TELLICO

Quick Lookup

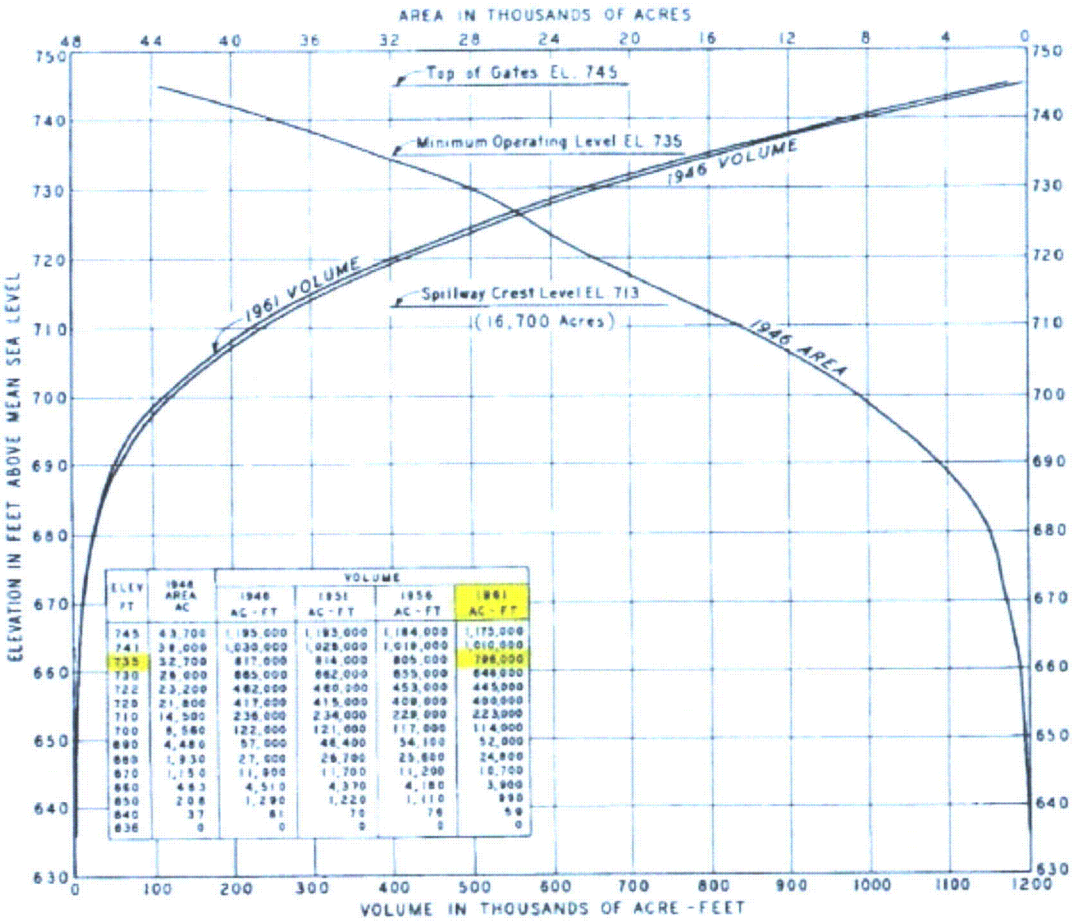
Storage	Enter known HW in green box Corresponding storage is in yellow/blue box		
	Elevation	Volume TDSF	Volume Ac-Ft
	815.00	213.764	423.994

HW	Enter known storage in green box Adjust value in gray box until value in blue box matches or closely approximates value in green box Corresponding HW is in yellow box			
	Volume			Elevation
	175.000	3.038	175.001	810.04

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
806.00	146.485	146.552	146.619	146.686	146.753	146.820	146.887	146.954	147.021	147.088
806.10	147.155	147.222	147.289	147.356	147.423	147.490	147.557	147.624	147.691	147.758
806.20	147.826	147.893	147.960	148.027	148.095	148.162	148.229	148.297	148.364	148.431
806.30	148.499	148.566	148.634	148.701	148.768	148.836	148.903	148.971	149.039	149.106
806.40	149.174	149.241	149.309	149.377	149.444	149.512	149.580	149.647	149.715	149.783
806.50	149.851	149.918	149.986	150.054	150.122	150.190	150.258	150.326	150.394	150.461
806.60	150.529	150.597	150.665	150.734	150.802	150.870	150.938	151.006	151.074	151.142
806.70	151.210	151.278	151.347	151.415	151.483	151.551	151.620	151.688	151.756	151.825
806.80	151.893	151.961	152.030	152.098	152.167	152.235	152.304	152.372	152.441	152.509
806.90	152.578	152.646	152.715	152.784	152.852	152.921	152.990	153.058	153.127	153.196
807.00	153.264	153.333	153.402	153.471	153.540	153.608	153.677	153.746	153.815	153.884
807.10	153.953	154.022	154.091	154.160	154.229	154.298	154.367	154.436	154.505	154.574
807.20	154.644	154.713	154.782	154.851	154.920	154.990	155.059	155.128	155.197	155.267
807.30	155.336	155.405	155.475	155.544	155.614	155.683	155.752	155.822	155.891	155.961
807.40	156.030	156.100	156.169	156.239	156.309	156.378	156.448	156.518	156.587	156.657
807.50	156.727	156.796	156.866	156.936	157.006	157.076	157.145	157.215	157.285	157.355
807.60	157.425	157.495	157.565	157.635	157.705	157.775	157.845	157.915	157.985	158.055
807.70	158.125	158.195	158.265	158.335	158.405	158.476	158.546	158.616	158.686	158.757
807.80	158.827	158.897	158.967	159.038	159.108	159.178	159.249	159.319	159.390	159.460
807.90	159.531	159.601	159.672	159.742	159.813	159.883	159.954	160.024	160.095	160.166

Attachment 11a: Watts Bar Bluebook Figure



ELEV FT	1946 AREA AC	VOLUME 1946 AC-FT	1951 AC-FT	1956 AC-FT	1961 AC-FT
745	43,700	1,195,000	1,193,000	1,184,000	1,175,000
741	38,000	1,030,000	1,025,000	1,019,000	1,010,000
735	32,700	817,000	814,000	805,000	798,000
730	28,000	665,000	662,000	655,000	646,000
722	23,200	482,000	480,000	453,000	445,000
720	21,800	417,000	415,000	408,000	400,000
710	14,500	236,000	234,000	229,000	223,000
700	8,580	122,000	121,000	117,000	114,000
690	4,480	57,000	46,400	54,100	52,000
680	1,930	27,000	26,700	25,600	24,800
670	1,150	11,900	11,700	11,200	10,700
660	463	4,510	4,370	4,180	3,900
650	208	1,290	1,220	1,110	990
640	37	81	70	76	59
636	0	0	0	0	0

NOTES

Reservoir areas at elevation 720 and below were measured on a composite map prepared by the Hydraulic Data Branch with contours drawn at 10' intervals. The map was prepared from Tennessee River Survey Maps made by the U.S. Army Engineers, with contours at 690, 700, 710 and 720. Contours were made to conform to elevations on TVA sediment range cross sections located at one to five mile intervals. Areas above elevation 720 were measured on TVA navigation maps with contours at elevations 722, 730, 735, 741 and 745, scale 1" = ½ mile. The areas at these elevations check with areas at the same elevations previously measured on TVA land maps. The 1946 volume was computed by the contour method. Volumes of sediment on succeeding dates were computed by the constant factor method.

Elevations are referred to the U.S.C. & G.S. 1936 Supplementary Adjustment.

Area of original river within reservoir = 10,343 acres.

Drainage area at dam = 17,310 square miles.

Dam closure January 1, 1942.

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

THIS DRAWING SUPERSEDES B-PP-1-321G370

TENNESSEE RIVER-MILE 529.9

RESERVOIR AREAS AND VOLUMES

WATTS BAR PROJECT
TENNESSEE VALLEY AUTHORITY
DIVISION OF WATER CONTROL PLANNING

SUBMITTED | RECOMMENDED | APPROVED

KNOXVILLE | 12-28-62 | 321G789

Attachment 11b: Watts Bar 1986 Level Storage Table

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

WATTS BAR

TOTAL LEVEL STORAGE IN 1000 CUBIC-SECOND-FEET

PAGE 1 OF 2

ELEV	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
730.0	325.69	325.83	325.97	326.11	326.25	326.39	326.53	326.67	326.81	326.95
.1	327.09	327.23	327.37	327.51	327.65	327.79	327.93	328.07	328.21	328.36
.2	328.50	328.64	328.78	328.92	329.06	329.20	329.34	329.48	329.62	329.77
.3	329.91	330.05	330.19	330.33	330.47	330.62	330.76	330.90	331.04	331.18
.4	331.32	331.47	331.61	331.75	331.89	332.03	332.18	332.32	332.46	332.60
730.5	332.74	332.89	333.03	333.17	333.31	333.45	333.60	333.74	333.88	334.02
.6	334.17	334.31	334.45	334.59	334.74	334.88	335.02	335.16	335.31	335.45
.7	335.59	335.74	335.88	336.02	336.17	336.31	336.45	336.60	336.74	336.88
.8	337.03	337.17	337.31	337.46	337.60	337.75	337.89	338.03	338.18	338.32
.9	338.46	338.61	338.75	338.90	339.04	339.18	339.33	339.47	339.61	339.76
731.0	339.90	340.05	340.19	340.34	340.48	340.63	340.77	340.91	341.06	341.20
.1	341.35	341.49	341.64	341.78	341.93	342.07	342.22	342.36	342.51	342.65
.2	342.80	342.94	343.09	343.23	343.38	343.52	343.67	343.81	343.96	344.11
.3	344.25	344.40	344.54	344.69	344.84	344.98	345.13	345.27	345.42	345.56
.4	345.71	345.86	346.00	346.15	346.30	346.44	346.59	346.73	346.88	347.03
.5	347.17	347.32	347.47	347.61	347.76	347.91	348.05	348.20	348.34	348.49
.6	348.64	348.79	348.93	349.08	349.23	349.37	349.52	349.67	349.82	349.96
.7	350.11	350.26	350.41	350.55	350.70	350.85	351.00	351.14	351.29	351.44
.8	351.59	351.74	351.88	352.03	352.18	352.33	352.48	352.62	352.77	352.92
.9	353.07	353.22	353.36	353.51	353.66	353.81	353.96	354.11	354.25	354.40
732.0	354.55	354.70	354.85	355.00	355.15	355.30	355.45	355.59	355.74	355.89
.1	356.04	356.19	356.34	356.49	356.64	356.79	356.94	357.09	357.23	357.38
.2	357.53	357.68	357.83	357.98	358.13	358.28	358.43	358.58	358.72	358.88
.3	359.03	359.18	359.33	359.48	359.64	359.79	359.94	360.09	360.24	360.39
.4	360.54	360.69	360.84	360.99	361.14	361.29	361.44	361.59	361.74	361.89
732.5	362.04	362.20	362.35	362.50	362.65	362.80	362.95	363.10	363.25	363.41
.6	363.56	363.71	363.86	364.01	364.16	364.32	364.47	364.62	364.77	364.92
.7	365.07	365.23	365.38	365.53	365.68	365.83	365.99	366.14	366.29	366.44
.8	366.60	366.75	366.90	367.05	367.21	367.36	367.51	367.66	367.82	367.97
.9	368.12	368.28	368.43	368.58	368.74	368.89	369.04	369.19	369.35	369.50
733.0	369.65	369.81	369.96	370.11	370.27	370.42	370.58	370.73	370.88	371.04
.1	371.19	371.34	371.50	371.65	371.81	371.96	372.11	372.27	372.42	372.58
.2	372.73	372.88	373.04	373.19	373.35	373.50	373.66	373.81	373.97	374.12
.3	374.28	374.43	374.59	374.74	374.90	375.05	375.21	375.36	375.52	375.68
.4	375.83	375.98	376.14	376.29	376.45	376.60	376.76	376.91	377.07	377.23
733.5	377.38	377.54	377.69	377.85	378.00	378.16	378.32	378.47	378.63	378.79
.6	378.94	379.10	379.25	379.41	379.57	379.72	379.88	380.04	380.19	380.35
.7	380.51	380.66	380.82	380.98	381.13	381.29	381.45	381.60	381.76	381.92
.8	382.08	382.24	382.39	382.55	382.71	382.87	383.02	383.18	383.34	383.50
.9	383.65	383.81	383.97	384.13	384.28	384.44	384.60	384.76	384.92	385.07
734.0	385.23	385.39	385.55	385.71	385.87	386.03	386.18	386.34	386.50	386.66
.1	386.82	386.98	387.14	387.29	387.45	387.61	387.77	387.93	388.09	388.25
.2	388.41	388.57	388.73	388.89	389.04	389.20	389.36	389.52	389.68	389.84
.3	390.00	390.16	390.32	390.48	390.64	390.80	390.96	391.12	391.28	391.44
.4	391.60	391.76	391.92	392.08	392.25	392.41	392.57	392.73	392.89	393.05
734.5	393.21	393.37	393.53	393.69	393.85	394.01	394.17	394.33	394.49	394.66
.6	394.82	394.98	395.14	395.30	395.46	395.63	395.79	395.95	396.11	396.27
.7	396.43	396.59	396.76	396.92	397.08	397.24	397.40	397.57	397.73	397.89
.8	398.05	398.22	398.38	398.54	398.71	398.87	399.03	399.19	399.35	399.52
.9	399.68	399.84	400.01	400.17	400.33	400.50	400.66	400.82	400.98	401.15

1986 EDITION/REV WOLUMES BASED ON 1961 SURVEY MERCHANTER 730- 740

Attachment 11c: Watts Bar Excel Level Storage Table

WATTS BAR

Quick Lookup

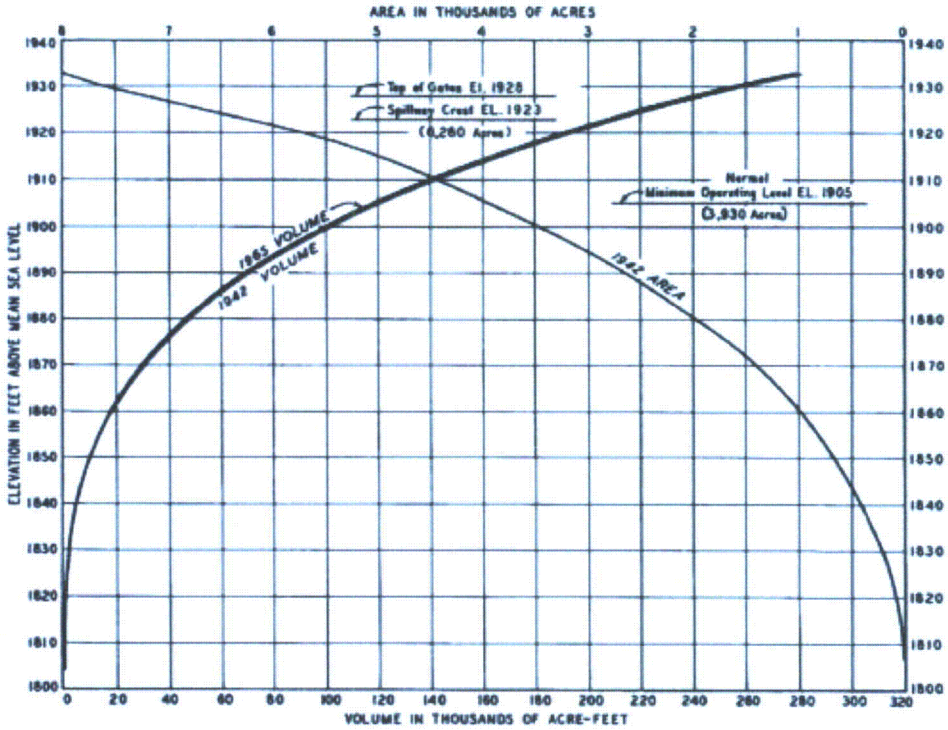
Storage	Enter known HW in green box. Corresponding storage is in yellow/blue box		
	Elevation	Volume	
		TDSF	Ac-Ft
	735.00	401.311	795,989

HW	Enter known storage in green box. Adjust value in gray box until value in blue box matches or closely approximates value in green box. Corresponding HW is in yellow box			
	Volume			Elevation
	450.000	2.848	450.004	737.85

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
734.00	385.233	385.391	385.549	385.708	385.866	386.024	386.183	386.342	386.500	386.659
734.10	386.818	386.976	387.135	387.294	387.453	387.612	387.771	387.930	388.089	388.248
734.20	388.408	388.567	388.726	388.886	389.045	389.204	389.364	389.524	389.683	389.843
734.30	390.003	390.162	390.322	390.482	390.642	390.802	390.962	391.122	391.282	391.442
734.40	391.603	391.763	391.923	392.084	392.244	392.405	392.565	392.726	392.886	393.047
734.50	393.208	393.369	393.530	393.690	393.851	394.012	394.173	394.335	394.496	394.657
734.60	394.818	394.979	395.141	395.302	395.464	395.625	395.787	395.948	396.110	396.272
734.70	396.434	396.595	396.757	396.919	397.081	397.243	397.405	397.567	397.730	397.892
734.80	398.054	398.217	398.379	398.541	398.704	398.866	399.029	399.192	399.354	399.517
734.90	399.680	399.843	400.006	400.169	400.332	400.495	400.658	400.821	400.984	401.148
735.00	401.311	401.474	401.638	401.801	401.965	402.128	402.292	402.456	402.619	402.783
735.10	402.947	403.111	403.275	403.439	403.603	403.767	403.931	404.096	404.260	404.424
735.20	404.588	404.753	404.917	405.082	405.247	405.411	405.576	405.741	405.905	406.070
735.30	406.235	406.400	406.565	406.730	406.895	407.060	407.226	407.391	407.556	407.722
735.40	407.887	408.053	408.218	408.384	408.549	408.715	408.881	409.047	409.212	409.378
735.50	409.544	409.710	409.876	410.042	410.209	410.375	410.541	410.707	410.874	411.040
735.60	411.207	411.373	411.540	411.707	411.873	412.040	412.207	412.374	412.541	412.708
735.70	412.875	413.042	413.209	413.376	413.543	413.710	413.878	414.045	414.213	414.380
735.80	414.548	414.715	414.883	415.051	415.218	415.386	415.554	415.722	415.890	416.058
735.90	416.226	416.394	416.562	416.731	416.899	417.067	417.236	417.404	417.573	417.741

Attachment 12a: Chatuge Bluebook Figure



ELEV FT	1942 AREA AC	VOLUME AC-FT 1942 AC-FT	1949 AC-FT	1954 AC-FT	1960 AC-FT	1965 AC-FT
1,933	7,990	280,200	279,900	279,400	278,900	278,400
1,928	7,290	242,300	242,000	241,500	241,000	240,500
1,920	5,680	191,000	190,700	190,100	189,700	189,100
1,910	4,440	140,400	140,000	139,400	139,100	138,400
1,900	3,450	101,000	100,600	100,000	99,700	99,100
1,890	2,650	70,600	70,200	69,700	69,300	68,800
1,880	1,970	47,500	47,200	46,700	46,300	46,100
1,870	1,390	30,800	30,600	30,300	30,000	29,900
1,860	990	18,900	18,900	18,600	18,400	18,400
1,850	660	10,600	10,600	10,500	10,300	10,300
1,840	410	5,200	5,200	5,100	4,900	4,900
1,830	210	2,100	2,100	2,100	1,900	1,900
1,820	90	600	600	600	500	500
1,810	20	100	100	100	50	50
1,804	0	0	0	0	0	0

NOTES:

Reservoir areas were measured on a composite map prepared by Hydraulic Data Branch with contours drawn at 10' intervals and scale 1"= 500'. The map was prepared from TVA land maps with contours at elevations 1928, 1933 and TVA topographic maps with contours at 40' intervals. Contours were made to conform to elevations on TVA sediment range cross-sections which are located at one half to one mile intervals in the reservoir.

Elevations are referred to the 1936 Supplementary Adjustment of the USC & GS.

Area of original river within reservoir = 107 acres.

Drainage area at dam = 189 square miles.

The 1949 and subsequent volumes were determined by the constant factor method for computing sediment.

Dam closure February 12, 1942.

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

HIWASSEE RIVER-MILE 121.0

RESERVOIR AREAS AND VOLUMES

CHATUGE PROJECT
TENNESSEE VALLEY AUTHORITY
DIVISION OF WATER CONTROL PLANNING

SUBMITTED | RECOMMENDED | APPROVED

KNOXVILLE | 12-28-62 | 17 | DA | 1 | 321N795 R2

THIS DRAWING SUPERSEDES 17-PP-1-3010278

Attachment 12b: Chatuge 1986 Level Storage Table

TVA			
Calculation No. CDQ0000200800051	Rev: 0	Plant: GEN	Page: 123
Subject: Reservoir Storage Tables		Prepped LKG	
		Checked WWC	

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

CHATUGE

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
1910.0	69.78	69.80	69.82	69.84	69.87	69.89	69.91	69.93	69.96	69.98	1915.0	81.73	81.75	81.78	81.80	81.83	81.86	81.88	81.91	81.93	81.96
.1	70.00	70.02	70.05	70.07	70.09	70.11	70.14	70.16	70.18	70.20	5.1	81.98	82.01	82.03	82.06	82.09	82.11	82.14	82.16	82.19	82.21
.2	70.23	70.25	70.27	70.29	70.32	70.34	70.36	70.38	70.41	70.43	5.2	82.24	82.26	82.29	82.32	82.34	82.37	82.39	82.42	82.44	82.47
.3	70.45	70.47	70.50	70.52	70.54	70.56	70.59	70.61	70.63	70.65	5.3	82.49	82.52	82.55	82.57	82.60	82.62	82.65	82.68	82.70	82.73
.4	70.68	70.70	70.72	70.74	70.77	70.79	70.81	70.84	70.86	70.88	5.4	82.75	82.78	82.80	82.83	82.85	82.88	82.91	82.93	82.96	82.98
1910.5	70.90	70.91	70.95	70.97	70.99	71.02	71.04	71.06	71.09	71.11	1915.5	83.01	83.04	83.06	83.09	83.11	83.14	83.16	83.19	83.22	83.24
.6	71.13	71.15	71.18	71.20	71.22	71.25	71.27	71.29	71.31	71.34	5.6	83.27	83.29	83.32	83.35	83.37	83.40	83.42	83.45	83.48	83.50
.7	71.36	71.38	71.40	71.43	71.45	71.47	71.50	71.52	71.54	71.56	5.7	83.53	83.55	83.58	83.60	83.63	83.66	83.68	83.71	83.74	83.76
.8	71.59	71.61	71.63	71.66	71.68	71.70	71.72	71.75	71.77	71.79	5.8	83.79	83.81	83.84	83.87	83.89	83.92	83.94	83.97	84.00	84.02
.9	71.82	71.84	71.86	71.89	71.91	71.93	71.95	71.98	72.00	72.02	5.9	84.05	84.07	84.10	84.13	84.15	84.18	84.20	84.23	84.26	84.28
1911.0	72.05	72.07	72.09	72.12	72.14	72.16	72.18	72.21	72.23	72.25	1916.0	84.31	84.33	84.36	84.39	84.41	84.44	84.47	84.49	84.52	84.54
1.1	72.28	72.30	72.32	72.35	72.37	72.39	72.41	72.44	72.46	72.48	6.1	84.57	84.60	84.62	84.65	84.68	84.70	84.73	84.75	84.78	84.81
1.2	72.51	72.53	72.55	72.58	72.60	72.62	72.65	72.67	72.69	72.72	6.2	84.83	84.86	84.89	84.91	84.94	84.96	84.99	85.02	85.04	85.07
1.3	72.74	72.76	72.78	72.81	72.83	72.85	72.88	72.90	72.92	72.95	6.3	85.10	85.12	85.15	85.18	85.20	85.23	85.25	85.28	85.31	85.33
1.4	72.97	72.99	73.02	73.04	73.06	73.09	73.11	73.13	73.16	73.18	6.4	85.36	85.39	85.41	85.44	85.47	85.49	85.52	85.54	85.57	85.60
1911.5	73.20	73.23	73.25	73.27	73.30	73.32	73.34	73.37	73.39	73.41	1916.5	85.62	85.65	85.68	85.70	85.73	85.76	85.78	85.81	85.84	85.86
1.6	73.44	73.46	73.48	73.51	73.53	73.55	73.58	73.60	73.62	73.65	6.6	85.89	85.92	85.94	85.97	86.00	86.02	86.05	86.08	86.10	86.13
1.7	73.67	73.69	73.72	73.74	73.76	73.79	73.81	73.83	73.86	73.88	6.7	86.16	86.18	86.21	86.24	86.26	86.29	86.32	86.34	86.37	86.40
1.8	73.90	73.93	73.95	73.97	74.00	74.02	74.04	74.07	74.09	74.12	6.8	86.42	86.45	86.48	86.50	86.53	86.56	86.58	86.61	86.64	86.66
1.9	74.14	74.16	74.19	74.21	74.23	74.26	74.28	74.30	74.33	74.35	6.9	86.69	86.72	86.74	86.77	86.80	86.82	86.85	86.88	86.90	86.93
1912.0	74.37	74.40	74.42	74.45	74.47	74.49	74.52	74.54	74.56	74.59	1917.0	86.96	86.98	87.01	87.04	87.07	87.09	87.12	87.15	87.17	87.20
2.1	74.61	74.63	74.66	74.68	74.71	74.73	74.75	74.78	74.80	74.82	7.1	87.23	87.25	87.28	87.31	87.33	87.36	87.39	87.42	87.44	87.47
2.2	74.85	74.87	74.89	74.92	74.94	74.97	74.99	75.01	75.04	75.06	7.2	87.50	87.52	87.55	87.58	87.60	87.63	87.66	87.69	87.71	87.74
2.3	75.08	75.11	75.13	75.16	75.18	75.20	75.23	75.25	75.27	75.30	7.3	87.77	87.79	87.82	87.85	87.87	87.90	87.93	87.96	87.98	88.01
2.4	75.32	75.35	75.37	75.39	75.42	75.44	75.47	75.49	75.51	75.54	7.4	88.04	88.06	88.09	88.12	88.15	88.17	88.20	88.23	88.25	88.28
1912.5	75.56	75.58	75.61	75.63	75.66	75.68	75.70	75.73	75.75	75.78	1917.5	88.31	88.34	88.36	88.39	88.42	88.44	88.47	88.50	88.53	88.55
2.6	75.80	75.82	75.85	75.87	75.90	75.92	75.94	75.97	75.99	76.02	7.6	88.58	88.61	88.64	88.66	88.69	88.72	88.75	88.77	88.80	88.83
2.7	76.04	76.06	76.09	76.11	76.14	76.16	76.18	76.21	76.23	76.26	7.7	88.85	88.88	88.91	88.94	88.96	88.99	89.02	89.05	89.07	89.10
2.8	76.28	76.30	76.33	76.35	76.38	76.40	76.42	76.45	76.47	76.50	7.8	89.13	89.16	89.18	89.21	89.24	89.27	89.29	89.32	89.35	89.38
2.9	76.52	76.54	76.57	76.59	76.62	76.64	76.67	76.69	76.71	76.74	7.9	89.40	89.43	89.46	89.48	89.51	89.54	89.57	89.59	89.62	89.65
1913.0	76.76	76.79	76.81	76.84	76.86	76.88	76.91	76.93	76.96	76.98	1918.0	89.68	89.71	89.73	89.76	89.79	89.82	89.84	89.87	89.90	89.93
3.1	77.01	77.03	77.05	77.08	77.10	77.13	77.15	77.18	77.20	77.22	8.1	89.95	89.98	90.01	90.04	90.06	90.09	90.12	90.15	90.18	90.20
3.2	77.25	77.27	77.30	77.32	77.34	77.37	77.39	77.42	77.44	77.47	8.2	90.23	90.26	90.29	90.31	90.34	90.37	90.40	90.42	90.45	90.48
3.3	77.49	77.52	77.54	77.56	77.59	77.61	77.64	77.66	77.69	77.71	8.3	90.51	90.54	90.56	90.59	90.62	90.65	90.67	90.70	90.73	90.76
3.4	77.73	77.76	77.78	77.81	77.83	77.86	77.88	77.91	77.93	77.96	8.4	90.79	90.81	90.84	90.87	90.90	90.92	90.95	90.98	91.01	91.04
1913.5	77.98	78.00	78.03	78.05	78.08	78.10	78.13	78.15	78.18	78.20	1918.5	91.06	91.09	91.12	91.15	91.18	91.20	91.23	91.26	91.29	91.32
3.6	78.23	78.25	78.27	78.30	78.32	78.35	78.37	78.40	78.42	78.45	8.6	91.34	91.37	91.40	91.43	91.46	91.48	91.51	91.54	91.57	91.60
3.7	78.47	78.50	78.52	78.55	78.57	78.59	78.62	78.64	78.67	78.69	8.7	91.62	91.65	91.68	91.71	91.74	91.76	91.79	91.82	91.85	91.88
3.8	78.72	78.74	78.77	78.79	78.82	78.84	78.87	78.89	78.92	78.94	8.8	91.91	91.93	91.96	91.99	92.02	92.05	92.07	92.10	92.13	92.16
3.9	78.96	78.99	79.01	79.04	79.06	79.09	79.11	79.14	79.16	79.19	8.9	92.19	92.22	92.24	92.27	92.30	92.33	92.36	92.38	92.41	92.44
1914.0	79.21	79.24	79.26	79.29	79.31	79.34	79.36	79.39	79.41	79.44	1919.0	92.47	92.50	92.53	92.55	92.58	92.61	92.64	92.67	92.70	92.72
4.1	79.46	79.49	79.51	79.54	79.56	79.59	79.61	79.64	79.66	79.69	9.1	92.75	92.78	92.81	92.84	92.87	92.90	92.92	92.95	92.98	93.01
4.2	79.71	79.74	79.76	79.79	79.81	79.84	79.86	79.89	79.91	79.94	9.2	93.04	93.07	93.09	93.12	93.15	93.18	93.21	93.24	93.26	93.29
4.3	79.96	79.99	80.01	80.04	80.06	80.09	80.11	80.14	80.16	80.19	9.3	93.32	93.35	93.38	93.41	93.44	93.46	93.49	93.52	93.55	93.58
4.4	80.21	80.24	80.26	80.29	80.31	80.34	80.36	80.39	80.41	80.44	9.4	93.61	93.64	93.66	93.69	93.72	93.75	93.78	93.81	93.84	93.86
1914.5	80.46	80.49	80.51	80.54	80.56	80.59	80.61	80.64	80.66	80.69	1919.5	93.89	93.92	93.95	93.98	94.01	94.04	94.07	94.09	94.12	94.15
4.6	80.71	80.74	80.76	80.79	80.82	80.84	80.87	80.89	80.92	80.94	9.6	94.18	94.21	94.24	94.27	94.30	94.32	94.35	94.38	94.41	94.44
4.7	80.97	80.99	81.02	81.04	81.07	81.09	81.12	81.14	81.17	81.19	9.7	94.47	94.50	94.53	94.55	94.58	94.61	94.64	94.67	94.70	94.73
4.8	81.22	81.24	81.27	81.30	81.32	81.35	81.37	81.40	81.42	81.45	9.8	94.76	94.79	94.82	94.84	94.87	94.90	94.93	94.96	94.99	95.02
4.9	81.47	81.50	81.52	81.55	81.57	81.60	81.63	81.65	81.68	81.70	9.9	95.05	95.08	95.10	95.13	95.16	95.19	95.22	95.25	95.28	95.31
											1920.0	95.34									

1986 EDITION/RDQ VOLUMES BASED ON 1965 SURVEY HEADWATER 1910-1920

Attachment 12c: Chatuge Excel Level Storage Table

CHATUGE

Quick Lookup

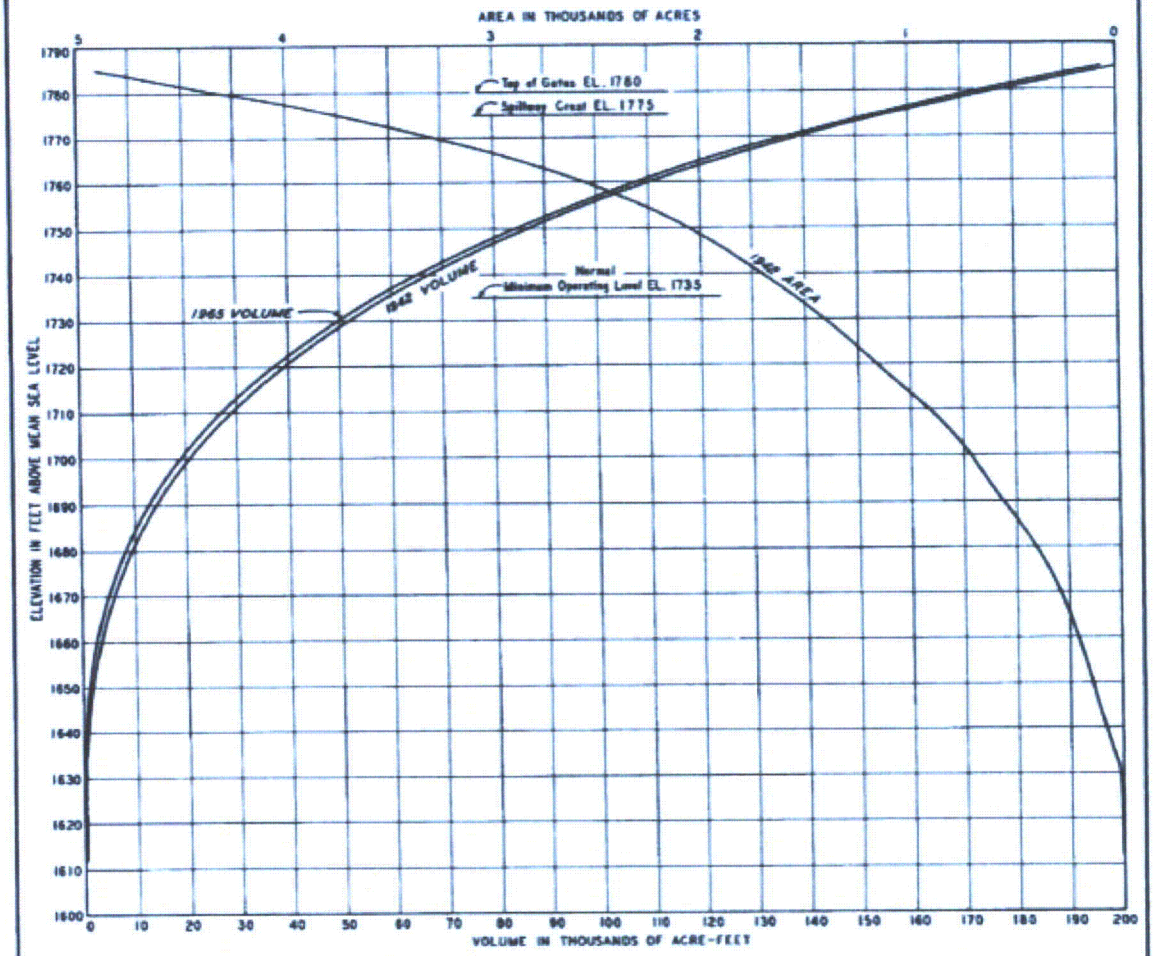
Storage	Enter known HW in green box Corresponding storage is in yellow box	
	Elevation	Volume
	1920.00	95.337

HW	Enter known storage in green box Adjust value in gray box until value in blue box matches or closely approximates value in green box Corresponding HW is in yellow box			
	Volume			Elevation
	100.000	1.575	100.008	1921.58

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
1900.00	49.962	49.980	49.997	50.014	50.032	50.049	50.067	50.084	50.101	50.119
1900.10	50.136	50.154	50.171	50.189	50.206	50.224	50.241	50.259	50.276	50.293
1900.20	50.311	50.328	50.346	50.363	50.381	50.398	50.416	50.433	50.451	50.469
1900.30	50.486	50.504	50.521	50.539	50.556	50.574	50.591	50.609	50.626	50.644
1900.40	50.662	50.679	50.697	50.714	50.732	50.749	50.767	50.785	50.802	50.820
1900.50	50.838	50.855	50.873	50.890	50.908	50.926	50.943	50.961	50.979	50.996
1900.60	51.014	51.032	51.049	51.067	51.085	51.102	51.120	51.138	51.155	51.173
1900.70	51.191	51.209	51.226	51.244	51.262	51.279	51.297	51.315	51.333	51.350
1900.80	51.368	51.386	51.404	51.421	51.439	51.457	51.475	51.493	51.510	51.528
1900.90	51.546	51.564	51.582	51.599	51.617	51.635	51.653	51.671	51.688	51.706
1901.00	51.724	51.742	51.760	51.778	51.796	51.813	51.831	51.849	51.867	51.885
1901.10	51.903	51.921	51.939	51.957	51.974	51.992	52.010	52.028	52.046	52.064
1901.20	52.082	52.100	52.118	52.136	52.154	52.172	52.190	52.208	52.226	52.244
1901.30	52.262	52.280	52.298	52.316	52.334	52.352	52.370	52.388	52.406	52.424
1901.40	52.442	52.460	52.478	52.496	52.514	52.532	52.550	52.568	52.586	52.604
1901.50	52.622	52.640	52.658	52.676	52.695	52.713	52.731	52.749	52.767	52.785
1901.60	52.803	52.821	52.839	52.858	52.876	52.894	52.912	52.930	52.948	52.966
1901.70	52.985	53.003	53.021	53.039	53.057	53.076	53.094	53.112	53.130	53.148
1901.80	53.167	53.185	53.203	53.221	53.239	53.258	53.276	53.294	53.312	53.331
1901.90	53.349	53.367	53.385	53.404	53.422	53.440	53.459	53.477	53.495	53.514
1902.00	53.532	53.550	53.568	53.587	53.605	53.623	53.642	53.660	53.678	53.697

Attachment 13a: Nottely Bluebook Figure



ELEV FT	1942 AREA AC	VOLUME 1942 AC-FT	1949 AC-FT	1955 AC-FT	1961 AC-FT	1965 AC-FT
1,785	4,910	199,500	198,800	197,900	197,400	197,300
1,780	4,310	176,500	175,800	174,900	174,400	174,300
1,775	3,750	156,500	155,800	154,900	154,400	154,300
1,770	3,290	138,900	138,200	137,300	136,800	136,700
1,760	2,560	109,700	109,000	108,100	107,600	107,400
1,750	2,060	86,600	86,000	84,900	84,400	84,200
1,740	1,710	67,700	67,200	66,000	65,500	65,300
1,730	1,420	52,100	51,600	50,400	49,900	49,800
1,720	1,160	39,200	38,800	37,500	37,100	37,100
1,710	910	28,800	28,500	27,200	26,800	26,800
1,700	713	20,700	20,400	19,200	19,000	19,000
1,690	563	14,300	14,100	12,900	12,700	12,700
1,680	403	9,520	9,430	8,340	8,190	8,140
1,670	293	6,040	5,950	5,020	4,940	4,860
1,660	213	3,520	3,420	2,650	2,620	2,530
1,650	145	1,750	1,640	1,060	1,040	1,000
1,640	82	613	491	235	315	308
1,630	17	127	34	6	103	101
1,620	5	20	0	0	11	9
1,612	0	0	0	0	0	0

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

NOTES:

Reservoir areas were measured on TVA land maps, scale 1"=500' at elevations 1785 and 1780. These maps were prepared by the Maps and Surveys Branch. Areas at 1640, 1680, 1720 & 1760 were measured on TVA topographic maps, scale 1"=2,000'. Contours were made to conform to elevations on TVA sediment range cross sections which are located at one to three mile intervals within the reservoir.

