flow, gal/d:	40,000	Kc Factor	0.8		
Average Day Domestic Demand, gal/d:	68,625	Impoundment Storage Area, ac:	2.0		
Annual Domestic Demand, ac-in:	923	Stormwater Runoff Area, ac:	44.0		
Annual Domestic Supply, ac-in:	4,394	Stormwater Runoff Coefficient	0.2		
Annual Supply Remaining for Irrigation, ac-in:	3,472	1 ft Freeboard GC Impoundment Storage Vol, ac-ft:	16.5	197.4	(ac-in)
Irrigation Application Area, acres:	171	0 ft Freeboard (Overflow) Storage Vol, ac-ft:	19.0	228.0	(ac-in)

(1) Water balance begins in April with impoundment full
(2) Precipitation figures provided in the project EIR by adjusting Portola maximum annual precipitation (1931-1997)
(3) Average monthly evapotranspiration (ET) obtained from project EIR using Tahoe City and Vinton
(4) Net ET equals ET (3) times Kc minus precipitation (2). Zero when negative.
(5) Applied quantity for irrigation assumed equal to Net ET (4) as percolation is estimated to be negligible.
(6) Wastewater effluent flow equals daily wastewater flow times days per month.
(7) Annual groundwater supply available after domestic demand
(8) Precipitation inflow equal precipitation (2) times total pond catchment area.
(9) Evaporation outflow equals ET(3) times and water surface area (13) from the previous month.
(10) Irrigation flow equals applied irrigation necessary (5) times application area (171 acres).
(11) Volume change equals sum of inflow (6), (7), (8) minus sum of outflow (9), (10)
(12) Net volume equals running total of volume changes (11) beginning in October (impoundment at min level)
(13) Total pond water surface area derived by interpolation of pond volumes (ac-in) and area (acres)