The 1949 and subsequent volumes were determined by the constant factor method for computing sediment.

All elevations are referred to the 1936 Supplementary Adjustment of the U.S.C. & G.S.

Area of original river within reservoir to elevation 1780=170 acres.

Drainage area above dam=214 square miles.

Dam closure January 24, 1942.

NOTTELY RIVER MILE 21.0

RESERVOIR AREAS AND VOLUMES

NOTTELY PROJECT
TENNESSEE VALLEY AUTHORITY
DIVISION OF WATER CONTROL PLANNING

SUBMITTED | RECOMMENDED | APPROVED

KNOXVILLE | 12-28-62 | 18 | DA | 1 | 321N796 R2

Attachment 13b: Nottely 1986 Level Storage Table

TVA			
Calculation No. CDQ00002008051	Rev: 0	Plant: GEN	Page: 126
Subject: Reservoir Storage Tables		Prepped	LKG
		Checked	WWC

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

NOTTELY

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
1780.0	87.87	87.90	87.92	87.94	87.96	87.98	88.01	88.03	88.05	88.07
1	88.09	88.12	88.14	88.16	88.18	88.20	88.22	88.25	88.27	88.29
2	88.31	88.33	88.36	88.38	88.40	88.42	88.44	88.47	88.49	88.51
3	88.53	88.55	88.58	88.60	88.62	88.64	88.66	88.69	88.71	88.73
4	88.75	88.77	88.80	88.82	88.84	88.86	88.89	88.91	88.93	88.95
1780.5	88.97	88.99	89.02	89.04	89.06	89.08	89.11	89.13	89.15	89.17
6	89.19	89.22	89.24	89.26	89.28	89.31	89.33	89.35	89.37	89.39
7	89.42	89.44	89.46	89.48	89.50	89.53	89.55	89.57	89.59	89.62
8	89.64	89.66	89.68	89.71	89.73	89.75	89.77	89.80	89.82	89.84
9	89.86	89.88	89.91	89.93	89.95	89.97	90.00	90.02	90.04	90.06
1781.0	90.09	90.11	90.13	90.15	90.18	90.20	90.22	90.24	90.27	90.29
1.1	90.31	90.33	90.36	90.38	90.40	90.42	90.45	90.47	90.49	90.51
1.2	90.54	90.56	90.58	90.60	90.63	90.65	90.67	90.70	90.72	90.74
1.3	90.76	90.79	90.81	90.83	90.85	90.88	90.90	90.92	90.94	90.97
1.4	90.99	91.01	91.03	91.06	91.08	91.10	91.13	91.15	91.17	91.19
1781.5	91.22	91.24	91.26	91.29	91.31	91.33	91.35	91.38	91.40	91.42
1.6	91.44	91.47	91.49	91.51	91.54	91.56	91.58	91.60	91.63	91.65
1.7	91.67	91.70	91.72	91.74	91.76	91.79	91.81	91.83	91.86	91.88
1.8	91.90	91.93	91.95	91.97	91.99	92.02	92.04	92.06	92.09	92.11
1.9	92.13	92.15	92.18	92.20	92.22	92.25	92.27	92.29	92.32	92.34
1782.0	92.36	92.38	92.41	92.43	92.45	92.48	92.50	92.52	92.55	92.57
2.1	92.59	92.62	92.64	92.66	92.69	92.71	92.73	92.75	92.78	92.80
2.2	92.82	92.85	92.87	92.89	92.92	92.94	92.96	92.99	93.01	93.03
2.3	93.06	93.08	93.10	93.13	93.15	93.17	93.20	93.22	93.24	93.26
2.4	93.29	93.31	93.33	93.36	93.38	93.40	93.43	93.45	93.47	93.50
1782.5	93.52	93.54	93.57	93.59	93.61	93.64	93.66	93.68	93.71	93.73
2.6	93.75	93.78	93.80	93.82	93.85	93.87	93.89	93.92	93.94	93.96
2.7	93.99	94.01	94.03	94.06	94.08	94.10	94.13	94.15	94.17	94.20
2.8	94.22	94.25	94.27	94.29	94.32	94.34	94.36	94.39	94.41	94.43
2.9	94.46	94.48	94.50	94.53	94.55	94.57	94.60	94.62	94.64	94.67
1783.0	94.69	94.71	94.74	94.76	94.79	94.81	94.83	94.86	94.88	94.90
3.1	94.93	94.95	94.97	95.00	95.02	95.04	95.07	95.09	95.12	95.14
3.2	95.16	95.19	95.21	95.23	95.26	95.28	95.30	95.33	95.35	95.38
3.3	95.40	95.42	95.45	95.47	95.49	95.52	95.54	95.56	95.59	95.61
3.4	95.64	95.66	95.68	95.71	95.73	95.75	95.78	95.80	95.83	95.85
1783.5	95.87	95.90	95.92	95.94	95.97	95.99	96.02	96.04	96.06	96.09
3.6	96.11	96.13	96.16	96.18	96.21	96.23	96.25	96.28	96.30	96.32
3.7	96.35	96.37	96.40	96.42	96.44	96.47	96.49	96.51	96.54	96.56
3.8	96.59	96.61	96.63	96.66	96.68	96.71	96.73	96.75	96.78	96.80
3.9	96.82	96.85	96.87	96.90	96.92	96.94	96.97	96.99	97.02	97.04
1784.0	97.06	97.09	97.11	97.14	97.16	97.18	97.21	97.23	97.26	97.28
4.1	97.30	97.33	97.35	97.38	97.40	97.42	97.45	97.47	97.50	97.52
4.2	97.54	97.57	97.59	97.61	97.64	97.66	97.69	97.71	97.74	97.76
4.3	97.78	97.81	97.83	97.86	97.88	97.90	97.93	97.95	97.98	98.00
4.4	98.02	98.05	98.07	98.10	98.12	98.14	98.17	98.19	98.22	98.24
1784.5	98.26	98.29	98.31	98.34	98.36	98.38	98.41	98.43	98.46	98.48
4.6	98.50	98.53	98.55	98.58	98.60	98.63	98.65	98.67	98.70	98.72
4.7	98.75	98.77	98.79	98.82	98.84	98.87	98.89	98.91	98.94	98.96
4.8	98.99	99.01	99.04	99.06	99.08	99.11	99.13	99.16	99.18	99.20
4.9	99.23	99.25	99.28	99.30	99.33	99.35	99.37	99.40	99.42	99.45

ELEV	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
1785.0	99.47	99.49	99.52	99.54	99.57	99.59	99.62	99.64	99.66	99.69
5.1	99.71	99.74	99.76	99.79	99.81	99.83	99.86	99.88	99.91	99.93
5.2	99.96	99.98	100.00	100.03	100.05	100.08	100.10	100.12	100.15	100.17
5.3	100.20	100.22	100.25	100.27	100.30	100.32	100.34	100.37	100.39	100.42
5.4	100.44	100.46	100.49	100.51	100.54	100.56	100.59	100.61	100.63	100.66
1785.5	100.68	100.71	100.73	100.76	100.78	100.81	100.83	100.85	100.88	100.90
5.6	100.93	100.95	100.98	101.00	101.02	101.05	101.07	101.10	101.12	101.15
5.7	101.17	101.19	101.22	101.24	101.27	101.29	101.32	101.34	101.37	101.39
5.8	101.41	101.44	101.46	101.49	101.51	101.54	101.56	101.59	101.61	101.63
5.9	101.66	101.68	101.71	101.73	101.76	101.78	101.80	101.83	101.85	101.88
1786.0	101.90	101.93	101.95	101.98	102.00	102.02	102.05	102.07	102.10	102.12
6.1	102.15	102.17	102.20	102.22	102.25	102.27	102.29	102.32	102.34	102.37
6.2	102.39	102.42	102.44	102.47	102.49	102.51	102.54	102.56	102.59	102.61
6.3	102.64	102.66	102.69	102.71	102.74	102.76	102.78	102.81	102.83	102.86
6.4	102.88	102.91	102.93	102.96	102.98	103.00	103.03	103.05	103.08	103.10
1786.5	103.13	103.15	103.18	103.20	103.23	103.25	103.28	103.30	103.32	103.35
6.6	103.37	103.40	103.42	103.45	103.47	103.50	103.52	103.55	103.57	103.60
6.7	103.62	103.64	103.67	103.69	103.72	103.74	103.77	103.79	103.82	103.84
6.8	103.87	103.89	103.92	103.94	103.96	103.99	104.01	104.04	104.06	104.09
6.9	104.11	104.14	104.16	104.19	104.21	104.24	104.26	104.28	104.31	104.33
1787.0	104.36	104.38	104.41	104.43	104.46	104.48	104.51	104.53	104.56	104.58
7.1	104.61	104.63	104.66	104.68	104.71	104.73	104.75	104.78	104.80	104.83
7.2	104.85	104.88	104.90	104.93	104.95	104.98	105.00	105.03	105.05	105.08
7.3	105.10	105.13	105.15	105.18	105.20	105.22	105.25	105.27	105.30	105.32
7.4	105.35	105.37	105.40	105.42	105.45	105.47	105.50	105.52	105.55	105.57
1787.5	105.60	105.62	105.65	105.67	105.70	105.72	105.75	105.77	105.80	105.82
7.6	105.85	105.87	105.89	105.92	105.94	105.97	105.99	106.02	106.04	106.07
7.7	106.09	106.12	106.14	106.17	106.19	106.22	106.24	106.27	106.29	106.32
7.8	106.34	106.37	106.39	106.42	106.44	106.47	106.49	106.52	106.54	106.57
7.9	106.59	106.62	106.64	106.67	106.69	106.72	106.74	106.77	106.79	106.82
1788.0	106.84	106.87	106.89	106.92	106.94	106.97	106.99	107.02	107.04	107.07
8.1	107.09	107.12	107.14	107.17	107.19	107.22	107.24	107.27	107.29	107.32
8.2	107.34	107.36	107.39	107.41	107.44	107.46	107.49	107.51	107.54	107.57
8.3	107.59	107.62	107.64	107.67	107.69	107.72	107.74	107.77	107.79	107.82
8.4	107.84	107.87	107.89	107.92	107.94	107.97	107.99	108.02	108.04	108.07
1788.5	108.09	108.12	108.14	108.17	108.19	108.22	108.24	108.27	108.29	108.32
8.6	108.34	108.37	108.39	108.42	108.44	108.47	108.49	108.52	108.54	108.57
8.7	108.59	108.62	108.64	108.67	108.69	108.72	108.74	108.77	108.79	108.82
8.8	108.84	108.87	108.89	108.92	108.95	108.97	109.00	109.02	109.05	109.07
8.9	109.10	109.12	109.15	109.17	109.20	109.22	109.25	109.27	109.30	109.32
1789.0	109.35	109.37	109.40	109.42	109.45	109.47	109.50	109.52	109.55	109.58
9.1	109.60	109.63	109.65	109.68	109.70	109.73	109.75	109.78	109.80	109.83
9.2	109.85	109.88	109.90	109.93	109.95	109.98	110.00	110.03	110.05	110.08
9.3	110.11	110.13	110.16	110.18	110.21	110.23	110.26	110.28	110.31	110.33
9.4	110.36	110.38	110.41	110.43	110.46	110.48	110.51	110.54	110.56	110.59
1789.5	110.61	110.64	110.66	110.69	110.71	110.74	110.76	110.79	110.81	110.84
9.6	110.87	110.89	110.92	110.94	110.97	110.99	111.02	111.04	111.07	111.09
9.7	111.12	111.14	111.17	111.20	111.22	111.25	111.27	111.30	111.32	111.35
9.8	111.37	111.40	111.42	111.45	111.47	111.50	111.53	111.55	111.58	111.60
9.9	111.63	111.65	111.68	111.70	111.73	111.75	111.78	111.81	111.83	111.86
1790.0	111.88									

1986 EDITION/ROB

VOLUMES BASED ON 1965 SURVEY

HEADWATER 1780-1790

Attachment 13c: Nottely Excel Level Storage Table

NOTTELY

Quick Lookup

Storage	Enter known HW in green box Corresponding storage is in yellow box	
	Elevation	Volume
	1785.00	99.471

HW	Enter known storage in green box Adjust value in gray box until value in blue box matches or closely approximates value in green box Corresponding HW is in yellow box			
	Volume			Elevation
	45.000	2.370	44.999	1752.37

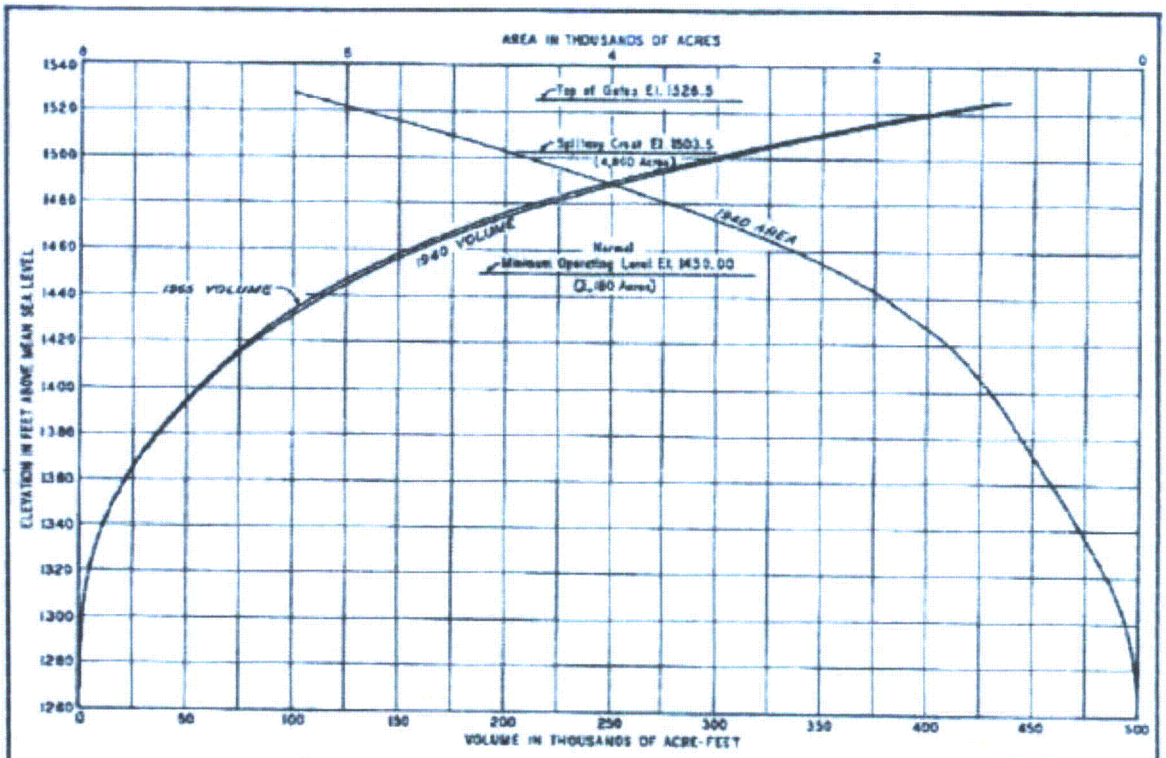
Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
1730.00	25.107	25.114	25.121	25.128	25.135	25.142	25.150	25.157	25.164	25.171
1730.10	25.178	25.185	25.192	25.199	25.206	25.213	25.220	25.227	25.234	25.241
1730.20	25.249	25.256	25.263	25.270	25.277	25.284	25.291	25.298	25.305	25.312
1730.30	25.320	25.327	25.334	25.341	25.348	25.355	25.362	25.369	25.376	25.383
1730.40	25.391	25.398	25.405	25.412	25.419	25.426	25.433	25.440	25.448	25.455
1730.50	25.462	25.469	25.476	25.483	25.490	25.497	25.505	25.512	25.519	25.526
1730.60	25.533	25.540	25.547	25.555	25.562	25.569	25.576	25.583	25.590	25.598
1730.70	25.605	25.612	25.619	25.626	25.633	25.640	25.648	25.655	25.662	25.669
1730.80	25.676	25.683	25.691	25.698	25.705	25.712	25.719	25.727	25.734	25.741
1730.90	25.748	25.755	25.762	25.770	25.777	25.784	25.791	25.798	25.806	25.813
1731.00	25.820	25.827	25.834	25.842	25.849	25.856	25.863	25.870	25.878	25.885
1731.10	25.892	25.899	25.907	25.914	25.921	25.928	25.935	25.943	25.950	25.957
1731.20	25.964	25.972	25.979	25.986	25.993	26.001	26.008	26.015	26.022	26.029
1731.30	26.037	26.044	26.051	26.058	26.066	26.073	26.080	26.087	26.095	26.102
1731.40	26.109	26.117	26.124	26.131	26.138	26.146	26.153	26.160	26.167	26.175
1731.50	26.182	26.189	26.196	26.204	26.211	26.218	26.226	26.233	26.240	26.247
1731.60	26.255	26.262	26.269	26.277	26.284	26.291	26.298	26.306	26.313	26.320
1731.70	26.328	26.335	26.342	26.350	26.357	26.364	26.372	26.379	26.386	26.393
1731.80	26.401	26.408	26.415	26.423	26.430	26.437	26.445	26.452	26.459	26.467
1731.90	26.474	26.481	26.489	26.496	26.503	26.511	26.518	26.525	26.533	26.540
1732.00	26.547	26.555	26.562	26.569	26.577	26.584	26.592	26.599	26.606	26.614

Attachment 14a: Hiwassee Bluebook Figure

TVA

Calculation No. CDQ000020080051	Rev: 0	Plant: GEN	Page: 128
Subject: Reservoir Storage Tables		Prepped	LKG
		Checked	WWC



ELEV FT	1940 AREA AC	VOLUME AC-FT 1940 AC-FT	1947 AC-FT	1953 AC-FT	1958 AC-FT	1965 AC-FT
1,526.5	6,230	440,000	436,000	436,000	434,000	434,000
1,520	5,800	400,000	398,000	395,000	394,000	393,000
1,510	5,140	345,000	341,000	341,000	339,000	338,000
1,500	4,540	296,000	293,000	292,000	291,000	290,000
1,490	3,990	253,000	250,000	249,000	248,000	247,000
1,480	3,480	217,000	214,000	213,000	212,000	211,000
1,470	2,980	184,000	181,000	181,000	179,000	178,000
1,460	2,540	157,000	154,000	153,000	152,000	151,000
1,450	2,160	134,000	131,000	131,000	130,000	128,000
1,440	1,880	113,000	111,000	111,000	110,000	108,000
1,430	1,640	93,800	94,200	93,800	92,500	91,900
1,420	1,410	80,700	79,500	79,300	78,400	77,900
1,410	1,240	67,400	68,300	68,300	66,000	65,500
1,400	1,090	55,800	54,700	55,100	54,300	54,400
1,390	978	45,400	44,500	44,600	45,500	44,200
1,380	868	38,200	35,400	35,700	35,400	35,100
1,370	759	28,100	27,400	27,700	27,400	27,200
1,360	636	21,100	20,500	20,800	20,600	20,300
1,350	527	15,400	14,800	15,200	15,000	14,600
1,340	424	10,700	10,200	10,500	10,400	10,200
1,330	321	6,910	6,580	6,690	6,760	6,610
1,320	223	4,200	3,970	4,070	4,120	4,000
1,310	143	2,400	2,230	2,340	2,300	2,290
1,300	93	1,200	1,120	1,140	1,180	1,160
1,290	52	470	436	450	440	430
1,280	24	110	110	100	100	90
1,270	0	0	0	0	0	0

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

NOTES:

Reservoir areas were measured on a composite map prepared by the Hydraulic Data Branch with contours drawn at 10' intervals and scale 1" = 500'. The map was prepared from TVA land maps with contours at elevation 1315, 1410, and 1520. Contours were made to conform to elevations on TVA sediment range cross sections which are located at one half to one mile intervals within the reservoir.

Elevations are based on the USC&GS 1929 Preliminary Adjustment. To correct to the USC&GS 1936 Supplementary Adjustment, subtract 0.62 feet

Area of original river within the reservoir = 1,000 acres

Drainage area at the dam = 968 square miles.

The 1947 and subsequent volumes were determined by the constant factor method for computing sediment

Dam closure February 8, 1940

HIWASSEE RIVER-MILE 75.8

RESERVOIR AREAS AND VOLUMES

HIWASSEE PROJECT
TENNESSEE VALLEY AUTHORITY
DIVISION OF WATER CONTROL PLANNING

SUBMITTED	RECOMMENDED	APPROVED

KNOXVILLE	12-28-62	S	DA	1	32N786 R2

Attachment 14b: Hiwassee 1986 Level Storage Table

TVA			
Calculation No. CDQ000020080051	Rev: 0	Plant: GEN	Page: 129
Subject: Reservoir Storage Tables		Prepped LKG	
		Checked WWC	

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

HIWASSEE

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
1500.0	146.21	146.23	146.25	146.28	146.30	146.32	146.35	146.37	146.39	146.42
.1	146.44	146.46	146.49	146.51	146.54	146.56	146.58	146.61	146.63	146.65
.2	146.68	146.70	146.72	146.75	146.77	146.79	146.82	146.84	146.86	146.89
.3	146.91	146.94	146.96	146.98	147.01	147.03	147.05	147.08	147.10	147.12
.4	147.15	147.17	147.19	147.22	147.24	147.27	147.29	147.31	147.34	147.36
1500.5	147.38	147.41	147.43	147.45	147.48	147.50	147.53	147.55	147.57	147.60
.6	147.62	147.64	147.67	147.69	147.72	147.74	147.76	147.79	147.81	147.83
.7	147.86	147.88	147.90	147.93	147.95	147.98	148.00	148.02	148.05	148.07
.8	148.09	148.12	148.14	148.17	148.19	148.21	148.24	148.26	148.28	148.31
.9	148.33	148.35	148.38	148.40	148.43	148.45	148.47	148.50	148.52	148.55
1501.0	148.57	148.59	148.62	148.64	148.66	148.69	148.71	148.74	148.76	148.78
.1	148.81	148.83	148.85	148.88	148.90	148.93	148.95	148.97	149.00	149.02
.2	149.04	149.07	149.09	149.12	149.14	149.16	149.19	149.21	149.24	149.26
.3	149.28	149.31	149.33	149.36	149.38	149.40	149.43	149.45	149.47	149.50
.4	149.52	149.55	149.57	149.59	149.62	149.64	149.67	149.69	149.71	149.74
1501.5	149.76	149.79	149.81	149.83	149.86	149.88	149.90	149.93	149.95	149.98
.6	150.00	150.02	150.05	150.07	150.10	150.12	150.14	150.17	150.19	150.22
.7	150.24	150.26	150.29	150.31	150.34	150.36	150.38	150.41	150.43	150.46
.8	150.48	150.50	150.53	150.55	150.58	150.60	150.62	150.65	150.67	150.70
.9	150.72	150.74	150.77	150.79	150.82	150.84	150.86	150.89	150.91	150.94
1502.0	150.96	150.98	151.01	151.03	151.06	151.08	151.11	151.13	151.15	151.18
.1	151.20	151.23	151.25	151.27	151.30	151.32	151.35	151.37	151.39	151.42
.2	151.44	151.47	151.49	151.51	151.54	151.56	151.59	151.61	151.64	151.66
.3	151.68	151.71	151.73	151.76	151.78	151.80	151.83	151.85	151.88	151.90
.4	151.93	151.95	151.97	152.00	152.02	152.05	152.07	152.09	152.12	152.14
1502.5	152.17	152.19	152.22	152.24	152.26	152.29	152.31	152.34	152.36	152.39
.6	152.41	152.43	152.46	152.48	152.51	152.53	152.56	152.58	152.60	152.63
.7	152.65	152.68	152.70	152.72	152.75	152.77	152.80	152.82	152.85	152.87
.8	152.89	152.92	152.94	152.97	152.99	153.02	153.04	153.06	153.09	153.11
.9	153.14	153.16	153.19	153.21	153.23	153.26	153.28	153.31	153.33	153.36
1503.0	153.38	153.40	153.43	153.45	153.48	153.50	153.53	153.55	153.58	153.60
.1	153.62	153.65	153.67	153.70	153.72	153.75	153.77	153.79	153.82	153.84
.2	153.87	153.89	153.92	153.94	153.96	153.99	154.01	154.04	154.06	154.09
.3	154.11	154.14	154.16	154.18	154.21	154.23	154.26	154.28	154.31	154.33
.4	154.35	154.38	154.40	154.43	154.45	154.48	154.50	154.53	154.55	154.58
1503.5	154.60	154.62	154.65	154.67	154.70	154.72	154.75	154.77	154.80	154.82
.6	154.84	154.87	154.89	154.92	154.94	154.97	154.99	155.02	155.04	155.06
.7	155.09	155.11	155.14	155.16	155.19	155.21	155.24	155.26	155.29	155.31
.8	155.33	155.36	155.38	155.41	155.43	155.46	155.48	155.51	155.53	155.56
.9	155.58	155.60	155.63	155.65	155.68	155.70	155.73	155.75	155.78	155.80
1504.0	155.82	155.85	155.87	155.90	155.92	155.95	155.97	156.00	156.02	156.05
.1	156.07	156.10	156.12	156.14	156.17	156.19	156.22	156.24	156.27	156.29
.2	156.32	156.34	156.37	156.39	156.42	156.44	156.46	156.49	156.51	156.54
.3	156.56	156.59	156.61	156.64	156.66	156.69	156.71	156.74	156.76	156.79
.4	156.81	156.83	156.86	156.88	156.91	156.93	156.96	156.98	157.01	157.03
1504.5	157.06	157.08	157.11	157.13	157.15	157.18	157.20	157.23	157.25	157.28
.6	157.30	157.33	157.35	157.38	157.40	157.43	157.45	157.48	157.50	157.53
.7	157.55	157.57	157.60	157.62	157.65	157.67	157.70	157.72	157.75	157.77
.8	157.80	157.82	157.85	157.87	157.90	157.92	157.95	157.97	158.00	158.02
.9	158.04	158.07	158.09	158.12	158.14	158.17	158.19	158.22	158.24	158.27

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
1505.0	158.29	158.32	158.34	158.37	158.39	158.42	158.44	158.47	158.49	158.52
5.1	158.54	158.57	158.59	158.62	158.64	158.67	158.69	158.71	158.74	158.76
5.2	158.79	158.81	158.84	158.86	158.89	158.91	158.94	158.96	158.99	159.01
5.3	159.04	159.06	159.09	159.11	159.14	159.16	159.19	159.21	159.24	159.26
5.4	159.29	159.31	159.34	159.36	159.39	159.41	159.44	159.46	159.49	159.51
1505.5	159.53	159.56	159.58	159.61	159.63	159.66	159.68	159.71	159.73	159.76
5.6	159.78	159.81	159.83	159.86	159.88	159.91	159.93	159.96	159.98	160.01
5.7	160.03	160.06	160.08	160.11	160.13	160.16	160.18	160.21	160.23	160.26
5.8	160.28	160.31	160.33	160.36	160.38	160.41	160.43	160.46	160.48	160.51
5.9	160.53	160.56	160.58	160.61	160.63	160.66	160.68	160.71	160.73	160.76
1506.0	160.78	160.81	160.83	160.86	160.88	160.91	160.93	160.96	160.98	161.01
6.1	161.03	161.06	161.08	161.11	161.13	161.16	161.18	161.21	161.23	161.26
6.2	161.28	161.31	161.33	161.36	161.38	161.41	161.43	161.46	161.48	161.51
6.3	161.53	161.56	161.58	161.61	161.63	161.66	161.68	161.71	161.73	161.76
6.4	161.78	161.81	161.83	161.86	161.88	161.91	161.93	161.96	161.98	162.01
1506.5	162.03	162.06	162.08	162.11	162.13	162.16	162.18	162.21	162.23	162.26
6.6	162.29	162.31	162.34	162.36	162.39	162.41	162.44	162.46	162.49	162.51
6.7	162.54	162.56	162.59	162.61	162.64	162.66	162.69	162.71	162.74	162.76
6.8	162.79	162.81	162.84	162.86	162.89	162.91	162.94	162.96	162.99	163.01
6.9	163.04	163.06	163.09	163.11	163.14	163.16	163.19	163.21	163.24	163.27
1507.0	163.29	163.32	163.34	163.37	163.39	163.42	163.44	163.47	163.49	163.52
7.1	163.54	163.57	163.59	163.62	163.64	163.67	163.69	163.72	163.74	163.77
7.2	163.79	163.82	163.84	163.87	163.89	163.92	163.95	163.97	164.00	164.02
7.3	164.05	164.07	164.10	164.12	164.15	164.17	164.20	164.22	164.25	164.27
7.4	164.30	164.32	164.35	164.37	164.40	164.42	164.45	164.48	164.50	164.53
1507.5	164.55	164.58	164.60	164.63	164.65	164.68	164.70	164.73	164.75	164.78
7.6	164.80	164.83	164.85	164.88	164.91	164.93	164.96	164.98	165.01	165.03
7.7	165.06	165.08	165.11	165.13	165.16	165.18	165.21	165.23	165.26	165.28
7.8	165.31	165.33	165.36	165.39	165.41	165.44	165.46	165.49	165.51	165.54
7.9	165.56	165.59	165.61	165.64	165.66	165.69	165.71	165.74	165.77	165.79
1508.0	165.82	165.84	165.87	165.89	165.92	165.94	165.97	165.99	166.02	166.04
8.1	166.07	166.09	166.12	166.15	166.17	166.20	166.22	166.25	166.27	166.30
8.2	166.32	166.35	166.37	166.40	166.42	166.45	166.48	166.50	166.53	166.55
8.3	166.58	166.60	166.63	166.65	166.68	166.70	166.73	166.75	166.78	166.81
8.4	166.83	166.86	166.88	166.91	166.93	166.96	166.98	167.01	167.03	167.06
1508.5	167.08	167.11	167.14	167.16	167.19	167.21	167.24	167.26	167.29	167.31
8.6	167.34	167.36	167.39	167.42	167.44	167.47	167.49	167.52	167.54	167.57
8.7	167.59	167.62	167.64	167.67	167.69	167.72	167.75	167.77	167.80	167.82
8.8	167.85	167.87	167.90	167.92	167.95	167.97	168.00	168.03	168.05	168.08
8.9	168.10	168.13	168.15	168.18	168.20	168.23	168.25	168.28	168.31	168.33
1509.0	168.36	168.38	168.41	168.43	168.46	168.48	168.51	168.53	168.56	168.59
9.1	168.61	168.64	168.66	168.69	168.71	168.74	168.76	168.79	168.82	168.84
9.2	168.87	168.89	168.92	168.94	168.97	168.99	169.02	169.04	169.07	169.10
9.3	169.12	169.15	169.17	169.20	169.22	169.25	169.27	169.30	169.33	169.35
9.4	169.38	169.40	169.43	169.45	169.48	169.50	169.53	169.56	169.58	169.61
1509.5	169.63	169.66	169.68	169.71	169.73	169.76	169.79	169.81	169.84	169.86
9.6	169.89	169.91	169.94	169.96	169.99	170.02	170.04	170.07	170.09	170.12
9.7	170.14	170.17	170.19	170.22	170.24	170.27	170.30	170.32	170.35	170.37
9.8	170.40	170.42	170.45	170.48	170.50	170.53	170.55	170.58	170.60	170.63
9.9	170.65	170.68	170.71	170.73	170.76	170.78	170.81	170.83	170.86	170.88
1510.0	170.91									

1986 EDITION/R08 VOLUMES BASED ON 1965 SURVEY HEADWATER 1500-1510

Attachment 14c: Hiwasse Excel Level Storage Table

HIWASSEE

Quick Lookup

Storage	Enter known HW in green box. Corresponding storage is in yellow box	
	Elevation	Volume
	1510.00	170.910

HW	Enter known storage in green box. Adjust value in gray box until value in blue box matches or closely approximates value in green box. Corresponding HW is in yellow box			
	Volume			Elevation
	200.000	0.620	200.005	1520.62

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
1450.00	64.532	64.543	64.554	64.565	64.576	64.587	64.598	64.609	64.620	64.631
1450.10	64.641	64.652	64.663	64.674	64.685	64.696	64.707	64.718	64.729	64.740
1450.20	64.751	64.762	64.773	64.783	64.794	64.805	64.816	64.827	64.838	64.849
1450.30	64.860	64.871	64.882	64.893	64.904	64.915	64.926	64.937	64.948	64.959
1450.40	64.969	64.980	64.991	65.002	65.013	65.024	65.035	65.046	65.057	65.068
1450.50	65.079	65.090	65.101	65.112	65.123	65.134	65.145	65.156	65.167	65.178
1450.60	65.189	65.200	65.211	65.222	65.233	65.244	65.255	65.266	65.277	65.288
1450.70	65.299	65.310	65.321	65.332	65.343	65.354	65.365	65.376	65.387	65.398
1450.80	65.409	65.420	65.431	65.442	65.453	65.464	65.475	65.486	65.497	65.508
1450.90	65.519	65.530	65.541	65.552	65.563	65.574	65.585	65.596	65.607	65.618
1451.00	65.629	65.640	65.651	65.662	65.673	65.684	65.695	65.706	65.717	65.728
1451.10	65.739	65.750	65.761	65.772	65.783	65.794	65.806	65.817	65.828	65.839
1451.20	65.850	65.861	65.872	65.883	65.894	65.905	65.916	65.927	65.938	65.949
1451.30	65.960	65.971	65.982	65.994	66.005	66.016	66.027	66.038	66.049	66.060
1451.40	66.071	66.082	66.093	66.104	66.115	66.126	66.138	66.149	66.160	66.171
1451.50	66.182	66.193	66.204	66.215	66.226	66.237	66.249	66.260	66.271	66.282
1451.60	66.293	66.304	66.315	66.326	66.337	66.348	66.360	66.371	66.382	66.393
1451.70	66.404	66.415	66.426	66.437	66.449	66.460	66.471	66.482	66.493	66.504
1451.80	66.515	66.526	66.538	66.549	66.560	66.571	66.582	66.593	66.604	66.616
1451.90	66.627	66.638	66.649	66.660	66.671	66.682	66.694	66.705	66.716	66.727
1452.00	66.738	66.749	66.761	66.772	66.783	66.794	66.805	66.816	66.828	66.839

Attachment 15a: Blue Ridge Bluebook Figure

January 2004 RESERVOIR AND POWER DATA Blue Ridge 21

					Best Efficiency			Maximum Sustainable		
Elevation (feet)	Area (acre*1000)	Volume (ac-ft*1000)	Potential Eis (gWh)	Gross Head (feet)	Plant Output (mW)	Turbine Discharge (cfs)	kW/CFS	Plant Output (mW)	Turbine Discharge (cfs)	kW/CFS
1691	3.34	195.9	162.7	145.0	16.5	1,600	10.33	18.0	1,750	10.29
1690	3.31	192.6	159.4	144.0	16.5	1,610	10.27	18.0	1,760	10.23
1689	3.28	189.3	156.2	143.0	16.5	1,620	10.21	18.0	1,770	10.17
1688	3.25	186.0	153.0	141.9	16.5	1,620	10.15	18.0	1,780	10.11
1687	3.22	182.6	149.9	140.9	16.5	1,630	10.10	18.0	1,790	10.05
1686	3.19	179.6	146.8	139.9	16.5	1,640	10.03	18.0	1,800	9.99
1685	3.16	176.4	143.6	138.9	16.3	1,640	9.94	17.8	1,800	9.88
1684	3.13	173.3	140.5	137.9	16.1	1,630	9.84	17.6	1,800	9.77
1683	3.10	170.1	137.4	136.9	15.9	1,630	9.75	17.4	1,800	9.65
1682	3.07	167.1	134.3	135.9	15.7	1,630	9.65	17.2	1,800	9.54
1681	3.04	164.0	131.3	134.9	15.5	1,620	9.55	17.0	1,800	9.43
1680	3.00	161.0	128.3	133.9	15.3	1,620	9.46	16.8	1,800	9.32
1679	2.97	158.0	125.4	132.9	15.1	1,610	9.36	16.6	1,800	9.20
1678	2.94	155.1	122.4	131.9	14.9	1,610	9.27	16.4	1,800	9.09
1677	2.91	152.1	119.6	130.9	14.7	1,600	9.17	16.2	1,800	8.98
1676	2.88	149.2	116.7	129.9	14.5	1,600	9.08	16.0	1,800	8.87
1675	2.84	146.4	114.0	128.9	14.3	1,590	9.04	15.8	1,780	8.83
1674	2.81	143.5	111.4	128.0	14.2	1,580	9.00	15.6	1,770	8.80
1673	2.77	140.8	108.7	127.0	14.0	1,570	8.96	15.4	1,750	8.76
1672	2.74	138.0	106.1	126.0	13.9	1,560	8.92	15.2	1,740	8.72
1671	2.70	135.3	103.6	125.0	13.8	1,550	8.88	15.0	1,730	8.69
1670	2.67	132.6	101.0	124.0	13.6	1,540	8.83	14.8	1,710	8.65
1669	2.63	130.0	98.5	123.1	13.5	1,530	8.79	14.6	1,700	8.61
1668	2.59	127.3	96.1	122.1	13.3	1,520	8.75	14.4	1,680	8.58
1667	2.55	124.8	93.7	121.1	13.2	1,510	8.71	14.2	1,670	8.54
1666	2.52	122.2	91.3	120.1	13.0	1,500	8.67	14.0	1,650	8.50
1665	2.48	119.7	88.9	119.1	12.8	1,490	8.61	13.8	1,640	8.46
1664	2.44	117.3	86.6	118.2	12.7	1,480	8.54	13.6	1,620	8.41
1663	2.41	114.8	84.3	117.2	12.5	1,470	8.48	13.4	1,610	8.36
1662	2.37	112.5	82.1	116.2	12.3	1,460	8.41	13.2	1,590	8.31

Attachment 15b: Blue Ridge 1986 Level Storage Table

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

BLUE RIDGE

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
1680.0	81.17	81.18	81.20	81.22	81.23	81.25	81.26	81.28	81.29	81.31
.1	81.32	81.34	81.35	81.37	81.38	81.40	81.41	81.43	81.44	81.46
.2	81.47	81.49	81.50	81.52	81.53	81.55	81.56	81.58	81.59	81.61
.3	81.62	81.64	81.66	81.67	81.69	81.70	81.72	81.73	81.75	81.76
.4	81.78	81.79	81.81	81.82	81.84	81.85	81.87	81.88	81.90	81.91
1680.5	81.93	81.94	81.96	81.97	81.99	82.01	82.02	82.04	82.05	82.07
.6	82.08	82.10	82.11	82.13	82.14	82.16	82.17	82.19	82.20	82.22
.7	82.23	82.25	82.26	82.28	82.29	82.31	82.33	82.34	82.36	82.37
.8	82.39	82.40	82.42	82.43	82.45	82.46	82.48	82.49	82.51	82.52
.9	82.54	82.55	82.57	82.58	82.60	82.62	82.63	82.65	82.66	82.68
1681.0	82.69	82.71	82.72	82.74	82.75	82.77	82.78	82.80	82.81	82.83
1.1	82.85	82.86	82.88	82.89	82.91	82.92	82.94	82.95	82.97	82.98
1.2	83.00	83.01	83.03	83.04	83.06	83.08	83.09	83.11	83.12	83.14
1.3	83.15	83.17	83.18	83.20	83.21	83.23	83.24	83.26	83.27	83.29
1.4	83.31	83.32	83.34	83.35	83.37	83.38	83.40	83.41	83.43	83.44
1681.5	83.46	83.47	83.49	83.51	83.52	83.54	83.55	83.57	83.58	83.60
1.6	83.61	83.63	83.64	83.66	83.67	83.69	83.71	83.72	83.74	83.75
1.7	83.77	83.78	83.80	83.81	83.83	83.84	83.86	83.87	83.89	83.91
1.8	83.92	83.94	83.95	83.97	83.98	84.00	84.01	84.03	84.04	84.06
1.9	84.08	84.09	84.11	84.12	84.14	84.15	84.17	84.18	84.20	84.21
1682.0	84.23	84.25	84.26	84.28	84.29	84.31	84.32	84.34	84.35	84.37
2.1	84.38	84.40	84.42	84.43	84.45	84.46	84.48	84.49	84.51	84.52
2.2	84.54	84.55	84.57	84.59	84.60	84.62	84.63	84.65	84.66	84.68
2.3	84.69	84.71	84.73	84.74	84.76	84.77	84.79	84.80	84.82	84.83
2.4	84.85	84.86	84.88	84.90	84.91	84.93	84.94	84.96	84.97	84.99
1682.5	85.00	85.02	85.04	85.05	85.07	85.08	85.10	85.11	85.13	85.14
2.6	85.16	85.18	85.19	85.21	85.22	85.24	85.25	85.27	85.28	85.30
2.7	85.32	85.33	85.35	85.36	85.38	85.39	85.41	85.42	85.44	85.46
2.8	85.47	85.49	85.50	85.52	85.53	85.55	85.57	85.58	85.60	85.61
2.9	85.63	85.64	85.66	85.67	85.69	85.71	85.72	85.74	85.75	85.77
1683.0	85.78	85.80	85.81	85.83	85.85	85.86	85.88	85.89	85.91	85.92
3.1	85.94	85.96	85.97	85.99	86.00	86.02	86.03	86.05	86.06	86.08
3.2	86.10	86.11	86.13	86.14	86.16	86.17	86.19	86.21	86.22	86.24
3.3	86.25	86.27	86.28	86.30	86.32	86.33	86.35	86.36	86.38	86.39
3.4	86.41	86.42	86.44	86.46	86.47	86.49	86.50	86.52	86.53	86.55
1683.5	86.57	86.58	86.60	86.61	86.63	86.64	86.66	86.68	86.69	86.71
3.6	86.72	86.74	86.75	86.77	86.79	86.80	86.82	86.83	86.85	86.86
3.7	86.88	86.90	86.91	86.93	86.94	86.96	86.97	86.99	87.01	87.02
3.8	87.04	87.05	87.07	87.08	87.10	87.12	87.13	87.15	87.16	87.18
3.9	87.19	87.21	87.23	87.24	87.26	87.27	87.29	87.30	87.32	87.34
1684.0	87.35	87.37	87.38	87.40	87.42	87.43	87.45	87.46	87.48	87.49
4.1	87.51	87.53	87.54	87.56	87.57	87.59	87.60	87.62	87.64	87.65
4.2	87.67	87.68	87.70	87.72	87.73	87.75	87.76	87.78	87.79	87.81
4.3	87.83	87.84	87.86	87.87	87.89	87.91	87.92	87.94	87.95	87.97
4.4	87.98	88.00	88.02	88.03	88.05	88.06	88.08	88.09	88.11	88.13
1684.5	88.14	88.16	88.17	88.19	88.21	88.22	88.24	88.25	88.27	88.29
4.6	88.30	88.32	88.33	88.35	88.36	88.38	88.40	88.41	88.43	88.44
4.7	88.46	88.48	88.49	88.51	88.52	88.54	88.55	88.57	88.59	88.60
4.8	88.62	88.63	88.65	88.67	88.68	88.70	88.71	88.73	88.75	88.76
4.9	88.78	88.79	88.81	88.82	88.84	88.86	88.87	88.89	88.90	88.92

ELEV	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
1685.0	88.94	88.95	88.97	88.98	89.00	89.02	89.03	89.05	89.06	89.08
5.1	89.10	89.11	89.13	89.14	89.16	89.18	89.19	89.21	89.22	89.24
5.2	89.26	89.27	89.29	89.30	89.32	89.33	89.35	89.37	89.38	89.40
5.3	89.41	89.43	89.45	89.46	89.48	89.49	89.51	89.53	89.54	89.56
5.4	89.57	89.59	89.61	89.62	89.64	89.65	89.67	89.69	89.70	89.72
1685.5	89.73	89.75	89.77	89.78	89.80	89.81	89.83	89.85	89.86	89.88
5.6	89.89	89.91	89.93	89.94	89.96	89.97	89.99	90.01	90.02	90.04
5.7	90.05	90.07	90.09	90.10	90.12	90.13	90.15	90.17	90.18	90.20
5.8	90.22	90.23	90.25	90.26	90.28	90.30	90.31	90.33	90.34	90.36
5.9	90.38	90.39	90.41	90.42	90.44	90.46	90.47	90.49	90.50	90.52
1686.0	90.54	90.55	90.57	90.58	90.60	90.62	90.63	90.65	90.66	90.68
6.1	90.70	90.71	90.73	90.75	90.76	90.78	90.79	90.81	90.83	90.84
6.2	90.86	90.87	90.89	90.91	90.92	90.94	90.95	90.97	90.99	91.00
6.3	91.02	91.04	91.05	91.07	91.08	91.10	91.12	91.13	91.15	91.16
6.4	91.18	91.20	91.21	91.23	91.24	91.26	91.28	91.29	91.31	91.33
1686.5	91.34	91.36	91.37	91.39	91.41	91.42	91.44	91.45	91.47	91.49
6.6	91.50	91.52	91.54	91.55	91.57	91.58	91.60	91.62	91.63	91.65
6.7	91.66	91.68	91.70	91.71	91.73	91.75	91.76	91.78	91.79	91.81
6.8	91.83	91.84	91.86	91.88	91.89	91.91	91.92	91.94	91.96	91.97
6.9	91.99	92.01	92.02	92.04	92.05	92.07	92.09	92.10	92.12	92.13
1687.0	92.15	92.17	92.18	92.20	92.22	92.23	92.25	92.26	92.28	92.30
7.1	92.31	92.33	92.35	92.36	92.38	92.39	92.41	92.43	92.44	92.46
7.2	92.48	92.49	92.51	92.52	92.54	92.56	92.57	92.59	92.61	92.62
7.3	92.64	92.66	92.67	92.69	92.70	92.72	92.74	92.75	92.77	92.79
7.4	92.80	92.82	92.83	92.85	92.87	92.88	92.90	92.92	92.93	92.95
1687.5	92.96	92.98	93.00	93.01	93.03	93.05	93.06	93.08	93.10	93.11
7.6	93.13	93.14	93.16	93.18	93.19	93.21	93.23	93.24	93.26	93.27
7.7	93.29	93.31	93.32	93.34	93.36	93.37	93.39	93.41	93.42	93.44
7.8	93.45	93.47	93.49	93.50	93.52	93.54	93.55	93.57	93.59	93.60
7.9	93.62	93.63	93.65	93.67	93.68	93.70	93.72	93.73	93.75	93.77
1688.0	93.78	93.80	93.81	93.83	93.85	93.86	93.88	93.90	93.91	93.93
8.1	93.95	93.96	93.98	93.99	94.01	94.03	94.04	94.06	94.08	94.09
8.2	94.11	94.13	94.14	94.16	94.18	94.19	94.21	94.22	94.24	94.26
8.3	94.27	94.29	94.31	94.32	94.34	94.36	94.37	94.39	94.41	94.42
8.4	94.44	94.45	94.47	94.49	94.50	94.52	94.54	94.55	94.57	94.59
1688.5	94.60	94.62	94.64	94.65	94.67	94.68	94.70	94.72	94.73	94.75
8.6	94.77	94.78	94.80	94.82	94.83	94.85	94.87	94.88	94.90	94.92
8.7	94.93	94.95	94.96	94.98	95.00	95.01	95.03	95.05	95.06	95.08
8.8	95.10	95.11	95.13	95.15	95.16	95.18	95.20	95.21	95.23	95.25
8.9	95.26	95.28	95.29	95.31	95.33	95.34	95.36	95.38	95.39	95.41
1689.0	95.43	95.44	95.46	95.48	95.49	95.51	95.53	95.54	95.56	95.58
9.1	95.59	95.61	95.63	95.64	95.66	95.68	95.69	95.71	95.73	95.74
9.2	95.76	95.77	95.79	95.81	95.82	95.84	95.86	95.87	95.89	95.91
9.3	95.92	95.94	95.96	95.97	95.99	96.01	96.02	96.04	96.06	96.07
9.4	96.09	96.11	96.12	96.14	96.16	96.17	96.19	96.21	96.22	96.24
1689.5	96.26	96.27	96.29	96.31	96.32	96.34	96.36	96.37	96.39	96.41
9.6	96.42	96.44	96.46	96.47	96.49	96.51	96.52	96.54	96.56	96.57
9.7	96.59	96.61	96.62	96.64	96.66	96.67	96.69	96.71	96.72	96.74
9.8	96.76	96.77	96.79	96.81	96.82	96.84	96.86	96.87	96.89	96.91
9.9	96.92	96.94	96.95	96.97	96.99	97.00	97.02	97.04	97.06	97.07
1690.0	97.09									

1986 EDITION/GDB

VOLUMES BASED ON 1968 SURVEY

HEADWATER 1680-1690

Attachment 15c: Blue Ridge Excel Level Storage Table

BLUE RIDGE

Quick Lookup

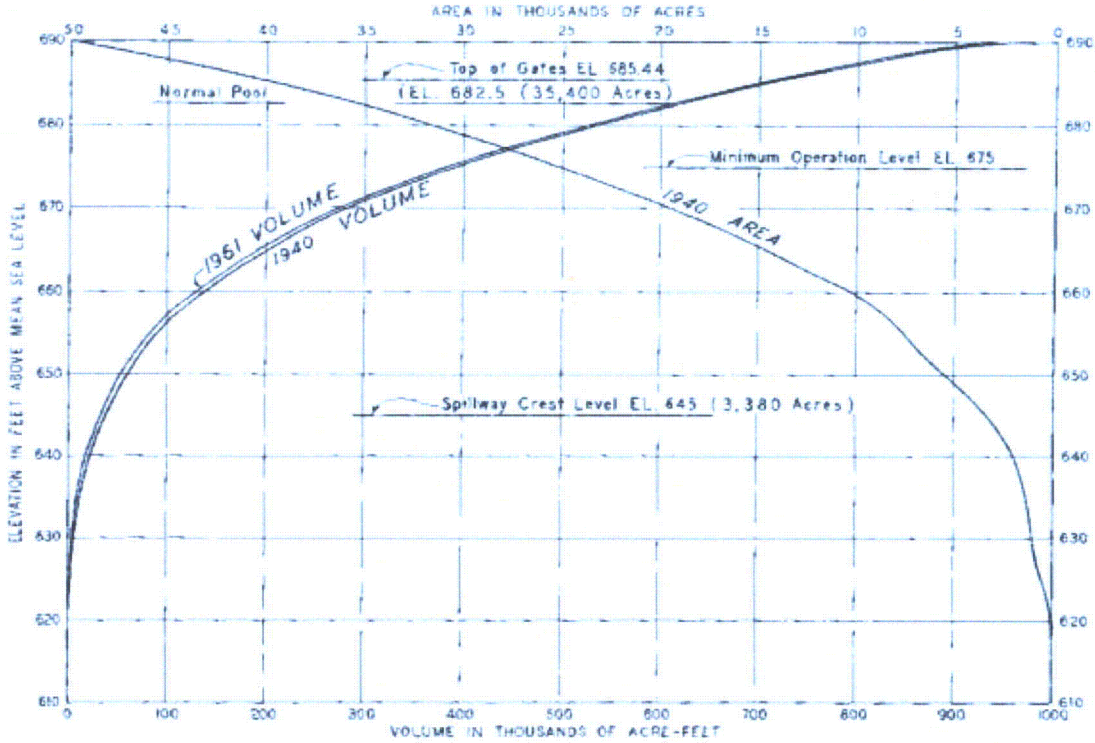
Storage	Enter known HW in green box Corresponding storage is in yellow box	
	Elevation	Volume
	1690.00	97.088

HW	Enter known storage in green box Adjust value in gray box until value in blue box matches or closely approximates value in green box Corresponding HW is in yellow box			
	Volume			Elevation
	85.000	2.500	85.005	1682.50

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
1580.00	3.247	3.249	3.252	3.254	3.256	3.259	3.261	3.264	3.266	3.269
1580.10	3.271	3.273	3.276	3.278	3.281	3.283	3.286	3.288	3.290	3.293
1580.20	3.295	3.298	3.300	3.303	3.305	3.307	3.310	3.312	3.315	3.317
1580.30	3.320	3.322	3.325	3.327	3.329	3.332	3.334	3.337	3.339	3.342
1580.40	3.344	3.347	3.349	3.351	3.354	3.356	3.359	3.361	3.364	3.366
1580.50	3.369	3.371	3.374	3.376	3.379	3.381	3.383	3.386	3.388	3.391
1580.60	3.393	3.396	3.398	3.401	3.403	3.406	3.408	3.411	3.413	3.416
1580.70	3.418	3.421	3.423	3.426	3.428	3.431	3.433	3.436	3.438	3.441
1580.80	3.443	3.445	3.448	3.450	3.453	3.455	3.458	3.460	3.463	3.465
1580.90	3.468	3.470	3.473	3.475	3.478	3.480	3.483	3.485	3.488	3.491
1581.00	3.493	3.496	3.498	3.501	3.503	3.506	3.508	3.511	3.513	3.516
1581.10	3.518	3.521	3.523	3.526	3.528	3.531	3.533	3.536	3.538	3.541
1581.20	3.543	3.546	3.548	3.551	3.554	3.556	3.559	3.561	3.564	3.566
1581.30	3.569	3.571	3.574	3.576	3.579	3.581	3.584	3.587	3.589	3.592
1581.40	3.594	3.597	3.599	3.602	3.604	3.607	3.609	3.612	3.615	3.617
1581.50	3.620	3.622	3.625	3.627	3.630	3.632	3.635	3.638	3.640	3.643
1581.60	3.645	3.648	3.650	3.653	3.656	3.658	3.661	3.663	3.666	3.668
1581.70	3.671	3.674	3.676	3.679	3.681	3.684	3.686	3.689	3.692	3.694
1581.80	3.697	3.699	3.702	3.704	3.707	3.710	3.712	3.715	3.717	3.720
1581.90	3.723	3.725	3.728	3.730	3.733	3.736	3.738	3.741	3.743	3.746
1582.00	3.749	3.751	3.754	3.756	3.759	3.762	3.764	3.767	3.769	3.772

Attachment 16a: Chickamauga Bluebook Figure



ELEV FT	1940 AREA AC	VOLUME 1940 AC-FT	1947 AC-FT	1954 AC-FT	1956 AC-FT	1981 AC-FT
696	49,800	951,000	935,000	950,000	945,000	944,000
685.44	46,806	747,006	735,000	745,000	740,000	739,000
685	39,905	727,000	715,000	725,000	721,000	719,000
680	32,200	547,000	535,000	544,000	539,000	537,000
675	25,500	492,000	390,000	394,000	394,000	392,000
664	18,860	269,645	266,000	265,000	263,000	261,000
662	12,400	160,056	153,000	158,000	155,000	153,000
660	10,590	137,000	131,000	133,000	132,000	135,000
650	5,720	57,700	58,700	54,700	53,600	52,200
640	2,020	20,000	18,600	18,500	18,600	18,000
630	1,140	4,740	4,020	3,970	3,950	3,650
620	104	135	94	86	47	88
611	0	0	0	0	0	0

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

NOTES:

Reservoir areas at elevation 660 and below were measured on a composite map prepared by the Hydraulic Data Branch with contours drawn at 10' intervals. The map was prepared from Tennessee River Survey Maps made by the U. S. Army Engineers, with contours at 620, 630, 640, 650 and 660. Contours were made to conform to elevations on TVA sediment range cross sections located at one to five mile intervals. Areas above elevation 660 were measured on TVA navigation maps at elevations 662, 669, 675, 680, 685 and 690 from TVA navigation maps adjusted to agree with the area at elevation 663 from TVA land maps.

The 1940 volume was computed by the contour method. Volumes of sediment on succeeding dates were computed by the constant factor method.

Elevations are referred to the USC & GS 1936 Supplementary Adjustment.

Area of original river within reservoir = 9,500 acres

Drainage area at dam = 20,793 square miles

Dam closure January 15, 1940

TENNESSEE RIVER-MILE 471.0

RESERVOIR AREAS AND VOLUMES

CHICKAMAUGA PROJECT
TENNESSEE VALLEY AUTHORITY
DIVISION OF WATER CONTROL PLANNING

SUBMITTED | RECOMMENDED | APPROVED

KNOXVILLE | 12-29-82 | 7 | CAT 1 | 321G806 Rev.

Attachment 16b: Chickamauga 1986 Level Storage Table

TVA			
Calculation No. CDQ000020080051	Rev: 0	Plant: GEN	Page: 135
Subject: Reservoir Storage Tables		Prepped	LKG
		Checked	WWC

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

CHICKAMAUGA

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
670.0	141.20	141.30	141.40	141.49	141.59	141.69	141.79	141.89	141.99	142.09
.1	142.19	142.29	142.38	142.48	142.58	142.68	142.78	142.88	142.98	143.08
.2	143.18	143.28	143.38	143.48	143.58	143.68	143.78	143.88	143.98	144.08
.3	144.18	144.28	144.38	144.48	144.58	144.68	144.78	144.88	144.98	145.08
.4	145.18	145.28	145.38	145.48	145.58	145.69	145.79	145.89	145.99	146.09
670.5	146.19	146.29	146.39	146.49	146.59	146.70	146.80	146.90	147.00	147.10
.6	147.20	147.31	147.41	147.51	147.61	147.71	147.82	147.92	148.02	148.12
.7	148.22	148.33	148.43	148.53	148.63	148.74	148.84	148.94	149.04	149.14
.8	149.25	149.35	149.45	149.56	149.66	149.76	149.87	149.97	150.07	150.18
.9	150.28	150.38	150.49	150.59	150.69	150.80	150.90	151.00	151.11	151.21
671.0	151.31	151.42	151.52	151.63	151.73	151.83	151.94	152.04	152.15	152.25
.1	152.35	152.46	152.56	152.67	152.77	152.88	152.98	153.09	153.19	153.30
.2	153.40	153.51	153.61	153.72	153.82	153.93	154.03	154.14	154.24	154.35
.3	154.45	154.56	154.66	154.77	154.88	154.98	155.09	155.19	155.30	155.40
.4	155.51	155.62	155.72	155.83	155.94	156.04	156.15	156.25	156.36	156.47
671.5	156.57	156.68	156.79	156.89	157.00	157.11	157.21	157.32	157.43	157.53
.6	157.64	157.75	157.86	157.96	158.07	158.18	158.29	158.39	158.50	158.61
.7	158.72	158.82	158.93	159.04	159.15	159.26	159.36	159.47	159.58	159.69
.8	159.80	159.91	160.01	160.12	160.23	160.34	160.45	160.56	160.66	160.77
.9	160.88	160.99	161.10	161.21	161.32	161.43	161.54	161.65	161.75	161.86
672.0	161.97	162.08	162.19	162.30	162.41	162.52	162.63	162.74	162.85	162.96
.1	163.07	163.18	163.29	163.40	163.51	163.62	163.73	163.84	163.95	164.06
.2	164.17	164.29	164.40	164.51	164.62	164.73	164.84	164.95	165.06	165.17
.3	165.28	165.40	165.51	165.62	165.73	165.84	165.95	166.06	166.18	166.29
.4	166.40	166.51	166.62	166.74	166.85	166.96	167.07	167.18	167.30	167.41
672.5	167.52	167.63	167.75	167.86	167.97	168.08	168.20	168.31	168.42	168.53
.6	168.65	168.76	168.87	168.99	169.10	169.21	169.33	169.44	169.55	169.67
.7	169.78	169.90	170.01	170.12	170.24	170.35	170.46	170.58	170.69	170.81
.8	170.92	171.04	171.15	171.27	171.38	171.49	171.61	171.72	171.84	171.95
.9	172.07	172.18	172.30	172.41	172.53	172.64	172.76	172.87	172.99	173.10
673.0	173.22	173.34	173.45	173.57	173.68	173.80	173.91	174.03	174.14	174.26
.1	174.38	174.49	174.61	174.73	174.84	174.96	175.08	175.19	175.31	175.42
.2	175.54	175.66	175.78	175.89	176.01	176.13	176.24	176.36	176.48	176.59
.3	176.71	176.83	176.95	177.07	177.18	177.30	177.42	177.54	177.65	177.77
.4	177.89	178.01	178.13	178.25	178.36	178.48	178.60	178.72	178.84	178.96
673.5	179.07	179.19	179.31	179.43	179.55	179.67	179.79	179.91	180.03	180.14
.6	180.26	180.38	180.50	180.62	180.74	180.86	180.98	181.10	181.22	181.34
.7	181.46	181.58	181.70	181.82	181.94	182.06	182.18	182.30	182.42	182.54
.8	182.67	182.79	182.91	183.03	183.15	183.27	183.39	183.51	183.63	183.75
.9	183.88	184.00	184.12	184.24	184.36	184.48	184.60	184.73	184.85	184.97
674.0	185.09	185.21	185.34	185.46	185.58	185.70	185.83	185.95	186.07	186.19
.1	186.31	186.44	186.56	186.68	186.81	186.93	187.05	187.17	187.30	187.42
.2	187.54	187.67	187.79	187.91	188.04	188.16	188.29	188.41	188.53	188.66
.3	188.78	188.91	189.03	189.15	189.28	189.40	189.53	189.65	189.78	189.90
.4	190.02	190.15	190.27	190.40	190.52	190.65	190.77	190.90	191.02	191.15
674.5	191.27	191.40	191.53	191.65	191.78	191.90	192.03	192.15	192.28	192.41
.6	192.53	192.66	192.78	192.91	193.04	193.16	193.29	193.42	193.54	193.67
.7	193.80	193.92	194.05	194.18	194.30	194.43	194.56	194.68	194.81	194.94
.8	195.07	195.20	195.32	195.45	195.58	195.71	195.83	195.96	196.09	196.22
.9	196.35	196.47	196.60	196.73	196.86	196.99	197.12	197.24	197.37	197.50

ELEV	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
675.0	197.63	197.76	197.89	198.02	198.15	198.28	198.41	198.53	198.66	198.79
5.1	198.92	199.05	199.18	199.31	199.44	199.57	199.70	199.83	199.96	200.09
5.2	200.22	200.35	200.48	200.61	200.74	200.87	201.01	201.13	201.27	201.40
5.3	201.53	201.66	201.79	201.92	202.05	202.19	202.32	202.45	202.58	202.71
5.4	202.84	202.97	203.11	203.24	203.37	203.50	203.63	203.76	203.90	204.03
675.5	204.16	204.29	204.43	204.56	204.69	204.83	204.96	205.09	205.22	205.36
5.6	205.49	205.62	205.76	205.89	206.02	206.16	206.29	206.42	206.56	206.69
5.7	206.82	206.96	207.09	207.23	207.36	207.49	207.63	207.76	207.90	208.03
5.8	208.17	208.30	208.44	208.57	208.71	208.84	208.98	209.11	209.24	209.38
5.9	209.51	209.65	209.79	209.92	210.06	210.19	210.33	210.46	210.60	210.73
676.0	210.87	211.01	211.14	211.28	211.41	211.55	211.69	211.82	211.96	212.10
6.1	212.23	212.37	212.51	212.64	212.78	212.92	213.05	213.19	213.33	213.46
6.2	213.60	213.74	213.88	214.01	214.15	214.29	214.43	214.56	214.70	214.84
6.3	214.98	215.12	215.26	215.39	215.53	215.67	215.81	215.95	216.08	216.22
6.4	216.36	216.50	216.64	216.78	216.92	217.06	217.20	217.33	217.47	217.61
676.5	217.75	217.89	218.03	218.17	218.31	218.45	218.59	218.73	218.87	219.01
6.6	219.15	219.29	219.43	219.57	219.71	219.85	219.99	220.13	220.27	220.41
6.7	220.55	220.69	220.84	220.98	221.12	221.26	221.40	221.54	221.68	221.82
6.8	221.97	222.11	222.25	222.39	222.53	222.67	222.82	222.96	223.10	223.24
6.9	223.38	223.53	223.67	223.81	223.95	224.10	224.24	224.38	224.52	224.67
677.0	224.81	224.95	225.09	225.24	225.38	225.52	225.67	225.81	225.95	226.10
7.1	226.24	226.38	226.53	226.67	226.82	226.96	227.10	227.25	227.39	227.53
7.2	227.68	227.82	227.97	228.11	228.26	228.40	228.55	228.69	228.83	228.98
7.3	229.13	229.27	229.42	229.56	229.71	229.85	230.00	230.14	230.29	230.43
7.4	230.58	230.72	230.87	231.02	231.16	231.31	231.45	231.60	231.74	231.89
677.5	232.04	232.18	232.33	232.48	232.62	232.77	232.92	233.06	233.21	233.36
7.6	233.50	233.65	233.80	233.95	234.09	234.24	234.39	234.53	234.68	234.83
7.7	234.98	235.12	235.27	235.42	235.57	235.72	235.86	236.01	236.16	236.31
7.8	236.46	236.61	236.75	236.90	237.05	237.20	237.35	237.50	237.65	237.80
7.9	237.94	238.09	238.24	238.39	238.54	238.69	238.84	238.99	239.14	239.29
678.0	239.44	239.59	239.74	239.89	240.04	240.19	240.34	240.49	240.64	240.79
8.1	240.94	241.09	241.24	241.39	241.54	241.69	241.84	241.99	242.14	242.29
8.2	242.45	242.60	242.75	242.90	243.05	243.20	243.35	243.50	243.66	243.81
8.3	243.96	244.11	244.26	244.42	244.57	244.72	244.87	245.02	245.18	245.33
8.4	245.48	245.63	245.79	245.94	246.09	246.25	246.40	246.55	246.70	246.86
678.5	247.01	247.16	247.32	247.47	247.62	247.78	247.93	248.08	248.24	248.39
8.6	248.54	248.70	248.85	249.01	249.16	249.31	249.47	249.62	249.77	249.93
8.7	250.08	250.24	250.39	250.55	250.70	250.86	251.01	251.17	251.32	251.48
8.8	251.63	251.79	251.94	252.10	252.26	252.41	252.57	252.72	252.88	253.03
8.9	253.19	253.34	253.50	253.66	253.81	253.97	254.13	254.28	254.44	254.59
679.0	254.75	254.91	255.06	255.22	255.38	255.53	255.69	255.85	256.00	256.16
9.1	256.32	256.47	256.63	256.79	256.95	257.10	257.26	257.42	257.58	257.73
9.2	257.89	258.05	258.21	258.37	258.52	258.68	258.84	259.00	259.16	259.31
9.3	259.47	259.63	259.79	259.95	260.11	260.27	260.43	260.59	260.74	260.90
9.4	261.06	261.22	261.38	261.54	261.70	261.86	262.02	262.18	262.34	262.50
679.5	262.66	262.82	262.98	263.14	263.30	263.46	263.62	263.78	263.94	264.10
9.6	264.26	264.42	264.58	264.74	264.90	265.06	265.22	265.38	265.54	265.71
9.7	265.87	266.03	266.19	266.35	266.51	266.67	266.84	267.00	267.16	267.32
9.8	267.48	267.65	267.81	267.97	268.13	268.29	268.46	268.62	268.78	268.94
9.9	269.11	269.27	269.43	269.59	269.76	269.92	270.08	270.24	270.41	270.57
680.0	270.73									

Attachment 16c: Chickamauga Excel Level Storage Table

Quick Lookup

Storage

Enter known HW in green box. Corresponding storage is in yellow/blue box

Elevation	Volume TDSF	Volume Ac-Ft
680.00	270.734	536,992

HW

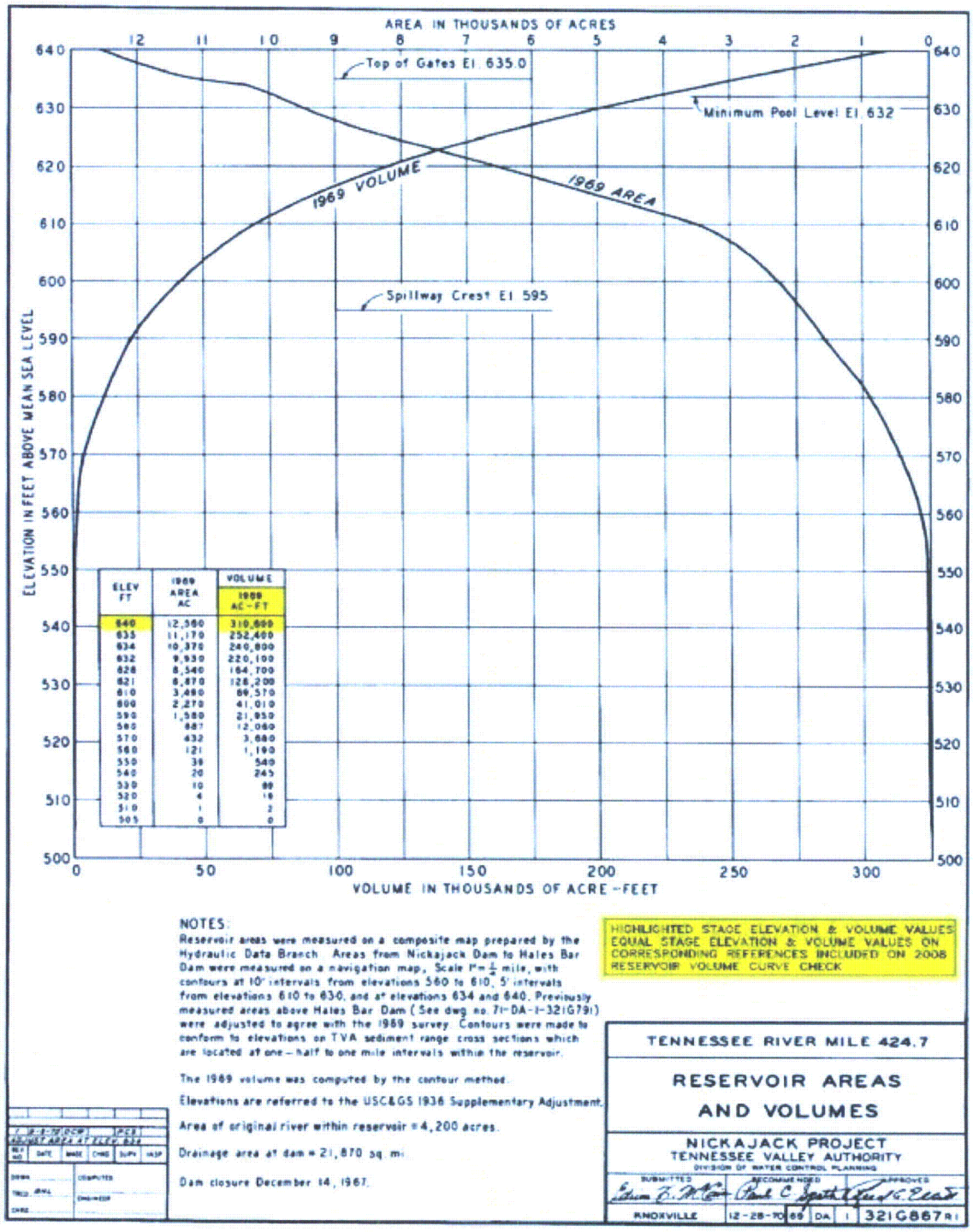
Enter known storage in green box. Adjust value in gray box until value in blue box matches or closely approximates value in green box. Corresponding HW is in yellow box.

Volume			Elevation
250.000	3.695	250.007	678.70

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
674.00	185.091	185.213	185.335	185.458	185.580	185.702	185.824	185.947	186.069	186.192
674.10	186.314	186.437	186.560	186.683	186.806	186.929	187.052	187.175	187.298	187.421
674.20	187.544	187.668	187.791	187.915	188.038	188.162	188.286	188.409	188.533	188.657
674.30	188.781	188.905	189.029	189.153	189.278	189.402	189.526	189.651	189.775	189.900
674.40	190.025	190.149	190.274	190.399	190.524	190.649	190.774	190.899	191.024	191.150
674.50	191.275	191.400	191.526	191.651	191.777	191.903	192.028	192.154	192.280	192.406
674.60	192.532	192.658	192.784	192.911	193.037	193.163	193.290	193.416	193.543	193.669
674.70	193.796	193.923	194.050	194.177	194.304	194.431	194.558	194.685	194.812	194.940
674.80	195.067	195.195	195.322	195.450	195.578	195.705	195.833	195.961	196.089	196.217
674.90	196.345	196.474	196.602	196.730	196.859	196.987	197.116	197.244	197.373	197.502
675.00	197.631	197.759	197.888	198.017	198.147	198.276	198.405	198.534	198.664	198.793
675.10	198.923	199.052	199.182	199.312	199.442	199.571	199.701	199.831	199.962	200.092
675.20	200.222	200.352	200.483	200.613	200.744	200.874	201.005	201.136	201.266	201.397
675.30	201.528	201.659	201.790	201.922	202.053	202.184	202.315	202.447	202.578	202.710
675.40	202.842	202.973	203.105	203.237	203.369	203.501	203.633	203.765	203.897	204.030
675.50	204.162	204.295	204.427	204.560	204.692	204.825	204.958	205.091	205.224	205.357
675.60	205.490	205.623	205.756	205.889	206.023	206.156	206.289	206.423	206.557	206.690
675.70	206.824	206.958	207.092	207.226	207.360	207.494	207.628	207.762	207.897	208.031
675.80	208.166	208.300	208.435	208.569	208.704	208.839	208.974	209.109	209.244	209.379
675.90	209.514	209.649	209.785	209.920	210.056	210.191	210.327	210.462	210.598	210.734

Attachment 17a: Nickajack Bluebook Figure



ELEV FT	1969 AREA AC	VOLUME 1969 AC-FT
640	12,380	310,800
635	11,170	252,400
634	10,375	240,800
632	9,930	220,100
628	8,540	164,700
621	6,870	128,200
610	3,480	69,570
600	2,270	41,010
590	1,580	21,950
580	887	12,060
570	432	3,680
560	121	1,190
550	38	540
540	20	245
530	10	80
520	4	19
510	1	2
505	0	0

Attachment 17b: Nickajack 1986 Level Storage Table

TVA			
Calculation No. CDQ00002008005 1	Rev: 0	Plant: GEN	Page: 138
Subject: Reservoir Storage Tables		Prepped	LKG
		Checked	WWC

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

NICKAJACK

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
630.0	101.10	101.15	101.20	101.25	101.30	101.34	101.39	101.44	101.49	101.54
.1	101.58	101.63	101.68	101.73	101.78	101.82	101.87	101.92	101.97	102.02
.2	102.07	102.11	102.16	102.21	102.26	102.31	102.35	102.40	102.45	102.50
.3	102.55	102.60	102.64	102.69	102.74	102.79	102.84	102.89	102.93	102.98
.4	103.03	103.08	103.13	103.18	103.23	103.27	103.32	103.37	103.42	103.47
630.5	103.52	103.57	103.61	103.66	103.71	103.76	103.81	103.86	103.91	103.95
.6	104.00	104.05	104.10	104.15	104.20	104.25	104.30	104.34	104.39	104.44
.7	104.49	104.54	104.59	104.64	104.69	104.74	104.79	104.83	104.88	104.93
.8	104.98	105.03	105.08	105.13	105.18	105.23	105.28	105.32	105.37	105.42
.9	105.47	105.52	105.57	105.62	105.67	105.72	105.77	105.82	105.87	105.92
631.0	105.96	106.01	106.06	106.11	106.16	106.21	106.26	106.31	106.36	106.41
1.1	106.46	106.51	106.56	106.61	106.66	106.71	106.76	106.80	106.85	106.90
1.2	106.95	107.00	107.05	107.10	107.15	107.20	107.25	107.30	107.35	107.40
1.3	107.45	107.50	107.55	107.60	107.65	107.70	107.75	107.80	107.85	107.90
1.4	107.95	108.00	108.05	108.10	108.15	108.20	108.25	108.30	108.35	108.40
631.5	108.45	108.50	108.55	108.60	108.65	108.70	108.75	108.80	108.85	108.90
1.6	108.95	109.00	109.05	109.10	109.15	109.20	109.25	109.30	109.35	109.40
1.7	109.45	109.50	109.55	109.60	109.65	109.70	109.75	109.80	109.85	109.90
1.8	109.95	110.00	110.06	110.11	110.16	110.21	110.26	110.31	110.36	110.41
1.9	110.46	110.51	110.56	110.61	110.66	110.71	110.76	110.81	110.86	110.91
632.0	110.97	111.02	111.07	111.12	111.17	111.22	111.27	111.32	111.37	111.42
2.1	111.47	111.52	111.58	111.63	111.68	111.73	111.78	111.83	111.88	111.93
2.2	111.98	112.03	112.08	112.14	112.19	112.24	112.29	112.34	112.39	112.44
2.3	112.49	112.55	112.60	112.65	112.70	112.75	112.80	112.85	112.90	112.95
2.4	113.01	113.06	113.11	113.16	113.21	113.26	113.31	113.37	113.42	113.47
632.5	113.52	113.57	113.62	113.67	113.73	113.78	113.83	113.88	113.93	113.98
2.6	114.03	114.09	114.14	114.19	114.24	114.29	114.35	114.40	114.45	114.50
2.7	114.55	114.60	114.66	114.71	114.76	114.81	114.86	114.91	114.97	115.02
2.8	115.07	115.12	115.17	115.23	115.28	115.33	115.38	115.43	115.49	115.54
2.9	115.59	115.64	115.69	115.75	115.80	115.85	115.90	115.95	116.01	116.06
633.0	116.11	116.16	116.21	116.27	116.32	116.37	116.42	116.48	116.53	116.58
3.1	116.63	116.69	116.74	116.79	116.84	116.89	116.95	117.00	117.05	117.10
3.2	117.16	117.21	117.26	117.31	117.37	117.42	117.47	117.52	117.58	117.63
3.3	117.68	117.74	117.79	117.84	117.89	117.95	118.00	118.05	118.10	118.16
3.4	118.21	118.26	118.32	118.37	118.42	118.47	118.53	118.58	118.63	118.68
633.5	118.74	118.79	118.84	118.90	118.95	119.00	119.06	119.11	119.16	119.21
3.6	119.27	119.32	119.37	119.43	119.48	119.53	119.59	119.64	119.69	119.75
3.7	119.80	119.85	119.91	119.96	120.01	120.07	120.12	120.17	120.22	120.28
3.8	120.33	120.39	120.44	120.49	120.55	120.60	120.65	120.71	120.76	120.81
3.9	120.87	120.92	120.97	121.03	121.08	121.13	121.19	121.24	121.29	121.35
634.0	121.40	121.46	121.51	121.56	121.62	121.67	121.72	121.78	121.83	121.88
4.1	121.94	121.99	122.05	122.10	122.15	122.21	122.26	122.32	122.37	122.42
4.2	122.48	122.53	122.59	122.64	122.69	122.75	122.80	122.86	122.91	122.96
4.3	123.02	123.07	123.13	123.18	123.23	123.29	123.34	123.40	123.45	123.51
4.4	123.56	123.61	123.67	123.72	123.78	123.83	123.89	123.94	123.99	124.05
634.5	124.10	124.16	124.21	124.27	124.32	124.38	124.43	124.48	124.54	124.59
4.6	124.65	124.70	124.76	124.81	124.87	124.92	124.98	125.03	125.08	125.14
4.7	125.19	125.25	125.30	125.36	125.41	125.47	125.52	125.58	125.63	125.69
4.8	125.74	125.80	125.85	125.91	125.96	126.02	126.07	126.13	126.18	126.24
4.9	126.29	126.35	126.40	126.46	126.51	126.57	126.62	126.68	126.73	126.79

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
635.0	126.84	126.90	126.95	127.01	127.06	127.12	127.17	127.23	127.28	127.34
5.1	127.39	127.45	127.51	127.56	127.62	127.67	127.73	127.78	127.84	127.89
5.2	127.95	128.00	128.06	128.12	128.17	128.23	128.28	128.34	128.39	128.45
5.3	128.51	128.56	128.62	128.67	128.73	128.78	128.84	128.89	128.95	129.01
5.4	129.06	129.12	129.17	129.23	129.29	129.34	129.40	129.45	129.51	129.57
635.5	129.62	129.68	129.73	129.79	129.85	129.90	129.96	130.01	130.07	130.13
5.6	130.18	130.24	130.29	130.35	130.41	130.46	130.52	130.57	130.63	130.69
5.7	130.74	130.80	130.86	130.91	130.97	131.03	131.08	131.14	131.19	131.25
5.8	131.31	131.36	131.42	131.48	131.53	131.59	131.65	131.70	131.76	131.82
5.9	131.87	131.93	131.99	132.04	132.10	132.16	132.21	132.27	132.33	132.38
636.0	132.44	132.50	132.55	132.61	132.67	132.72	132.78	132.84	132.90	132.95
6.1	133.01	133.07	133.12	133.18	133.24	133.29	133.35	133.41	133.47	133.52
6.2	133.58	133.64	133.69	133.75	133.81	133.87	133.92	133.98	134.04	134.09
6.3	134.15	134.21	134.27	134.32	134.38	134.44	134.50	134.55	134.61	134.67
6.4	134.73	134.78	134.84	134.90	134.96	135.01	135.07	135.13	135.19	135.24
636.5	135.30	135.36	135.42	135.47	135.53	135.59	135.65	135.71	135.76	135.82
6.6	135.88	135.94	135.99	136.05	136.11	136.17	136.23	136.28	136.34	136.40
6.7	136.46	136.52	136.57	136.63	136.69	136.75	136.81	136.86	136.92	136.98
6.8	137.04	137.10	137.16	137.21	137.27	137.33	137.39	137.45	137.50	137.56
6.9	137.62	137.68	137.74	137.80	137.86	137.91	137.97	138.03	138.09	138.15
637.0	138.21	138.26	138.32	138.38	138.44	138.50	138.56	138.62	138.67	138.73
7.1	138.79	138.85	138.91	138.97	139.03	139.09	139.14	139.20	139.26	139.32
7.2	139.38	139.44	139.50	139.56	139.61	139.67	139.73	139.79	139.85	139.91
7.3	139.97	140.03	140.09	140.15	140.21	140.26	140.32	140.38	140.44	140.50
7.4	140.56	140.62	140.68	140.74	140.80	140.86	140.92	140.97	141.03	141.09
637.5	141.15	141.21	141.27	141.33	141.39	141.45	141.51	141.57	141.63	141.69
7.6	141.75	141.81	141.87	141.93	141.99	142.05	142.11	142.17	142.23	142.28
7.7	142.34	142.40	142.46	142.52	142.58	142.64	142.70	142.76	142.82	142.88
7.8	142.94	143.00	143.06	143.12	143.18	143.24	143.30	143.36	143.42	143.48
7.9	143.54	143.60	143.66	143.72	143.78	143.85	143.91	143.97	144.03	144.09
638.0	144.15	144.21	144.27	144.33	144.39	144.45	144.51	144.57	144.63	144.69
8.1	144.75	144.81	144.87	144.93	144.99	145.05	145.11	145.17	145.23	145.30
8.2	145.36	145.42	145.48	145.54	145.60	145.66	145.72	145.78	145.84	145.90
8.3	145.96	146.03	146.09	146.15	146.21	146.27	146.33	146.39	146.45	146.51
8.4	146.57	146.64	146.70	146.76	146.82	146.88	146.94	147.00	147.06	147.12
638.5	147.19	147.25	147.31	147.37	147.43	147.49	147.55	147.61	147.68	147.74
8.6	147.80	147.86	147.92	147.98	148.04	148.11	148.17	148.23	148.29	148.35
8.7	148.41	148.48	148.54	148.60	148.66	148.72	148.78	148.85	148.91	148.97
8.8	149.03	149.09	149.16	149.22	149.28	149.34	149.40	149.46	149.53	149.59
8.9	149.65	149.71	149.78	149.84	149.90	149.96	150.02	150.09	150.15	150.21
639.0	150.27	150.33	150.40	150.46	150.52	150.58	150.65	150.71	150.77	150.83
9.1	150.89	150.96	151.02	151.08	151.14	151.21	151.27	151.33	151.39	151.46
9.2	151.52	151.58	151.65	151.71	151.77	151.83	151.90	151.96	152.02	152.08
9.3	152.15	152.21	152.27	152.34	152.40	152.46	152.52	152.59	152.65	152.71
9.4	152.78	152.84	152.90	152.97	153.03	153.09	153.15	153.22	153.28	153.34
639.5	153.41	153.47	153.53	153.60	153.66	153.72	153.79	153.85	153.91	153.98
9.6	154.04	154.10	154.17	154.23	154.29	154.36	154.42	154.48	154.55	154.61
9.7	154.67	154.74	154.80	154.87	154.93	154.99	155.06	155.12	155.18	155.25
9.8	155.31	155.38	155.44	155.50	155.57	155.63	155.70	155.76	155.82	155.89
9.9	155.95	156.02	156.08	156.14	156.21	156.27	156.34	156.40	156.46	156.53
640.0	156.59									

1986 EDITION/KUB

VOLUMES BASED ON 1969 SURVEY

HEADWATER 630- 640

Attachment 17c: Nickajack Excel Level Storage Table

NICKAJACK

Quick Lookup

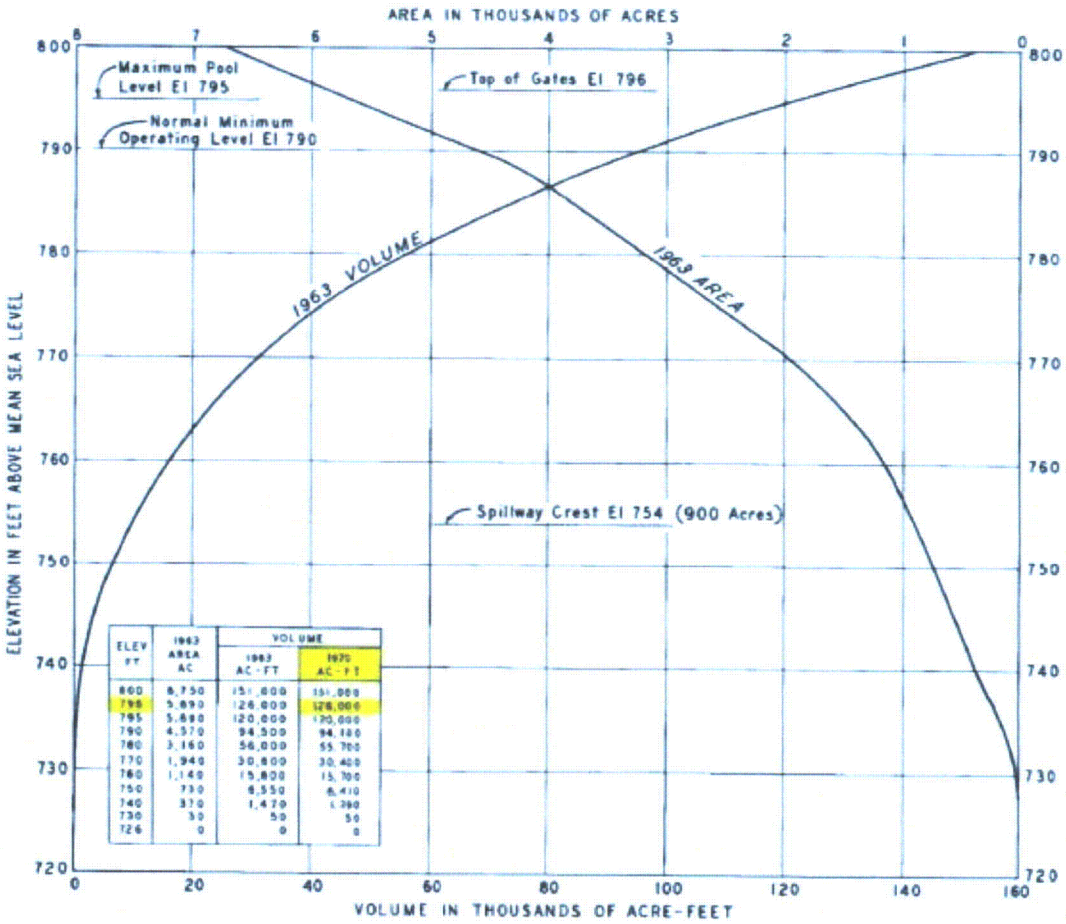
Storage	Enter known HW in green box Corresponding storage is in yellow/blue box		
	Elevation	Volume	
		TDSF	Ac-Ft
	640.00	156.592	310,596

HW	Enter known storage in green box Adjust value in gray box until value in blue box matches or closely approximates value in green box Corresponding HW is in yellow box			
	Volume			Elevation
	120.000	1.739	120.006	633.74

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
631.00	105.964	106.014	106.063	106.112	106.162	106.211	106.260	106.310	106.359	106.409
631.10	106.458	106.508	106.557	106.606	106.656	106.705	106.755	106.804	106.854	106.904
631.20	106.953	107.003	107.052	107.102	107.152	107.201	107.251	107.301	107.350	107.400
631.30	107.450	107.499	107.549	107.599	107.649	107.699	107.748	107.798	107.848	107.898
631.40	107.948	107.998	108.047	108.097	108.147	108.197	108.247	108.297	108.347	108.397
631.50	108.447	108.497	108.547	108.597	108.647	108.697	108.747	108.798	108.848	108.898
631.60	108.948	108.998	109.048	109.098	109.149	109.199	109.249	109.299	109.350	109.400
631.70	109.450	109.500	109.551	109.601	109.651	109.702	109.752	109.803	109.853	109.903
631.80	109.954	110.004	110.055	110.105	110.156	110.206	110.257	110.307	110.358	110.408
631.90	110.459	110.510	110.560	110.611	110.661	110.712	110.763	110.813	110.864	110.915
632.00	110.966	111.016	111.067	111.118	111.169	111.219	111.270	111.321	111.372	111.423
632.10	111.473	111.524	111.575	111.626	111.677	111.728	111.779	111.830	111.881	111.932
632.20	111.983	112.034	112.085	112.136	112.187	112.238	112.289	112.340	112.391	112.443
632.30	112.494	112.545	112.596	112.647	112.699	112.750	112.801	112.852	112.904	112.955
632.40	113.006	113.057	113.109	113.160	113.211	113.263	113.314	113.366	113.417	113.468
632.50	113.520	113.571	113.623	113.674	113.726	113.777	113.829	113.880	113.932	113.983
632.60	114.035	114.087	114.138	114.190	114.242	114.293	114.345	114.397	114.448	114.500
632.70	114.552	114.603	114.655	114.707	114.759	114.811	114.862	114.914	114.966	115.018
632.80	115.070	115.122	115.174	115.226	115.278	115.329	115.381	115.433	115.485	115.537
632.90	115.589	115.641	115.694	115.746	115.798	115.850	115.902	115.954	116.006	116.058

Attachment 18a: Melton Hill Bluebook Figure



ELEV FT	1963 AREA AC	VOLUME 1963 AC-FT	VOLUME 1970 AC-FT
800	8,750	151,000	151,000
796	5,890	126,000	126,000
795	5,680	120,000	120,000
790	4,570	94,500	94,100
780	3,160	56,000	55,700
770	1,940	30,800	30,400
760	1,140	15,800	15,700
750	730	8,550	8,410
740	370	1,470	1,390
730	50	50	50
726	0	0	0

NOTES

Reservoir areas were measured on a composite map prepared by the Hydraulic Data Branch with contours drawn at 10' intervals and scale 1"=1,000'. The map was prepared from TVA topographic maps with contours at 5' intervals below elevation 820.

Contours were made to conform to elevations on TVA sediment range cross sections located at one to two mile intervals.

The 1963 volume was computed by the contour method.

Volumes of sediment on succeeding date were computed by the constant factor method.

Elevations are referred to the U.S.C. & G.S. 1936 Supplementary Adjustment.

Area of original river within reservoir = 1,645 acres.

Drainage area at dam = 3,343 square miles.

Dam closure May 1, 1963.

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK.

CLINCH RIVER-MILE 23.1

RESERVOIR AREAS AND VOLUMES

MELTON HILL PROJECT
TENNESSEE VALLEY AUTHORITY
DIVISION OF WATER CONTROL PLANNING

SUBMITTED	RECOMMENDED	APPROVED

KNOXVILLE | 2-20-69 | 43 | PP | 1 | 321G828R1

THIS DRAWING SUPERSEDES 43-PP-1-321G720R1

Attachment 18b: Melton Hill 1986 Level Storage Table

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

MELTON HILL

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
790.0	47.44	47.46	47.49	47.51	47.53	47.56	47.58	47.60	47.63	47.65
.1	47.67	47.70	47.72	47.75	47.77	47.79	47.82	47.84	47.86	47.89
.2	47.91	47.93	47.96	47.98	48.00	48.03	48.05	48.07	48.10	48.12
.3	48.14	48.17	48.19	48.22	48.24	48.26	48.29	48.31	48.33	48.36
.4	48.38	48.40	48.43	48.45	48.48	48.50	48.52	48.55	48.57	48.59
790.5	48.62	48.64	48.66	48.69	48.71	48.74	48.76	48.78	48.81	48.83
.6	48.86	48.88	48.90	48.93	48.95	48.97	49.00	49.02	49.05	49.07
.7	49.09	49.12	49.14	49.17	49.19	49.21	49.24	49.26	49.29	49.31
.8	49.33	49.36	49.38	49.41	49.43	49.45	49.48	49.50	49.53	49.55
.9	49.58	49.60	49.62	49.65	49.67	49.70	49.72	49.74	49.77	49.79
791.0	49.82	49.84	49.87	49.89	49.91	49.94	49.96	49.99	50.01	50.04
1.1	50.06	50.08	50.11	50.13	50.16	50.18	50.21	50.23	50.25	50.28
1.2	50.30	50.33	50.35	50.38	50.40	50.43	50.45	50.48	50.50	50.52
1.3	50.55	50.57	50.60	50.62	50.65	50.67	50.70	50.72	50.75	50.77
1.4	50.80	50.82	50.84	50.87	50.89	50.92	50.94	50.97	50.99	51.02
791.5	51.04	51.07	51.09	51.12	51.14	51.17	51.19	51.22	51.24	51.27
1.6	51.29	51.32	51.34	51.37	51.39	51.42	51.44	51.46	51.49	51.51
1.7	51.54	51.57	51.59	51.62	51.64	51.67	51.69	51.72	51.74	51.77
1.8	51.79	51.82	51.84	51.87	51.89	51.92	51.94	51.97	51.99	52.02
1.9	52.04	52.07	52.09	52.12	52.14	52.17	52.19	52.22	52.24	52.27
792.0	52.30	52.32	52.35	52.37	52.40	52.42	52.45	52.47	52.50	52.52
2.1	52.55	52.57	52.60	52.63	52.65	52.68	52.70	52.73	52.75	52.78
2.2	52.80	52.83	52.86	52.88	52.91	52.93	52.96	52.98	53.01	53.04
2.3	53.06	53.09	53.11	53.14	53.16	53.19	53.22	53.24	53.27	53.29
2.4	53.32	53.34	53.37	53.40	53.42	53.45	53.47	53.50	53.53	53.55
792.5	53.58	53.60	53.63	53.66	53.68	53.71	53.73	53.76	53.79	53.81
2.6	53.84	53.86	53.89	53.92	53.94	53.97	53.99	54.02	54.05	54.07
2.7	54.10	54.13	54.15	54.18	54.20	54.23	54.26	54.28	54.31	54.34
2.8	54.36	54.39	54.41	54.44	54.47	54.49	54.52	54.55	54.57	54.60
2.9	54.63	54.65	54.68	54.71	54.73	54.76	54.79	54.81	54.84	54.86
793.0	54.89	54.92	54.94	54.97	55.00	55.02	55.05	55.08	55.10	55.13
3.1	55.16	55.18	55.21	55.24	55.27	55.29	55.32	55.35	55.37	55.40
3.2	55.43	55.45	55.48	55.51	55.53	55.56	55.59	55.61	55.64	55.67
3.3	55.70	55.72	55.75	55.78	55.80	55.83	55.86	55.88	55.91	55.94
3.4	55.97	55.99	56.02	56.05	56.08	56.10	56.13	56.16	56.18	56.21
793.5	56.24	56.27	56.29	56.32	56.35	56.38	56.40	56.43	56.46	56.48
3.6	56.51	56.54	56.57	56.59	56.62	56.65	56.68	56.70	56.73	56.76
3.7	56.79	56.81	56.84	56.87	56.90	56.92	56.95	56.98	57.01	57.04
3.8	57.06	57.09	57.12	57.15	57.17	57.20	57.23	57.26	57.29	57.31
3.9	57.34	57.37	57.40	57.43	57.45	57.48	57.51	57.54	57.56	57.59
794.0	57.62	57.65	57.68	57.70	57.73	57.76	57.79	57.82	57.85	57.87
4.1	57.90	57.93	57.96	57.99	58.01	58.04	58.07	58.10	58.13	58.16
4.2	58.18	58.21	58.24	58.27	58.30	58.33	58.35	58.38	58.41	58.44
4.3	58.47	58.50	50.53	58.55	58.58	58.61	58.64	58.67	58.70	58.72
4.4	58.75	58.78	58.81	58.84	58.87	58.90	58.93	58.95	58.98	59.01
794.5	59.04	59.07	59.10	59.13	59.16	59.18	59.21	59.24	59.27	59.30
4.6	59.33	59.36	59.39	59.42	59.44	59.47	59.50	59.53	59.56	59.59
4.7	59.62	59.65	59.68	59.71	59.74	59.76	59.79	59.82	59.85	59.88
4.8	59.91	59.94	59.97	60.00	60.03	60.06	60.09	60.12	60.15	60.17
4.9	60.20	60.23	60.26	60.29	60.32	60.35	60.38	60.41	60.44	60.47

ELEV	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
795.0	60.50	60.53	60.56	60.59	60.62	60.65	60.68	60.71	60.74	60.77
5.1	60.80	60.83	60.86	60.89	60.91	60.94	60.97	61.00	61.03	61.06
5.2	61.09	61.12	61.15	61.18	61.21	61.24	61.27	61.30	61.33	61.36
5.3	61.39	61.42	61.45	61.48	61.51	61.54	61.57	61.60	61.63	61.66
5.4	61.69	61.72	61.76	61.79	61.82	61.85	61.88	61.91	61.94	61.97
795.5	62.00	62.03	62.06	62.09	62.12	62.15	62.18	62.21	62.24	62.27
5.6	62.30	62.33	62.36	62.39	62.42	62.45	62.48	62.51	62.54	62.57
5.7	62.60	62.64	62.67	62.70	62.73	62.76	62.79	62.82	62.85	62.88
5.8	62.91	62.94	62.97	63.00	63.03	63.06	63.09	63.12	63.16	63.19
5.9	63.22	63.25	63.28	63.31	63.34	63.37	63.40	63.43	63.46	63.49
796.0	63.52	63.55	63.59	63.62	63.65	63.68	63.71	63.74	63.77	63.80
6.1	63.83	63.86	63.89	63.92	63.96	63.99	64.02	64.05	64.08	64.11
6.2	64.14	64.17	64.20	64.23	64.26	64.30	64.33	64.36	64.39	64.42
6.3	64.45	64.48	64.51	64.54	64.57	64.61	64.64	64.67	64.70	64.73
6.4	64.76	64.79	64.82	64.85	64.88	64.92	64.95	64.98	65.01	65.04
796.5	65.07	65.10	65.13	65.16	65.20	65.23	65.26	65.29	65.32	65.35
6.6	65.38	65.41	65.44	65.48	65.51	65.54	65.57	65.60	65.63	65.66
6.7	65.69	65.72	65.76	65.79	65.82	65.85	65.88	65.91	65.94	65.97
6.8	66.01	66.04	66.07	66.10	66.13	66.16	66.19	66.23	66.26	66.29
6.9	66.32	66.35	66.38	66.41	66.44	66.48	66.51	66.54	66.57	66.60
797.0	66.63	66.66	66.70	66.73	66.76	66.79	66.82	66.85	66.88	66.91
7.1	66.95	66.98	67.01	67.04	67.07	67.10	67.13	67.17	67.20	67.23
7.2	67.26	67.29	67.32	67.35	67.39	67.42	67.45	67.48	67.51	67.54
7.3	67.58	67.61	67.64	67.67	67.70	67.73	67.76	67.80	67.83	67.86
7.4	67.89	67.92	67.95	67.98	68.02	68.05	68.08	68.11	68.14	68.17
797.5	68.21	68.24	68.27	68.30	68.33	68.36	68.39	68.43	68.46	68.49
7.6	68.52	68.55	68.58	68.62	68.65	68.68	68.71	68.74	68.77	68.81
7.7	68.84	68.87	68.90	68.93	68.96	69.00	69.03	69.06	69.09	69.12
7.8	69.15	69.19	69.22	69.25	69.28	69.31	69.34	69.37	69.41	69.44
7.9	69.47	69.50	69.53	69.56	69.60	69.63	69.66	69.69	69.72	69.75
798.0	69.79	69.82	69.85	69.88	69.91	69.95	69.98	70.01	70.04	70.07
8.1	70.10	70.14	70.17	70.20	70.23	70.26	70.29	70.33	70.36	70.39
8.2	70.42	70.45	70.48	70.52	70.55	70.58	70.61	70.64	70.67	70.71
8.3	70.74	70.77	70.80	70.83	70.87	70.90	70.93	70.96	70.99	71.02
8.4	71.06	71.09	71.12	71.15	71.18	71.21	71.25	71.28	71.31	71.34
798.5	71.37	71.40	71.44	71.47	71.50	71.53	71.56	71.59	71.63	71.66
8.6	71.69	71.72	71.75	71.79	71.82	71.85	71.88	71.91	71.94	71.98
8.7	72.01	72.04	72.07	72.10	72.13	72.17	72.20	72.23	72.26	72.29
8.8	72.33	72.36	72.39	72.42	72.45	72.48	72.52	72.55	72.58	72.61
8.9	72.64	72.67	72.71	72.74	72.77	72.80	72.83	72.87	72.90	72.93
799.0	72.96	72.99	73.02	73.06	73.09	73.12	73.15	73.18	73.21	73.25
9.1	73.28	73.31	73.34	73.37	73.40	73.44	73.47	73.50	73.53	73.56
9.2	73.60	73.63	73.66	73.69	73.72	73.75	73.79	73.82	73.65	73.88
9.3	73.91	73.94	73.98	74.01	74.04	74.07	74.10	74.13	74.17	74.20
9.4	74.23	74.26	74.29	74.33	74.36	74.39	74.42	74.45	74.48	74.51
799.5	74.55	74.58	74.61	74.64	74.67	74.71	74.74	74.77	74.80	74.83
9.6	74.86	74.90	74.93	74.96	74.99	75.02	75.05	75.08	75.12	75.15
9.7	75.18	75.21	75.24	75.27	75.31	75.34	75.37	75.40	75.43	75.46
9.8	75.50	75.53	75.56	75.59	75.62	75.65	75.69	75.72	75.75	75.78
9.9	75.81	75.84	75.88	75.91	75.94	75.97	76.00	76.03	76.06	76.10
800.0	76.13									

1986 EDITION/ROD

VOLUMES BASED ON 1970 SURVEY

HEADWATER 790- 800

Attachment 18c: Melton Hill Excel Level Storage Table

MELTON HILL

Quick Lookup

Storage	Enter known HW in green box. Corresponding storage is in yellow box	
	Elevation	Volume
	796.00	63.524

HW	Enter known storage in green box. Adjust value in gray box until value in blue box matches or closely approximates value in green box. Corresponding HW is in yellow box			
	Volume			Elevation
	60.000	4.830	59.999	794.83

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
780.00	28.082	28.098	28.113	28.129	28.145	28.161	28.177	28.193	28.209	28.224
780.10	28.240	28.256	28.272	28.288	28.304	28.320	28.336	28.352	28.368	28.384
780.20	28.400	28.415	28.431	28.447	28.463	28.479	28.495	28.511	28.527	28.543
780.30	28.559	28.575	28.591	28.607	28.623	28.640	28.656	28.672	28.688	28.704
780.40	28.720	28.736	28.752	28.768	28.784	28.800	28.816	28.833	28.849	28.865
780.50	28.881	28.897	28.913	28.929	28.946	28.962	28.978	28.994	29.010	29.027
780.60	29.043	29.059	29.075	29.091	29.108	29.124	29.140	29.156	29.173	29.189
780.70	29.205	29.221	29.238	29.254	29.270	29.287	29.303	29.319	29.336	29.352
780.80	29.368	29.385	29.401	29.417	29.434	29.450	29.466	29.483	29.499	29.515
780.90	29.532	29.548	29.565	29.581	29.598	29.614	29.630	29.647	29.663	29.680
781.00	29.696	29.713	29.729	29.746	29.762	29.779	29.795	29.812	29.828	29.845
781.10	29.861	29.878	29.894	29.911	29.927	29.944	29.960	29.977	29.994	30.010
781.20	30.027	30.043	30.060	30.077	30.093	30.110	30.127	30.143	30.160	30.176
781.30	30.193	30.210	30.226	30.243	30.260	30.276	30.293	30.310	30.327	30.343
781.40	30.360	30.377	30.394	30.410	30.427	30.444	30.461	30.477	30.494	30.511
781.50	30.528	30.544	30.561	30.578	30.595	30.612	30.629	30.645	30.662	30.679
781.60	30.696	30.713	30.730	30.747	30.763	30.780	30.797	30.814	30.831	30.848
781.70	30.865	30.882	30.899	30.916	30.933	30.950	30.967	30.983	31.000	31.017
781.80	31.034	31.051	31.068	31.085	31.102	31.119	31.137	31.154	31.171	31.188
781.90	31.205	31.222	31.239	31.256	31.273	31.290	31.307	31.324	31.341	31.359
782.00	31.376	31.393	31.410	31.427	31.444	31.461	31.479	31.496	31.513	31.530

Attachment 19a: Ocoee#1 Bluebook Figure

Reservoir and Power Data

					Best Efficiency			Maximum Sustainable		
Elevation (feet)	Area (acre*1000)	Volume (ac-ft*1000)	Potential Eis (gWh)	Gross Head (feet)	Plant Output (mW)	Turbine Discharge (cfs)	kW/CFS	Plant Output (mW)	Turbine Discharge (cfs)	kW/CFS
830.76	1.97	83.3	12.5	112.9	23.5	2,570	9.03	25.0	2,760	8.98
830	1.96	81.8	11.9	112.1	23.4	2,600	8.93	25.0	2,800	8.88
829	1.93	79.9	11.1	111.0	23.2	2,630	8.79	25.0	2,850	8.75
828	1.90	78.0	10.3	110.0	23.1	2,660	8.66	25.0	2,900	8.62
827	1.86	76.1	9.6	108.9	23.0	2,690	8.53	25.0	2,950	8.49
826	1.82	74.2	8.8	107.9	22.8	2,720	8.40	25.0	3,000	8.36
825	1.77	72.4	8.1	106.8	22.7	2,750	8.27	25.0	3,050	8.23
824	1.71	70.7	7.4	105.8	22.6	2,780	8.14	25.0	3,090	8.10
823	1.66	69.0	6.8	104.7	22.5	2,810	8.01	25.0	3,140	7.97
822	1.60	67.4	6.1	103.7	22.4	2,840	7.90	25.0	3,190	7.85
821	1.54	65.8	5.5	102.6	22.3	2,870	7.79	25.0	3,240	7.72
820	1.49	64.3	4.9	101.6	22.2	2,900	7.67	25.0	3,290	7.60
819	1.45	62.8	4.4	100.5	22.1	2,930	7.56	25.0	3,340	7.48
818	1.41	61.4	3.8	99.5	22.1	2,970	7.46	25.0	3,390	7.37

Attachment 19b: Ocoee#1 1986 Level Storage Table

TVA			
Calculation No. CDQ00002008051	Rev: 0	Plant: GEN	Page: 144
Subject: Reservoir Storage Tables		Prepped	LKG
		Checked	WWC

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

OCOEE NO. 1

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV	0.00	.10	.20	.30	.40	.50	.60	.70	.80	.90
800.0	20.17	20.22	20.27	20.32	20.37	20.42	20.47	20.52	20.57	20.62
1.0	20.68	20.73	20.78	20.83	20.88	20.93	20.98	21.04	21.09	21.14
2.0	21.19	21.25	21.30	21.35	21.40	21.46	21.51	21.56	21.61	21.67
3.0	21.72	21.77	21.83	21.88	21.94	21.99	22.04	22.10	22.15	22.21
4.0	22.26	22.32	22.37	22.42	22.48	22.54	22.59	22.65	22.70	22.76
805.0	22.81	22.87	22.92	22.98	23.04	23.09	23.15	23.20	23.26	23.32
6.0	23.37	23.43	23.49	23.55	23.60	23.66	23.72	23.78	23.83	23.89
7.0	23.95	24.01	24.06	24.12	24.18	24.24	24.30	24.36	24.42	24.47
8.0	24.53	24.59	24.65	24.71	24.77	24.83	24.89	24.95	25.01	25.07
9.0	25.13	25.19	25.25	25.31	25.37	25.43	25.49	25.55	25.61	25.67
810.0	25.73	25.79	25.86	25.92	25.98	26.04	26.10	26.16	26.23	26.29
1.0	26.35	26.41	26.47	26.54	26.60	26.66	26.72	26.79	26.85	26.91
2.0	26.97	27.04	27.10	27.16	27.23	27.29	27.35	27.42	27.48	27.54
3.0	27.61	27.67	27.74	27.80	27.86	27.93	27.99	28.06	28.12	28.19
4.0	28.25	28.32	28.38	28.45	28.51	28.58	28.64	28.71	28.77	28.84
815.0	28.91	28.97	29.04	29.11	29.17	29.24	29.31	29.37	29.44	29.51
6.0	29.57	29.64	29.71	29.78	29.85	29.91	29.98	30.05	30.12	30.19
7.0	30.26	30.33	30.40	30.46	30.53	30.60	30.67	30.75	30.82	30.89
8.0	30.96	31.03	31.10	31.17	31.24	31.31	31.39	31.46	31.53	31.60
9.0	31.68	31.75	31.82	31.90	31.97	32.05	32.12	32.19	32.27	32.34
820.0	32.42	32.49	32.57	32.65	32.72	32.80	32.88	32.95	33.03	33.11
1.0	33.18	33.26	33.34	33.42	33.50	33.58	33.66	33.74	33.82	33.90
2.0	33.98	34.06	34.14	34.22	34.30	34.38	34.46	34.55	34.63	34.71
3.0	34.80	34.88	34.96	35.05	35.13	35.22	35.30	35.39	35.47	35.56
4.0	35.65	35.73	35.82	35.91	35.99	36.08	36.17	36.26	36.35	36.43
825.0	36.52	36.61	36.70	36.79	36.88	36.97	37.06	37.15	37.24	37.34
6.0	37.43	37.52	37.61	37.70	37.79	37.89	37.98	38.07	38.17	38.26
7.0	38.35	38.45	38.54	38.64	38.73	38.82	38.92	39.01	39.11	39.20
8.0	39.30	39.40	39.49	39.59	39.68	39.78	39.88	39.97	40.07	40.17
9.0	40.26	40.36	40.46	40.56	40.65	40.75	40.85	40.95	41.05	41.15
830.0	41.24	41.34	41.44	41.54	41.64	41.74	41.84	41.94	42.04	42.14
1.0	42.24	42.34	42.44	42.54	42.64	42.74	42.84	42.94	43.04	43.14
2.0	43.24	43.34	43.44	43.54	43.64	43.74	43.84	43.94	44.05	44.15
3.0	44.25	44.35	44.45	44.55	44.65	44.76	44.86	44.96	45.06	45.16
4.0	45.27	45.37	45.47	45.57	45.67	45.78	45.88	45.98	46.08	46.19
835.0	46.29	46.39	46.49	46.60	46.70	46.80	46.91	47.01	47.11	47.21
6.0	47.32	47.42	47.52	47.63	47.73	47.83	47.94	48.04	48.14	48.25
7.0	48.35									
8.0	48.53									

ELEV.	0.00	.10	.20	.30	.40	.50	.60	.70	.80	.90

1985 EDITION/R08 VOLUMES BASED ON 1982 SURVEY HEADWATER 800- 837

Attachment 19c: Ocoee #1 Excel Level Storage Table

OCOEE NO.1

Quick Lookup

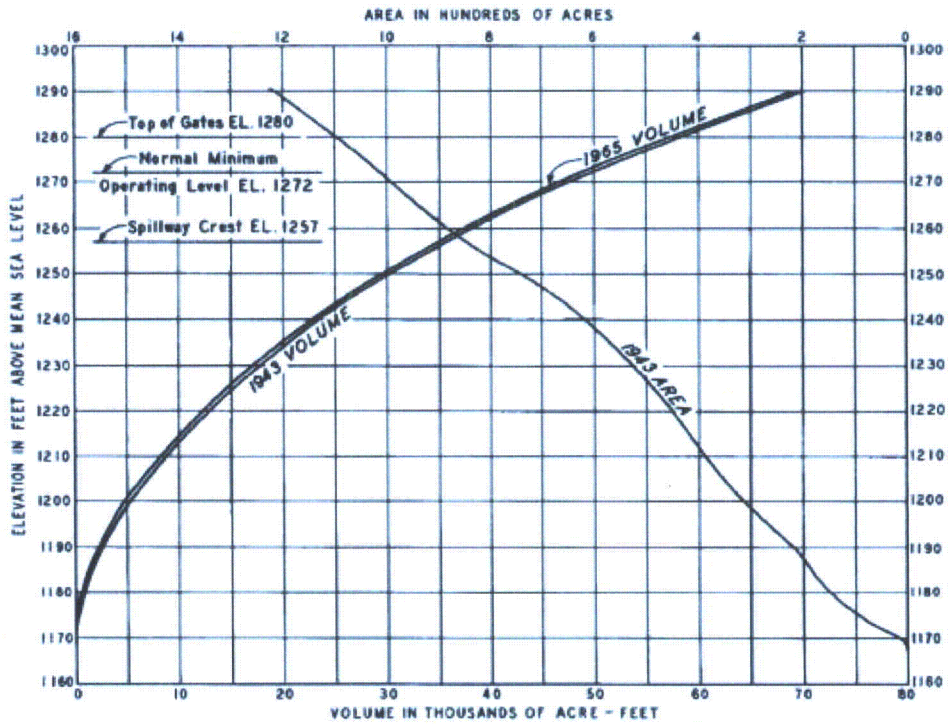
Storage	Enter known HW in green box. Corresponding storage is in yellow box	
	Elevation	Storage
	830.00	41.244

HW	Enter known storage in green box. Adjust value in gray box until value in blue box matches or closely approximates value in green box. Corresponding HW is in yellow box			
	Volume			Elevation
	35.000	0.135	35.001	823.25

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
800.00	20.169	20.174	20.179	20.184	20.189	20.194	20.199	20.204	20.209	20.214
800.10	20.219	20.224	20.229	20.234	20.239	20.244	20.249	20.254	20.259	20.264
800.20	20.269	20.274	20.279	20.284	20.289	20.294	20.299	20.304	20.310	20.315
800.30	20.320	20.325	20.330	20.335	20.340	20.345	20.350	20.355	20.360	20.365
800.40	20.370	20.375	20.380	20.385	20.390	20.395	20.401	20.406	20.411	20.416
800.50	20.421	20.426	20.431	20.436	20.441	20.446	20.451	20.456	20.461	20.466
800.60	20.472	20.477	20.482	20.487	20.492	20.497	20.502	20.507	20.512	20.517
800.70	20.522	20.527	20.533	20.538	20.543	20.548	20.553	20.558	20.563	20.568
800.80	20.573	20.578	20.584	20.589	20.594	20.599	20.604	20.609	20.614	20.619
800.90	20.624	20.629	20.635	20.640	20.645	20.650	20.655	20.660	20.665	20.670
801.00	20.676	20.681	20.686	20.691	20.696	20.701	20.706	20.711	20.717	20.722
801.10	20.727	20.732	20.737	20.742	20.747	20.752	20.758	20.763	20.768	20.773
801.20	20.778	20.783	20.788	20.794	20.799	20.804	20.809	20.814	20.819	20.824
801.30	20.830	20.835	20.840	20.845	20.850	20.855	20.860	20.866	20.871	20.876
801.40	20.881	20.886	20.891	20.897	20.902	20.907	20.912	20.917	20.922	20.928
801.50	20.933	20.938	20.943	20.948	20.953	20.959	20.964	20.969	20.974	20.979
801.60	20.985	20.990	20.995	21.000	21.005	21.010	21.016	21.021	21.026	21.031
801.70	21.036	21.042	21.047	21.052	21.057	21.062	21.068	21.073	21.078	21.083
801.80	21.088	21.094	21.099	21.104	21.109	21.114	21.120	21.125	21.130	21.135
801.90	21.141	21.146	21.151	21.156	21.161	21.167	21.172	21.177	21.182	21.187
802.00	21.193	21.198	21.203	21.208	21.214	21.219	21.224	21.229	21.235	21.240

Attachment 20a: Apalachia Bluebook Figure



ELEV FT	1943 AREA AC	VOLUME 1943 AC-FT	1950 AC-FT	1960 AC-FT	1985 AC-FT
1,290	1,222	70,100	69,800	69,400	69,000
1,280	1,100	58,300	58,000	57,500	57,000
1,270	993	47,700	47,400	46,900	47,100
1,257	846	35,700	35,400	34,900	35,100
1,255	820	34,000	33,700	33,300	33,500
1,240	814	23,400	23,100	22,700	22,900
1,230	524	17,700	17,500	17,100	17,200
1,220	449	12,900	12,700	12,300	12,500
1,210	385	8,700	8,500	8,200	8,300
1,200	312	5,200	5,000	4,700	4,900
1,190	215	2,600	2,500	2,300	2,400
1,180	149	800	700	600	600
1,170	11	10	0	0	0
1,168	0	0	0	0	0

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

NOTES:

Reservoir areas were measured on a composite map prepared by the Hydraulic Data Branch with contours drawn at 10' intervals and scale 1" = 500'. The map was prepared from TVA land maps with contours at elevations 1,255 & 1,280. Contours were made to conform to elevations on TVA sediment range cross sections located at one-mile intervals. The 1943 volume was computed by the contour method. Volumes of sediment on succeeding dates were computed by the constant factor method.

Elevations are referred to the USC & GS 1936 Supplementary Adjustment.

Upstream limit of the reservoir is Hiwassee Dam at river mile 75.6.

Area of original river within reservoir = 80 acres.

Drainage area above Apalachia Dam = 1,018 square miles.

Drainage area between Apalachia and Hiwassee Dams = 50 square miles.

Dam closure February 14, 1943.

ADDED 1985 VOLUME

THIS DRAWING SUPERSEDES 15-DA-321G50lno

HIWASSEE RIVER - MILE 66.0

RESERVOIR AREAS AND VOLUMES

APALACHIA PROJECT
TENNESSEE VALLEY AUTHORITY
DIVISION OF WATER CONTROL PLANNING

SUBMITTED: Edwin B. McCann | RECOMMENDED: Paul C. Barrett | APPROVED: Gordon Reed

KNOXVILLE | 12-28-82 | 15 | DA | 1 | 321G794R1

Attachment 20b: Apalachia 1986 Level Storage Table

TVA			
Calculation No. CDQ00002008005 1	Rev: 0	Plant: GEN	Page: 147
Subject: Reservoir Storage Tables		Prepped	LKG
		Checked	WWC

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

APALACHIA

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
1280.0	29.14	29.15	29.15	29.16	29.16	29.17	29.17	29.18	29.19	29.19
.1	29.20	29.20	29.21	29.21	29.22	29.23	29.23	29.24	29.24	29.25
.2	29.25	29.26	29.26	29.27	29.28	29.28	29.29	29.29	29.30	29.30
.3	29.31	29.32	29.32	29.33	29.33	29.34	29.34	29.35	29.36	29.36
.4	29.37	29.37	29.38	29.38	29.39	29.39	29.40	29.41	29.41	29.42
1280.5	29.42	29.43	29.43	29.44	29.45	29.45	29.46	29.46	29.47	29.47
.6	29.48	29.49	29.49	29.50	29.50	29.51	29.51	29.52	29.52	29.53
.7	29.54	29.54	29.55	29.55	29.56	29.56	29.57	29.58	29.58	29.59
.8	29.59	29.60	29.60	29.61	29.62	29.62	29.63	29.63	29.64	29.64
.9	29.65	29.66	29.66	29.67	29.67	29.68	29.68	29.69	29.70	29.70
1281.0	29.71	29.71	29.72	29.72	29.73	29.73	29.74	29.75	29.75	29.76
.1	29.76	29.77	29.77	29.78	29.79	29.79	29.80	29.80	29.81	29.81
.2	29.82	29.83	29.83	29.84	29.84	29.85	29.85	29.86	29.87	29.87
.3	29.88	29.88	29.89	29.89	29.90	29.91	29.91	29.92	29.92	29.93
.4	29.93	29.94	29.95	29.95	29.96	29.96	29.97	29.97	29.98	29.99
1281.5	29.99	30.00	30.00	30.01	30.01	30.02	30.03	30.03	30.04	30.04
.6	30.05	30.05	30.06	30.07	30.07	30.08	30.08	30.09	30.09	30.10
.7	30.11	30.11	30.12	30.12	30.13	30.13	30.14	30.15	30.15	30.16
.8	30.16	30.17	30.17	30.18	30.19	30.19	30.20	30.20	30.21	30.21
.9	30.22	30.23	30.23	30.24	30.24	30.25	30.25	30.26	30.27	30.27
1282.0	30.28	30.28	30.29	30.29	30.30	30.31	30.31	30.32	30.32	30.33
.1	30.33	30.34	30.35	30.35	30.36	30.36	30.37	30.38	30.38	30.39
.2	30.39	30.40	30.40	30.41	30.42	30.42	30.43	30.43	30.44	30.44
.3	30.45	30.46	30.46	30.47	30.47	30.48	30.48	30.49	30.50	30.50
.4	30.51	30.51	30.52	30.52	30.53	30.54	30.54	30.55	30.55	30.56
1282.5	30.56	30.57	30.58	30.58	30.59	30.59	30.60	30.61	30.61	30.62
.6	30.62	30.63	30.63	30.64	30.65	30.65	30.66	30.66	30.67	30.67
.7	30.68	30.69	30.69	30.70	30.70	30.71	30.71	30.72	30.73	30.73
.8	30.74	30.74	30.75	30.76	30.76	30.77	30.77	30.78	30.78	30.79
.9	30.80	30.80	30.81	30.81	30.82	30.82	30.83	30.84	30.84	30.85
1283.0	30.85	30.86	30.87	30.87	30.88	30.88	30.89	30.89	30.90	30.91
.1	30.91	30.92	30.92	30.93	30.93	30.94	30.95	30.95	30.96	30.96
.2	30.97	30.98	30.98	30.99	30.99	31.00	31.00	31.01	31.02	31.02
.3	31.03	31.03	31.04	31.05	31.05	31.06	31.06	31.07	31.07	31.08
.4	31.09	31.09	31.10	31.10	31.11	31.11	31.12	31.13	31.13	31.14
1283.5	31.14	31.15	31.16	31.16	31.17	31.17	31.18	31.18	31.19	31.20
.6	31.20	31.21	31.21	31.22	31.23	31.23	31.24	31.24	31.25	31.25
.7	31.26	31.27	31.27	31.28	31.28	31.29	31.30	31.30	31.31	31.31
.8	31.32	31.32	31.33	31.34	31.34	31.35	31.35	31.36	31.37	31.37
.9	31.38	31.38	31.39	31.40	31.40	31.41	31.41	31.42	31.42	31.43
1284.0	31.44	31.44	31.45	31.45	31.46	31.47	31.47	31.48	31.48	31.49
.1	31.49	31.50	31.51	31.51	31.52	31.52	31.53	31.54	31.54	31.55
.2	31.55	31.56	31.57	31.57	31.58	31.58	31.59	31.59	31.60	31.61
.3	31.61	31.62	31.62	31.63	31.64	31.64	31.65	31.65	31.66	31.67
.4	31.67	31.68	31.68	31.69	31.69	31.70	31.71	31.71	31.72	31.72
1284.5	31.73	31.74	31.74	31.75	31.75	31.76	31.77	31.77	31.78	31.78
.6	31.79	31.79	31.80	31.81	31.81	31.82	31.82	31.83	31.84	31.84
.7	31.85	31.85	31.86	31.87	31.87	31.88	31.88	31.89	31.89	31.90
.8	31.91	31.91	31.92	31.92	31.93	31.94	31.94	31.95	31.95	31.96
.9	31.97	31.97	31.98	31.98	31.99	32.00	32.00	32.01	32.01	32.02

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
1285.0	32.03	32.03	32.04	32.04	32.05	32.05	32.06	32.07	32.07	32.08
5.1	32.08	32.09	32.10	32.10	32.11	32.11	32.12	32.13	32.13	32.14
5.2	32.14	32.15	32.16	32.16	32.17	32.17	32.18	32.19	32.19	32.20
5.3	32.20	32.21	32.22	32.22	32.23	32.23	32.24	32.24	32.25	32.26
5.4	32.26	32.27	32.27	32.28	32.29	32.29	32.30	32.30	32.31	32.32
1285.5	32.32	32.33	32.33	32.34	32.35	32.35	32.36	32.36	32.37	32.38
5.6	32.38	32.39	32.39	32.40	32.41	32.41	32.42	32.42	32.43	32.44
5.7	32.44	32.45	32.45	32.46	32.47	32.47	32.48	32.48	32.49	32.50
5.8	32.50	32.51	32.51	32.52	32.53	32.53	32.54	32.54	32.55	32.56
5.9	32.56	32.57	32.57	32.58	32.59	32.59	32.60	32.60	32.61	32.62
1286.0	32.62	32.63	32.63	32.64	32.65	32.65	32.66	32.66	32.67	32.68
6.1	32.68	32.69	32.69	32.70	32.71	32.71	32.72	32.72	32.73	32.74
6.2	32.74	32.75	32.75	32.76	32.77	32.77	32.78	32.78	32.79	32.80
6.3	32.80	32.81	32.81	32.82	32.83	32.83	32.84	32.84	32.85	32.86
6.4	32.86	32.87	32.87	32.88	32.89	32.89	32.90	32.90	32.91	32.92
1286.5	32.92	32.93	32.93	32.94	32.95	32.95	32.96	32.96	32.97	32.98
6.6	32.98	32.99	32.99	33.00	33.01	33.01	33.02	33.03	33.03	33.04
6.7	33.04	33.05	33.06	33.06	33.07	33.07	33.08	33.09	33.09	33.10
6.8	33.10	33.11	33.12	33.12	33.13	33.13	33.14	33.15	33.15	33.16
6.9	33.16	33.17	33.18	33.18	33.19	33.19	33.20	33.21	33.21	33.22
1287.0	33.23	33.23	33.24	33.24	33.25	33.26	33.26	33.27	33.27	33.28
7.1	33.29	33.29	33.30	33.30	33.31	33.32	33.32	33.33	33.33	33.34
7.2	33.35	33.35	33.36	33.37	33.37	33.38	33.38	33.39	33.40	33.40
7.3	33.41	33.41	33.42	33.43	33.43	33.44	33.44	33.45	33.46	33.46
7.4	33.47	33.48	33.48	33.49	33.49	33.50	33.51	33.51	33.52	33.52
1287.5	33.53	33.54	33.54	33.55	33.55	33.56	33.57	33.57	33.58	33.59
7.6	33.59	33.60	33.60	33.61	33.62	33.62	33.63	33.63	33.64	33.65
7.7	33.65	33.66	33.67	33.67	33.68	33.68	33.69	33.70	33.70	33.71
7.8	33.71	33.72	33.73	33.73	33.74	33.75	33.75	33.76	33.76	33.77
7.9	33.78	33.78	33.79	33.79	33.80	33.81	33.81	33.82	33.83	33.83
1288.0	33.84	33.84	33.85	33.86	33.86	33.87	33.87	33.88	33.89	33.89
8.1	33.90	33.91	33.91	33.92	33.92	33.93	33.94	33.94	33.95	33.95
8.2	33.96	33.97	33.97	33.98	33.99	33.99	34.00	34.00	34.01	34.02
8.3	34.02	34.03	34.04	34.04	34.05	34.05	34.06	34.07	34.07	34.08
8.4	34.08	34.09	34.10	34.10	34.11	34.12	34.12	34.13	34.13	34.14
1288.5	34.15	34.15	34.16	34.17	34.17	34.18	34.18	34.19	34.20	34.20
8.6	34.21	34.22	34.22	34.23	34.23	34.24	34.25	34.25	34.26	34.27
8.7	34.27	34.28	34.28	34.29	34.30	34.30	34.31	34.32	34.32	34.33
8.8	34.33	34.34	34.35	34.35	34.36	34.36	34.37	34.38	34.38	34.39
8.9	34.40	34.40	34.41	34.41	34.42	34.43	34.43	34.44	34.45	34.45
1289.0	34.46	34.46	34.47	34.48	34.48	34.49	34.50	34.50	34.51	34.52
9.1	34.52	34.53	34.53	34.54	34.55	34.55	34.56	34.57	34.57	34.58
9.2	34.58	34.59	34.60	34.60	34.61	34.62	34.62	34.63	34.63	34.64
9.3	34.65	34.65	34.66	34.67	34.67	34.68	34.68	34.69	34.70	34.70
9.4	34.71	34.72	34.72	34.73	34.74	34.74	34.75	34.75	34.76	34.77
1289.5	34.77	34.78	34.79	34.79	34.80	34.80	34.81	34.82	34.82	34.83
9.6	34.84	34.84	34.85	34.86	34.86	34.87	34.87	34.88	34.89	34.89
9.7	34.90	34.91	34.91	34.92	34.92	34.93	34.94	34.94	34.95	34.96
9.8	34.96	34.97	34.98	34.98	34.99	34.99	35.00	35.01	35.01	35.02
9.9	35.03	35.03	35.04	35.04	35.05	35.06	35.06	35.07	35.08	35.08
1290.0	35.09									

1986 EDITION/KUB

VOLUMES BASED ON 1965 SURVEY

HEADWATER 1280-1290

Attachment 20c: Apalachia Excel Level Storage Table

APALACHIA

Quick Lookup

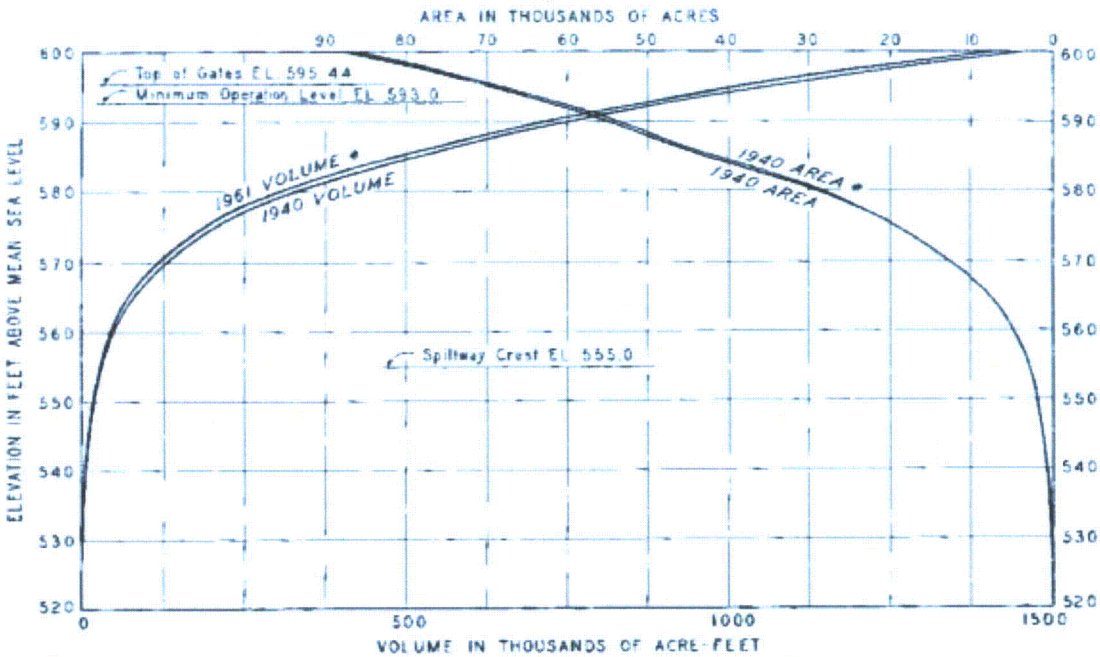
Storage	Enter known HW in green box. Corresponding storage is in yellow box	
	Elevation	Volume
	1290.00	35.089

HW	Enter known storage in green box. Adjust value in gray box until value in blue box matches or closely approximates value in green box. Corresponding HW is in yellow box			
	Volume			Elevation
	28.000	7.970	28.005	1277.97

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
1250.00	14.973	14.977	14.980	14.984	14.988	14.991	14.995	14.999	15.003	15.006
1250.10	15.010	15.014	15.017	15.021	15.025	15.029	15.032	15.036	15.040	15.043
1250.20	15.047	15.051	15.054	15.058	15.062	15.066	15.069	15.073	15.077	15.080
1250.30	15.084	15.088	15.092	15.095	15.099	15.103	15.106	15.110	15.114	15.118
1250.40	15.121	15.125	15.129	15.133	15.136	15.140	15.144	15.147	15.151	15.155
1250.50	15.159	15.162	15.166	15.170	15.173	15.177	15.181	15.185	15.188	15.192
1250.60	15.196	15.200	15.203	15.207	15.211	15.215	15.218	15.222	15.226	15.229
1250.70	15.233	15.237	15.241	15.244	15.248	15.252	15.256	15.259	15.263	15.267
1250.80	15.271	15.274	15.278	15.282	15.286	15.289	15.293	15.297	15.301	15.304
1250.90	15.308	15.312	15.316	15.319	15.323	15.327	15.331	15.334	15.338	15.342
1251.00	15.346	15.349	15.353	15.357	15.361	15.364	15.368	15.372	15.376	15.379
1251.10	15.383	15.387	15.391	15.394	15.398	15.402	15.406	15.409	15.413	15.417
1251.20	15.421	15.424	15.428	15.432	15.436	15.440	15.443	15.447	15.451	15.455
1251.30	15.458	15.462	15.466	15.470	15.473	15.477	15.481	15.485	15.489	15.492
1251.40	15.496	15.500	15.504	15.507	15.511	15.515	15.519	15.522	15.526	15.530
1251.50	15.534	15.538	15.541	15.545	15.549	15.553	15.557	15.560	15.564	15.568
1251.60	15.572	15.575	15.579	15.583	15.587	15.591	15.594	15.598	15.602	15.606
1251.70	15.610	15.613	15.617	15.621	15.625	15.628	15.632	15.636	15.640	15.644
1251.80	15.647	15.651	15.655	15.659	15.663	15.666	15.670	15.674	15.678	15.682
1251.90	15.685	15.689	15.693	15.697	15.701	15.704	15.708	15.712	15.716	15.720
1252.00	15.723	15.727	15.731	15.735	15.739	15.742	15.746	15.750	15.754	15.758

Attachment 21a: Guntersville Bluebook Figure



ELEV FT	1940 AREA AC	VOLUME 1940 AC-FT	VOLUME 1947 AC-FT	VOLUME 1956 AC-FT	VOLUME 1961 AC-FT	1940 AREA* AC	VOLUME* 1940 AC-FT	VOLUME* 1961 AC-FT
600	87,700	1,456,000	1,449,900	1,432,000	1,423,000	86,800	1,438,000	1,406,000
595.44	71,200	1,097,000	1,088,000	1,078,000	1,064,000	76,200	1,085,000	1,052,000
595	66,100	1,063,000	1,045,000	1,039,000	1,030,000	67,900	1,050,000	1,018,000
590	54,500	722,000	733,000	728,000	719,000	53,600	745,000	712,000
585	42,800	510,000	492,000	461,000	427,000	41,800	508,000	474,000
580	29,100	330,000	319,000	317,000	301,000	28,700	330,000	301,000
570	12,400	127,000	121,000	117,000	113,000	12,400	127,000	113,000
560	4,480	48,000	44,000	45,000	39,100	4,480	48,000	39,100
550	1,600	17,500	16,600	14,500	14,000	1,600	17,450	14,000
540	930	4,410	4,220	3,210	2,910	850	4,430	2,910
530	15	25	18	2	0	15	25	0
524.9	0	0	0	0	0	0	0	0

NOTES

Reservoir areas at elevation 580 and above were measured on navigation maps, scale 1"=2,000' showing field located contours at elevations 580, 585, 590, 595 and 600. Supplementary measurements were made on TVA land maps, scale 1"=500' with field located contours at elevations 595 and 600. Contours were drawn at 10' intervals and made to conform to elevations on TVA sediment range cross sections located at five to ten mile intervals. The 1940 volume was computed by the contour method. Volumes of sediment on succeeding dates were computed by the constant factor method.

Elevations are referred to the USC & GS 1929 General Adjustment.

Area of original river within reservoir = 12,065 acres.

Drainage area at dam = 24,450 square miles.

Dam closure January 10, 1939.

* Adjusted due to closure of Nickajack Dam Dec. 14, 1967, reducing length of Guntersville Reservoir by 6.4 miles.

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

THIS DRAWING SUPERSEDES 6-DA-1-32/A2(in)

TENNESSEE RIVER MILE 349.0

RESERVOIR AREAS AND VOLUMES

GUNTERSVILLE PROJECT
TENNESSEE VALLEY AUTHORITY
DIVISION OF WATER CONTROL PLANNING

SUBMITTED | RECOMMENDED | APPROVED

KNOXVILLE | 12-28-62 | 32IG787 R1

Attachment 21b: Guntersville 1986 Level Storage Table

TVA			
Calculation No. CDQ00002008005 1	Rev: 0	Plant: GEN	Page: 150
Subject: Reservoir Storage Tables		Prepped	LKG
		Checked	WWC

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

GUNTERSVILLE

28

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
590.0	358.96	359.23	359.51	359.78	360.05	360.33	360.60	360.87	361.15	361.42
.1	361.69	361.97	362.24	362.52	362.79	363.07	363.34	363.61	363.89	364.17
.2	364.44	364.72	364.99	365.27	365.54	365.82	366.10	366.37	366.65	366.92
.3	367.20	367.48	367.76	368.04	368.31	368.59	368.87	369.14	369.42	369.70
.4	369.98	370.25	370.53	370.81	371.09	371.37	371.65	371.92	372.20	372.48
590.5	372.76	373.04	373.32	373.60	373.88	374.16	374.44	374.72	375.00	375.28
.6	375.56	375.84	376.12	376.41	376.69	376.97	377.25	377.53	377.81	378.09
.7	378.37	378.66	378.94	379.22	379.50	379.79	380.07	380.35	380.63	380.92
.8	381.20	381.49	381.77	382.06	382.34	382.62	382.91	383.19	383.47	383.76
.9	384.04	384.33	384.61	384.90	385.19	385.47	385.76	386.04	386.33	386.61
591.0	386.90	387.18	387.47	387.76	388.04	388.33	388.62	388.90	389.19	389.48
1.1	389.76	390.05	390.34	390.63	390.92	391.21	391.49	391.78	392.07	392.36
1.2	392.65	392.94	393.22	393.51	393.80	394.09	394.38	394.67	394.96	395.25
1.3	395.54	395.84	396.13	396.42	396.71	397.00	397.29	397.58	397.87	398.16
1.4	398.45	398.75	399.04	399.33	399.62	399.92	400.21	400.50	400.79	401.08
591.5	401.38	401.67	401.96	402.26	402.55	402.85	403.14	403.43	403.73	404.02
1.6	404.31	404.61	404.90	405.20	405.49	405.79	406.09	406.38	406.67	406.97
1.7	407.27	407.56	407.86	408.16	408.45	408.75	409.05	409.34	409.64	409.93
1.8	410.24	410.53	410.83	411.13	411.43	411.73	412.02	412.32	412.62	412.92
1.9	413.22	413.52	413.81	414.11	414.41	414.71	415.01	415.31	415.61	415.91
592.0	416.21	416.51	416.81	417.11	417.41	417.72	418.02	418.32	418.62	418.92
2.1	419.22	419.52	419.82	420.13	420.43	420.73	421.04	421.33	421.64	421.94
2.2	422.24	422.55	422.85	423.16	423.46	423.76	424.07	424.37	424.67	424.98
2.3	425.29	425.59	425.90	426.20	426.51	426.81	427.12	427.42	427.73	428.03
2.4	428.34	428.65	428.95	429.26	429.57	429.88	430.18	430.49	430.79	431.10
592.5	431.41	431.72	432.03	432.33	432.64	432.95	433.26	433.57	433.87	434.18
2.6	434.49	434.80	435.11	435.42	435.73	436.04	436.35	436.66	436.97	437.28
2.7	437.59	437.90	438.21	438.53	438.84	439.15	439.46	439.77	440.08	440.39
2.8	440.71	441.02	441.34	441.65	441.96	442.27	442.59	442.90	443.21	443.53
2.9	443.84	444.15	444.47	444.78	445.10	445.41	445.73	446.04	446.35	446.67
593.0	446.98	447.30	447.62	447.93	448.25	448.56	448.88	449.19	449.51	449.83
3.1	450.14	450.46	450.78	451.10	451.41	451.73	452.05	452.36	452.68	453.00
3.2	453.32	453.64	453.96	454.28	454.59	454.91	455.23	455.55	455.87	456.19
3.3	456.51	456.83	457.15	457.48	457.80	458.12	458.44	458.76	459.08	459.40
3.4	459.72	460.04	460.36	460.69	461.01	461.33	461.65	461.97	462.30	462.62
593.5	462.94	463.27	463.59	463.91	464.24	464.56	464.89	465.21	465.53	465.86
3.6	466.18	466.51	466.83	467.16	467.48	467.81	468.13	468.46	468.78	469.11
3.7	469.43	469.76	470.09	470.42	470.74	471.07	471.40	471.72	472.05	472.38
3.8	472.71	473.04	473.37	473.69	474.02	474.35	474.68	475.01	475.34	475.67
3.9	476.00	476.32	476.66	476.99	477.32	477.65	477.98	478.30	478.63	478.97
594.0	479.30	479.63	479.96	480.29	480.62	480.96	481.29	481.62	481.95	482.28
4.1	482.62	482.95	483.28	483.62	483.95	484.28	484.62	484.95	485.28	485.62
4.2	485.95	486.29	486.62	486.96	487.29	487.63	487.96	488.29	488.63	488.97
4.3	489.31	489.64	489.98	490.32	490.65	490.99	491.33	491.66	492.00	492.34
4.4	492.67	493.01	493.35	493.69	494.03	494.37	494.70	495.04	495.38	495.72
594.5	496.06	496.40	496.74	497.08	497.42	497.76	498.10	498.44	498.78	499.12
4.6	499.46	499.80	500.14	500.48	500.83	501.17	501.51	501.85	502.19	502.53
4.7	502.88	503.22	503.56	503.91	504.25	504.59	504.94	505.28	505.62	505.97
4.8	506.31	506.66	507.00	507.35	507.69	508.04	508.39	508.73	509.07	509.42
4.9	509.77	510.11	510.46	510.81	511.15	511.50	511.85	512.19	512.54	512.89

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
595.0	513.23	513.58	513.93	514.28	514.63	514.98	515.33	515.67	516.02	516.37
5.1	516.72	517.07	517.42	517.77	518.12	518.47	518.82	519.17	519.52	519.87
5.2	520.22	520.57	520.93	521.28	521.63	521.98	522.33	522.68	523.04	523.39
5.3	523.75	524.10	524.45	524.81	525.16	525.51	525.87	526.22	526.57	526.93
5.4	527.28	527.64	527.99	528.35	528.70	529.06	529.41	529.77	530.12	530.48
595.5	530.84	531.19	531.55	531.91	532.26	532.62	532.98	533.33	533.69	534.05
5.6	534.41	534.77	535.12	535.48	535.84	536.20	536.56	536.92	537.27	537.63
5.7	537.99	538.35	538.71	539.08	539.44	539.80	540.16	540.52	540.88	541.24
5.8	541.60	541.97	542.33	542.69	543.05	543.42	543.78	544.14	544.50	544.86
5.9	545.23	545.59	545.95	546.32	546.68	547.05	547.41	547.77	548.14	548.50
596.0	548.87	549.23	549.60	549.96	550.33	550.69	551.06	551.42	551.79	552.16
6.1	552.52	552.89	553.26	553.62	553.99	554.36	554.73	555.09	555.46	555.83
6.2	556.20	556.57	556.93	557.30	557.67	558.04	558.41	558.78	559.15	559.52
6.3	559.89	560.26	560.63	561.01	561.38	561.75	562.12	562.49	562.86	563.23
6.4	563.60	563.97	564.35	564.72	565.09	565.46	565.84	566.21	566.58	566.95
596.5	567.33	567.70	568.08	568.45	568.82	569.20	569.57	569.94	570.32	570.70
6.6	571.07	571.45	571.82	572.20	572.58	572.95	573.33	573.70	574.08	574.45
6.7	574.83	575.21	575.59	575.96	576.34	576.72	577.10	577.47	577.85	578.23
6.8	578.61	578.99	579.37	579.75	580.13	580.51	580.89	581.27	581.65	582.03
6.9	582.41	582.79	583.17	583.55	583.94	584.32	584.70	585.08	585.46	585.84
597.0	586.22	586.61	586.99	587.37	587.76	588.14	588.52	588.90	589.29	589.67
7.1	590.05	590.44	590.82	591.21	591.59	591.98	592.36	592.74	593.13	593.52
7.2	593.90	594.29	594.67	595.06	595.45	595.83	596.22	596.60	596.99	597.38
7.3	597.77	598.16	598.55	598.94	599.32	599.71	600.10	600.49	600.88	601.26
7.4	601.65	602.04	602.43	602.82	603.21	603.60	604.00	604.38	604.77	605.16
597.5	605.55	605.95	606.34	606.73	607.12	607.51	607.91	608.29	608.69	609.08
7.6	609.47	609.87	610.26	610.65	611.05	611.44	611.84	612.22	612.62	613.01
7.7	613.41	613.80	614.20	614.59	614.99	615.39	615.78	616.17	616.57	616.97
7.8	617.37	617.76	618.16	618.56	618.95	619.35	619.75	620.14	620.54	620.94
7.9	621.34	621.74	622.13	622.53	622.93	623.33	623.73	624.13	624.53	624.93
598.0	625.33	625.73	626.13	626.53	626.93	627.33	627.73	628.13	628.53	628.93
8.1	629.33	629.73	630.14	630.54	630.94	631.34	631.75	632.15	632.55	632.95
8.2	633.36	633.76	634.16	634.57	634.97	635.38	635.78	636.18	636.59	636.99
8.3	637.40	637.81	638.21	638.62	639.03	639.43	639.84	640.24	640.65	641.05
8.4	641.46	641.87	642.28	642.68	643.09	643.50	643.91	644.31	644.72	645.13
598.5	645.54	645.95	646.36	646.77	647.18	647.59	648.00	648.40	648.81	649.22
8.6	649.63	650.04	650.45	650.87	651.28	651.69	652.10	652.51	652.92	653.33
8.7	653.74	654.16	654.57	654.98	655.40	655.81	656.22	656.63	657.05	657.46
8.8	657.88	658.29	658.71	659.12	659.54	659.95	660.37	660.78	661.20	661.61
8.9	662.03	662.44	662.86	663.28	663.69	664.11	664.53	664.94	665.36	665.78
599.0	666.19	666.61	667.03	667.45	667.87	668.29	668.71	669.12	669.54	669.96
9.1	670.38	670.80	671.22	671.64	672.06	672.48	672.90	673.32	673.74	674.16
9.2	674.58	675.00	675.42	675.84	676.27	676.69	677.11	677.53	677.95	678.38
9.3	678.80	679.23	679.65	680.07	680.50	680.92	681.35	681.77	682.19	682.62
9.4	683.04	683.47	683.89	684.32	684.74	685.17	685.60	686.02	686.44	686.87
599.5	687.30	687.72	688.15	688.58	689.01	689.43	689.86	690.28	690.71	691.14
9.6	691.57	692.00	692.43	692.86	693.29	693.72	694.15	694.57	695.00	695.43
9.7	695.86	696.29	696.72	697.15	697.58	698.02	698.45	698.87	699.31	699.74
9.8	700.18	700.61	701.04	701.47	701.91	702.34	702.77	703.20	703.63	704.07
9.9	704.50	704.94	705.37	705.81	706.24	706.68	707.11	707.54	707.98	708.41
600.0	708.85									

1986 EDITION/RDB

VOLUMES BASED ON 1961 SURVEY ADJUSTED FOR REDUCTION DUE TO CLOSURE OF NICKAJACK DAM IN DEC. 1967.

HEADWATER 590- 600

Attachment 21c: Guntersville Excel Level Storage Table

GUNTERSVILLE

Quick Lookup

Storage	Enter known HW in green box. Corresponding storage is in yellow/blue box		
	Elevation	Volume TDSF	Volume Ac-Ft
	600.00	708.848	1,405,980

HW	Enter known storage in green box. Adjust value in gray box until value in blue box matches or closely approximates value in green box. Corresponding HW is in yellow box			
	Volume			Elevation
	480.000	4.021	480.000	594.02

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
592.00	416.211	416.511	416.812	417.113	417.413	417.714	418.015	418.317	418.618	418.920
592.10	419.221	419.523	419.825	420.127	420.429	420.732	421.034	421.337	421.640	421.943
592.20	422.246	422.550	422.853	423.157	423.460	423.764	424.068	424.372	424.677	424.981
592.30	425.286	425.591	425.896	426.201	426.506	426.811	427.117	427.422	427.728	428.034
592.40	428.340	428.647	428.953	429.260	429.566	429.873	430.180	430.487	430.795	431.102
592.50	431.410	431.718	432.025	432.334	432.642	432.950	433.259	433.567	433.876	434.185
592.60	434.494	434.804	435.113	435.422	435.732	436.042	436.352	436.662	436.973	437.283
592.70	437.594	437.905	438.215	438.527	438.838	439.149	439.461	439.772	440.084	440.396
592.80	440.708	441.021	441.333	441.646	441.959	442.271	442.585	442.898	443.211	443.525
592.90	443.838	444.152	444.466	444.780	445.095	445.409	445.724	446.038	446.353	446.668
593.00	446.984	447.299	447.615	447.930	448.246	448.562	448.878	449.194	449.511	449.828
593.10	450.144	450.461	450.778	451.095	451.413	451.730	452.048	452.366	452.684	453.002
593.20	453.320	453.639	453.958	454.276	454.595	454.914	455.234	455.553	455.873	456.192
593.30	456.512	456.832	457.152	457.473	457.793	458.114	458.435	458.756	459.077	459.398
593.40	459.720	460.041	460.363	460.685	461.007	461.329	461.652	461.974	462.297	462.620
593.50	462.943	463.266	463.589	463.913	464.236	464.560	464.884	465.208	465.533	465.857
593.60	466.182	466.506	466.831	467.156	467.482	467.807	468.133	468.458	468.784	469.110
593.70	469.437	469.763	470.089	470.416	470.743	471.070	471.397	471.724	472.052	472.380
593.80	472.707	473.035	473.363	473.692	474.020	474.349	474.678	475.007	475.336	475.665
593.90	475.994	476.324	476.654	476.984	477.314	477.644	477.974	478.305	478.635	478.966

Attachment 22a: Nantahala Bluebook Data

NANTAHALA PROJECT
Aluminum Company of America

SUMMARY OF PRINCIPAL FEATURES
March 1970

LOCATION

Dam on the Nantahala River at river mile 22.8, in Macon County, North Carolina, approximately 18 miles west of Franklin, North Carolina. Two small dams divert flow to Dicks Creek and White Oak Creek into penstock.

Powerhouse on Nantahala River at river mile 13.6.

CHRONOLOGY

Construction started (on tunnel) . . . . . March 1930
Construction completed . . . . . July 1931
Reservoir closure . . . . . January 30, 1942
Unit on line . . . . . July 2, 1942
Dicks Creek diverted into penstock . . . . November 6, 1948
White Oak Creek diverted
into penstock . . . . . April 29, 1949

STREAMFLOW

Drainage area:
At dam . . . . . 91.0 sq. miles
At Dicks Creek dam . . . . . 3.5 sq. miles
At White Oak Creek dam . . . . . 13.7 sq. miles
Total . . . . . 108.3 sq. miles
Gaging station discharge records (for complete records see Data Services Branch files)
Near Rainbow Springs, North Carolina,
October 1940 to date,
drainage area . . . . . 51.9 sq. miles
At Nantahala, North Carolina,
May 1942 to date
drainage area . . . . . 144 sq. miles
At Almond, North Carolina April 1912 to
November 1917, January 1927 to
September 1943:
drainage area . . . . . 174 sq. miles
Maximum known flood at dam site,
estimated (1947) . . . . . 11,000 cfs
Average unregulated flow at dam site,
(est. mean) (1941-1970) . . . . . 325 cfs
Minimum daily natural flow at dam site
(est. mean) (1925) . . . . . 41 cfs

RESERVOIR

Counties affected:
State of North Carolina . . . . Clay, Macon
Operating pool at dam:
Top of gates (area 1,575 ac.) . . . . . el. 3012.16
Normal maximum pool levels
(area 1,575 ac.) . . . . . el. 3012.16
Spillway crest (area 1,377 ac.) . . . . . el. 2993.16
Normal minimum pool (area 408 ac.) . . . el. 2882.16

Backwater length . . . . . 4.5 miles
Storage (flat pool assumption):
Total volume at top of
gates (el. 3012.16) . . . . . 137,300 ac-ft
Useful volume (e. 3012.16-2882.16) . . 125,500 ac-ft

TAILWATER (At Powerhouse)

Normal level . . . . . el. 2597

HEAD

Maximum static . . . . . 1,094.3 ft
Average net . . . . . 944 ft
Minimum (maximum downpour, zero flow) . . 877 ft

DAM

Material and type . . . . . Earth and rockfill
Length . . . . . 1,042 ft
Maximum height . . . . . 250 ft
Maximum width at base . . . . . 1,130 ft
Crest . . . . . el. 3034
Sluice . . . . . 16 ft dia. drivers on tunnel controlled by 2 electrically operated gates, 5' by 10'-9" clear opening.
Discharge capacity of sluice, HW el. 3012.1 . . . . 2,350 cfs
Volume . . . . . 2,200,000 cu. yd

SPILLWAY

Location . . . . . East of dam
Type . . . . . Gate control, supplemented by flashboard dams when flow exceeds gate capacity
Gates . . . . . Four, 25' by 19'-6" Tainter gates
Flashboard dams 2

WATERWAY

INTAKE

Location . . . . . In hill west of dam
Gross area of opening . . . . . 520 sq. ft
Size . . . . . 6 by 14 ft clear opening
Gates . . . . . 2 in tandem, electrically operated

Attachment 22b: Nantahala 1986 Level Storage Table

NANTAHALA

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
2870.0	54.35	54.36	54.36	54.37	54.38	54.38	54.39	54.40	54.40	54.41
.1	54.42	54.42	54.43	54.44	54.44	54.45	54.46	54.47	54.47	54.48
.2	54.49	54.49	54.50	54.51	54.51	54.52	54.53	54.53	54.54	54.55
.3	54.55	54.56	54.57	54.57	54.58	54.59	54.60	54.60	54.61	54.62
.4	54.62	54.63	54.64	54.64	54.65	54.66	54.66	54.67	54.68	54.69
2870.5	54.69	54.70	54.71	54.71	54.72	54.73	54.73	54.74	54.75	54.75
.6	54.76	54.77	54.78	54.78	54.79	54.80	54.80	54.81	54.82	54.82
.7	54.83	54.84	54.84	54.85	54.86	54.86	54.87	54.88	54.89	54.89
.8	54.90	54.91	54.91	54.92	54.93	54.93	54.94	54.95	54.95	54.96
.9	54.97	54.98	54.98	54.99	55.00	55.00	55.01	55.02	55.02	55.03
2871.0	55.04	55.04	55.05	55.06	55.07	55.07	55.08	55.09	55.09	55.10
1.1	55.11	55.11	55.12	55.13	55.13	55.14	55.15	55.16	55.16	55.17
1.2	55.18	55.18	55.19	55.20	55.20	55.21	55.22	55.23	55.23	55.24
1.3	55.25	55.25	55.26	55.27	55.27	55.28	55.29	55.29	55.30	55.31
1.4	55.32	55.32	55.33	55.34	55.34	55.35	55.36	55.36	55.37	55.38
2871.5	55.38	55.39	55.40	55.41	55.41	55.42	55.43	55.43	55.44	55.45
1.6	55.45	55.46	55.47	55.48	55.48	55.49	55.50	55.50	55.51	55.52
1.7	55.52	55.53	55.54	55.54	55.55	55.56	55.57	55.57	55.58	55.59
1.8	55.59	55.60	55.61	55.61	55.62	55.63	55.64	55.64	55.65	55.66
1.9	55.66	55.67	55.68	55.68	55.69	55.70	55.71	55.71	55.72	55.73
2872.0	55.73	55.74	55.75	55.75	55.76	55.77	55.78	55.78	55.79	55.80
2.1	55.80	55.81	55.82	55.82	55.83	55.84	55.85	55.85	55.86	55.87
2.2	55.87	55.88	55.89	55.89	55.90	55.91	55.92	55.92	55.93	55.94
2.3	55.94	55.95	55.96	55.96	55.97	55.98	55.99	55.99	56.00	56.01
2.4	56.01	56.02	56.03	56.03	56.04	56.05	56.06	56.06	56.07	56.08
2872.5	56.08	56.09	56.10	56.10	56.11	56.12	56.13	56.13	56.14	56.15
2.6	56.15	56.16	56.17	56.17	56.18	56.19	56.20	56.20	56.21	56.22
2.7	56.22	56.23	56.24	56.24	56.25	56.26	56.27	56.27	56.28	56.29
2.8	56.29	56.30	56.31	56.31	56.32	56.33	56.34	56.34	56.35	56.36
2.9	56.36	56.37	56.38	56.39	56.39	56.40	56.41	56.41	56.42	56.43
2873.0	56.43	56.44	56.45	56.46	56.46	56.47	56.48	56.48	56.49	56.50
3.1	56.51	56.51	56.52	56.53	56.53	56.54	56.55	56.55	56.56	56.57
3.2	56.58	56.58	56.59	56.60	56.60	56.61	56.62	56.63	56.63	56.64
3.3	56.65	56.65	56.66	56.67	56.67	56.68	56.69	56.70	56.70	56.71
3.4	56.72	56.72	56.73	56.74	56.75	56.75	56.76	56.77	56.77	56.78
2873.5	56.79	56.79	56.80	56.81	56.82	56.82	56.83	56.84	56.84	56.85
3.6	56.86	56.87	56.87	56.88	56.89	56.89	56.90	56.91	56.92	56.92
3.7	56.93	56.94	56.94	56.95	56.96	56.96	56.97	56.98	56.99	56.99
3.8	57.00	57.01	57.01	57.02	57.03	57.04	57.04	57.05	57.06	57.06
3.9	57.07	57.08	57.09	57.09	57.10	57.11	57.11	57.12	57.13	57.13
2874.0	57.14	57.15	57.16	57.16	57.17	57.18	57.18	57.19	57.20	57.21
4.1	57.21	57.22	57.23	57.23	57.24	57.25	57.26	57.26	57.27	57.28
4.2	57.28	57.29	57.30	57.31	57.31	57.32	57.33	57.33	57.34	57.35
4.3	57.36	57.36	57.37	57.38	57.38	57.39	57.40	57.41	57.41	57.42
4.4	57.43	57.43	57.44	57.45	57.46	57.46	57.47	57.48	57.48	57.49
2874.5	57.50	57.50	57.51	57.52	57.53	57.53	57.54	57.55	57.56	57.56
4.6	57.57	57.58	57.58	57.59	57.60	57.60	57.61	57.62	57.63	57.63
4.7	57.64	57.65	57.66	57.66	57.67	57.68	57.68	57.69	57.70	57.71
4.8	57.71	57.72	57.73	57.73	57.74	57.75	57.76	57.76	57.77	57.78
4.9	57.78	57.79	57.80	57.80	57.81	57.82	57.83	57.83	57.84	57.85

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
2875.0	57.86	57.86	57.87	57.88	57.88	57.89	57.90	57.91	57.91	57.92
5.1	57.93	57.93	57.94	57.95	57.95	57.96	57.96	57.97	57.98	57.98
5.2	58.00	58.01	58.01	58.02	58.02	58.03	58.03	58.04	58.05	58.05
5.3	58.07	58.08	58.08	58.09	58.09	58.10	58.11	58.11	58.12	58.12
5.4	58.14	58.15	58.15	58.16	58.16	58.17	58.18	58.18	58.19	58.20
2875.5	58.21	58.22	58.22	58.23	58.24	58.24	58.25	58.26	58.26	58.27
5.6	58.28	58.29	58.29	58.30	58.31	58.31	58.32	58.33	58.33	58.34
5.7	58.35	58.36	58.37	58.37	58.38	58.38	58.39	58.39	58.40	58.41
5.8	58.42	58.43	58.43	58.44	58.45	58.45	58.46	58.47	58.47	58.48
5.9	58.49	58.50	58.51	58.51	58.52	58.52	58.53	58.54	58.55	58.55
2876.0	58.56	58.57	58.58	58.58	58.59	58.60	58.60	58.61	58.62	58.62
6.1	58.63	58.63	58.64	58.65	58.66	58.66	58.67	58.68	58.68	58.69
6.2	58.70	58.70	58.71	58.72	58.73	58.73	58.74	58.75	58.75	58.76
6.3	58.77	58.77	58.78	58.79	58.80	58.80	58.81	58.82	58.82	58.83
6.4	58.84	58.84	58.85	58.86	58.87	58.87	58.88	58.89	58.89	58.90
2876.5	58.91	58.91	58.92	58.93	58.94	58.94	58.95	58.96	58.96	58.97
6.6	58.98	58.98	58.99	59.00	59.01	59.01	59.02	59.03	59.03	59.04
6.7	59.05	59.05	59.06	59.07	59.08	59.08	59.09	59.10	59.10	59.11
6.8	59.12	59.12	59.13	59.14	59.15	59.15	59.16	59.17	59.17	59.18
6.9	59.19	59.19	59.20	59.21	59.22	59.22	59.23	59.24	59.24	59.25
2877.0	59.26	59.26	59.27	59.28	59.29	59.29	59.30	59.31	59.31	59.32
7.1	59.33	59.33	59.34	59.35	59.36	59.36	59.37	59.38	59.38	59.39
7.2	59.40	59.40	59.41	59.42	59.43	59.43	59.44	59.45	59.45	59.46
7.3	59.47	59.47	59.48	59.49	59.50	59.50	59.51	59.52	59.52	59.53
7.4	59.54	59.54	59.55	59.56	59.57	59.57	59.58	59.59	59.59	59.60
2877.5	59.61	59.61	59.62	59.63	59.64	59.64	59.65	59.66	59.66	59.67
7.6	59.68	59.68	59.69	59.70	59.71	59.71	59.72	59.73	59.73	59.74
7.7	59.75	59.75	59.76	59.77	59.77	59.78	59.79	59.79	59.80	59.80
7.8	59.81	59.81	59.82	59.83	59.83	59.84	59.85	59.85	59.86	59.87
7.9	59.87	59.88	59.89	59.90	59.90	59.91	59.92	59.93	59.93	59.94
2878.0	59.95	59.96	59.96	59.97	59.98	59.98	59.99	59.99	60.00	60.01
8.1	60.02	60.03	60.04	60.04	60.05	60.06	60.07	60.07	60.08	60.09
8.2	60.09	60.10	60.11	60.12	60.12	60.13	60.14	60.15	60.15	60.16
8.3	60.17	60.18	60.18	60.19	60.20	60.21	60.21	60.22	60.23	60.24
8.4	60.24	60.25	60.26	60.27	60.28	60.29	60.29	60.30	60.31	60.32
2878.5	60.32	60.33	60.34	60.35	60.35	60.36	60.37	60.37	60.38	60.39
8.6	60.40	60.40	60.41	60.42	60.43	60.43	60.44	60.45	60.45	60.46
8.7	60.47	60.48	60.49	60.49	60.50	60.51	60.51	60.52	60.53	60.54
8.8	60.54	60.55	60.56	60.57	60.57	60.58	60.59	60.60	60.60	60.61
8.9	60.62	60.63	60.63	60.64	60.65	60.65	60.66	60.67	60.68	60.68
2879.0	60.69	60.70	60.71	60.71	60.72	60.73	60.74	60.74	60.75	60.76
9.1	60.77	60.77	60.78	60.79	60.80	60.80	60.81	60.82	60.82	60.83
9.2	60.84	60.85	60.85	60.86	60.87	60.88	60.88	60.89	60.90	60.91
9.3	60.91	60.92	60.93	60.94	60.94	60.95	60.96	60.97	60.97	60.98
9.4	60.99	60.99	61.00	61.01	61.02	61.02	61.03	61.04	61.05	61.05
2879.5	61.06	61.07	61.08	61.08	61.09	61.10	61.11	61.11	61.12	61.13
9.6	61.14	61.14	61.15	61.16	61.17	61.17	61.18	61.19	61.20	61.20
9.7	61.21	61.22	61.23	61.23	61.24	61.25	61.26	61.26	61.27	61.28
9.8	61.28	61.29	61.30	61.31	61.31	61.32	61.33	61.34	61.34	61.35
9.9	61.36	61.37	61.37	61.38	61.39	61.40	61.40	61.41	61.42	61.43
2880.0	61.43	61.44	61.45	61.46	61.46	61.47	61.48	61.48	61.49	61.50
	61.51									

NANTAHALA

Quick Lookup

Storage	Enter known HW in green box. Corresponding storage is in yellow box	
	Elevation	Volume
	2870.00	54.348

HW	Enter known storage in green box. Adjust value in gray box until value in blue box matches or closely approximates value in green box. Corresponding HW is in yellow box			
	Volume			Elevation
	70.000	1.060	70.001	2891.06

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
2700.00	0.181	0.182	0.182	0.182	0.182	0.183	0.183	0.183	0.183	0.184
2700.10	0.184	0.184	0.184	0.185	0.185	0.185	0.185	0.185	0.186	0.186
2700.20	0.186	0.186	0.187	0.187	0.187	0.187	0.188	0.188	0.188	0.188
2700.30	0.189	0.189	0.189	0.189	0.189	0.190	0.190	0.190	0.190	0.191
2700.40	0.191	0.191	0.191	0.192	0.192	0.192	0.192	0.193	0.193	0.193
2700.50	0.193	0.194	0.194	0.194	0.194	0.195	0.195	0.195	0.195	0.195
2700.60	0.196	0.196	0.196	0.196	0.197	0.197	0.197	0.197	0.198	0.198
2700.70	0.198	0.198	0.199	0.199	0.199	0.199	0.200	0.200	0.200	0.200
2700.80	0.201	0.201	0.201	0.201	0.202	0.202	0.202	0.202	0.203	0.203
2700.90	0.203	0.203	0.204	0.204	0.204	0.204	0.205	0.205	0.205	0.205
2701.00	0.206	0.206	0.206	0.206	0.207	0.207	0.207	0.207	0.208	0.208
2701.10	0.208	0.209	0.209	0.209	0.209	0.210	0.210	0.210	0.210	0.211
2701.20	0.211	0.211	0.211	0.212	0.212	0.212	0.212	0.213	0.213	0.213
2701.30	0.213	0.214	0.214	0.214	0.214	0.215	0.215	0.215	0.216	0.216
2701.40	0.216	0.216	0.217	0.217	0.217	0.217	0.218	0.218	0.218	0.218
2701.50	0.219	0.219	0.219	0.219	0.220	0.220	0.220	0.221	0.221	0.221
2701.60	0.221	0.222	0.222	0.222	0.222	0.223	0.223	0.223	0.224	0.224
2701.70	0.224	0.224	0.225	0.225	0.225	0.225	0.226	0.226	0.226	0.226
2701.80	0.227	0.227	0.227	0.228	0.228	0.228	0.228	0.229	0.229	0.229
2701.90	0.230	0.230	0.230	0.230	0.231	0.231	0.231	0.231	0.232	0.232
2702.00	0.232	0.233	0.233	0.233	0.233	0.234	0.234	0.234	0.234	0.235

SANTEETLAH PROJECT
Aluminum Company of America

SUMMARY OF PRINCIPAL FEATURES
March 1970

LOCATION

Dam - on Cheoah River at river mile 9.3; in Graham County, North Carolina; 8 air miles southeast of Tapoco, North Carolina; 5.3 air miles south of powerhouse; 10.3 air miles southeast of Calderwood Dam; 25 air miles southeast of Alcoa, Tennessee; U. S. Highway 129 passes dam.

Powerhouse - on Little Tennessee River at river mile 56.8; North Carolina Highway 28 passes powerhouse.

CHRONOLOGY

Work started. . . . . January 1926
Reservoir closure. . . . . December 7, 1927
Station placed in commercial operation . . . . . June 7, 1928

STREAMFLOW

Drainage area at dam . . . . . 176 sq. miles
Gaging station discharge records (for complete records see Data Services Branch files):
Johnson, North Carolina, November 1912 to December 1918; December 1920 to September 1927; drainage area. . . . . 177 sq. miles
Maximum known flood at dam site, estimated (1906). . . . . Unknown
Average unregulated flow at dam site, estimated (1899). . . . . 516 cfs
Minimum daily natural flow at dam site, estimated (1925). . . . . 38 cfs

RESERVOIR

Counties affected:
State of North Carolina . . . . . Graham
Operating levels at dam:
Top of gates (area 2,850 ac.) . . . . . el. 1939.92
Normal maximum pool (area 2,850 ac.) . . . . . el. 1939.92
Spillway crest (area 2,440 ac.) . . . . . el. 1927.90
Normal minimum pool (area 798 ac.) . . . . . el. 1862.92
Backwater length. . . . . 7.5 miles
Storage (flat pool assumption):
Total volume at top of gates (el. 1939.92) . . . . . 156,300 ac.-ft
Useful volume (el. 1939.92-1862.92) . . . . 132,000 ac.-ft

TAILWATER

Average (Cheoah pool) . . . . . el. 1275.5

HEAD (Gross) (At Powerhouse)

Normal (el. 1939.92-1276.5) . . . . . 663.4 ft
Minimum (el. 1863.0-1276.5) . . . . . 586.5 ft
Average net effective (full reservoir, all units running). . . . . 597 ft

DAM

Material and type . . . . . Concrete; variable-radius arch center section, flanked on either side by a gravity spillway section and a non-overflow gravity section
Length (overall) . . . . . 1,054 ft
Maximum height . . . . . 216 ft
Top of nonoverflow section. . . . . el. 1958.9
Ogee spillway crest . . . . . el. 1927.9
Arch spillway crest . . . . . el. 1939.9
Maximum width at base:
Spillway section only . . . . . 120.5 ft
Including integral apron . . . . . 180.5 ft
Arch section. . . . . 48 ft
Crest gates . . . . . 6 Tainter gates 12 ft high by 25 ft wide
Spillway discharge capacity . . . . . 83,000 cfs
Foundation . . . . . Arkose

WATERWAY

INTAKE

Location . . . . . In gravity section near right bank

TUNNEL AND PIPELINE

Diameter . . . . . 11 ft
Length:
Tunnel (5 sections) . . . . . 19,230 ft
Steel pipe (6 sections) . . . . . 5,950 ft
Total. . . . . 25,180 ft
Lining, tunnel . . . . . Concrete and steel

SURGE TANK

Type. . . . . One Johnston differential, nonspill, 32.5 ft dia., 165 ft high
Location . . . . . On hill 550 ft above river

Attachment 23b: Santeetlah 1986 Level Storage Table

SANTEETLAH

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
1810.0	69.17	69.19	69.20	69.21	69.22	69.24	69.25	69.26	69.28	69.29
.1	69.30	69.32	69.33	69.34	69.36	69.37	69.38	69.40	69.41	69.42
.2	69.43	69.45	69.46	69.47	69.49	69.50	69.51	69.53	69.54	69.55
.3	69.57	69.58	69.59	69.61	69.62	69.63	69.65	69.66	69.67	69.69
.4	69.70	69.71	69.73	69.74	69.75	69.77	69.78	69.79	69.81	69.82
1810.5	69.83	69.85	69.86	69.87	69.89	69.90	69.91	69.93	69.94	69.95
.6	69.97	69.98	69.99	70.01	70.02	70.03	70.05	70.06	70.07	70.08
.7	70.10	70.11	70.12	70.14	70.15	70.16	70.18	70.19	70.20	70.22
.8	70.23	70.24	70.26	70.27	70.28	70.30	70.31	70.32	70.34	70.35
.9	70.36	70.38	70.39	70.40	70.42	70.43	70.44	70.46	70.47	70.49
1811.0	70.50	70.51	70.53	70.54	70.55	70.57	70.58	70.59	70.61	70.62
.1	70.63	70.65	70.66	70.67	70.69	70.70	70.71	70.73	70.74	70.75
.2	70.77	70.78	70.79	70.81	70.82	70.83	70.85	70.86	70.87	70.89
.3	70.90	70.91	70.93	70.94	70.95	70.97	70.98	70.99	71.01	71.02
.4	71.04	71.05	71.06	71.08	71.09	71.10	71.12	71.13	71.14	71.16
1811.5	71.17	71.18	71.20	71.21	71.22	71.24	71.25	71.26	71.28	71.29
.6	71.30	71.32	71.33	71.35	71.36	71.37	71.39	71.40	71.41	71.43
.7	71.44	71.45	71.47	71.48	71.49	71.51	71.52	71.53	71.55	71.56
.8	71.57	71.59	71.60	71.62	71.63	71.64	71.66	71.67	71.68	71.70
.9	71.71	71.72	71.74	71.75	71.76	71.78	71.79	71.80	71.82	71.83
1812.0	71.85	71.86	71.87	71.89	71.90	71.91	71.93	71.94	71.95	71.97
.1	71.98	71.99	72.01	72.02	72.04	72.05	72.06	72.08	72.09	72.10
.2	72.12	72.13	72.14	72.16	72.17	72.19	72.20	72.21	72.23	72.24
.3	72.25	72.27	72.28	72.29	72.31	72.32	72.33	72.35	72.36	72.38
.4	72.39	72.40	72.42	72.43	72.44	72.46	72.47	72.48	72.50	72.51
1812.5	72.53	72.54	72.55	72.57	72.58	72.59	72.61	72.62	72.63	72.65
.6	72.66	72.68	72.69	72.70	72.72	72.73	72.74	72.76	72.77	72.79
.7	72.80	72.81	72.83	72.84	72.85	72.87	72.88	72.89	72.91	72.92
.8	72.94	72.95	72.96	72.98	72.99	73.00	73.02	73.03	73.05	73.06
.9	73.07	73.09	73.10	73.11	73.13	73.14	73.15	73.17	73.18	73.20
1813.0	73.21	73.22	73.24	73.25	73.26	73.28	73.29	73.31	73.32	73.33
.1	73.35	73.36	73.37	73.39	73.40	73.42	73.43	73.44	73.46	73.47
.2	73.48	73.50	73.51	73.53	73.54	73.55	73.57	73.58	73.59	73.61
.3	73.62	73.64	73.65	73.66	73.68	73.69	73.70	73.72	73.73	73.75
.4	73.76	73.77	73.79	73.80	73.81	73.83	73.84	73.86	73.87	73.88
1813.5	73.90	73.91	73.93	73.94	73.95	73.97	73.98	73.99	74.01	74.02
.6	74.04	74.05	74.06	74.08	74.09	74.11	74.12	74.13	74.15	74.16
.7	74.17	74.19	74.20	74.22	74.23	74.24	74.26	74.27	74.28	74.30
.8	74.31	74.33	74.34	74.35	74.37	74.38	74.40	74.41	74.42	74.44
.9	74.45	74.46	74.48	74.49	74.51	74.52	74.53	74.55	74.56	74.58
1814.0	74.59	74.60	74.62	74.63	74.64	74.66	74.67	74.69	74.70	74.71
.1	74.73	74.74	74.76	74.77	74.78	74.80	74.81	74.83	74.84	74.85
.2	74.87	74.88	74.89	74.91	74.92	74.94	74.95	74.96	74.98	74.99
.3	75.01	75.02	75.03	75.05	75.06	75.08	75.09	75.10	75.12	75.13
.4	75.14	75.16	75.17	75.19	75.20	75.21	75.23	75.24	75.26	75.27
1814.5	75.28	75.30	75.31	75.33	75.34	75.35	75.37	75.38	75.40	75.41
.6	75.42	75.44	75.45	75.47	75.48	75.49	75.51	75.52	75.54	75.55
.7	75.56	75.58	75.59	75.60	75.62	75.63	75.65	75.66	75.67	75.69
.8	75.70	75.72	75.73	75.74	75.76	75.77	75.79	75.80	75.81	75.83
.9	75.84	75.86	75.87	75.88	75.90	75.91	75.93	75.94	75.95	75.97

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
1815.0	75.98	76.00	76.01	76.02	76.04	76.05	76.07	76.08	76.09	76.11
.1	76.12	76.14	76.15	76.16	76.18	76.19	76.21	76.22	76.23	76.25
.2	76.26	76.28	76.29	76.30	76.32	76.33	76.35	76.36	76.37	76.39
.3	76.40	76.42	76.43	76.44	76.46	76.47	76.49	76.50	76.51	76.53
.4	76.54	76.56	76.57	76.58	76.60	76.61	76.63	76.64	76.65	76.67
1815.5	76.68	76.70	76.71	76.73	76.74	76.75	76.77	76.78	76.80	76.81
.6	76.82	76.84	76.85	76.87	76.88	76.89	76.91	76.92	76.94	76.95
.7	76.96	76.98	76.99	77.01	77.02	77.03	77.05	77.06	77.08	77.09
.8	77.10	77.12	77.13	77.15	77.16	77.18	77.19	77.20	77.22	77.23
.9	77.25	77.26	77.27	77.29	77.30	77.32	77.33	77.34	77.36	77.37
1816.0	77.39	77.40	77.41	77.43	77.44	77.46	77.47	77.49	77.50	77.51
.1	77.53	77.54	77.56	77.57	77.58	77.60	77.61	77.63	77.64	77.65
.2	77.67	77.68	77.70	77.71	77.72	77.74	77.75	77.77	77.78	77.80
.3	77.81	77.82	77.84	77.85	77.87	77.88	77.89	77.91	77.92	77.94
.4	77.95	77.96	77.98	77.99	78.01	78.02	78.04	78.05	78.06	78.08
1816.5	78.09	78.11	78.12	78.13	78.15	78.16	78.18	78.19	78.21	78.22
.6	78.23	78.25	78.26	78.28	78.29	78.30	78.32	78.33	78.35	78.36
.7	78.38	78.39	78.40	78.42	78.43	78.45	78.46	78.47	78.49	78.50
.8	78.52	78.53	78.55	78.56	78.57	78.59	78.60	78.62	78.63	78.64
.9	78.66	78.67	78.69	78.70	78.71	78.73	78.74	78.76	78.77	78.79
1817.0	78.80	78.81	78.83	78.84	78.86	78.87	78.89	78.90	78.91	78.93
.1	78.94	78.96	78.97	78.98	79.00	79.01	79.03	79.04	79.06	79.07
.2	79.08	79.10	79.11	79.13	79.14	79.15	79.17	79.18	79.20	79.21
.3	79.23	79.24	79.25	79.27	79.28	79.30	79.31	79.33	79.34	79.35
.4	79.37	79.38	79.40	79.41	79.42	79.44	79.45	79.47	79.48	79.50
1817.5	79.51	79.52	79.54	79.55	79.57	79.58	79.60	79.61	79.62	79.64
.6	79.65	79.67	79.68	79.69	79.71	79.72	79.74	79.75	79.77	79.78
.7	79.79	79.81	79.82	79.84	79.85	79.87	79.88	79.89	79.91	79.92
.8	79.94	79.95	79.97	79.98	79.99	80.01	80.02	80.04	80.05	80.06
.9	80.08	80.09	80.11	80.12	80.14	80.15	80.16	80.18	80.19	80.21
1818.0	80.22	80.24	80.25	80.26	80.28	80.29	80.31	80.32	80.34	80.35
.1	80.36	80.38	80.39	80.41	80.42	80.44	80.45	80.46	80.48	80.49
.2	80.51	80.52	80.54	80.55	80.56	80.58	80.59	80.61	80.62	80.63
.3	80.65	80.66	80.68	80.69	80.71	80.72	80.73	80.75	80.76	80.79
.4	80.79	80.81	80.82	80.83	80.85	80.86	80.88	80.89	80.91	80.92
1818.5	80.93	80.95	80.96	80.98	80.99	81.01	81.02	81.03	81.05	81.06
.6	81.08	81.09	81.11	81.12	81.13	81.15	81.16	81.18	81.19	81.21
.7	81.22	81.23	81.25	81.26	81.28	81.29	81.31	81.32	81.33	81.35
.8	81.36	81.38	81.39	81.41	81.42	81.43	81.45	81.46	81.48	81.49
.9	81.51	81.52	81.53	81.55	81.56	81.58	81.59	81.61	81.62	81.63
1819.0	81.65	81.66	81.68	81.69	81.71	81.72	81.74	81.75	81.76	81.78
.1	81.79	81.81	81.82	81.84	81.85	81.86	81.88	81.89	81.91	81.92
.2	81.94	81.95	81.96	81.98	81.99	82.01	82.02	82.04	82.05	82.06
.3	82.08	82.09	82.11	82.12	82.14	82.15	82.16	82.18	82.19	82.21
.4	82.22	82.24	82.25	82.26	82.28	82.29	82.31	82.32	82.34	82.35
1819.5	82.37	82.38	82.39	82.41	82.42	82.44	82.45	82.47	82.48	82.49
.6	82.51	82.52	82.54	82.55	82.57	82.58	82.59	82.61	82.62	82.64
.7	82.65	82.67	82.68	82.69	82.71	82.72	82.74	82.75	82.77	82.78
.8	82.80	82.81	82.82	82.84	82.85	82.87	82.88	82.90	82.91	82.92
.9	82.94	82.95	82.97	82.98	83.00	83.01	83.02	83.04	83.05	83.07
1820.0	83.08									

1986 EDITION/ROB

VOLUMES BASED ON 1935 SURVEY. ALCOA PROJECT.

HEADWATER 1810-1820

Attachment 23c: Santeetlah Excel Level Storage Table

SANTEETLAH

Quick Lookup

Storage	Enter known HW in green box Corresponding storage is in yellow box	
	Elevation	Volume
	1812.00	71.846

HW	Enter known storage in green box Adjust value in gray box until value in blue box matches or closely approximates value in green box Corresponding HW is in yellow box			
	Volume			Elevation
	54.000	7.410	53.998	1797.41

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
1740.00	12.201	12.205	12.209	12.213	12.217	12.221	12.225	12.229	12.233	12.237
1740.10	12.241	12.245	12.249	12.253	12.257	12.261	12.265	12.269	12.273	12.277
1740.20	12.281	12.285	12.289	12.293	12.297	12.301	12.305	12.309	12.313	12.317
1740.30	12.321	12.325	12.329	12.333	12.337	12.341	12.345	12.349	12.353	12.357
1740.40	12.361	12.365	12.369	12.373	12.378	12.382	12.386	12.390	12.394	12.398
1740.50	12.402	12.406	12.410	12.414	12.418	12.422	12.426	12.430	12.434	12.438
1740.60	12.442	12.446	12.450	12.454	12.458	12.463	12.467	12.471	12.475	12.479
1740.70	12.483	12.487	12.491	12.495	12.499	12.503	12.507	12.511	12.515	12.519
1740.80	12.524	12.528	12.532	12.536	12.540	12.544	12.548	12.552	12.556	12.560
1740.90	12.564	12.568	12.572	12.577	12.581	12.585	12.589	12.593	12.597	12.601
1741.00	12.605	12.609	12.613	12.617	12.621	12.626	12.630	12.634	12.638	12.642
1741.10	12.646	12.650	12.654	12.658	12.662	12.667	12.671	12.675	12.679	12.683
1741.20	12.687	12.691	12.695	12.699	12.703	12.708	12.712	12.716	12.720	12.724
1741.30	12.728	12.732	12.736	12.741	12.745	12.749	12.753	12.757	12.761	12.765
1741.40	12.769	12.774	12.778	12.782	12.786	12.790	12.794	12.798	12.802	12.807
1741.50	12.811	12.815	12.819	12.823	12.827	12.831	12.835	12.840	12.844	12.848
1741.60	12.852	12.856	12.860	12.864	12.869	12.873	12.877	12.881	12.885	12.889
1741.70	12.894	12.898	12.902	12.906	12.910	12.914	12.918	12.923	12.927	12.931
1741.80	12.935	12.939	12.943	12.948	12.952	12.956	12.960	12.964	12.968	12.973
1741.90	12.977	12.981	12.985	12.989	12.993	12.998	13.002	13.006	13.010	13.014
1742.00	13.019	13.023	13.027	13.031	13.035	13.039	13.044	13.048	13.052	13.056

Cheoah 1

CHEOAH PROJECT
Aluminum Company of America

SUMMARY OF PRINCIPAL FEATURES
March 1970

LOCATION

On Little Tennessee River at river mile 51.4, in Graham and Swain Counties, North Carolina; 0.7 air mile north of Tapoco, North Carolina; 20 air miles south of Alcoa, Tennessee.

CHRONOLOGY

Reservoir closure . . . . . December 8, 1918
Station placed in commercial operation:
Units 1, 2, and 3 . . . . . April 13, 1919
Unit 4 . . . . . October 27, 1925
Unit 5 . . . . . September 26, 1949

STREAMFLOW

Drainage area at dam . . . . . 1,608 sq. miles
Gaging station discharge records (for complete records see Data Services Branch files):
Judson, North Carolina, July 1896 to January 1945; drainage area . . . . . 664 sq. miles
Bryson City, North Carolina (Tuckasegee River), October 1899 to date; drainage area . . . . 655 sq. miles
Calderwood, Tennessee, January 1912 to December 1918; January 1921 to January 1922; April 1922 to August 1957; drainage area . . . . . 1,802 sq. miles
Maximum known flood at dam site, estimated (1867) . . . . . 131,000 cfs
Average unregulated flow at dam site, estimated (1913-1970) . . . . . 3,788 cfs
Minimum daily natural flow at dam site, estimated (1925) . . . . . 430 cfs
Maximum flood for spillway design . . . . . 170,800 cfs

RESERVOIR

Counties affected:
State of North Carolina . . . . . Graham, Swain
Operating levels at dam:
Top of gates (area 632 ac.) . . . . . el. 1276.51
Normal maximum pool (area 632 ac.) . . . . . el. 1276.51
Normal minimum pool (area 600 ac.) . . . . . el. 1273.51
Backwater length . . . . . 8.9 miles
Storage (flat pool assumption):
Total volume at top of gates (el. 1276.51) . . . . . 35,030 ac.-ft
Useful volume (el. 1276.51-1273.51) . . . . . 1,830 ac.-ft

TAILWATER

Average (Calderwood pool) . . . . . el. 1084.40-1087.46

HEAD

Gross . . . . . 190 ft
Average net . . . . . 187 ft

DAM

Material and type . . . . . Concrete, curved gravity of 400-ft radius
Length along top . . . . . 750 ft
Maximum height . . . . . 225 ft
Maximum width at base, spillway section only (approx.) . . . . . 175 ft
Spillway crest, masonry . . . . . el. 1257.5
Crest gates . . . . . 19 Tainter gates 25 ft wide by 19 ft high
Spillway discharge capacity . . . . . 170,800 cfs

WATERWAY

INTAKE

Location . . . . . Left bank
Head gates . . . . . Stoney

TUNNEL AND SURGE SHAFT

Tunnel:
Diameter . . . . . 27 ft
Length . . . . . No. 1, 528 ft; No. 2, 571 ft; No. 3, 613 ft; No. 4, 655 ft; none for No. 5
Lining . . . . . Reinforced concrete
Surge shafts:
Number 4
Location . . . . . Between tunnel header and penstock
Height (approx.) . . . . . 70 ft

PENSTOCKS

Number 5
Length . . . . . No. 1, 267 ft; No. 2, 254 ft; No. 3, 242 ft; No. 4, 231 ft; No. 5, 513 ft
Inside diameter . . . . . 13.5 ft
Type . . . . . Steel embedded in concrete
Gates . . . . . Stoney

Attachment 24b: Cheoah 1986 Level Storage Table

CHEOAH

TOTAL LEVEL STORAGE IN 1000 DAY-SECONDS-FEET

PAGE 1 OF 3

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
1130.0	11.75	11.75	11.75	11.75	11.75	11.76	11.76	11.76	11.76	11.76	1135.0	12.69	12.69	12.69	12.69	12.69	12.70	12.70	12.70	12.70	12.70
.1	11.76	11.77	11.77	11.77	11.77	11.78	11.78	11.78	11.78	11.78	5.1	12.71	12.71	12.71	12.71	12.71	12.72	12.72	12.72	12.72	12.72
.2	11.79	11.79	11.79	11.79	11.79	11.79	11.79	11.80	11.80	11.80	5.2	12.73	12.73	12.73	12.73	12.73	12.74	12.74	12.74	12.74	12.74
.3	11.80	11.80	11.80	11.80	11.81	11.81	11.81	11.81	11.82	11.82	5.3	12.75	12.75	12.75	12.75	12.75	12.76	12.76	12.76	12.76	12.76
.4	11.82	11.82	11.82	11.82	11.83	11.83	11.83	11.83	11.83	11.83	5.4	12.77	12.77	12.77	12.77	12.77	12.78	12.78	12.78	12.78	12.78
1130.5	11.83	11.84	11.84	11.84	11.84	11.85	11.85	11.85	11.85	11.85	1135.5	12.79	12.79	12.79	12.79	12.79	12.80	12.80	12.80	12.80	12.80
.6	11.85	11.86	11.86	11.86	11.86	11.86	11.86	11.87	11.87	11.87	5.6	12.81	12.81	12.81	12.81	12.81	12.82	12.82	12.82	12.82	12.82
.7	11.87	11.87	11.88	11.88	11.88	11.88	11.88	11.88	11.89	11.89	5.7	12.83	12.83	12.83	12.83	12.83	12.84	12.84	12.84	12.84	12.84
.8	11.89	11.89	11.89	11.89	11.89	11.90	11.90	11.90	11.90	11.91	5.8	12.85	12.85	12.85	12.85	12.85	12.86	12.86	12.86	12.86	12.86
.9	11.91	11.91	11.91	11.91	11.91	11.92	11.92	11.92	11.92	11.92	5.9	12.87	12.87	12.87	12.87	12.88	12.88	12.88	12.88	12.88	12.88
1131.0	11.93	11.93	11.93	11.93	11.93	11.93	11.94	11.94	11.94	11.94	1136.0	12.89	12.89	12.89	12.89	12.90	12.90	12.90	12.90	12.90	12.90
.1	11.94	11.95	11.95	11.95	11.95	11.95	11.95	11.96	11.96	11.96	6.1	12.91	12.91	12.91	12.91	12.91	12.92	12.92	12.92	12.92	12.92
.2	11.96	11.96	11.97	11.97	11.97	11.97	11.97	11.97	11.98	11.98	6.2	12.93	12.93	12.93	12.93	12.94	12.94	12.94	12.94	12.94	12.95
.3	11.98	11.98	11.98	11.98	11.98	11.99	11.99	11.99	11.99	11.99	6.3	12.95	12.95	12.95	12.95	12.96	12.96	12.96	12.96	12.96	12.97
.4	11.99	12.00	12.00	12.00	12.00	12.01	12.01	12.01	12.01	12.01	6.4	12.97	12.97	12.97	12.97	12.98	12.98	12.98	12.98	12.98	12.99
1131.5	12.02	12.02	12.02	12.02	12.02	12.03	12.03	12.03	12.03	12.03	1136.5	12.99	12.99	12.99	12.99	13.00	13.00	13.00	13.00	13.00	13.01
.6	12.04	12.04	12.04	12.04	12.04	12.04	12.05	12.05	12.05	12.05	6.6	13.01	13.01	13.01	13.02	13.02	13.02	13.02	13.02	13.03	13.03
.7	12.05	12.06	12.06	12.06	12.06	12.06	12.06	12.07	12.07	12.07	6.7	13.03	13.04	13.04	13.04	13.04	13.05	13.05	13.05	13.05	13.05
.8	12.07	12.07	12.08	12.08	12.08	12.08	12.08	12.08	12.09	12.09	6.8	13.06	13.06	13.06	13.06	13.06	13.06	13.07	13.07	13.07	13.07
.9	12.09	12.09	12.09	12.09	12.10	12.10	12.10	12.10	12.10	12.11	6.9	13.08	13.08	13.08	13.08	13.08	13.09	13.09	13.09	13.09	13.09
1132.0	12.11	12.11	12.11	12.11	12.12	12.12	12.12	12.12	12.12	12.12	1137.0	13.10	13.10	13.10	13.10	13.11	13.11	13.11	13.11	13.11	13.12
.1	12.13	12.13	12.13	12.13	12.13	12.14	12.14	12.14	12.14	12.14	7.1	13.12	13.12	13.12	13.12	13.13	13.13	13.13	13.13	13.13	13.14
.2	12.15	12.15	12.15	12.15	12.15	12.15	12.16	12.16	12.16	12.16	7.2	13.14	13.14	13.14	13.15	13.15	13.15	13.15	13.15	13.16	13.16
.3	12.16	12.17	12.17	12.17	12.17	12.17	12.18	12.18	12.18	12.18	7.3	13.16	13.16	13.16	13.16	13.17	13.17	13.17	13.17	13.18	13.18
.4	12.18	12.19	12.19	12.19	12.19	12.19	12.19	12.20	12.20	12.20	7.4	13.18	13.18	13.19	13.19	13.19	13.19	13.19	13.20	13.20	13.20
1132.5	12.20	12.21	12.21	12.21	12.21	12.21	12.21	12.22	12.22	12.22	1137.5	13.20	13.21	13.21	13.21	13.21	13.21	13.21	13.22	13.22	13.22
.6	12.22	12.22	12.23	12.23	12.23	12.23	12.23	12.24	12.24	12.24	7.6	13.23	13.23	13.23	13.23	13.23	13.24	13.24	13.24	13.24	13.24
.7	12.24	12.24	12.25	12.25	12.25	12.25	12.25	12.26	12.26	12.26	7.7	13.25	13.25	13.25	13.26	13.26	13.26	13.26	13.26	13.26	13.27
.8	12.26	12.26	12.27	12.27	12.27	12.27	12.27	12.28	12.28	12.28	7.8	13.27	13.27	13.27	13.28	13.28	13.28	13.28	13.28	13.29	13.29
.9	12.28	12.28	12.29	12.29	12.29	12.29	12.29	12.29	12.30	12.30	7.9	13.29	13.29	13.29	13.30	13.30	13.30	13.30	13.30	13.31	13.31
1133.0	12.30	12.30	12.31	12.31	12.31	12.31	12.31	12.32	12.32	12.32	1138.0	13.31	13.31	13.32	13.32	13.32	13.32	13.32	13.33	13.33	13.33
.1	12.32	12.32	12.32	12.32	12.32	12.33	12.33	12.33	12.33	12.33	8.1	13.33	13.34	13.34	13.34	13.34	13.34	13.35	13.35	13.35	13.35
.2	12.33	12.34	12.34	12.34	12.34	12.35	12.35	12.35	12.35	12.36	8.2	13.36	13.36	13.36	13.36	13.36	13.37	13.37	13.37	13.37	13.38
.3	12.36	12.36	12.36	12.36	12.36	12.36	12.37	12.37	12.37	12.37	8.3	13.38	13.38	13.38	13.38	13.38	13.39	13.39	13.39	13.39	13.40
.4	12.37	12.38	12.38	12.38	12.38	12.39	12.39	12.39	12.39	12.39	8.4	13.40	13.40	13.40	13.41	13.41	13.41	13.41	13.41	13.42	13.42
1133.5	12.39	12.39	12.40	12.40	12.40	12.40	12.40	12.40	12.41	12.41	1138.5	13.42	13.42	13.42	13.43	13.43	13.43	13.43	13.44	13.44	13.44
.6	12.41	12.41	12.41	12.42	12.42	12.42	12.42	12.42	12.43	12.43	8.6	13.44	13.45	13.45	13.45	13.45	13.45	13.46	13.46	13.46	13.46
.7	12.43	12.43	12.43	12.44	12.44	12.44	12.44	12.45	12.45	12.45	8.7	13.47	13.47	13.47	13.48	13.48	13.48	13.48	13.48	13.49	13.49
.8	12.45	12.45	12.45	12.45	12.46	12.46	12.46	12.46	12.47	12.47	8.8	13.49	13.49	13.49	13.50	13.50	13.50	13.50	13.50	13.51	13.51
.9	12.47	12.47	12.47	12.48	12.48	12.48	12.48	12.49	12.49	12.49	8.9	13.51	13.51	13.51	13.52	13.52	13.52	13.52	13.53	13.53	13.53
1134.0	12.49	12.49	12.50	12.50	12.50	12.50	12.50	12.50	12.51	12.51	1139.0	13.53	13.53	13.54	13.54	13.54	13.54	13.55	13.55	13.55	13.55
.1	12.51	12.51	12.51	12.51	12.52	12.52	12.52	12.52	12.52	12.52	9.1	13.56	13.56	13.56	13.56	13.56	13.56	13.57	13.57	13.57	13.57
.2	12.53	12.53	12.53	12.53	12.53	12.54	12.54	12.54	12.54	12.54	9.2	13.58	13.58	13.58	13.59	13.59	13.59	13.59	13.59	13.60	13.60
.3	12.55	12.55	12.55	12.55	12.55	12.56	12.56	12.56	12.56	12.56	9.3	13.60	13.60	13.61	13.61	13.61	13.61	13.62	13.62	13.62	13.62
.4	12.57	12.57	12.57	12.57	12.57	12.58	12.58	12.58	12.58	12.58	9.4	13.62	13.63	13.63	13.63	13.63	13.64	13.64	13.64	13.64	13.65
1134.5	12.59	12.59	12.59	12.59	12.59	12.60	12.60	12.60	12.60	12.60	1139.5	13.65	13.65	13.65	13.65	13.66	13.66	13.66	13.66	13.66	13.67
.6	12.61	12.61	12.61	12.61	12.61	12.62	12.62	12.62	12.62	12.62	9.6	13.67	13.67	13.68	13.68	13.68	13.68	13.68	13.69	13.69	13.69
.7	12.63	12.63	12.63	12.63	12.63	12.64	12.64	12.64	12.64	12.64	9.7	13.69	13.69	13.70	13.70	13.70	13.70	13.70	13.71	13.71	13.71
.8	12.65	12.65	12.65	12.65	12.65	12.66	12.66	12.66	12.66	12.66	9.8	13.72	13.72	13.72	13.72	13.72	13.72	13.73	13.73	13.74	13.74
.9	12.67	12.67	12.67	12.67	12.68	12.68	12.68	12.68	12.68	12.68	9.9	13.74	13.74	13.75	13.75	13.75	13.75	13.76	13.76	13.76	13.76
											1140.0										

1986 EDITION/AUG VOLUMES BASED ON 1981 SURVEY. ALCOA PROJECT HEADWATER 1130-1140

Attachment 24c: Cheoah Excel Level Storage Table

CHEOAH

Quick Lookup

Storage	Enter known HW in green box Corresponding storage is in yellow box	
	Elevation	Volume
	1130.00	11.747

HW	Enter known storage in green box Adjust value in gray box until value in blue box matches or closely approximates value in green box Corresponding HW is in yellow box			
	Volume			Elevation
	14.000	1.000	14.001	1141.00

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
1130.00	11.747	11.749	11.750	11.752	11.754	11.756	11.758	11.759	11.761	11.763
1130.10	11.765	11.766	11.768	11.770	11.772	11.774	11.775	11.777	11.779	11.781
1130.20	11.782	11.784	11.786	11.788	11.790	11.791	11.793	11.795	11.797	11.798
1130.30	11.800	11.802	11.804	11.806	11.807	11.809	11.811	11.813	11.814	11.816
1130.40	11.818	11.820	11.822	11.823	11.825	11.827	11.829	11.831	11.832	11.834
1130.50	11.836	11.838	11.839	11.841	11.843	11.845	11.847	11.848	11.850	11.852
1130.60	11.854	11.856	11.857	11.859	11.861	11.863	11.865	11.866	11.868	11.870
1130.70	11.872	11.874	11.875	11.877	11.879	11.881	11.883	11.884	11.886	11.888
1130.80	11.890	11.892	11.893	11.895	11.897	11.899	11.901	11.902	11.904	11.906
1130.90	11.908	11.910	11.911	11.913	11.915	11.917	11.919	11.920	11.922	11.924
1131.00	11.926	11.928	11.929	11.931	11.933	11.935	11.937	11.938	11.940	11.942
1131.10	11.944	11.946	11.948	11.949	11.951	11.953	11.955	11.957	11.958	11.960
1131.20	11.962	11.964	11.966	11.967	11.969	11.971	11.973	11.975	11.977	11.978
1131.30	11.980	11.982	11.984	11.986	11.987	11.989	11.991	11.993	11.995	11.997
1131.40	11.998	12.000	12.002	12.004	12.006	12.008	12.009	12.011	12.013	12.015
1131.50	12.017	12.019	12.020	12.022	12.024	12.026	12.028	12.029	12.031	12.033
1131.60	12.035	12.037	12.039	12.040	12.042	12.044	12.046	12.048	12.050	12.051
1131.70	12.053	12.055	12.057	12.059	12.061	12.063	12.064	12.066	12.068	12.070
1131.80	12.072	12.074	12.075	12.077	12.079	12.081	12.083	12.085	12.086	12.088
1131.90	12.090	12.092	12.094	12.096	12.098	12.099	12.101	12.103	12.105	12.107
1132.00	12.109	12.110	12.112	12.114	12.116	12.118	12.120	12.122	12.123	12.125

Calderwood 1

CALDERWOOD PROJECT
Aluminum Company of America

SUMMARY OF PRINCIPAL FEATURES
March 1970

LOCATION

On Little Tennessee River at river mile 43.6; in Monroe and Blount Counties, Tennessee; 1.2 miles upstream from powerhouse; 16 air miles south of Alcoa, Tennessee; 32 air miles south of Knoxville, Tennessee.

CHRONOLOGY

Construction started . . . . . August 1928
Reservoir closure . . . . . April 15, 1930
Placed in operation:
Units 1 and 2 . . . . . April 19, 1930
Unit 3 . . . . . June 22, 1938

STREAMFLOW

Drainage area at dam . . . . . 1,856 sq. miles
Gaging station discharge records (for complete records see Data Services Branch files):
Calderwood, Tennessee, January 1912 to December 1918; January 1921 to January 1922; April 1922 to August 1957; drainage area . . . . . 1,862 sq. miles
McGhee, Tennessee, November 1904 to September 1969; drainage area. . . . . 2,443 sq. miles
Maximum known flood at dam site, estimated (1867) . . . . . 150,000 cfs
Average unregulated flow at dam site, estimated (1899-1970) . . . . . 4,477 cfs
Minimum daily natural flow at dam site, estimated (1925) . . . . . 460 cfs

RESERVOIR

Counties affected:
State of Tennessee . . . . . Blount, Monroe
State of North Carolina . . . . . Graham, Swain
Operating levels at dam:
Top of gates (area 541 ac.) . . . . . el. 1087.46
Normal maximum pool (area 541 ac.) . . . . . el. 1087.46
Spillway crest (area 541 ac.) . . . . . el. 1087.46
Normal minimum pool (area 525 ac.) . . . . . el. 1084.46
Backwater length . . . . . 7.7 miles
Storage (flat pool assumption):
Total volume at top of gates (el. 1087.46) . . . . . 41,160 ac.-ft
Useful volume . . . . . 1,670 ac.-ft

TAILWATER (At Powerhouse)

Average (Chilhowee pool) . . . . . el. 870-874

HEAD (At Powerhouse)

Normal maximum (el. 1087.46-865.56) . . . . . 222 ft
Average effective (full reservoir, all units running) . . . . . 200 ft

DAM

Material and type . . . . . Thin-section, concrete, variable-radius arch dam with concrete gravity cushion pool dam below main dam
Length (overall) . . . . . 916 ft
Maximum height . . . . . 232 ft
Spillway crest, masonry . . . . . el. 1067.46
Crest gates . . . . . 24 Stoney gates, 24 ft wide by 20 ft high
Spillway discharge capacity . . . . . 260,000 cfs
Traveling hoist . . . . . 35-ton gantry
Foundation . . . . . Arkose
Cushion dam height (400 ft below main dam) . . . . . 40 ft

WATERWAY

INTAKE

Location . . . . . Adjacent to right abutment of the arch
Trashrack area per bay (gross) . . . . . 1,426 sq. ft
Gates . . . . . 2 vertical sliding, 1 roller, each 15 by 24 ft

TUNNEL

Length . . . . . No. 1, 2,071 ft; Nos. 2 and 3, 2,147 ft
Inside dimensions . . . . . 25.5-ft dia. for 220 ft; 24- by 26-ft horseshoe section for remainder
Lining . . . . . Concrete, 1 ft or more thick

SURGE CHAMBER

Location . . . . . Between tunnel and penstock header
Type . . . . . Differential, in rock, riser concrete lined
Dimensions . . . . . 18-ft-dia. shaft on 51 degrees slope ending in 124- by 30- by 45-ft chamber

Attachment 25b: Calderwood 1986 Level Storage Table

12

CALDERWOOD

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
950.0	16.94	16.94	16.94	16.95	16.95	16.95	16.95	16.96	16.96	16.96
.1	16.96	16.97	16.97	16.97	16.97	16.98	16.98	16.98	16.98	16.99
.2	16.99	16.99	16.99	17.00	17.00	17.00	17.00	17.00	17.01	17.01
.3	17.01	17.01	17.02	17.02	17.02	17.02	17.03	17.03	17.03	17.03
.4	17.04	17.04	17.04	17.04	17.05	17.05	17.05	17.05	17.06	17.06
950.5	17.06	17.06	17.07	17.07	17.07	17.07	17.08	17.08	17.08	17.08
.6	17.08	17.09	17.09	17.09	17.09	17.10	17.10	17.10	17.10	17.11
.7	17.11	17.11	17.11	17.12	17.12	17.12	17.12	17.13	17.13	17.13
.8	17.13	17.14	17.14	17.14	17.14	17.15	17.15	17.15	17.15	17.16
.9	17.16	17.16	17.16	17.17	17.17	17.17	17.17	17.18	17.18	17.18
951.0	17.18	17.18	17.19	17.19	17.19	17.19	17.20	17.20	17.20	17.20
1.1	17.21	17.21	17.21	17.21	17.22	17.22	17.22	17.22	17.23	17.23
1.2	17.23	17.23	17.24	17.24	17.24	17.24	17.25	17.25	17.25	17.25
1.3	17.26	17.26	17.26	17.26	17.27	17.27	17.27	17.27	17.28	17.28
1.4	17.28	17.28	17.29	17.29	17.29	17.29	17.30	17.30	17.30	17.30
951.5	17.31	17.31	17.31	17.31	17.31	17.32	17.32	17.32	17.32	17.33
1.6	17.33	17.33	17.33	17.34	17.34	17.34	17.34	17.35	17.35	17.35
1.7	17.35	17.36	17.36	17.36	17.36	17.37	17.37	17.37	17.37	17.38
1.8	17.38	17.38	17.38	17.39	17.39	17.39	17.39	17.40	17.40	17.40
1.9	17.40	17.41	17.41	17.41	17.41	17.42	17.42	17.42	17.42	17.43
952.0	17.43	17.43	17.43	17.44	17.44	17.44	17.45	17.45	17.45	17.45
2.1	17.45	17.46	17.46	17.46	17.46	17.47	17.47	17.47	17.47	17.48
2.2	17.48	17.48	17.48	17.49	17.49	17.49	17.49	17.50	17.50	17.50
2.3	17.50	17.51	17.51	17.51	17.51	17.52	17.52	17.52	17.52	17.52
2.4	17.53	17.53	17.53	17.53	17.54	17.54	17.54	17.54	17.55	17.55
952.5	17.55	17.55	17.56	17.56	17.56	17.56	17.57	17.57	17.57	17.57
2.6	17.58	17.58	17.58	17.58	17.59	17.59	17.59	17.59	17.60	17.60
2.7	17.60	17.60	17.61	17.61	17.61	17.61	17.62	17.62	17.62	17.62
2.8	17.63	17.63	17.63	17.63	17.64	17.64	17.64	17.64	17.65	17.65
2.9	17.65	17.65	17.66	17.66	17.66	17.66	17.67	17.67	17.67	17.67
953.0	17.68	17.68	17.68	17.68	17.69	17.69	17.69	17.69	17.70	17.70
3.1	17.70	17.70	17.71	17.71	17.71	17.71	17.72	17.72	17.72	17.72
3.2	17.73	17.73	17.73	17.73	17.74	17.74	17.74	17.74	17.75	17.75
3.3	17.75	17.75	17.76	17.76	17.76	17.76	17.77	17.77	17.77	17.77
3.4	17.78	17.78	17.78	17.78	17.79	17.79	17.79	17.79	17.80	17.80
953.5	17.80	17.80	17.81	17.81	17.81	17.81	17.82	17.82	17.82	17.82
3.6	17.83	17.83	17.83	17.83	17.84	17.84	17.84	17.84	17.85	17.85
3.7	17.85	17.85	17.86	17.86	17.86	17.86	17.87	17.87	17.87	17.87
3.8	17.88	17.88	17.88	17.88	17.89	17.89	17.89	17.89	17.90	17.90
3.9	17.90	17.90	17.91	17.91	17.91	17.91	17.92	17.92	17.92	17.92
954.0	17.93	17.93	17.93	17.93	17.94	17.94	17.94	17.94	17.95	17.95
4.1	17.95	17.95	17.96	17.96	17.96	17.96	17.97	17.97	17.97	17.98
4.2	17.98	17.98	17.98	17.99	17.99	17.99	17.99	18.00	18.00	18.00
4.3	18.00	18.01	18.01	18.01	18.01	18.02	18.02	18.02	18.02	18.03
4.4	18.03	18.03	18.03	18.04	18.04	18.04	18.04	18.05	18.05	18.05
954.5	18.05	18.06	18.06	18.06	18.06	18.07	18.07	18.07	18.07	18.08
4.6	18.08	18.08	18.09	18.09	18.09	18.09	18.09	18.10	18.10	18.10
4.7	18.10	18.11	18.11	18.11	18.11	18.12	18.12	18.12	18.12	18.13
4.8	18.13	18.13	18.13	18.14	18.14	18.14	18.14	18.15	18.15	18.15
4.9	18.15	18.16	18.16	18.16	18.16	18.17	18.17	18.17	18.17	18.18

ELEV.	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
955.0	18.18	18.18	18.18	18.19	18.19	18.19	18.19	18.20	18.20	18.20
5.1	18.20	18.21	18.21	18.21	18.21	18.22	18.22	18.22	18.22	18.23
5.2	18.23	18.23	18.24	18.24	18.24	18.24	18.25	18.25	18.25	18.25
5.3	18.26	18.26	18.26	18.26	18.27	18.27	18.27	18.27	18.28	18.28
5.4	18.28	18.28	18.29	18.29	18.29	18.29	18.30	18.30	18.30	18.30
955.5	18.31	18.31	18.31	18.31	18.32	18.32	18.32	18.32	18.33	18.33
5.6	18.33	18.33	18.34	18.34	18.34	18.34	18.35	18.35	18.35	18.35
5.7	18.36	18.36	18.36	18.36	18.37	18.37	18.37	18.37	18.38	18.38
5.8	18.38	18.38	18.39	18.39	18.39	18.39	18.40	18.40	18.40	18.40
5.9	18.41	18.41	18.41	18.41	18.42	18.42	18.42	18.43	18.43	18.43
956.0	18.43	18.44	18.44	18.44	18.44	18.45	18.45	18.45	18.45	18.46
6.1	18.46	18.46	18.46	18.47	18.47	18.47	18.47	18.48	18.48	18.48
6.2	18.48	18.49	18.49	18.49	18.49	18.50	18.50	18.50	18.50	18.51
6.3	18.51	18.51	18.51	18.52	18.52	18.52	18.52	18.53	18.53	18.53
6.4	18.53	18.54	18.54	18.54	18.54	18.55	18.55	18.55	18.55	18.56
956.5	18.56	18.56	18.56	18.57	18.57	18.57	18.57	18.58	18.58	18.58
6.6	18.59	18.59	18.59	18.59	18.60	18.60	18.60	18.60	18.61	18.61
6.7	18.61	18.61	18.62	18.62	18.62	18.62	18.63	18.63	18.63	18.63
6.8	18.64	18.64	18.64	18.64	18.65	18.65	18.65	18.65	18.66	18.66
6.9	18.66	18.66	18.67	18.67	18.67	18.67	18.68	18.68	18.68	18.68
957.0	18.69	18.69	18.69	18.69	18.70	18.70	18.70	18.70	18.71	18.71
7.1	18.71	18.71	18.72	18.72	18.72	18.72	18.73	18.73	18.73	18.73
7.2	18.74	18.74	18.74	18.75	18.75	18.75	18.75	18.76	18.76	18.76
7.3	18.76	18.77	18.77	18.77	18.77	18.78	18.78	18.78	18.78	18.79
7.4	18.79	18.79	18.79	18.80	18.80	18.80	18.80	18.81	18.81	18.81
957.5	18.81	18.82	18.82	18.82	18.82	18.83	18.83	18.83	18.83	18.84
7.6	18.84	18.84	18.84	18.85	18.85	18.85	18.85	18.86	18.86	18.86
7.7	18.86	18.87	18.87	18.87	18.87	18.88	18.88	18.88	18.88	18.89
7.8	18.89	18.89	18.90	18.90	18.90	18.90	18.91	18.91	18.91	18.91
7.9	18.92	18.92	18.92	18.92	18.93	18.93	18.93	18.93	18.94	18.94
958.0	18.94	18.94	18.95	18.95	18.95	18.95	18.96	18.96	18.96	18.96
8.1	18.97	18.97	18.97	18.97	18.98	18.98	18.98	18.98	18.99	18.99
8.2	18.99	18.99	19.00	19.00	19.00	19.00	19.01	19.01	19.01	19.01
8.3	19.02	19.02	19.02	19.02	19.03	19.03	19.03	19.04	19.04	19.04
8.4	19.04	19.05	19.05	19.05	19.05	19.06	19.06	19.06	19.06	19.07
958.5	19.07	19.07	19.07	19.08	19.08	19.08	19.08	19.09	19.09	19.09
8.6	19.09	19.10	19.10	19.10	19.10	19.11	19.11	19.11	19.11	19.12
8.7	19.12	19.12	19.12	19.13	19.13	19.13	19.13	19.14	19.14	19.14
8.8	19.14	19.15	19.15	19.15	19.15	19.16	19.16	19.16	19.16	19.17
8.9	19.17	19.17	19.18	19.18	19.18	19.18	19.19	19.19	19.19	19.19
959.0	19.20	19.20	19.20	19.20	19.21	19.21	19.21	19.21	19.22	19.22
9.1	19.22	19.22	19.23	19.23	19.23	19.23	19.24	19.24	19.24	19.24
9.2	19.25	19.25	19.25	19.25	19.26	19.26	19.26	19.26	19.27	19.27
9.3	19.27	19.27	19.28	19.28	19.28	19.28	19.29	19.29	19.29	19.29
9.4	19.30	19.30	19.30	19.31	19.31	19.31	19.31	19.32	19.32	19.32
959.5	19.32	19.33	19.33	19.33	19.33	19.34	19.34	19.34	19.34	19.35
9.6	19.35	19.35	19.35	19.36	19.36	19.36	19.36	19.37	19.37	19.37
9.7	19.37	19.38	19.38	19.38	19.38	19.39	19.39	19.39	19.39	19.40
9.8	19.40	19.40	19.40	19.41	19.41	19.41	19.41	19.42	19.42	19.42
9.9	19.42	19.43	19.43	19.43	19.44	19.44	19.44	19.44	19.45	19.45
960.0	19.45									

1986 EDITION/ROB

VOLUMES BASED ON 1945 SURVEY. ALCOA PROJECT.

HEADWATER 950- 960

Attachment 25c: Calderwood Excel Level Storage Table

CALDERWOOD

Quick Lookup

Storage	Enter known HW in green box. Corresponding storage is in yellow box.	
	Elevation	Volume
	950.00	16.940

HW	Enter known storage in green box. Adjust value in gray box until value in blue box matches or closely approximates value in green box. Corresponding HW is in yellow box.			
	Volume			Elevation
	20.000	2.150	20.002	962.15

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
940.00	14.681	14.683	14.685	14.688	14.690	14.692	14.694	14.696	14.698	14.700
940.10	14.702	14.705	14.707	14.709	14.711	14.713	14.715	14.717	14.720	14.722
940.20	14.724	14.726	14.728	14.730	14.732	14.735	14.737	14.739	14.741	14.743
940.30	14.745	14.747	14.749	14.752	14.754	14.756	14.758	14.760	14.762	14.764
940.40	14.767	14.769	14.771	14.773	14.775	14.777	14.779	14.782	14.784	14.786
940.50	14.788	14.790	14.792	14.794	14.797	14.799	14.801	14.803	14.805	14.807
940.60	14.809	14.812	14.814	14.816	14.818	14.820	14.822	14.824	14.827	14.829
940.70	14.831	14.833	14.835	14.837	14.839	14.842	14.844	14.846	14.848	14.850
940.80	14.852	14.855	14.857	14.859	14.861	14.863	14.865	14.867	14.870	14.872
940.90	14.874	14.876	14.878	14.880	14.882	14.885	14.887	14.889	14.891	14.893
941.00	14.895	14.898	14.900	14.902	14.904	14.906	14.908	14.910	14.913	14.915
941.10	14.917	14.919	14.921	14.923	14.926	14.928	14.930	14.932	14.934	14.936
941.20	14.939	14.941	14.943	14.945	14.947	14.949	14.951	14.954	14.956	14.958
941.30	14.960	14.962	14.964	14.967	14.969	14.971	14.973	14.975	14.977	14.980
941.40	14.982	14.984	14.986	14.988	14.990	14.993	14.995	14.997	14.999	15.001
941.50	15.003	15.006	15.008	15.010	15.012	15.014	15.016	15.019	15.021	15.023
941.60	15.025	15.027	15.029	15.032	15.034	15.036	15.038	15.040	15.042	15.045
941.70	15.047	15.049	15.051	15.053	15.055	15.058	15.060	15.062	15.064	15.066
941.80	15.068	15.071	15.073	15.075	15.077	15.079	15.081	15.084	15.086	15.088
941.90	15.090	15.092	15.094	15.097	15.099	15.101	15.103	15.105	15.108	15.110
942.00	15.112	15.114	15.116	15.118	15.121	15.123	15.125	15.127	15.129	15.131

Chilhowee I

CHILHOWEE PROJECT
Aluminum Company of America

SUMMARY OF PRINCIPAL FEATURES
March 1970

LOCATION

On Little Tennessee River at river mile 33.6; in Blount and Monroe Counties, Tennessee, 17 air miles southwest of Alcoa, Tennessee.

CHRONOLOGY

Construction started . . . . . July 28, 1956
Dam closure . . . . . June 9, 1957
Placed in operation . . . . . August 22, 1957

STREAMFLOW

Drainage area at dam . . . . . 1,977 sq. miles
Gaging station discharge records (for complete records see Data Services Branch files).
Calderwood, Tennessee, January 1912 to December 1918; January 1921 to January 1922; April 1922 to August 1957:
drainage area . . . . . 1,862 sq. miles
McGhee, Tennessee, November 1904 to September 1969; drainage area . . . . . 2,443 sq. miles
Maximum known flood at dam site, estimated (1867) . . . . . 151,000 cfs
Average unregulated flow at dam site, estimated (1904-1969) . . . . . 4,769 cfs
Minimum daily natural flow at dam site, estimated (1925) . . . . . 490 cfs

RESERVOIR

Counties affected:
State of Tennessee . . . . . Blount, Monroe
Operating levels at dam:
Top of gates (area 1,750 ac.) . . . . . el. 874
Normal maximum pool (area 1,750 ac.) . . . . . el. 874
Spillway crest (area 520 ac.) . . . . . el. 836
Normal minimum pool (area 1,660 ac.) . . . . . el. 870
Backwater length . . . . . 9.2 miles
Storage (flat pool assumption):
Total volume at top of gates (el. 874) . . . . . 49,250 ac. ft
Useful volume (el. 874-870) . . . . . 6,800 ac. ft

TAILWATER

Normal minimum . . . . . el. 836.0

HEAD

Gross . . . . . 88.0 ft
Average net . . . . . 60.0 ft

DAM

Material and type . . . . . Concrete gravity spillway, rockfill end abutments
Lengths.
Nonoverflow . . . . . 287 ft
Spillway . . . . . 268 ft
Intake section . . . . . 165 ft
Embankments . . . . . 765 ft
Total . . . . . 1,483 ft
Maximum height . . . . . 91 ft

SPILLWAY

Type . . . . . Concrete
Crest level . . . . . el. 836
Clear opening . . . . . 210 ft
Crest control . . . . . 6 Tainter gates, each 35 ft wide by 38 ft high

POWER PLANT

POWER STATION

Generating capacity (3 units) . . . . . 60,000 kW

HYDRAULIC TURBINES

Number 3
Manufacturer . . . . . Newport News
Type . . . . . Kaplan
Rated capacity . . . . . 23,333 hp at 56.5-ft head
Normal speed . . . . . 128.6 r/min

GENERATORS

Number 3
Manufacturer . . . . . Westinghouse
Rating . . . . . 19,608 kVA, 16,667 kW, 0.85 pf, 6.9 kV, 3 ph, 60 Hz

TRANSMISSION PLANT

Transformers . . . . . Three 3 phase
Rating . . . . . 25,000 kVA, 6.9/161 kV, 60 Hz

NOTE

Elevations are based on U.S.C. & G.S. 1936 Supplementary Adjustment.

Attachment 26b: Chilhowee 1986 Level Storage Table

HIGHLIGHTED STAGE ELEVATION & VOLUME VALUES EQUAL STAGE ELEVATION & VOLUME VALUES ON CORRESPONDING REFERENCES INCLUDED ON 2008 RESERVOIR VOLUME CURVE CHECK

CHILHOWEE

TOTAL LEVEL STORAGE IN 1000 DAY-SECOND-FEET

ELEV	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
870.0	21.40	21.41	21.42	21.43	21.43	21.44	21.45	21.46	21.47	21.48
.1	21.48	21.49	21.50	21.51	21.52	21.53	21.54	21.54	21.55	21.56
.2	21.57	21.58	21.59	21.59	21.60	21.61	21.62	21.63	21.64	21.64
.3	21.65	21.66	21.67	21.68	21.69	21.69	21.70	21.71	21.72	21.73
.4	21.74	21.74	21.75	21.76	21.77	21.78	21.79	21.79	21.80	21.81
870.5	21.82	21.83	21.84	21.84	21.85	21.86	21.87	21.88	21.89	21.90
.6	21.90	21.91	21.92	21.93	21.94	21.95	21.95	21.96	21.97	21.98
.7	21.99	22.00	22.00	22.01	22.02	22.03	22.04	22.05	22.06	22.06
.8	22.07	22.08	22.09	22.10	22.11	22.11	22.12	22.13	22.14	22.15
.9	22.16	22.16	22.17	22.18	22.19	22.20	22.21	22.22	22.22	22.23
871.0	22.24	22.25	22.26	22.27	22.27	22.28	22.29	22.30	22.31	22.32
.1	22.33	22.33	22.34	22.35	22.36	22.37	22.38	22.38	22.39	22.40
.2	22.41	22.42	22.43	22.44	22.44	22.45	22.46	22.47	22.48	22.49
.3	22.50	22.50	22.51	22.52	22.53	22.54	22.55	22.55	22.56	22.57
.4	22.58	22.59	22.60	22.61	22.61	22.62	22.63	22.64	22.65	22.66
871.5	22.67	22.67	22.68	22.69	22.70	22.71	22.72	22.73	22.73	22.74
.6	22.75	22.76	22.77	22.78	22.78	22.79	22.80	22.81	22.82	22.83
.7	22.84	22.84	22.85	22.86	22.87	22.88	22.89	22.90	22.90	22.91
.8	22.92	22.93	22.94	22.95	22.96	22.96	22.97	22.98	22.99	23.00
.9	23.01	23.02	23.02	23.03	23.04	23.05	23.06	23.07	23.08	23.08
872.0	23.09	23.10	23.11	23.12	23.13	23.14	23.14	23.15	23.16	23.17
.1	23.18	23.19	23.20	23.20	23.21	23.22	23.23	23.24	23.25	23.26
.2	23.26	23.27	23.28	23.29	23.30	23.31	23.32	23.32	23.33	23.34
.3	23.35	23.36	23.37	23.38	23.39	23.39	23.40	23.41	23.42	23.43
.4	23.44	23.45	23.45	23.46	23.47	23.48	23.49	23.50	23.51	23.51
872.5	23.52	23.53	23.54	23.55	23.56	23.57	23.58	23.58	23.59	23.60
.6	23.61	23.62	23.63	23.64	23.64	23.65	23.66	23.67	23.68	23.69
.7	23.70	23.70	23.71	23.72	23.73	23.74	23.75	23.76	23.77	23.77
.8	23.78	23.79	23.80	23.81	23.82	23.83	23.83	23.84	23.85	23.86
.9	23.87	23.88	23.89	23.90	23.90	23.91	23.92	23.93	23.94	23.95
873.0	23.96	23.96	23.97	23.98	23.99	24.00	24.01	24.02	24.03	24.03
.1	24.04	24.05	24.06	24.07	24.08	24.09	24.10	24.10	24.11	24.12
.2	24.13	24.14	24.15	24.16	24.16	24.17	24.18	24.19	24.20	24.21
.3	24.22	24.23	24.23	24.24	24.25	24.26	24.27	24.28	24.29	24.30
.4	24.30	24.31	24.32	24.33	24.34	24.35	24.36	24.37	24.37	24.38
873.5	24.39	24.40	24.41	24.42	24.43	24.44	24.44	24.45	24.46	24.47
.6	24.48	24.49	24.50	24.51	24.51	24.52	24.53	24.54	24.55	24.56
.7	24.57	24.58	24.58	24.59	24.60	24.61	24.62	24.63	24.64	24.65
.8	24.65	24.66	24.67	24.68	24.69	24.70	24.71	24.72	24.72	24.73
.9	24.74	24.75	24.76	24.77	24.78	24.79	24.79	24.80	24.81	24.82
874.0	24.83	24.84	24.85	24.86	24.87	24.87	24.88	24.89	24.90	24.91
.1	24.92	24.93	24.94	24.94	24.95	24.96	24.97	24.98	24.99	25.00
.2	25.01	25.01	25.02	25.03	25.04	25.05	25.06	25.07	25.08	25.09
.3	25.09	25.10	25.11	25.12	25.13	25.14	25.15	25.16	25.16	25.17
.4	25.18	25.19	25.20	25.21	25.22	25.23	25.24	25.24	25.25	25.26
874.5	25.27	25.28	25.29	25.30	25.31	25.32	25.32	25.33	25.34	25.35
.6	25.36	25.37	25.38	25.39	25.40	25.40	25.41	25.42	25.43	25.44
.7	25.45	25.46	25.47	25.48	25.48	25.49	25.50	25.51	25.52	25.53
.8	25.54	25.55	25.56	25.56	25.57	25.58	25.59	25.60	25.61	25.62
.9	25.63	25.64	25.65	25.65	25.66	25.67	25.68	25.69	25.70	25.71

ELEV	0.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
875.0	25.72	25.73	25.74	25.74	25.75	25.76	25.77	25.78	25.79	25.80
5.1	25.81	25.82	25.83	25.83	25.84	25.85	25.86	25.87	25.88	25.89
5.2	25.90	25.91	25.92	25.93	25.93	25.94	25.95	25.96	25.97	25.98
5.3	25.99	26.00	26.01	26.02	26.03	26.03	26.04	26.05	26.06	26.07
5.4	26.08	26.09	26.10	26.11	26.12	26.13	26.14	26.14	26.15	26.16
875.5	26.17	26.18	26.19	26.20	26.21	26.22	26.23	26.24	26.25	26.25
5.6	26.26	26.27	26.28	26.29	26.30	26.31	26.32	26.33	26.34	26.35
5.7	26.36	26.36	26.37	26.38	26.39	26.40	26.41	26.42	26.43	26.44
5.8	26.45	26.46	26.47	26.48	26.49	26.49	26.50	26.51	26.52	26.53
5.9	26.54	26.55	26.56	26.57	26.58	26.59	26.60	26.61	26.62	26.62
876.0	26.63	26.64	26.65	26.66	26.67	26.68	26.69	26.70	26.71	26.72
6.1	26.73	26.74	26.75	26.76	26.76	26.77	26.78	26.79	26.80	26.81
6.2	26.82	26.83	26.84	26.85	26.86	26.87	26.88	26.89	26.90	26.91
6.3	26.91	26.92	26.93	26.94	26.95	26.96	26.97	26.98	26.99	27.00
6.4	27.01	27.02	27.03	27.04	27.05	27.06	27.07	27.07	27.08	27.09
876.5	27.10	27.11	27.12	27.13	27.14	27.15	27.16	27.17	27.18	27.19
6.6	27.20	27.21	27.22	27.23	27.24	27.24	27.25	27.26	27.27	27.28
6.7	27.29	27.30	27.31	27.32	27.33	27.34	27.35	27.36	27.37	27.38
6.8	27.39	27.40	27.41	27.42	27.43	27.43	27.44	27.45	27.46	27.47
6.9	27.48	27.49	27.50	27.51	27.52	27.53	27.54	27.55	27.56	27.57
877.0	27.58	27.59	27.60	27.61	27.62	27.63	27.63	27.64	27.65	27.66
7.1	27.67	27.68	27.69	27.70	27.71	27.72	27.73	27.74	27.75	27.76
7.2	27.77	27.78	27.79	27.80	27.81	27.82	27.83	27.84	27.85	27.85
7.3	27.86	27.87	27.88	27.89	27.90	27.91	27.92	27.93	27.94	27.95
7.4	27.96	27.97	27.98	27.99	28.00	28.01	28.02	28.03	28.04	28.05
877.5	28.06	28.07	28.08	28.09	28.10	28.11	28.11	28.12	28.13	28.14
7.6	28.15	28.16	28.17	28.18	28.19	28.20	28.21	28.22	28.23	28.24
7.7	28.25	28.26	28.27	28.28	28.29	28.30	28.31	28.32	28.33	28.34
7.8	28.35	28.36	28.37	28.38	28.39	28.40	28.40	28.41	28.42	28.43
7.9	28.44	28.45	28.46	28.47	28.48	28.49	28.50	28.51	28.52	28.53
878.0	28.54	28.55	28.56	28.57	28.58	28.59	28.60	28.61	28.62	28.63
8.1	28.64	28.65	28.66	28.67	28.68	28.69	28.70	28.71	28.72	28.73
8.2	28.73	28.74	28.75	28.76	28.77	28.78	28.79	28.80	28.81	28.82
8.3	28.83	28.84	28.85	28.86	28.87	28.88	28.89	28.90	28.91	28.92
8.4	28.93	28.94	28.95	28.96	28.97	28.98	28.99	29.00	29.01	29.02
878.5	29.03	29.04	29.05	29.06	29.07	29.08	29.09	29.10	29.11	29.12
8.6	29.13	29.13	29.14	29.15	29.16	29.17	29.18	29.19	29.20	29.21
8.7	29.22	29.23	29.24	29.25	29.26	29.27	29.28	29.29	29.30	29.31
8.8	29.32	29.33	29.34	29.35	29.36	29.37	29.38	29.39	29.40	29.41
8.9	29.42	29.43	29.44	29.45	29.46	29.47	29.48	29.49	29.50	29.51
879.0	29.52	29.53	29.54	29.55	29.56	29.57	29.58	29.59	29.60	29.61
9.1	29.62	29.63	29.63	29.64	29.65	29.66	29.67	29.68	29.69	29.70
9.2	29.71	29.72	29.73	29.74	29.75	29.76	29.77	29.78	29.79	29.80
9.3	29.81	29.82	29.83	29.84	29.85	29.86	29.87	29.88	29.89	29.90
9.4	29.91	29.92	29.93	29.94	29.95	29.96	29.97	29.98	29.99	30.00
879.5	30.01	30.02	30.03	30.04	30.05	30.06	30.07	30.08	30.09	30.10
9.6	30.11	30.12	30.13	30.14	30.15	30.16	30.17	30.18	30.19	30.20
9.7	30.21	30.22	30.23	30.24	30.25	30.26	30.26	30.27	30.28	30.29
9.8	30.30	30.31	30.32	30.33	30.34	30.35	30.36	30.37	30.38	30.39
9.9	30.40	30.41	30.42	30.43	30.44	30.45	30.46	30.47	30.48	30.49
880.0	30.50									

1986 EDITION/R08 VOLUMES BASED ON 1959 SURVEY. ALCOA PROJECT. HEADWATER 870- 880

TVA

Calculation No. CDQ00002008051	Rev: 0	Plant: GEN	Page: 165
Subject: Reservoir Storage Tables		Prepped LKG	
		Checked WWC	

Attachment 26c: Chilhowee Excel Level Storage Table

CHILHOWEE

Quick Lookup

Storage	Enter known HW in green box Corresponding storage is in yellow box	
	Elevation	Volume
	874.00	24.830

HW	Enter known storage in green box Adjust value in gray box until value in blue box matches or closely approximates value in green box Corresponding HW is in yellow box			
	Volume			Elevation
	25.000	0.200	25.006	874.20

Table

	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
850.00	7.663	7.669	7.674	7.679	7.685	7.690	7.695	7.701	7.706	7.712
850.10	7.717	7.722	7.728	7.733	7.738	7.744	7.749	7.755	7.760	7.765
850.20	7.771	7.776	7.782	7.787	7.792	7.798	7.803	7.809	7.814	7.819
850.30	7.825	7.830	7.836	7.841	7.846	7.852	7.857	7.863	7.868	7.874
850.40	7.879	7.884	7.890	7.895	7.901	7.906	7.912	7.917	7.923	7.928
850.50	7.933	7.939	7.944	7.950	7.955	7.961	7.966	7.972	7.977	7.982
850.60	7.988	7.993	7.999	8.004	8.010	8.015	8.021	8.026	8.032	8.037
850.70	8.043	8.048	8.054	8.059	8.065	8.070	8.076	8.081	8.087	8.092
850.80	8.098	8.103	8.109	8.114	8.120	8.125	8.131	8.136	8.142	8.147
850.90	8.153	8.158	8.164	8.169	8.175	8.180	8.186	8.191	8.197	8.202
851.00	8.208	8.213	8.219	8.225	8.230	8.236	8.241	8.247	8.252	8.258
851.10	8.263	8.269	8.274	8.280	8.286	8.291	8.297	8.302	8.308	8.313
851.20	8.319	8.324	8.330	8.336	8.341	8.347	8.352	8.358	8.363	8.369
851.30	8.375	8.380	8.386	8.391	8.397	8.403	8.408	8.414	8.419	8.425
851.40	8.431	8.436	8.442	8.447	8.453	8.459	8.464	8.470	8.475	8.481
851.50	8.487	8.492	8.498	8.503	8.509	8.515	8.520	8.526	8.532	8.537
851.60	8.543	8.548	8.554	8.560	8.565	8.571	8.577	8.582	8.588	8.594
851.70	8.599	8.605	8.611	8.616	8.622	8.628	8.633	8.639	8.645	8.650
851.80	8.656	8.662	8.667	8.673	8.679	8.684	8.690	8.696	8.701	8.707
851.90	8.713	8.718	8.724	8.730	8.735	8.741	8.747	8.752	8.758	8.764
852.00	8.769	8.775	8.781	8.787	8.792	8.798	8.804	8.809	8.815	8.821

1.0 Purpose

The purpose for this appendix is to supplement the Reservoir Storage Tables calculation with Wheeler and Tims reservoir storage tables and provide TRBROUTE storage table data for Tims Ford Reservoir. Volume check tables and graphs for Wheeler and Tims Ford reservoirs are included within this document.

2.0 References

1. Tennessee Valley Authority (TVA) Water Control Projects (WCP BB) – Technical Monograph (Wheeler, August 2000 & Tims Ford, August 1999)
2. EXCEL Total Level Storage Tables - RFI-BEWH 3301 0B042 (EDMS No. L58090713800)
3. Bellefonte Nuclear Plant White Paper (EDMS No. L58 081219800) – Hydrologic Analysis (Rev. 1 July 25, 2008)
4. Sedimentation in TVA Reservoirs, TVA Division of Water Control Planning, Report No. 0-6693, Knoxville, TN Feb 1968.
5. Reservoir Sedimentation Data for Reservoirs in the Tennessee Valley, TVA Division of Water Control Planning, Knoxville, TN, Jan 1970.
6. Tennessee Valley Authority, Calculation CDQ000020080033, SOCH Geometry Verification for Wheeler Reservoir, Rev 0 (not approved).

3.0 Assumptions

3.1 General Assumptions

None.

3.2 Unverified Assumptions

The surface areas used in this appendix for elevations above those listed in the WCPBB or Level Storage Table documents are suitable for use in calculating reservoir storage volumes.

Technical Justification: These values are part of the Wheeler Geometry Calculation. This UVA will be removed following the issuance of the Wheeler Geometry Calculation, CDQ00020080033.

4.0 Background

4.1 Reservoir Description Table

The following is a listing and brief description of Wheeler and Tims Ford Reservoirs. Data was taken from www.tva.gov/sites .

	RESERVOIR	Flood-Storage Capacity *(a)* (ac-ft)	Uses	Operated & Maintained By
1	**Wheeler**	326,484	Power production, flood control, Navigation	TVA
2	**Tims Ford**	219,600	Power production, flood control, Tributary Area Development	TVA

a) Flood storage capacity values tabulated here were taken from www.tva.gov/sites . These values do not reflect PMF conditions and are included for background information only.

4.2 Recorded Documentation

Documented historic data compiled from the following sources provide the basis for the reservoir storage tables used in the TVA PMF analysis:

- *TVA Water Control Project Blue Books(WCPBB) (Ref.1),*
- *TVA Sediment Survey Data (Ref.4),*
- *More recent Total Level Storage Tables prepared in Excel format (Ref. 2).*

Descriptions of the documentation used in the preparation of this appendix can be found in Sections 4.2.1 through 4.2.3 of the parent calculation. Excerpts of the references can be found in Attachments A-1 and A-2

4.3 Methods of Computing Volumes

Volume calculations for Wheeler and Tims Ford Reservoirs were computed using the methodology detailed in the parent calculation for reservoirs upstream of Guntersville Dam. Surface areas from GIS (Ref. 6) were used in an average-end volume calculation (shown below) to calculate the volumes in the extended GIS volume section of Table 1.

$$\frac{(A_1 + A_2)(h_2 - h_1)}{2}, \qquad \textbf{Eq. 4.3}$$

Where A_1=surface area at elevation h_1
A_2=surface area at elevation h_2.

TRBROUTE storage table data was generated for Tims Ford as a composite of the historic stage-storage information available. The best available data was used in the composite storage table.

5.0 Data

	DATA SOURCE		
RESERVOIR	**WCPBB (Ref. 1)** ***Reservoir Areas & Volumes***	**WCPBB (Ref. 1)** ***Reservoir & Power Data***	**Excel (Ref. 2) Level Storage Table***
Wheeler	A-1a	A-1b	A-1c
Tims Ford	A-2a	A-2b	A-2c

*** ONLY ONE PAGE HAS BEEN INCLUDED FOR SPACE LIMITATIONS**

6.0 Calculations

Excel spreadsheets for reservoirs were developed to plot the curve of each reservoir storage table for available data sets.

Data sets for Tims Ford Reservoir may include the following:

1. TVA Water Control project Blue Book (WCPBB) (Ref. 1)
2. 1986 Level Storage Tables (Ref. 2)

Data sets for Wheeler Reservoir includes the following:

1. WCPBB data (Ref. 1)
2. 1986 Level Storage Tables (Ref. 2)
3. GIS-based surface area data (Ref. 6)

As seen on the graphs 1 & 2, the values for the compared data sets are consistent; therefore, the data are considered verified.

Table 1 – Wheeler Reservoir Volume Curve Check Table

WCPBB	
Elevation	Ac-Ft
630	No Data
620	No Data
600	No Data
590	No Data
580	No Data
578	No Data
576	No Data
574	No Data
572	No Data
570	No Data
568	No Data
566	No Data
564	No Data
562	No Data
560	1358000
558	No Data
556.28	1071000
556	1050000
554	No Data
552	No Data
550	720000
545	528000
538	335000
530	171000
520	65600
510	18100
500	800
490	0
483.8	0

Level Storage Tables		
Elevation	DSF*1000	Ac-Ft
630	No Data	No Data
620	No Data	No Data
600	No Data	No Data
590	No Data	No Data
580	2029.241	4024938.646
578	1846.415	3662309.501
576	1675.283	3322872.894
574	1515.502	3005953.35
572	1366.734	2710875.168
570	1228.636	2436962.647
568	1100.856	2183514.917
566	982.987	1949724.273
564	874.608	1734759.52
562	775.302	1537788.626
560	684.648	1357979.562
558	602.446	1194933.52
556.28	539.016	1069122.066
556	529.367	1049984.159
554	465.904	924106.1442
552	410.948	815103.7742
550	362.995	719989.296

Extended GIS Volume	
Elevation	Ac-Ft
630	22095660
620	17399300
600	9606610
590	6601115
580	4241380

DSF x 1000 = 1000 Day Second Feet

DSF x 1000 x 1.98347 = AC-FT

Graph 1 – Wheeler Reservoir Volume Check

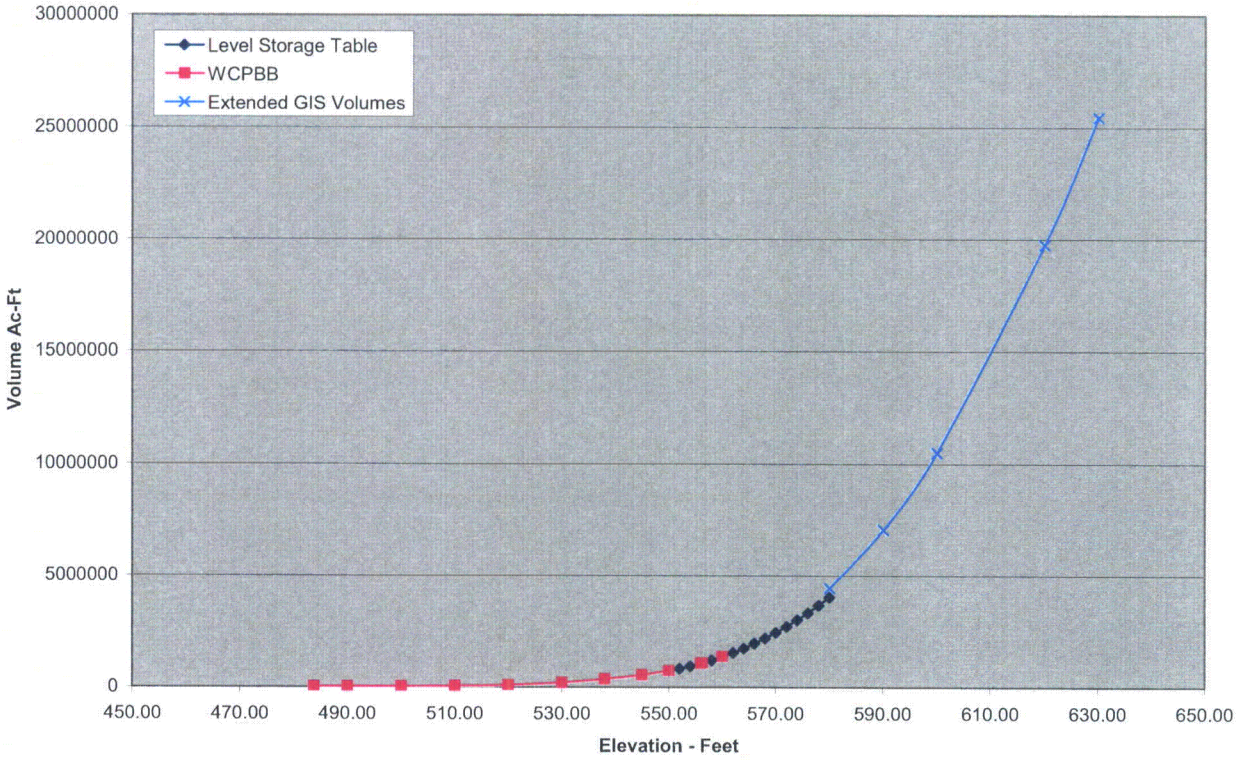


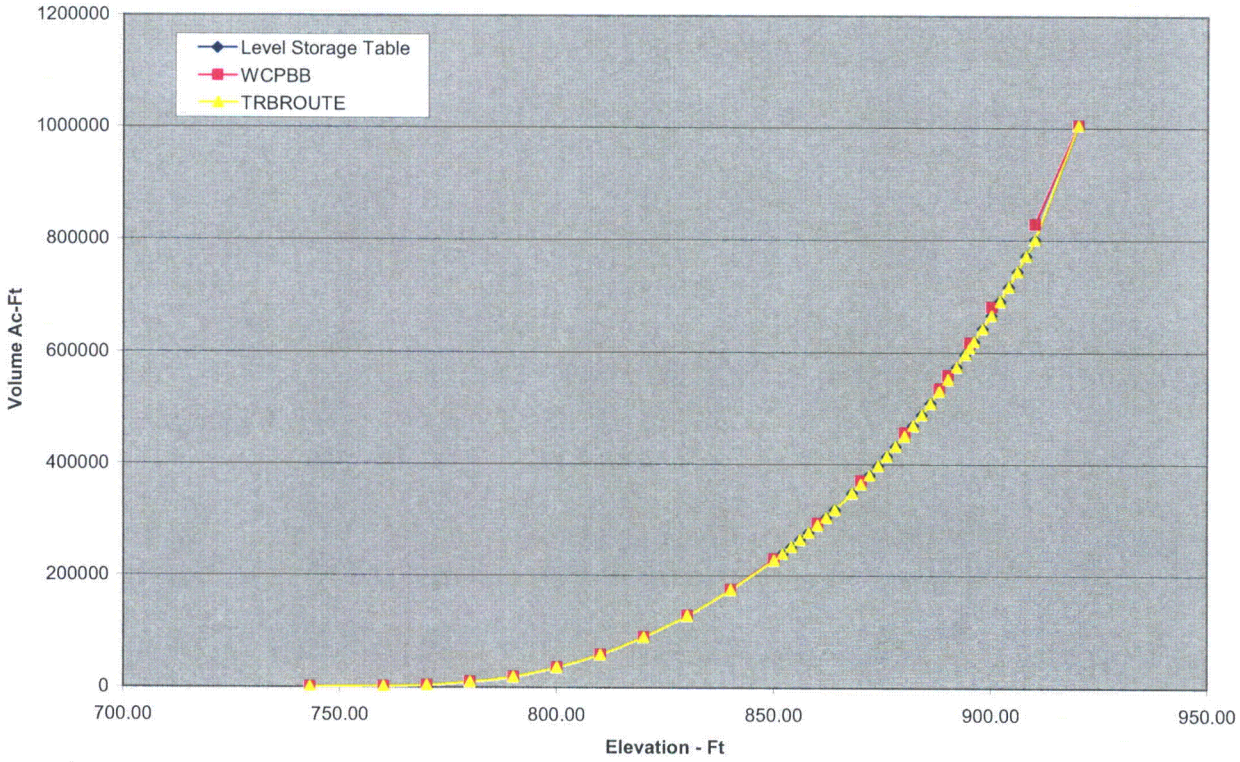
Table 2 – Tims Ford Reservoir Volume Curve Check Table

WCPBB		Level Storage Tables			TRBROUTE	
Elevation	Ac-Ft	Elevation	DSF*1000	Ac-Ft	Elevation	Ac-Ft
920	1004000				920	1004000
910	829000	910.00	403.832	800988.1	910.00	800988.1
908.00	No Data	908.00	389.011	771591.7	908.00	771591.7
906.00	No Data	906.00	374.906	743614.1	906.00	743614.1
904.00	No Data	904.00	361.442	716909.7	904.00	716909.7
902.00	No Data	902.00	348.547	691331.9	902.00	691331.9
900	681000	900.00	336.131	666706.7	900.00	666706.7
898.00	No Data	898.00	324.095	642833.4	898.00	642833.4
896.00	No Data	896.00	312.336	619509.7	896.00	619509.7
895	617000	895.00	306.529	607991.1	895.00	607991.1
894.00	No Data	894.00	300.756	596540.5	894.00	596540.5
892.00	No Data	892.00	289.334	573885.9	892.00	573885.9
890	559000	890.00	278.130	551662.2	890.00	551662.2
888	535000	888.00	267.205	529992.1	888.00	529992.1
886.00	No Data	886.00	256.610	508977.9	886.00	508977.9
884.00	No Data	884.00	246.356	488640.2	884.00	488640.2
882.00	No Data	882.00	236.444	468978.7	882.00	468978.7
880	457000	880.00	226.872	449993.2	880.00	449993.2
878.00	No Data	878.00	217.636	431674	878.00	431674
876.00	No Data	876.00	208.711	413972.7	876.00	413972.7
874.00	No Data	874.00	200.069	396831	874.00	396831
872.00	No Data	872.00	191.680	380191	872.00	380191
870	370000	870.00	183.514	363994.5	870.00	363994.5
868.00	No Data	868.00	175.553	348204.8	868.00	348204.8
864.00	No Data	864.00	160.354	318057.7	864.00	318057.7
862.00	No Data	862.00	153.156	303780.4	862.00	303780.4
860	294000	860.00	146.206	289995.6	860.00	289995.6
858.00	No Data	858.00	139.483	276659.6	858.00	276659.6
856.00	No Data	856.00	132.965	263731.7	856.00	263731.7
854.00	No Data	854.00	126.633	251171.8	854.00	251171.8
852.00	No Data	852.00	120.466	238940.1	852.00	238940.1
850	229000	850.00	114.444	226996.6	850.00	226996.6
840	174000				840.00	174000
830	127000				830.00	127000
820	89000				820.00	89000
810	58000				810.00	58000
800	35000				800.00	35000
790	18000				790.00	18000
780	9000				780.00	9000
770	3000				770.00	3000
760	1000				760.00	1000
743	0				743.00	0

DSF x 1000 = 1000 Day Second Feet

DSF x 1000 x 1.98347 = AC-FT

Graph 2 – Tims Ford Reservoir Volume Check



7.0 Summary & Conclusions

The reservoir storage elevation relationships provided in the final reservoir storage table for Wheeler Reservoir and the TRBROUTE storage table data for Tims Ford Reservoir are considered acceptable for use in the PMF analysis and as input in future calculations. Refer to Section 7.0 of the parent calculation.

The following are final reservoir storage tables:

Table 3

Wheeler Reservoir Storage Table	
Elevation	**DSF*1000**
630	11139.9
620	8772.2
600	4843.3
590	3328.1
580	2138.4
578	1846.4
576	1675.3
574	1515.5
572	1366.7
570	1228.6
568	1100.9
566	982.9
564	874.6
562	775.3
560	684.6
558	602.4
556.28	539.0
556	529.4
554	465.9
552	410.9
550	362.9

Table 4

Tims Ford Reservoir Storage Table	
Elevation	DSF*1000
920	506.2
910	403.8
908	389.0
906	374.9
904	361.4
902	348.5
900	336.1
898	324.1
896	312.3
895	306.5
894	300.8
892	289.3
890	278.1
888	267.2
886	256.6
884	246.4
882	236.4
880	226.9
878	217.6
876	208.7
874	200.1
872	191.7
870	183.5
868	175.6
864	160.4
862	153.2
860	146.2
858	139.5
856	132.9
854	126.6
852	120.5
850	114.4